37TH ANZAM CONFERENCE

CONFERENCE

Celebrating management research, its impact & future

3-5 December 2024

University of Wollongong, NSW, Australia

Proudly hosted by:

ANZAM

AUSTRALIAN & NEW ZEALAND
ACADEMY OF MANAGEMENT

UNIVERSITY
OF WOLLONGONG
AUSTRALIA

ACKNOWLEDGEMENT OF COUNTRY

We acknowledge and pay our respects to the Traditional Custodians of the unceded lands on which we work, we walk, and we live. We acknowledge their enduring relationships with Country and the stories and knowledges that Country holds.

We also acknowledge our shared history and the need for us to engage in truth telling at all levels if we are to heal our past and move into a more just and inclusive future. This conference seeks to contribute to this process by amplifying diverse voices and respecting Indigenous cultures, knowledge systems, histories, and futures. We can each contribute to this individually and collectively by fostering dialogue that embraces the principles of truth, equity, and reconciliation; and embodying the values of respect, responsibility, and reciprocity as delegates of this conference and in all the spaces through which we move.
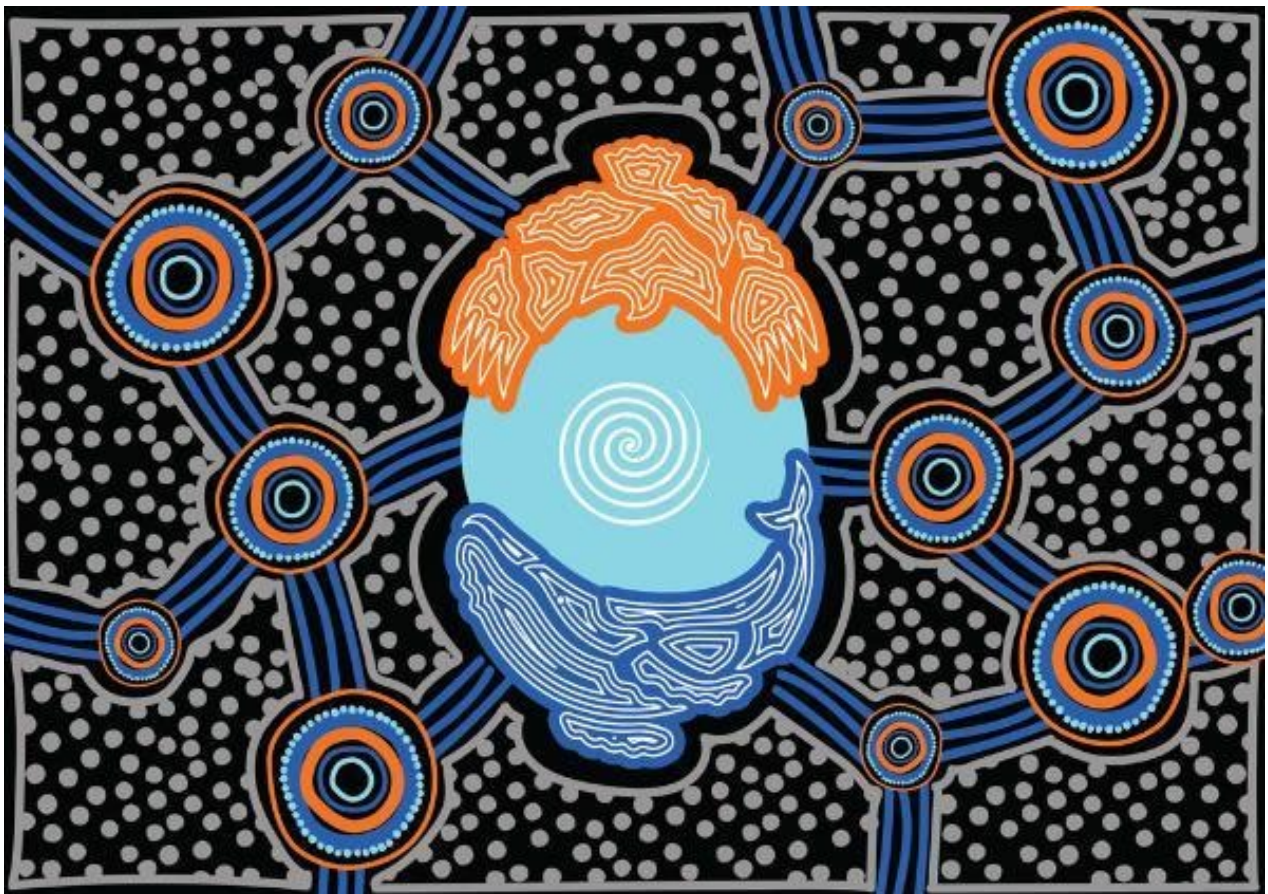
Brittney Angus (2024) *Indigenous Nationals* artwork. Brittney Angus is a Wiradjuri & Ngunnawal graphic designer and digital artist. Cultural authenticity is at the heart of her creation, weaving ancient narratives and contemporary design. The work combines symbolic motifs, bold colours, and modern aesthetics, a vibrant storytelling experience that connects audiences to the rich tapestry of Aboriginal culture. Brittney sees her role not just as a graphic designer but as a storyteller and bridge-builder in visual communication, connecting history & culture in modern, contemporary environments. See her work here: https://www.brittneyangus.com/

MESSAGE FROM THE CONFERENCE CO-CHAIRS

We are delighted to welcome delegates from across the globe, including Australia, New Zealand, America, Canada, India and the United Kingdom. It is a privilege to host such a diverse group of scholars, practitioners, and thought leaders, all gathered here to engage with the latest research and foster collaboration within the field of management.

Our goal for this conference is to strengthen connections within our global community by blurring the lines between academia and practice, advocating for shared learning and collaboration. Together, we will explore the impact of management research and its relevance to practice, while critically reflecting on the past to shape the future.

Equity, inclusion, and fostering a sense of belonging are key drivers of this event, and we are excited to offer a dynamic program that supports these values.

We also invite you to be a part of our conference story. Throughout the event, we encourage you to share your thoughts and ideas by recording short vlogs, which we will feature on our social media platforms. This is your opportunity to make your voice heard and contribute to the ongoing conversation.

We would like to take this opportunity to thank the ANZAM Board, lead by Professor Kevin Lowe and supported by Emma Nixon, ANZAM Officer Manager, for their support. In addition, our sincere thanks is extended to Professor Grace McCarthy, Interim Executive Dean, Faculty Business and Law, University of Wollongong for her full support.

We look forward to your active participation and hope that you leave this conference inspired and energised for the future.

Associate Professor Matt Pepper
Dr Rebekah Schulz
Co-Chairs
37th ANZAM Conference

STREAM CHAIRS

The 37th ANZAM Conference has been made possible thanks to the energy, dedication, and wisdom of many people. We would like to thank all the volunteers who have helped us make this conference a reality, in particular, the Stream Chairs:

Code	Stream	Stream Chairs
HRM	Human resource management	Dr Diep Nguyen, Northumbria University
OB	Organisation behaviour	Associate Professor David Cheng, Australian National University Dr Bichen Guan, La Trobe University
SSI	Sustainability & social issues	Dr Mehran Nejati, Edith Cowan University Dr Subha Parida, University of South Australia
GDI	Gender, diversity & Indigeneity	Associate Professor Shamika Almeida, University of Wollongong Dr Mark Jones, University of Melbourne
ESME	Entrepreneurship & SMEs	Dr Stephanie Macht, CQUniversity Dr Admiral Manganda, University of Melbourne
LGS	Leadership, governance & strategy	Dr Jonathan Baker, University of Adelaide Dr Julia Fehrer, University of Auckland
T&L	Teaching & learning	Dr Lynnaire Sheridan, University of Otago Dr Mathew Todres, University of Wollongong
BPISC	Business processes, innovation & supply chain	Associate Professor Arun Elias, Victoria University of Wellington Dr Alka Nand, Monash University
HMO	Health management & organisation	Professor Ann Dadich, Western Sydney University Dr Mostafa Khatami, University of Wollongong
PSNFP	Public sector, NGOs & not-for-profits	Dr Matthew Xerri, Griffith University Dr Aastha Malhotra, University of Southern Queensland

ANZAM BOARD

The ANZAM Board are instrumental in the strategic direction of the Conference. Thank you to:

- Professor Kevin Lowe (ANZAM President 2023-2024)
- Professor Ruth McPhail (ANZAM President-Elect 2023-2024)
- Professor Kerry Brown (ANZAM Past President)
- Dr Justine Ferrer (Secretary and Region VIC/Tas representative)
- Dr Ryan Gould (Treasurer and Region QLD/NT representative)
- Associate Professor Subas Dhakal (Region NSW/ACT representative)
- Dr Esme Franken (Region WA/SA representative)
- Professor Jason Mika (Region New Zealand representative)
- Dr Paula O'Kane (Region New Zealand representative)
- Professor Ann Dadich (Region NSW/ACT representative)
- Associate Professor Remi Ayoko (Region QLD/NT representative)
- Associate Professor Chad Chiu (Region WA/SA representative)
- Professor Peter Holland (Region VIC/Tas representative)
- Victoria Lister (Student Representative 2023-2024)

Special mention must go to **Ms Emma Nixon**, the ANZAM Office Manager and all-round great person. Thank you for your support, hard work and dedication, Emma!

UOW CHAMPIONS

We would also like to thank our many colleagues at the University of Wollongong who championed and provided substantial support for this Conference, particularly:

- Professor Shahriar Akter
- Professor Corinne Cortese
- Associate Professor Shamika Almeida
- Dr Laura Rook
- Dr Jacki Johnson, Doctoral Workshop Representative
- Ms Catherine Moyle
- Mr Max Farrington
- Ms Erin Snape, Business Development Manager Innovation and Commercial Research Unit
- Ms Michelle Faughlin
- Ms Iresha Donmanige, PhD Candidate
- Mr Xinxiong Wu, PhD Candidate
- Mr Rio Bire, PhD Candidate
- Mr Shamimul Rayhan, Masters student

KEYNOTE SPEAKERS

'Reinvigorating Management Research – the role of critical systems thinking' by Emeritus Professor Michael C. Jackson
Tuesday 3 December 2024, 10.00am

Contemporary systems thinking can take the leading role in reinvigorating management research. Critical systems thinking champions a pragmatist orientation and is committed both to theoretical advancement and practical relevance. It has developed a range of methodologies to translate different theoretical perspectives into practice. This is illustrated with examples. Increasingly, systems thinking is seen by international agencies, governments, businesses, and third-sector organisations as the most appropriate means of responding to the challenges of the polycrisis.

At the upcoming conference, Emeritus Professor Jackson OBE will also launch his new book, Critical Systems Thinking: A Practitioner's Guide. This book provides an overview of the full range of systems approaches and their applications, offering academia, leaders and managers the tools they need to navigate complex, interconnected issues.

Biography
Michael C. Jackson is Emeritus Professor at the University of Hull and MD of Systems Research Ltd. He graduated from Oxford University, gained an MA from Lancaster University and a PhD from Hull, and has worked in the civil service, in academia and as a consultant. Between 1999 and 2011, Mike was Dean of Hull University Business School, leading it to triple-crown accreditation. Mike has been President of the International Federation for Systems Research and the International Society for the Systems Sciences. He is currently Co-Chair of the UK Government Office for Science 'Systems Thinking Working Group'. He was editor-in-chief of Systems Research and Behavioral Science for 26 years. In 2011 Mike was awarded an OBE for services to higher education and business. In 2017 he received the Beale Medal of the UK Operational Research Society for 'a sustained contribution over many years to the theory, practice, and philosophy of Operational Research'. In 2022 he received the Pioneer Award of the International Council on Systems Engineering for 'the development of the foundations of systems engineering as author, educator and intellectual leader in systems thinking'. Mike is known as the leading figure in the development of 'Critical Systems Thinking' – a topic on which he has published ten books and over 150 articles. His last book Critical Systems Thinking and the Management of Complexity was published by Wiley in 2019. His new book Critical Systems Thinking: A Practitioner's Guide will be published by Wiley in September 2024.

KEYNOTE SPEAKERS

'What is your theoretical contribution? Unpacking, problematizing, and rethinking theoretical contributions'
by Emeritus Professor Jörgen Sandberg
Tuesday 3 December 2024, 1.55pm

A critical, if not the most critical, purpose of research is to generate knowledge that deepens our understanding of social and organizational phenomena. Indeed, making a theoretical contribution is the raison d'être of management and organization studies, and of science more broadly. Hence, a question repeatedly posed by supervisors, editors, and reviewers is, "What is the contribution of your study?"

However, although a substantial body of literature exist on this topic, what actually constitutes a theoretical contribution still remains highly ambiguous for many academics. This ambiguity is particularly troubling given the growing concern among both academics and practitioners that, despite the increasing number of journal articles being published, there appears to be a lack of theoretical contributions that make a significant impact both theoretically and practically meaningful. While several factors contribute to the scarcity of more impactful theoretical contributions, it is undeniable that developing such contributions requires a clear understanding of what characterizes them. The aim of this talk is to unpack and problematize current understandings of what makes a theoretical contribution and, based on this, to propose how we can rethink the generation of more impactful contributions that make a difference both theoretically and practically in society.

Biography

Jörgen Sandberg is Emeritus Professor at the University of Queensland (UQ) Business School in Australia, Research Professor at the University of Lund in Sweden, Honorary Professor at Warwick Business School in the UK, and Co-founder of the international conference Philosophy and Organization Studies (PHILOS). He has made significant and enduring contributions worldwide in the field of management and organization studies, as well as in the broader domain of social science, particularly in the areas of theory development, practice and process theory, philosophy and organization studies, research methodology, and organizational competence and learning. His work has been published in leading journals such as Academy of Management Journal, Academy of Management Review, Journal of International Business Studies, Journal of Organizational Behavior, Organization Theory, Organizational Research Methods, Journal of Management Studies, and Harvard Business Review. His most recent books include Generating Research Questions: Doing Interesting Research, 2nd Edition (with Alvesson, Sage, 2024); Re-imagining the Research Process: Conventional and Alternative Metaphors (with Alvesson, Sage, 2021); and Skillful Performance: Enacting Capabilities, Knowledge, Competence, and Expertise in Organizations (with Rouleau, Langley, and Tsoukas, Oxford University Press, 2017).

KEYNOTE SPEAKERS

'What is reconciliation in a post-referendum Australia?' **by Brendan Moyle**
Wednesday 4 December 2024, 11.10am

A pragmatic and honest look at what reconciliation is post the failed 2023 Indigenous Voice to Parliament referendum from a community position and how this needs to influence future managers and management research agendas. In an environment where ongoing reports are that social and political systems are failing to Close the Gap for Aboriginal and Torres Strait Islander people, what does reconciliation actually look like.

This issue was exacerbated with the failed 2023 Indigenous Voice to Parliament referendum which has harmed race-relations and the discussion about reconciliation, with ongoing reports of escalating racism. In this environment, what can we do individually and collectively to restore trust and build better outcomes for Aboriginal and Torres Strait Islander people.

Biography
Brendan Moyle is the Executive Branch Manager for the Office of Aboriginal and Torres Strait Islander Affairs in the ACT Government. He is a Kamilaroi/Gomeroi man with cultural connections throughout northern NSW and southern Queensland. Prior to commencing in his current role, Brendan was the CEO of Darkinjung Local Aboriginal Land Council on the Central Coast of NSW after spending 21 years working in the NSW and then Commonwealth Government. His government roles have seen him lead regulatory and legislative processes, complex policy and program implementation, and stakeholder engagement at local and national levels. He has also been a former Chairperson and Board member of the ACT Aboriginal and Torres Strait Islander Legal Service, SEARMS Aboriginal Corporation, Munjuwa Aboriginal Health and Housing Corporation, and the Ngambri Local Aboriginal Land Council. He was also an inaugural member of the NSW Aboriginal Land Council Economic Development Advisory Committee.

KEYNOTE SPEAKERS

'University.com: Examining the impact of Corporatisation on University Councils' by Professor Corinne Cortese
Thursday 5 December 2024, 9.00am

The higher education sector in Australia is experiencing unprecedented pressure. It faces numerous policy changes, including the University Accord, immigration policy, and a steady decline in government funding. Concurrently, there are increasing demands for universities to align their research agendas with industry needs and to ensure that teaching and learning portfolios, as well as graduate outcomes, meet employer expectations.

These pressures are compounded by a neoliberal agenda that commodifies higher education, transforming the sector into a corporatist model and creating significant tension between academic values and managerialist demands. By considering the dual academic and economic dimensions of these complex organisations, this keynote address will encourage thoughtful exploration of contemporary university governance structures and their impact on the future of universities.

Biography
Corinne Cortese is a Professor of Accounting and Associate Dean-Higher Degree Research at the University of Wollongong (UOW). She graduated with a Bachelor of Commerce degree from UOW, obtained an Honours degree from Macquarie University, and a PhD from UOW. Corinne worked for KPMG and Macquarie University before joining UOW. She has made significant contributions to critical accounting scholarship, with her research published in leading journals such as Critical Perspectives in Accounting, Accounting, Auditing and Accountability Journal, Accounting History, and Accounting Forum. Corinne has a particular interest in how regulatory processes are politically influenced, and she has written on topics such as accounting history, carbon accounting, corporate boards, academic networks, accounting practice in China, and higher education. Her recent work on corporate boards has featured in the Australian Journal of Management and Corporate Governance: An International Review, and was recognised as one of the "best papers" at the 2022 Academy of Management conference.

DAY 1 PROGRAM: TUES 3 DECEMBER 2024

REGISTRATION

Time: 8.00am - 9.00am
Venue: Foyer, Building 67, University of Wollongong

SESSION 1: WELCOME TO COUNTRY & ANZAM PRESENTATION

Time: 9.00am - 10.00am
Venue: Amphitheatre, outside Building 67
Chair: Associate Professor Matt Pepper and Dr Rebekah Schulz

Welcome to Country by Aunty Barb
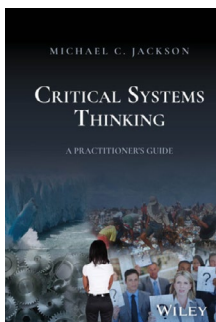Smoking Ceremony by Uncle Peter

Presentations by
- *Professor Eileen McLaughlin*, UOW Interim Deputy Vice-Chancellor (Research and Sustainable Futures) and
- *Professor Kevin Lowe,* ANZAM President

SESSION 2: KEYNOTE - EMERITUS PROFESSOR MICHAEL C. JACKSON

Time: 10.00am - 10.50am
Venue: 67.107
Session chair: Associate Professor Matt Pepper

MORNING TEA & BOOK LAUNCH

Time: 10.50am - 11.20am
Venue: Foyer
MC: Associate Professor Matt Pepper

We have the pleasure of launching Emeritus Professor Michael C. Jackson's new publication, *Critical Systems Thinking: A Practitioner's Guide* (2024).

SESSION 3: PAPERS & WORKSHOPS

Time: 11.20am - 1.00pm
Venue: Concurrent sessions across Building 67

Workshop | Venue: 67.303 | Session chair: Yiyang Bian
W1 - Fostering Generative AI in The Workforce - *Yiyang Bian, Mario Fernando, Ruwan Bandara, Michael Draper, Katina Michael, Lynn Sheridan, and Hatim Urabi.*
The workshop provides a comprehensive exploration of integrating generative AI technologies into organizational settings. Participants will gain insights into the fundamental concepts of generative AI and its applications across various industries. Through interactive sessions and case study presentations, attendees will learn practical strategies for successfully implementing and managing generative AI initiatives in their respective workplaces. This workshop offers a unique opportunity for professionals, researchers, and industry practitioners to exchange knowledge, share best practices, and collaborate on harnessing the transformative potential of generative AI in the workforce.

HRM | Venue: 67.101 | Session chair: John Molineux
43 - Protean Career Orientation and Turnover Intention: Exploring the Mediating Effect of Subjective Career Success - Hui Hui Teow, Wee Chan, Pervaiz Ahmed
76 - Were You Listening? Exploring the Moderating Roles of Voice Entitlement and Supportive Voice Climate - Aldrich Dominic Guarin
91 - Efficacy of Talent Attraction and Retention in African Tribal Leadership - Anna-Marie Pelser
113 - Humorous Job Ads and Job Attractiveness - David Cheng, Miaojia Huang, Rajiv Amarnani, Alexander Eapen
165 - Building Workplace Inclusion in a Hybrid Environment: An Exploratory Study - *Paula O'Kane, Sophie Gimblett, Dana L. Ott, Azka Ghafoor*

OB | Venue: 67.107 | Session chair: Chad Chiu
9 - Managerial Coaching and Readiness for Change - *Grace McCarthy, Sonia Bird, Julia Milner*
305 - Platform Worker Citizenship Behaviour: Insights from Ride Hailing Drivers and Customers in Indonesia - *Ria Triwastuti*
315 - The Impact of Different Types of Customer Mistreatment on Employees' Well-being and Attitude - *Yu Wu, Markus Groth*
364 - Project Manager Attributes and the Stakeholder Relationship - *Alicia Gilchrist, Caroline Hatcher, Neal Ashkanasy*
377 - Data Breaches, Employee Well-Being and Productivity: The Australian Case - *Remi Ayoko, Ryan Ko, Hai Luong, Grigori Agbas*

OB | Venue: 67.208 | Session chair: Paula O'Kane
20 - Connectivity and Autonomy in Our New World of Work: The Role of Connectivity Agency as a Job Resource in Telework Arrangements - *Luke Booker*
38 - Work Passion Contagion: A Multiple Mediation Model - *Velina Serafimova, Denise Jepsen*
62 - Integrating Goal Setting Theory and Self-Regulation of Emotions: Exploring the Interplay Between Emotions and Goal Orientation on Performance Under Limiting Conditions - *Shilpa Chingan Thottathil*
100 - Hidden Agendas: How Organizational Cultures Influence Dark Triad Leader Behaviors - *Katrin Riisla, Dritjon Gruda*

SESSION 3: PAPERS & WORKSHOPS CONTINUED

Time: 11.20am - 1.00pm

SSI | Venue: 67.104 | Session chair: Subha Parida
65 - Exploring the Factors Promoting Social Acceptance of Solar Energy Technologies - *Jane Osei, Kerry Brown, Mehran Nejati*
85 - Say It Out Loud or Stay Silent: Consumer Effects and Mechanisms of CEO Activism - *Niko Dellner*
117 - Leadership Studies in Tourism and Hospitality: Paving the Way for Sustainable Development Goals - A Systematic Literature Review and Future Research Directions - *Ngo Tinh Giang Nguyen, Heidi Wechtler, Po-Hsin Lai*
408 - Mapping Sustainability and Governance Interplay in the Blue Economy: A Bibliometric Review of Contributions from Australia - Chandima Jeewanthi Hapu Achchige, Harsha Sarvaiya, Robert Hales

GDI | Venue: 67.102 | Session chair: Jonathon Mackay
48 - Double-Face Effect of Cognitive Diversity on Self-Organizing Team Creativity - *Tian Wang, Rebecca Dong, Candy Ying Lu, Miles Yang, Jianhua Zhu*
53 - Potential Influence of Cobots Intervention on Australian Manufacturing Workforce Diversity: A Conceptual Paper - *Akash Hettiarachchi*
64 - The Subjective Career Crafting of Working Mothers - *Marian Crowley-Henry*
220 - Tyranny of Women of Colour in the Academia: A Racial Literacy Perspective from Narratives - *Nilufa Khanom, Tasmiha Tarafder*

**ESME | Venue: 67.201 | Session chair: Minnu Pynadath**
10 - Dynamic Process of Entrepreneurship, Global Trade and National Economic Growth - *Kai Du*
32 - Network Marketing Organizational Process of Legitimation: Managing the Discrepancy Between Internal and External Legitimacy - *Fu Dai, Anthony NG, Ian Eddie, Sarah Eyaa*
96 - Rolling Out the Red Carpet: Legitimate Daughter Succession in Family Business - *Yi-Chun Li, Huang Hsiu-Ling, Hsi-Mei Chung*
139 - Overcoming or Removing Barriers? Social Entrepreneurs' Hybrid Strategies for Navigating External Financing Constraints - *Niko Gerlach, Deike Schlütter*
146 - Unpacking the Digital Barriers in Emerging Market SMEs: Towards a Process Model - *Michael Xiang Yao, Dan Wang, Susan Freeman*
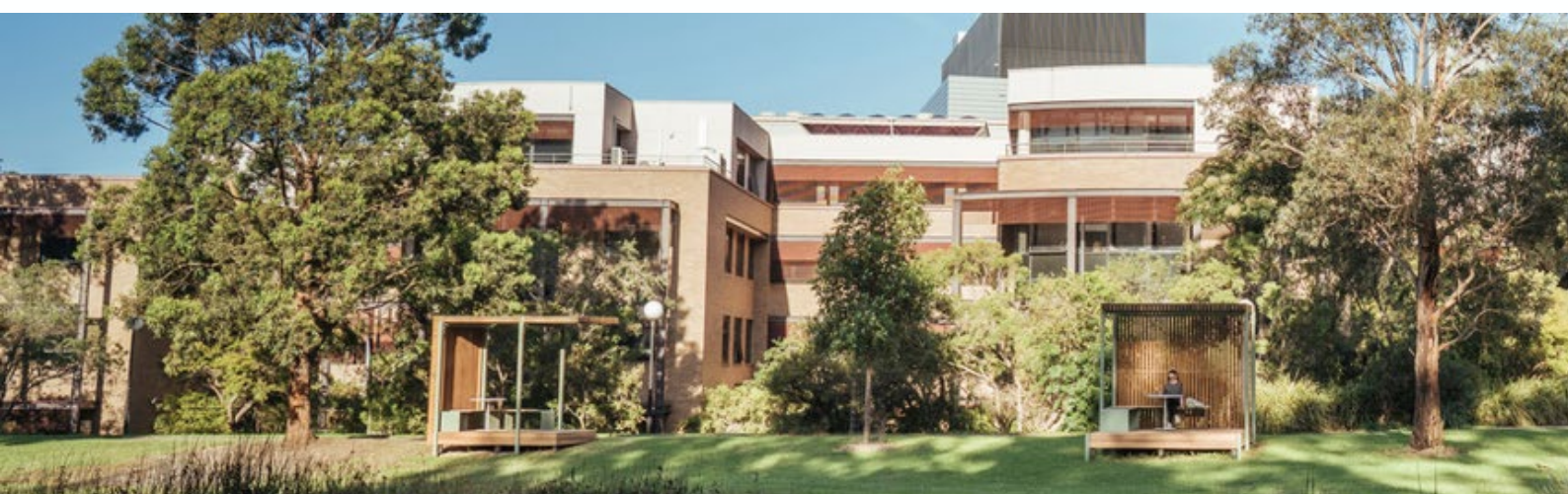
SESSION 3: PAPERS & WORKSHOPS CONTINUED

Time: 11.20am - 1.00pm

LGS | Venue: 67.202 | Session chair: Ataus Samad
36 - Navigating Repugnance: How Psychic Distance and (Un-)fairness Impact Public Acceptance of MNE Cross-Border Acquisitions - *Aureliu Sindila*
70 - Leading with a Managed Heart: Understanding How Leader Emotional Labor Shapes Followers' Work Engagement? - *Muhammad Salman Rashid, Jarrod Haar, Peter McGhee*
102 - Conceptualising Inclusive Communicative Leadership for Disability Inclusion - *Ann Jacob, Leila Afshari, Adela McMurray, Nuttawuth Muenjohn, Michael Muchiri*
123 - Taking Stock of Responsible Leadership Research: A Systematic Literature Review and Research Agenda - *Ngo Tinh Giang Nguyen, Heidi Wechtler, Po-Hsin Lai*
133 - Influence of Leaders' Artificial Intelligence-Driven Capabilities on Business Model Innovation: The Mediating Role of Leaders' Agility - *Sahadat Hossain, Mario Fernando, Shahriar Akter*

T&L | Venue: 67.203 | Session chair: Arshia Kaul
222 - From AI to A+: The Impact of AI Usage Intention on Academic Performance, Learning Effectiveness, and University Reputation - *Gazi Farid Hossain, Amaln Haque, Md Shamirul Islam*
235 - Changing Skills for Advanced Manufacturing: How Vocational Education Responds to Industry Needs - *Jacqueline Greentree*
343 - AI and Gamification: Uncharted Possibility or Dangerous Pitfall? - *Geoffrey Chapman, Stephanie Macht*

BPISC | Venue: 67.302 | Session chair: Arun Elias
14 - Absorptive Capacity and Organizational Resilience as Antecedents for Organizational Innovation Capability to Adopt Cobots in Manufacturing: A Conceptual Framework - *Nisar Ahmed Channa, Greg Hearn, Gian Luca Casali*
90 - Integrating Lean, Green and Industry 4.0/5.0 for Improving the Performance of Manufacturing SMEs - *Niranga Silva, Dilupa Nakandala, Richard Yang*
221 - Social Implications of Industry 5.0 in Supply Chains - *Wayne Ren, Vipul Jain, Mohammad Saud Khan*
287 - Examining the Paradigmatic Perspective in the Management of the Supply Chain Across the Reduction-Holism Spectrum via Semi-Structured Interviews with Practitioners - *Daniell Wilden*

HMO | Venue: 67.209 | Session chair: Victoria Lister
75 - Turning a Blind Eye: How Wilful Ignorance Manifested in the Morrison Government's Management of Aged Care - *Ann Dadich, Abby Mellick Lopes*
114 - A Modified World Café Approach to Identify the Core Components of Palliative Care Models for Underserved Populations - *Ann Dadich, Caroline Laurence*
144 - A Modest Article About Brilliant Care - *Ann Dadich*
328 - Evaluating the 2022 New Zealand Health Reforms: Insights from Event System Theory - *Adeel Akmal, Nataliya Podgorodnichenko, Robin Gauld, Tim Stokes*

SESSION 3: PAPERS & WORKSHOPS CONTINUED

Time: 11.20am - 1.00pm

PSNFP | Venue: 67.301 | Session chair: Patrick McKenna
29 - The Complementarity of Program Logic and Critical Systems Heuristics: Critical Systems Practice for the Evaluation of Emergency Relief in Australia - *Patrick McKenna*
42 - The Maverick Organisation: An Initial Practice Theory Analysis of the Field and Valued Capital in a Defence Organisation - *Amanda Van de Paverd, Ree Jordan, Victor James Callan*
56 - The Blended Workforce in the Public Service: Effects on Middle Manager Well-Being – Lessons Learnt from Australia - *Vindhya Weeratunga, Fiona Buick*
148 - Ready, Set, Reform? Exploring Not-for-Profit Practitioner Perceptions of Readiness - *Aastha Malhotra, Luke Bayliss, Govind Krishnamoorthy, Nathan Beel, Carol Du Plessis, Lorelle Burton*
340 - Navigating the Digital Wave: An Ethnographic Study of Sociomaterial Interactions in Public Sector Digital Transformation - *Aristito Febrianto, Adina Dudau, Anna Morgan-Thomas*

LUNCH

Time: 1.00pm - 1.55pm
Venue: Foyer

SESSION 4: KEYNOTE - EMERITUS PROFESSOR JÖRGEN SANDBERG

Time: 1.55pm - 2.45pm
Venue: 67.107
Session chair: Associate Professor Catherine Collins

Time: 2.45pm - 2.55pm
Short sponsor presentation

S Sage

AFTERNOON TEA

Time: 2.55pm - 3.20pm
Venue: Foyer

UOW Wollongong Campus

SESSION 5: WORKSHOPS, PAPERS & INTERACTIVE PRESENTATIONS

Time: 3.20pm - 5.00pm
Venue: Concurrent sessions across Building 67

Workshop | Venue: 67.303 | Session chair: Catherine Collins

W2 - Editors panel and round table discussions: General management and interdisciplinary research with a regional focus - *Catherine Collins, Andrei Lux, Chinmay Pattnaik, Adina Dudau.*

The workshop brings together editors from the *Journal of Management and Organization, Asia-Pacific Journal of Management, Australian Journal of Management, and the European Management Journal*. In the first section, the editors will introduce their journals and explore points of commonality and differentiation between their aims. The second section is interactive, including time for questions and answers between the panel and audience, as well as round table discussions. This interactive section will focus on how to craft the contribution of a paper, including for general management, interdisciplinary, and/or regional discussions. Round table discussions will then explore the review process, as well as how and why it is important to become involved in Editorial Boards and Associate Editor roles at all career stages.

HRM Interactive | Venue: 67.101 | Session chair: Tasmiha Tarafder

24 - Sustainable HRM: A Comprehensive Review of Antecedents, Strategies and Practices driving Triple Bottom Line Performance - *Muhammad Zia ul haq, Youqing Fan, Thomas Kliaukar*
31 - The Mediating Effect of Leader-Member Exchange and Psychological Capital on Engineers' Perception of Their Psychosocial Safety Climate - *Zack Deban, Nasim Saheli, Yvonne Brunetto*
108 - Applying Punctuated Equilibrium Theory as a Time Lens for Exploring HR Responses to the Pandemic Crisis Across Three National Contexts - *John Molineux, Roslyn Cameron, Reshman Tabassum*
127 - The Diversity of Emotional Intelligences: The Role of Job Characteristics - *Hélène Delerue, Virginie Moisson*
184 - Unveiling the Unseen: Documenting Pacific and Māori Women Academics' Experiences of Glass Ceilings and Mentorship in Australian Universities - *Tuma Fesaitu Grieg*

OB | Venue: 67.107 | Session chair: Saima Ahmad

160 - The Nature, Antecedents, and Outcomes of Gig Workers' Daily Motivation Profiles: A Multilevel Latent Profile Approach - *Guanyu Zhang, Lixin Jiang, Lu (Lucy) Xing, Niannian Dong*
178 - Relationship Between Psychological Contract and Use of Technology at Work: A Scoping Review - *Aditi Jamil, Arash Mashhady*
185 - Enhancing Individual and Organisational Outcomes from Hybrid Working Through Intentional Management in Public Sector Workplaces - *Judy Lundy, Uma Jogulu, Helen Taylor, Sue Williamson*
367 - The Digital Disconnect: Unravelling the Impact of Work-Related ICT Use After Hours on Quiet Quitting - *Jasmine Ah Kiaw Phan, Siu Gek Khor*
130 - When Purpose Leads to Pain: The Role of Workplace Loneliness in Nursing Outcomes - *Payal Anand*

SESSION 5: WORKSHOPS, PAPERS & INTERACTIVE PRESENTATIONS CONTINUED

Time: 3.20pm - 5.00pm

OB Interactive | Venue: 67.208 | Session chair: Heidi Wechtler

45 - Handling Identity Threats Through Suppression or Adaptation: The Dynamics of Identity Work and Moral Emotions - *Paul Hibbert*

77 - Justice and Job Crafting: The Role of Regulatory Focus and Leader Narcissism - *Gabby K.P. Choi, Raymond Loi, Stephanie W.X. Wang, Fangjian Wu*

337 - The Effect of Leaders' Dispositional Resistance to Change on Thir Health and Wellbeing During Organizational Change: The Role of Emotion Regulation and Emotional Intelligence - *Alan Hudson, Peter J. Jordan, Ashlea C. Troth*

40 - Job Demand, Job Satisfaction, and Time Management: Through a Gender Lens - *Cassandra Xiaoyi Liang, Linh Bui, Guihyun Park*

SSI Interactive | Venue: 67.104 | Session chair: Subha Parida

59 - Does a Sustainable Career Exist in the Gig Sector? A Qualitative Study of Gig Workers in China - *Christian Yao*

321 - Tovo ni Bula Sautu: Sustainable Land Development in Fiji - *Jekope Maiono, Diane Ruwhiu*

352 - Sustainable Project Management in Australian Public Projects: A Dynamic Capabilities Perspective - *Richard Hughes, Kerry Brown*

358 - The 'Gig Slur' in the Era of Platform-Based Economy: Economic Perspective Versus Humanistic Perspective - *Sonika Jha, Sriparna Basu*

16 - AI-Powered Smart Cities for Children with Autism: Perspectives from Parents - *Arshia Kaul, Debarati Basak, Vasundhara Kaul, Suman Ananthanarayan*

GDI Interactive | Venue: 67.102 | Session chair: Shamika Almeida

118 - The Erosion and Restoration of Women's Leadership Identity and Confidence: The Role of External and Internal Mentors - *Carol Gill, Isabel Metz, Jody Evans*

124 - Exploring the Relationship Between Spiritual Intelligence and Employee Mental Well-Being of Temporary Migrant Workers in Australia - *Poornima Setty, Wahed Waheduzzaman, Diana Rajendran*

166 - Exploring the Effect of Boardroom Gender Diversity on Financial Constraints of Firms: An International Evidence - *Shahid Md Shahiduzzaman, Priyantha Mudalige, Subba Yarram, Omar Farooque, Subas Dhakal, Sujana Adapa*

217 - Integrating Māori Values in New Zealand Commercial Fisheries: A Case Study of Moana New Zealand - *Carla Houkamau, Robert Pouwhare*

258 - Tale of a Leader's Closet Decisions: Aspects from Goffman's Stigma Theory, Disclosure, and Voice - *Charvi Hasmukh Shukla*

ESME Interactive | Venue: 67.201 | Session chair: Admiral Manganda

18 - Bibliometric Analysis of Cognitive Flexibility in Entrepreneurship: Navigating Change and Adaptation - *Safoora Pitsi, Afsaneh Bagheri*

164 - Hospitality Start-Up in Bangladesh: Identifying Factors Associated with Prospective Graduates' Self-Employment Transition Through Entrepreneurship - *Mahfuja Khatan, Damian Morgan, Jenny Panchal*

208 - The Influence of Social Capital on Small Business Resilience: A Research Agenda - *Hoang Thanh Van Vo, Sardana Islam Khan, Geoffrey Chapman*

244 - What Is a Maori Entrepreneur? A Ngapuhi Perspective - *Jason Rogers, Naomi Birdthistle, Kerry Bodle, Richard Laferriere*

300 - Investigating the Pathway of Entrepreneurial Journey and Skill Development: A Research Framework for University Entrepreneurship Education Programs - *Benjamin Thomas, Revadee Vyravene*

SESSION 5: WORKSHOPS, PAPERS & INTERACTIVE PRESENTATIONS CONTINUED

Time: 3.20pm - 5.00pm

LGS Interactive | Venue: 67.202 | Session chair: Gazi Hossain

94 - Leadership Entrapment: A Review and Framework for Management Research - *David Armsworth-Maw, Dan Caprar*

116 - Provenance: Looking Back to Move Forward in Practice Inquiry - *Kaylene Ascough, Geoff Hill*

325 - Cross-Sector Capability Translation Ecosystem: University-Industry Collaboration for Grand Challenges in the Digital Age - *Zhe Cao, Martie-Louise Verreynne*

376 - Process Model of LMX Ambivalence: Mapping Attributions, Emotions, Coping and Outcomes of Subordinates - *Alina Haider, Geoff Plimmer, Jane Bryson*

51 - Power Dynamics and Leader and Follower Identity Dynamics in Organizational Discourse - *Rui Zhang*

T&L Mixed | Venue: 67.203 | Session chair: Lynnaire Sheridan

355 - Paper - Engagement and Experiences of International Onshore Postgraduate Coursework Students in Distributed Learning Model - *Subas Dhakal, Shahid Shahiduzzaman* 137 - Adding Value: Engaging Stakeholders in Higher Education via the Course Advisory Committee - *Katherine Attree, Jill Bamforth*

198 - Professional Development for Sessional Academics: Quality and Engagement Enhancement - *Thi Tuyet Tran, Carol Bond, Sam Wilkin*

310 - Inclusive and Sustainable Learning in Elite Universities: An inductive study on the experiences of Widening Participation students in Scotland - *Michelle O'Toole, Susan Dunnett*

BPISC Mixed | Venue: 67.302 | Session chair: Mohammad Saud Khan

107 - Exploring the Referents of Trust in Algorithm Aversion - *Fatemeh Jafaralijasbi, Steven Lui, John Lai, Zhijing Zhu*

126 - Call Lean Systems by Any Name, It Spells the Same Operational Wonders: Sharing a Tale of Two Operations - *Ram Roy, Nick Cordery, Phil Doran*

128 - Unleashing the Roles of the GSCM Committee and Monitoring on Business Performance: An Empirical Study - *Abdullah Al-Mamun, Mehadi Al Mamun*

212 - Reconsidering the Concept of User Community as a Competitive Resource for User Entrepreneurs: A Case Study of a New Boutique Winery in Japan - *Naoki Teramoto, Tokiko Nakamura, Daisuke Nishi, Hirotoshi Fukuda*

382 - Paper - Systems of Innovation: A Case Study on Artificial Intelligence and the Internet of Things (AIOT) in the Illawarra Region - *Katina Michael*

HMO & PSNFP Interactive | Venue: 67.301 | Session chair: Aastha Malhotra

34 - Enhancing Organizational Resilience in Non-Profit Organizations: Is Following the For-Profits' Strategies a Pitfall? - Aureliu Sindila, Xueyong Zhan

122 - Factors Affecting Business Leaders and Board Members' Work Health & Safety Governance - Yvonne Brunetto, Leigh-Ann Onnis, Ben Farr-Wharton, Aglae Hernandez Grande

IM rep & HOSOM Meeting | Venue: 67.209 | Session chair: Ruth McPhail Institutional membership representative (IM rep) meeting followed by HOSOM "invitation only" meeting.

DAY 2 PROGRAM: WED 4 DECEMBER 2024

SESSION 6: PAPERS & WORKSHOPS

Time: 9.00am - 10.40am
Venue: Concurrent sessions across Building 67

Workshop | Venue: 67.303 | Session chair: Jason Mika
W3 - Indigenous Issues SIG: Indigenous Management Research, its Impact and its Future within ANZAM and Beyond - *Ella Henry, Jason Mika, Michelle Evans, Mark Jones, Admiral Manganda, Emma Olsen, Samatha Cooms, Diane Ruwhiu, Kelly Lendsay*

This symposium aims to celebrate Indigenous management research and share ideas about its impact and future within ANZAM and beyond. The ANZAM Indigenous Special Interest Group has been around since 2013 and its time to reflect on the past, present, and future direction and shape of the group for the benefit of current and future generations of Indigenous management student, scholar, and practitioner – both Indigenous and non-Indigenous.

HRM | Venue: 67.101 | Session chair: Marian Crowley-Henry
143 - The Role of Labor Market Regulations in the Relationship Between High-Performance Work Systems and Organizational Performance: A Meta-Analysis - *Xiaoxuan Zhai, Fang Huang, Xiaowen Tian*
171 - Beginning Teachers' Perceptions of Mentoring, Support, and Job Demands in the First Semester of Teaching: A Longitudinal Qualitative Investigation - *Jane Gifkins, Paula Brough, Mitchell Rapper*
196 - Deconstructing the Holistic Nature of Employee Experience: A Sociological Perspective Integrating Agency and Structure - *Ramanathan Iyer, Mohan Thite, Sangita De*
279 - Reviewing Green Human Resource Management: A Comparative Analysis of Western and Non-Western Practices and Cultural Influences - *Ruilin Lyu*

OB | Venue: 67.107 | Session chair: Chad Chiu
132 - Interaction Effects of Workplace Stressors and Employee Resilience on Depersonalization and Turnover Intentions - *Samina Quratulain, Aqsa Ejaz, Abdul Karim Khan, Meghna Sabharwal*
142 - How STEM Women Achieve Objective Career Success Through Networking: A Competence Signal Perspective - *Lingyan Hu, Yan Liu, Zhaolong Fu*
152 - When East Meets West: What Do Chinese Employees Talk About When They Talk About Person-Organisation Fit? - *Yuwei Sun, Jon Billsberry*
157 - High Performance Work Systems and Employee Expedience at Work: A Test of Mediating Mechanisms - *Aqsa Ejaz, Osama Islam, Samina Quratulain, Delphine Lacaze*
188 - Bottleneck or Not? The Ceiling Effect of Network Closure on Individual Innovative Performance - *Stefan Breet, Lotte Glaser, Justin Jansen, Jan Dul*

SESSION 6: PAPERS & WORKSHOPS CONTINUED

Time: 9.00am - 10.40am

SSI | Venue: 67.104 | Session chair: Sara Walton

150 - The Role of Responsible Leadership in Alleviating Poverty Through Decent Work and Employee Well-Being: A Case of Singapore - *Nik Teck Siong Chong, Carolyn Koh, Maler Ratnam, Krishnamoorthy Renganathan*

192 - Policy Support and Transnational Nascent Markets: EIF's Implication on Impact Investing Infrastructure - *Juan González, Benjamin Le Pendeven, Guillermo Casasnovas, Celine Louche*

211 - Exploring Stakeholder Configurations Based on Three Dimensions of Companies' Stakeholder Relations - *Peter Hoffman, Yiyu Wang, Youngun Kim, Saileshsingh Gunessee*

239 - Does the Workspace Matter? - *Aditya Moses*

275 - A Novel Methodology to Assess the Perspective of Indigenous Communities on Multinational Operations: The Case of Fiji - *Jekope Maiono, Eduardo Ordonez-Ponce, Penina Waqatabu*

GDI | Venue: 67.102 | Session chair: Rebekah Schulz

22 - The Provision of Culturally Safe Care for the Sexual and Gender Minority Older Adult in Australian Residential Aged Care Facilities - *Anthony Auditore, Ruth McPhail, Martha Mansah, Elise Stephenson*

224 - Financial Effects of Gender Diversity: Role of External Environment - *Subba Yarram, Sujana Adapa*

268 - Strategic Inclusive Leadership: Making Sense of the Complexity of Diversity Management Today - *Shireen Chua, Peter Sun*

331 - Gender Differences in the Impact of Organizational Justice on Citizenship Behavior and Operational Effectiveness in the Aerospace Industry - *Ricardo Santa, Ataus Samad, Diego Morante, Andres Rodriguez*

368 - Gender in and Gendering Social Exchange Theory in Leadership Research: A Problematizing Review - *Karryna Madison, Nathan Eva, Helen De Cirei, Zen Goh*

ESME | Venue: 67.201 | Session chair: Mile Terziovski

172 - "After Opening the Business, I Completely Forgot About Wellbeing": Indian Immigrant Entrepreneurs and Their Wellbeing - *Nadeera Ranabahu, Poh Yen Ng*

234 - Excelling Amidst Change: Building Capability During Business Transformation by Senior Entrepreneurs - *Pranab Mukherjee, Ying Zhu, Subhadarsini Parida, Danny Soetanto*

238 - Exploring Resilience Development in a Poly-Crisis: A Study of International Entrepreneurial Firms in a Post-Conflict Emerging Economy - *Visitha Amaratunge, Pi-Shen Seet, Jalleh Sharafizad*

303 - Artificial Intelligence Adoption in Small and Medium Enterprises: A Systematic Literature Review Under the Lens of Absorptive Capacity Framework - *Fany Indriyani, Adela McMurray, Bruno Pereira, Andreas Cebulla*

309 - Applications of Machine Learning in Entrepreneurship Using a Systematic Literature Review Approach - *Fakhitah Ridzuan, Noor Ullah Khan, Nurzulaikha Abdullah*

LGS | Venue: 67.202 | Session chair: Jonathan Baker

138 - Integrated Risk and Resilience for Complex System Governance—Renewing the Value of Algedonic Signal Warnings - *Daniel Norris, Jeff Foote*

173 - The Hierarchical Structure of Leadership Behaviors - *Peter Yih-Tong Sun, Marc Anderson, Sudong Shang, HeyIn Gang*

207 - Does Bank-Firm Relationship Affect ESG Performance in a Bank-Based System?: Evidence from COVID-19 Crisis Period - *Hideaki Sakawa, Yiuwai Wong, Naoki Watanabel*

213 - Corporate Psychopath's Exceptional Craving for Materialism, Money and Power - *Clive Boddy*

SESSION 6: PAPERS & WORKSHOPS CONTINUED

Time: 9.00am - 10.40am

T&L | Venue: 67.203 | Session chair: Justine Ferrer

54 - Vision 2050: A Road Map for Shaping Impact-Driven Future Business Schools - *Hafsa Ahmed, Justine Ferrer*

135 - Generative Artificial Intelligence and Universities in Australia and New Zealand - *Ann Dadich, Subas Dhakal*

228 - Revisiting the Case Method in the Age of Complexity - *Helen Parker*

280 - Exploring a Plausible Future of Learning for Ōtautahi, Christchurch Through Multi-Stakeholder Perspectives - *Hafsa Ahmed, Cheryl Doig*

345 - How the 'Future of Work' Has Changed Skills Requirements for Management Graduates Since the Millennium: A Systematic Literature Review - *Neeru Choudhary, Shilpa Jain, Hanoku Bathula*

BPISC | Venue: 67.302 | Session chair: Arun Elias

270 - How Networks Influence Supply Chain Innovation Through Public Procurement: Insights from Ghanaian Public Works Sector - *Peter Adjei-Bamfo, Hadrian Djajadikerta, Ferry Jie, Kerry Brown, Reza Kiani Mavi*

290 - Impediments to Developing Full Supply Chain Maps - *Prakash Singh*

302 - Creating and Capturing Value in Speciality Crop Production: An Analysis of the Hazelnut Value Chain - *Namal Bandaranayake, Senevi Kiridena, Kalinga Jagoda, Jonathan Parkes*

344 - Evaluating the Antifragility of Business Models in Food Delivery Logistics - *George Joseph, Arun Elias*

357 - Green Strategic Orientation and Sustainable Performance: Evidence from Pakistani Manufacturing Sector - *Saad Mahmood Bhatti, Zafir Khan Mohamed Makhbul, Sara Kanwal, Muhammad Zia ul haq*

HMO | Venue: 67.209 | Session chair: Anneke Fitzgerald

156 - Consumer Engagement, Empowerment, and Wellbeing in Online Mental Health Communities: An Empirical Study with Implications for Health Management - *Kendall Dent, Shahriar Akter, Corinne Cortese*

167 - Exploring the Impact of Psychosocial Safety Climate on Organisational Citizenship Behaviour: A Pathway to Enhanced Organisational Well-Being - *G.G. Udaya Priyasantha Rathnayake, Anil Chandrakumara, Anura De Zoysa*

336 - Revisiting Intergenerational Practice (IGP) Theory: A Decade On - *Gaery Barbery, Natalie Reyes Bernard, Jennifer Kosiol, Anneke Fitzgerald*

PSNFP | Venue: 67.301 | Session chair: Dinah Hippolyte-Blake

33 - Psychological Safety Climate, Human Resource Practices, Employee Wellbeing of Public and Private Healthcare and Engineering Professionals - *Yvonne Brunetto, Matthew Xerri, Geremy Farr-Wharton, George Kominis*

55 - Talent Value and the Impact of Context on Australian Public Service Talent Management Architecture - *Max Rixe*

298 - Valuing Phar Lap: Construction of a New Classification System for Collections Valuation at Melbourne Museum (1995-2016) - *Erica Coslor, Vanessa Pouthier, Yuval Millo*

301 - Crisis Leadership: Unpacking Effective Leadership Attributes in the Australian Not-for-Profit Sector During COVID-19 Pandemic - *Ataus Samad, Khalil Al Jerjawi*

SESSION 6: PAPERS & WORKSHOPS CONTINUED

Time: 9.00am - 10.40am

Workshop | Venue: 67.208 | Session chair: Paul Hibbert

W14 - Building on research in the classroom: Developing your impact as a management educator through scholarly journal publication - S*tuart Middleton, Paul Hibbert, Martyna Śliwa, Marissa Edwards*

Understanding the distinctive focus of the main management education journals is vital in enabling potential authors decide the most appropriate outlet for their manuscript. Journals in this field are characterised by different methodological, philosophical, theoretical and practical orientations and traditions. Authors are therefore more likely to find success with publishing their work if they understand the background of each journal and how they might engage with previously published work. Understanding also entails appreciation of the topics and areas where journal editors, reviewers and readers have an interest in seeing further research develop, and how work in these traditions is shaped for successful publication.

This workshop will help scholars to position their work thoughtfully in the overlapping spaces occupied by the different management learning and education journals, through highlighting key success (and failure!) criteria, helping participants learn from successfully published exemplar papers, and offering direct one-to-one feedback to potential authors on their draft papers or management education project ideas.

South coast of NSW

MORNING TEA

Time: 10.40am - 11.10am
Venue: Foyer

Today's catering is brought to you by Aunty Donna, a Bundjalup woman. The slices and cheesecakes incorporate traditional Indigenous ingredients.

Left: Australian fingerlimes

SESSION 7: KEYNOTE - BRENDAN MOYLE

Time: 11.10am - 12.00pm
Venue: 67.107
Session chair: Associate Professor Shamika Almeida

LUNCH

Time: 12.00pm - 1.00pm
Venue: Foyer

SESSION 8: ANZAM AWARDS AND AGM

Time: 1.00pm - 2.30pm
Venue: 67.107
Session chair: Professor Kevin Lowe

AFTERNOON TEA

Time: 2.30pm - 3.00pm
Venue: Foyer

SESSION 9: WORKSHOPS, PAPERS & INTERACTIVE PRESENTATIONS

Time: 3.00pm - 4.40pm
Venue: Concurrent sessions across Building 67

Workshop | Venue: 67.303 | Session chair: Lynnaire Sheridan
W4 - Leading in higher education: Bring your uniqueness and prepare to rise to the challenge! - *Lynnaire Sheridan, Ann Rogerson, Diane Ruwhiu, Shahriar Akter, Shamika Almeida.*

Are you seeking to make a difference within your department, faculty, or university? It is challenging as an early to mid-career researcher to understand what leadership roles in higher education encompass, let alone perceiving that we might be a good fit. When we do take up these types of roles, we have often waited too long, which has consequences for our careers as leadership is intrinsically linked to academic progression. This workshop is designed to introduce to you a panel of higher education leaders in academic, research and EDI / Indigenous leadership. Through their stories and anecdotes, we hope that you will identify with one or more of these leaders. In the workshop you will then:
- Identify the skills and personality traits required for different leadership roles.
- Understand how your current academic activities comprise leadership
- Identify activities that you could, in the short to medium term, engage in to develop your leadership skill-set in preparation for formal roles
- Strategically plan towards leadership roles that you have identified as a strong personality and skill fit.

Workshop | Venue: 67.301 | Session chair: Tine Köhler
W5 - Strengthening alignment of theory and methods in management studies - *Paula O'Kane, Paul Hibbert, Tine Köhler, Bill Harley.*

We want to critically examine the correspondence between theory and methods and advance scholarly work by discussing the relationship and interaction between theorizing and the application of research methods. We have observed that investigators are too often concerned with how methods are carried out, i.e., which steps they need to follow, and which analyses they need to run when employing method X, especially when determining rigor. However, rigor in most author's (and reviewers') understanding has devolved into something of a yardstick that measures whether an author followed the same steps followed in previous work, rather than a larger evaluation of the degree to which the design and methods are in line with the actual research questions, the specific research context, and the larger epistemological background of the study (Harley & Cornelissen, 2022; Köhler, Smith, & Bhakoo, 2022). Consequently, as editors and editorial board members, we have witnessed the application of many sophisticated statistical techniques in quantitative work or templated application of a coding scheme in qualitative work, which do not in fact lend themselves to the evaluation of the research questions or hypotheses all that well. On the flipside, in some cases, we see authors make adjustments to methods for no apparent reason, other than to increase the likelihood of producing a particular outcome of their research (e.g., Cortina, Green, Keeler, & Vandenberg, 2017; Heggestad, Scheaf, Banks, Monroe Hausfeld, Tonidandel, & Williams, 2019). Both of these trends are worrisome, particularly when considering (re)emerging themes in organization studies, like time, space, and people. In this symposium, we present and discuss theoretical and methodological concerns, novel techniques, and ways forward to foster a more appropriate union of theory and method.

SESSION 9: WORKSHOPS, PAPERS & INTERACTIVE PRESENTATIONS CONTINUED

Time: 3.00pm - 4.40pm

Workshop | Venue: 67.201 | Session chair: Katina Michael

W6 - Empowering Employees in Organizations using Empathy: Applying Design Thinking Practices in the Pursuit of Cultural Change Aiding in Successful Innovation and Business Transformation - *Katina Michael, Belinda Gibbons, Tim Vo, Amanda Winks, Monique Watts.*

In this workshop, attendees will learn about the first phase of the design thinking process known as "empathy", before setting out on even defining a business problem or challenge. They will reflect on the inward mindset and outward mindset and be introduced to (1) a mindfulness exercise; (2) real-world cases where empathy has been applied in a personal business context, departmental, and organization-wide and the commensurate results; and (3) interventionist activities that can impact positively on organizational behaviour, leadership, and ultimately successful innovation.

Workshop | Venue: 67.203 | Session chair: Janis Wardrop

W7 - Showcase: Innovations in Management Education - *Stuart Middleton, Janis Wardrop, Helen Parker, Geoff Chapman.*

As Universities struggle with the challenges brought about by technological change and increasing student attrition rates, it is more important than ever to develop and implement effective and engaging classroom experiences. This workshop is an opportunity to participate in a showcase of innovative teaching practices. In the workshop we will present four different teaching activities that can be adopted in 'management classrooms' across different cohorts (undergraduate, pre-experience postgraduate, to post-experience postgraduate courses). Each presentation in the showcase will include an experiential component, where participants engage 'as students in a classroom', and a 'warts and all' summary of the challenges and benefits encountered when adopting the innovation.

HRM Interactive | Venue: 67.101 | Session chair: Marian Crowley-Henry

214 - Artificial Intelligence: Enhancing Algorithmic Platforms While Diminishing Workers' Well-Being - *Vishit Trivedi*

215 - Why Human Resource Management Personnel Sides with Management and Fails to Deal with Bullying to the Bullied Employee's Satisfaction - *Clive Boddy*

263 - Expatriate Management in the New Millennium Era: A Two-Study Perspective - *Charvi Hasmukh Shukla*

272 - A Moderated Mediation Model of Line Manager Human Resource (HR) Implementation: The Interplay of Beliefs, Motivation, and Attribution of Intended HR Practices - *Andrew Ng, Hugh T. J. Bainbridge, Karin Sanders*

SESSION 9: WORKSHOPS, PAPERS & INTERACTIVE PRESENTATIONS CONTINUED

Time: 3.00pm - 4.40pm

OB | Venue: 67.107 | Session chair: Andrei Lux

37 - Work Passion: A Leadership Perspective - *Velina Serafimova, Denise Jepsen*

281 - When Followers Disgust Toward the Humble Leaders: Roles of the Attribution Process - *Fu Chen Kuo, Chia-Yen (Chad) Chiu, Nai-Wen Chi*

319 - Exploring the Relationship Between Pro-Social Motivation and Taking Charge Behaviour in Nurses: A Moderated Mediation Model - *Mit Chandresh Vachhrajani, Sushanta Kumar Mishra, Himanshu Rai*

326 - Understanding Team Processes: The Role of Transition and Action Phases in Leadership Effectiveness in Extreme Team Contexts - *Linda Baulecke, Jan Schmutz*

391 - Managing Non-Family Employees' Brand Citizenship Behaviour in Family-Owned SMEs: Investigating the Role of Family Members' Leadership Styles and Brand Psychological Ownership - *Muhammad Bilal Mustafa, Mohsin Altaf, Umer Asif*

OB Interactive | Venue: 67.208 | Session chair: Rebecca Dong

47 - Well-Being of Formal Leaders: A Critical and Interdisciplinary Review of Predictors Shaping Leader Well-Being - *Burak Oc, Kraivin Chintakananda*

50 - Tailoring Work Redesign Through Idiosyncratic Deals to Enhance Burnout Recovery: The Roles of Occupational Future Time Perspective and Perceived Control of Time - *Rui Zhang*

74 - The Role of Dark Leadership Triad and Leader Psychological Capital in Influencing Employee Outcomes and Attitudes: The Mediating Role of Employee Psychological Capital and Moderating Role of Leader-Member Exchange Relationship - *Saeed Loghman, Mauricio Ramirez-Perez, Maree Roche*

136 - Reimagining the Phenomenon of Continual Change from an Employee-Centric Perspective: A Conceptual Model - *Paulette Brazzale*

SSI Interactive | Venue: 67.104 | Session chair: Krishnan Navaneetha

89 - Exploring the Role of Corporate Social Responsibility (CSR) Towards Achieving Saudi Vision 2030 - *Abdulaziz Alessa*

159 - Visibility as the Conceptual Basis for Improving Corporate Responses to Modern Slavery Transparency Legislation - *Bruce Pinnington, Martijn Boersma*

236 - Evolving Managerial Cognition for Sustainability: Insights from a Longitudinal Study on a Leadership Training Program - *Leonie Paul, Juha Väätänen, Hardik Bhimani, Anne-Laure Mention*

294 - Critical Systems Heuristics as a Hermeneutical Framework: Insights from Modern Slavery Reports of ASX50 Companies - *Jonathon Mackay, Ed Wray-Bliss*

SESSION 9: WORKSHOPS, PAPERS & INTERACTIVE PRESENTATIONS CONTINUED

Time: 3.00pm - 4.40pm

GDI Interactive | Venue: 67.102 | Session chair: Judy Lundy

289 - Creative Careers and Issues of Gender Inequity in Independent Filmmaking in Australia - *Louise Ingersoll*

296 - "I Don't Want to Make This Such a Gender Thing": The Place of Gender in Implementing Domestic Violence Policies - *Ruth Weatherall, Mihajla Gavin*

327 - Unpacking Community Resilience: Investigating Key Dimensions in an Indigenous Community Context - *Monika Gupta Preeta George, Dhirendra Mani Shukla*

359 - International Scholars and Gender Dynamics in Evaluation and Selection of Early-Career Researchers - The Case of Taiwan - *Nurbibi Datova, Thijs A. Velema*

421 - The "Real Lives" of Professional Working Mothers with Children in Their Early Years: A Socio-Ecological and Conservation of Resources Approach - *Afrouz Shoghi, Amanda Biggs, Ashlea Troth*

LGS | Venue: 67.202 | Session chair: Sardana Khan

12 - The Effect of Heterogeneous Ownership on Firm Performance in Nascent Fields - *Sihong Lu, Di Fan, Timothy Bartram*

81 - The Effects of Family Involvement on Corporate Governance and Firm Performance: a Study on Taiwanese Publicly Listed Companies - *Nguyen Duong, Shyh-Jer Chen, Phuoc Nguyen*

87 - Neurodivergent Women in Leadership: Challenges, Strengths, and Strategies for Organizational Inclusion - *Sugandha Deva, Debora Gottardello, Susan Elaine Murphy*

370 - Rediscovering Effective Leadership Attributes During Crisis in Australian Higher Education Context - *Ataus Samad, Michael Muchiri, Ancy Gamage*

385 - CEO Overconfidence Heterogeneity and Mergers and Acquisitions - *Huiting Wang*

LGS Interactive | Venue: 67.209 | Session chair: Subba Yarram

216 - Ego-Driven Fear Overrides Rational Managerial Decision-Making - *Gergely Duh, Leonie Hallo, Tiffany De Sousa Machado*

255 - The Responsible Leadership Mindset: The Influence of the Mind in the Emergence of Responsible Leadership - *Alice Rickert*

373 - Effective Collaboration in Collaborative Infrastructure Projects - *Kobra Gharouni Jafari, Lara Mottee, Jennifer Whyte*

BPISC Interactive | Venue: 67.302 | Session chair: Vipul Jain

11 - Components of Circular Supply Chains - A Design Guide - *Peter Robertson, Matthew Pepper*

41 - Power Structure in New Product Development Projects: Past, Present, and Future Research Directions - *Chia-Yang Chang*

194 - Partner Selection and Strategic Alliance Formation in the Incubation Stage - *Gaomin Liu*

249 - Analysing Critical Success Factors of Medium and Large Construction Projects Using Fuzzy Analytic Hierarchy Process - *Neda Kiani Mavi, Kerry Brown, Richard Fulford, Mark Goh*

414 - Conceptualizing an Innovative Supply Chain Model for Electronic Vehicles - *Yu Cui, Prakash Singh*

DAY 3 PROGRAM: THURS 5 DECEMBER 2024

SESSION 10: KEYNOTE - PROFESSOR CORINNE CORTESE

Time: 9.00am - 9.40pm
Venue: 67.107
Session chair: Professor Ruth McPhail

Time: 9.40am - 9.50am
Short sponsor address
®RESEARCH2U

SESSION 11: PAPERS & WORKSHOPS

Time: 9.50am - 11.30am
Venue: Concurrent sessions across Building 67

HRM | Venue: 67.101 | Session chair: Joanne Mutter
58 - Hybrid Working Dual-Career Couples: A Proposed Typology - *Joanne Mutter*
304 - The Effects of HR Strength and Intra-Group Identification on Employee Performance in Bangladeshi Banks - *Sardana Islam Khan, Timothy Bartram, Jillian Cavanagh, Pradeepa Dahanayake*
306 - Reducing Job Content Plateau and Job Insecurity Through Workplace Friendship and Knowledge Transfer - *Yu-Ying Lu, Chien-Chung Kao, Wei-Yu Chen, Yu-Husan Wang*
365 - Workforce Localization: A Systematic Review, Advances, and Future Research - *Ali Faqihi, Heidi Wechtler*

OB | Venue: 67.107 | Session chair: David Cheng
189 - The Use of Experimental Designs to Examine Causality in Authentic Leadership: A Scoping Review - *Ann Dadich, Ling Abbott, Andrei Lux, Kevin Lowe*
190 - Am I Immune to Leaders' Lies? The Role of Leader Narcissism and Verbal Deception on Followers' Workplace Dignity and Job Performance - *Menaka Hewawaduge, Mario Fernando, Kumar Biswas*
191 - Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect - *Yu-Ting (Roxie) Liu*
203 - From Calling to Rest: The Mediating Role of Work-Life Enrichment in Linking Calling to Sleep Quality, and the Moderated Effect of Overtime Frequency - *Amber Yun-ping Lee, Po-Chien Chang, Heng-Yu Chang*
209 - Unraveling the Roots of Quiet Quitting: Antecedents and Scale Development - *Somayeh Bahmannia, Darren K.B., Kevin Lowe, Daan van Knippenberg*

SSI Mixed | Venue: 67.104 | Session chair: Krishnan Navaneetha
17 - How Healthcare Professionals and Their Families Experience and Cope with Work-Related Sacrifices - J*ames Greenslade-Yeats, Tago Mharapara, Janine Clemons, Katherine Ravenswood, Gil Kirton, Lesley Dixon, Nimbus Staniland*
129 - Employees' Perception of Corporate Social Responsibility, Ethical Leadership, Scepticism Toward CSR and Meaningfulness at Work - Deki Choden, Mehran Nejati, Ben Farr-Wharton, Azadeh Shafaei
155 - Multistakeholder Initiatives for Sustainability: How Actors Perceive Legitimacy - *Kate Arnautovic*
379 - Interactive - Navigating Digital Sustainability in Large Firms: Top Management Perspectives - Manjari Srivastava, Satish Sinha, Laszlo Sajtos, Hanoku Bathula, Rahul Singh

SESSION 11: PAPERS & WORKSHOPS CONTINUED

Time: 9.50am - 11.30am

GDI | Venue: 67.102 | Session chair: Lynnaire Sheridan
46 - "Too Poor, Too Shameful, Too Boring": Pacific Workers' Responses to Workplace Literacy and Numeracy Courses in New Zealand - *Betty Ofe-Grant*
61 - Women at the Helm: Identity Anchors as a Navigation Tool in Academic Career Progression - *Iresha Donmanige, Shamika Almeida, Betty Frino, Rebekkah Middleton*
274 - Beyond the Art in the Boardroom: How First Nations and Australian Listed Companies Partner for the United Nations Sustainability Goals - *Jacki Johnson, Paul Gollan, Mario Fernando, Catherine Moyle*
284 - Wāhine Māori Entrepreneurs and Business Growth: The Power of Social and Cultural Capital - *Tui MacDonald, Jason Mika, Brad Jackson*
360 - Indigenous Social Innovation and Whānau-Centred Design Within Bureaucracies - *Jason Mika, Xiaoliang Niu, Chellie Spiller, Jarrod Haar, Matthew Rout, John Reid, Tane Karamaina*

ESME | Venue: 67.201 | Session chair: Marissa Kaloga
39 - Against the Clock: Leveraging Time Perception and Delegation for Enhanced Crisis Resilience - *Aureliu Sindila, Xueyong Zhan*
109 - Synergizing Lean Startup and Effectuation Principles for Rural Entrepreneurship - *Jayshree Patnaik*
111 - "Just in Time" to "Just in Case" – Resilience Building by Women Entrepreneurs Through Value Constellations - *Kajari Mukherjee*
283 - Towards a Typology of Indigenous Businesses - *Michelle Evans, Admiral Manganda, Dinah Hippolyte Blake, Mitchell Hibbens*
285 - Entrepreneurial Opportunity and Institutional Void in Emerging Markets: Current State and Future Directions - *Md Reaz Uddin, Sara Ekberg, Gloria Ge*

Workshop | Venue: 67.303 | Session chair: Bill Harley
W8 - Managing Career Tensions: Strategies for Making Tensions Productive, Not Destructive - *Lisa Callagher, Bill Harley, Paul Hibbert, Tine Köhler, Paula O'Kane.*

As academics we typically work in large, complex organisations, in which there are numerous and sometimes competing demands for our time and energy. Moreover, as well as having a high degree of autonomy in some areas of our work, for example the topics we research, we are members of highly structured and often tightly managed bureaucracies and subject to numerous performance measures. The range of choices we have about how we structure our activities, the complex nature of the organisations we work in, and the pervasiveness of management systems can create significant tensions. Further, our academic careers are just one part of who we are and of our lives, which adds additional complexity. Examples of the kind of tensions we confront are, how can we balance our departments' need for us to do admin and teaching with our desire to maintain an active and meaningful research life? How can we reconcile the need for short-term research outputs to meet performance targets with the desire to do long-term projects which may not immediately bear fruit? How can we balance the need to undertake output-focused tasks and projects with the desire to maintain meaningful relationships with colleagues? How can we balance conventional career goals with our non-work activities and identities? We constantly must confront tensions such as these, as we attempt to build meaningful lives at work. The specific tensions we face are likely to change as we move through different phases of our careers. This workshop is intended to help scholars at all career stages, but particularly those at early- to mid-career stage, to think about ways not just to navigate these tensions, but to use them productively to explore different career pathways and grow both professionally and personally.

SESSION 11: PAPERS & WORKSHOPS CONTINUED

Time: 9.50am - 11.30am

Workshop | Venue: 67.202 | Session chair: Victoria Lister
W9 - Celebrating the impact of HDR management research with industry stakeholders outside of academia - *Wayne Graham*, *Victoria Lister, Alina Haider, Inkah Fischer*.
Increasingly, business schools are being asked to consider how HDR research – and researchers – can be better linked to industry, yet few business schools have mastered this type of collaboration or have considered how it might best be implemented. In this workshop, we showcase HDR-industry collaborations that yielded outcomes for industry partners and demonstrate how such collaborations are developed, sustained and supervised. Case studies highlighting three highly successful student-industry partnerships will pave the way for discussion of the 'how tos' from the student and supervisory perspectives, including how industry-HDR collaborations can result in robust academic outcomes for both parties. The case studies will also highlight the impacts of such research on industry, all of which have been profound. The workshop, facilitated by experienced 'pracademics', will include discussions on three topics: HDR students with academic career objectives, HDR students with non-academic career objectives, and HDR supervisors. HDRs, early career academics, supervisors, directors of research and teaching and learning, heads of schools and all interested parties are encouraged to attend this 'future-forward' workshop.

Workshop | Venue: 67.203 | Session chair: Rebecca Mitchell
W10 - Wellbeing@Work SIG Symposium: Emerging research and an exploration of Women's Wellbeing at Work - *Rebecca Mitchell, Chen-Bo Zhang, Belinda Steffan, Debora Gottardello, Paula Brough, Helen De Cieri, Lan Snell*.
This symposium will a) provide an exciting developmental opportunity for HDR and ECR scholars b) showcase the world-leading and impactful research on women's wellbeing at work that is being led by research centres across Australia, Canada, and the UK and b) facilitate collaborations on exciting workplace health and wellbeing issues with the aim of fostering excellent and impactful research. Attendance will provide insights into some exciting emerging themes and projects.
We aim to strengthen our understanding of the impact, mechanisms, and boundary conditions of how societal, environmental and geo-eco-political transitions influence workforce wellbeing and mental health. We hope our symposium will guide and inspire future research and practical interventions and managerial practices to enhance employee health and wellbeing.

Workshop | Venue: 67.302 | Session chair: Subha Parida
W11 - The Future of Business: Launching the Sustainability and Responsible Management SIG - *Subha Parida, Mehran Nejati, Subas Dhakal, Kerry Brown*.
The SRM SIG is thrilled to announce its official launch at the ANZAM conference with an exciting 'Meet and Greet' event. This workshop aims to bring together academics and professionals dedicated to advancing sustainability and responsible management in business. The session will feature networking opportunities designed to foster collaboration and idea exchange. Attendees will hear from thought leaders and practitioners who are at the forefront of implementing sustainable practices in their organizations.

By attending this workshop, participants will:
- Network with like-minded professionals and academics.
- Explore opportunities for collaborative research and projects.
- Contribute to shaping the future direction of the SIG.

Whether you are already working in the field of business and sustainability nexus or are new to the arena, this event is an invaluable opportunity to connect, learn, and inspire. Join us in celebrating the launch of the SRM SIG and become a part of this exciting journey.

MORNING TEA

Time: 11.30am - 12.00pm
Venue: Foyer
MC: Professor Mario Fernando
The Centre for Cross Cultural Management (CCCM) is a research centre dedicated to advancing, applying and promoting theory and practice on cross-cultural and intracultural management in organizations.

THIS EVENT IS SPONSORED BY

SESSION 12: PAPERS, WORKSHOPS & INTERACTIVE PRESENTATIONS

Time: 12.00pm - 1.40pm
Venue: Concurrent sessions across Building 67

Workshop | Venue: 67.303 | Session chair: Farveh Farivar
W12 - Launch the Research Methods SIG: Current challenges and advances in research methods - *Tine Köhler, Paula O'Kane, Farveh Farivar, Bill Harley, Gordon Cheung, Paul Hibbert.*

Join us as we launch the new Research Method SIG (RMSIG) with an expert panel, discussing some of the key challenges and advancements in research methods in the field. ANZAM attendees can engage with the existing research methods community at ANZAM and inform our future offerings as part of the RMSIG's service to ANZAM. In this panel workshop, we will discuss what constitutes a methodological contribution to our field, where research methods manuscripts can be published, and how we can make them relevant to a local (Australia and Aotearoa, New Zealand) and global audience. This session aims to bring together researchers in the methods community in ANZAM and ANZAM members interested in pursuing a scholarship in research methods or getting further training in methods. As part of the workshop, we will provide an opportunity to hear what ANZAM members would like the new SIG to focus upon and how the SIG can address current research methods development needs. This is an opportunity to hear from experts and to influence the direction of our new particular interest group.

SESSION 12: PAPERS, WORKSHOPS & INTERACTIVE PRESENTATIONS CONTINUED

Time: 12.00pm - 1.40pm

Workshop | Venue: 67.208 | Session chair: Catherine Collins

W13 - Co-designing management research and industry engagement for impact: An important process for addressing societal challenges - *Catherine Collins, Marek Kowalkiewicz, Matthias Haeusler, Kathlyn Loseby, Anya Johnson, Helena Nguyen.*

The workshop brings together academics with a track record of co-designing management research and industry engagement with partner organisations. This process involves academic and industry stakeholders collaborating to problematize a phenomenon and co-design a research agenda, including research questions, methods, and strategies for utilising the resulting knowledge for industry engagement. The workshop takes a broad view of industry stakeholders, including leaders from organisations and industry bodies, as well as those representing frontline employees and the general public, such as unions and think tanks.

Workshop | Venue: 67.301 | Session chair: Roslyn Cameron

W15 - Advances in Mixed Methods Research Designs and MMR Notation Systems - *Roslyn Cameron, Anneke Fitzgerald.*

The Workshop will provide an update on Advances in Mixed Methods Research Designs and MMR Notation Systems. Topics to be covered include innovations in MMR designs that better reflect rapidly changing business contexts, complex research problems, new advances in mixing of methodologies and the new extended MMR notation system which assists in the rigorous reporting of innovative and complex MMR studies. The Workshop will provide guidance for editors, reviewers, supervisors, examiners, researchers and HDR students alike. We encourage attendance to those who utilise MMR and want to take note of the recent advances, those new to or curious about MMR, supervisors and HDR students navigating their way through MMR and reviewers and journal editors.

SESSION 12: PAPERS, WORKSHOPS & INTERACTIVE PRESENTATIONS CONTINUED

Time: 12.00pm - 1.40pm

HRM | Venue: 67.101 | Session chair: Justine Ferrer

141 - A Systematic Literature Review on Neurodiversity in Human Resource Management Research - *Jim Andersén, Kirsi Minkkinen*

121 - *Perceived AI Explainability and Employee Job Crafting: The Role of Ethical Climate - Tianyi Long, Ran Xiao*

202 - Human Resource is Not a Resource at All: A Return-on-Investment Perspective - *Wahed Waheduzzaman, Justine Ferrer*

278 - A Tale of Two Apps: What Platforms Offer and What Workers Want - *Lutfun Nahar Lata, Andreas Pekarek, Josh Healy*

297 - Investigating Alternative Pathways of Justice Perceptions and Appraisal Politics Perceptions: Role of LMX and Perceived Control - *Ravi Krishna Gupta, Amit Dhiman, Rajiv Kumar*

HRM Interactive | Venue: 67.201 | Session chair: Tianyi Long

115 - Myth or Reality: Do Sustainable Practices Make a Hotel an Employer of Choice for Gen Z? - *Renata Casado, Benita Hube, Doina Olaru*

161 - Using Resilience-Enhancing HRM to Lessen the Negative Effects of Techno-Stress on Customer-Oriented Prosocial Behaviors - *Daniel Asante, Eric Asante*

266 - Sustainable Behaviour at Work: The Role of HRM, Goal Clarity and Commitment - *Joe Cooper, Nataliya Podgorodnichenko, Fiona Edgar*

383 - Effective Conflict Resolution and Negotiation Techniques in Managing Staff During Technological and Process Change: An Interpretivist Approach - *M. J. Hourani, Sean Quifors*

OB | Venue: 67.107 | Session chair: Victoria Lister

219 - Employee Responses to Dark Leadership: The Role of Followers' Envy in Knowledge-Hiding Dynamics - *Fangping Zhao, Karen Tian, Heidi Wechtler, Judith Zhu*

229 - When Work Passion Loots Leisure Time: Exploring the Dual-Edged Effect of Passion on Employee Time Poverty and Dehumanization Experiences - *Shilpa Chingan Thottathil, Manoranjan Dhal, Kapil Verma*

240 - Silent Struggle for Mature-Aged Employees: How Relational Age and Voice Behavior Shape Co-Worker Trust and Task Performance in Professional Teams - *Chia-yen Chiu, Sanjeewa Perera, Valerie Caines*

259 - Examining the Interpersonal Consequences of Proactive Work Behaviour: Can Proactivity Hurt Co-Worker Relationships? - *Candice Wray, Chien-Chung Kao, Yu-Hsuan Wang*

269 - Outcomes of Employee Voice and Silence: A Systematic Literature Review - *Ghulam Mustafa Mir, Shamika Almeida, Uraiporn Kattiyapornpong, Martin O'Brien*

SSI | Venue: 67.104 | Session chair: Jonathan Baker

174 - Development in the Context of Electrification and the Lithium Industry: The View of the Citizens of San Pedro de Atacama - *Eduardo Ordonez-Ponce*

232 - A Multi-Level, Multi-Actor Exploration of Moral Market Failure - *Jonathan Baker* 2023 ANZAM EXCELLENCE AWARD WINNER

256 - Exploring the Correlation Between the Quality of Service and the Customer's Experience on Level of Satisfaction, and Likelihood to Return and Recommend the Service to Others - *Ngan Nguyen Hoang Thanh, Lee Lichang, Hong Son Vo*

262 - System-Level Barriers to Circular Market Emergence - *Rico Boesch, Julia Fehrer, Paavo Ritala, Joya Kemper*

292 - Social Value Creation as Care: Comparing the Stakeholder Perspectives of Beneficiaries and Social Entrepreneurs - *Diana Lorenzo-Afable*

SESSION 12: PAPERS, WORKSHOPS & INTERACTIVE PRESENTATIONS CONTINUED

Time: 12.00pm - 1.40pm

GDI Mixed | Venue: 67.102 | Session chair: Jason Mika
97 - Capitalising Equality: Feminism and Firm Drivers of Australian Women in Corporate Leadership, 1986 - 2018 - *Claire Wright*
162 - Victorian Treaty Through an Indigenous Lens: Incorporating Collective Leadership, Voice, and Identity - *Kevin Moore, Pauline Stanton, Mark Jones*
335 - Equality, Diversity and Inclusion in the Aftermath of the Covid-19 Pandemic: The Changing Dynamics of Job Satisfaction in the UK's Research and Innovation Ecosystem - *James Richards, Siddhartha Saxena, Kate Sang*
384 - Identified Positions: What Are They and Why Do We Have Them - *Emma Olssen*
334 - Interactive - *Fatherhood and Work-Life Balance: An Ethnographic Study from Lens of the Divorced and Separated Men - Charvi Hasmukh Shukla*

LGS | Venue: 67.202 | Session chair: Saima Ahmad
243 - The Rule of Heuristics Versus Dynamic Competitive Response - *Takhaui Kamzabek, Hayot Berk Saydaliev*
246 - An Empirical Investigation of Leaders' Downward Malicious Envy in Organisations - *Sabreen Kaur, Herman Tse, Nathan Eva*
265 - Shared Leadership in Filmmaking: A Collaborative Approach to Creativity - *Simon Minaee, Dominic Gasbarro*
277 - Leadership Styles for Integrating Emerging Technologies into Banking Operations: A Systematic Review, Synthesis, and Future Research Opportunities - *Brijesh Mysore Srikanth, Amlan Haque, Sardana Islam Khan*

BPISC | Venue: 67.302 | Session chair: Dilupa Nakandala
35 - A Dyadic Investigation of Product Characteristics, Relational Embeddedness, and Digital Transformation in Buyer-Manufacturer Relationships - *Natalia Szozda, Artur Świerczek*
68 - Dynamic capability for innovation in the heavy industry sector'- *Ryan Jang, Adela McMurray, Ann-Louise Hordacre, Tim Van Erp*
82 - "They Don't Know Till They See What 'It' Is Not": How Actors Coordinate for Distributed Innovation in Ecosystems - *Xianxian Jiang, Andrew Burton-Jones, Jörgen Sandberg*
101 - Necessary Conditions for Team Creativity: Composition and Competence - *Carlos Vazquez-Hernandez, Praveena Chandra, Stefan Breet*

BPISC | Venue: 67.203 | Session chair: Jaya Krishna Singu
151 - Use of Business Intelligence (BI) During Business Process Improvement Initiatives (BPIIs) - *Imesha Perera, Ahangama Abeygunasekera*
175 - Stimulating Socialization in Triads: The Impact on Partitional Ambidexterity and Relational Performance - *Artur Swierczek, Natalia Szozda*
180 - Broadening Our Lens: Four Theoretical Perspectives on Industry Incubation - *Gaomin Lui, Glenn Hoetker*
252 - Adopting and Domesticating Design Thinking Within Management Subfields: The Case of Sport Management - *Greg Joachim, Katie Schlenker, Stephen Frawley*
346 - Unveiling Antecedents of Blockchain Adoption in the Saudi Pharmaceutical Supply Chain: A Multi-Stakeholder Perspective - *Amani Jaha, Vinh Thai, Ahmad Abareshi*

LUNCH

Time: 1.40pm - 2.40pm
Venue: Foyer

SESSION 13: PAPERS, WORKSHOPS & INTERACTIVE PRESENTATIONS

Time: 2.40pm - 4.20pm
Venue: Concurrent sessions across Building 67

Workshop | Venue: 67.303 | Session chair: Andrew Creed

W16 - Academic collaboration as a motivational lynchpin of management research: An ERG perspective on group and individual impacts - *Andrew Creed, Ambika Zutshi, Diana Rajendran, Marzena Baker, Amrik Sohal, Pandula Gamage.*

Academic researchers are individualistic and competitive; however, collaboration proliferates because of the wider global competition among universities. This workshop facilitates insightful discussion of lynchpin motivations that may encourage or hinder academic collaboration. A specialised focus is on needs-based motivation offering opportunities for participant self-reflection, and improved management incentives maximising perceived and actual benefits from academic collaboration.

Workshop | Venue: 67.107 | Session chair: Elizabeth Nichols

W17 - Don't get mad, get equity: How can we support learning equity through critiquing the assumptions academics make about student skill development and knowledges prior to starting at university? - *Elizabeth Nichols, Lynnaire Sheridan, Virginia Cathro.*

Considering that students face significant adjustments when transitioning to university with research showing significant challenges in academic demands, living conditions, living environment, and social networks. In addition, university educators assume first-year students arrive at university with a set of skills especially the ability to communicate effectively, use technology, be organised, and work in teams to be successful at university. With tight university curricula, management scholars often 'just want to teach' disciplinary skills and knowledge. Anecdotally, however, many of us become frustrated as many first-year students don't possess the necessary skills and knowledges to arrive at the start line for their learning. While we acknowledge this current skills gap, we are also facing an emerging skills gap derived from societal level changes that are disrupting the future world of work (such as artificial intelligence). This workshop recognises the equity issues facing students as they transition to university. The workshop, then, seeks to overcome these inequalities by identifying current and emerging skills gaps before collaborating to share existing mechanisms and generate new ideas that management educators could implement to close the gap by delivering disciplinary-specific skills and knowledges.

SESSION 13: PAPERS, WORKSHOPS & INTERACTIVE PRESENTATIONS CONTINUED

Time: 2.40pm - 4.20pm

Workshop | Venue: 67.301 | Session chair: Roba Abbas, Savvas Pagagiannidis
W18 - Industry Engagement and Impactful Innovation - *Roba Abbas, Savvas Papagiannidis, Natalie Chapman, Jagdeep Singh, Ali Abbas, Yiyang Bian.*

The Industry Engagement and Impactful Innovation workshop will provide a forum for discussing and debating the opportunities and challenges associated with industry engagement in the context of innovation related research, specifically technological innovation and digital transformation. The workshop will also facilitate an exploration of the diverse forms or modes of industry engagement, including, but not limited to, contract research, collaborative research and industry focused schemes, short term projects, long term research partnerships and other academia-industry initiatives. With an emphasis on practice-based and practice-led research, and impactful industry projects, the workshop will support information and knowledge sharing toward the co-creation of an industry engagement and impactful innovation guide. It will additionally provide skills, professional development and collaborative opportunities for attendees interested in topics such as: (i) technology / digital transformation / information systems / operations management research; (ii) innovation related research more broadly; (iii) industry engagement best practice; and (iv) practice-based and practice-led research. This will be achieved by drawing on diverse experience, expertise, and project examples with the intention of shaping how industry engagement can be managed across distinct innovation contexts and projects. The workshop is also aimed at (higher degree research) students and early career researchers.

Workshop | Venue: 67.203 | Session chair: Fatima Afzal
W19 - From Theory to Practice: Transforming Group Work Assessment in Higher Education - *Fatima Afzal, Yvette Debergue, Roksana Tumpa.*

Three interactive activities form the core of the workshop. "Challenge Mapping" involves small group discussions to identify top challenges in group work assessments, encouraging reflection and insight sharing. "Solution Evaluation" presents specific research-derived solutions, with participants rating their potential effectiveness using a digital polling tool and discussing applications in pairs. "Action Planning" focuses on translating insights into practice, with participants developing and sharing actionable steps to improve their assessment practices. The workshop emphasises active participation, peer learning, and practical application. It concludes with a Q&A session and a summary of key points, ensuring participants leave with a clear understanding of the material and resources for further learning.

Benefits for participants will include enhanced understanding of current research and best practices in group work assessments, fostering a more reflective and informed approach to assessment design. Participants will develop tailored, actionable items for immediate implementation, leading to more effective and fair group work assessments. Network building with colleagues facing similar challenges potentially leads to future collaborations and ongoing professional development opportunities. Furthermore, the workshop's collaborative nature fosters a community of practice among participants. This community can serve as a valuable resource for ongoing support, idea exchange, and collaborative problem-solving long after the workshop concludes. This workshop offers a scholarly yet practical approach to enhancing group work assessment practices. By combining evidence-based strategies with interactive learning experiences, it provides participants with the knowledge, skills, and network to make meaningful improvements in their assessment practices, ultimately benefiting both students and educators.

SESSION 13: PAPERS, WORKSHOPS & INTERACTIVE PRESENTATIONS CONTINUED

Time: 2.40pm - 4.20pm

HRM & OB Interactive | Venue: 67.101 | Session chair: Justine Ferrer
110 - Union Voice and Campaigning, and a National Ban: The Case of Engineered Stone - Justine Ferrer, Peter Holland
332 - The Concept of Future of Work from the Standpoint of People, Processes, and Technology - *Charvi Hasmukh Shukla*
411 - Constant Connectivity and Its Impact on Employee Well-Being: A Mediating Role of Cognitive Overload and Mobile Work Device Anxiety - *Biswadeep Tamang, Aradhna Malik, Jaya Dantas, Piyush Sharma*
417 - Impact of Time-Independent Working and Location-Independent Working in Blended Work on Employee Job Performance - *Sasimali Attanagoda, Saima Ahmad, Argho Bandyopadhyay, Shae Fan*
98 - How Supportive Supervision Impacts Women's Careers in Patriarchal Contexts: The Mediating Role of Psychological Capital - *Ashraf Farzana, Denise Jepson, Raymond Trau*

SSI | Venue: 67.104 | Session chair: Paula O'Kane
119 - Understanding Food Waste Within the Aged Care Sector: A Systematic Review - Paula O'Kane, Elena Piere, Miranda Mirosa
314 - Deconstructing Impact Narratives in Impact and ESG Investing - *James Gordon, Israr Qureshi*
342 - Sustainability in Action: How Repair Cafes Support Environmental and Social Well-Being - *Mamun Ala*
104 - Love versus Power Orientation: Collective Imagination for a Desired Future in Rural Revitalization - *Haiying Lin*
407 - Corporate Social Responsibility and Green Behavior: Green Work Climate and Shared Vision Perspective - *Sara Kanwal, Saad Mahmood Bhatti, Muhammad Zia ul haq*

SSI Interactive | Venue: 67.208 | Session chair: Sardana Khan
299 - Standardising Boundaries and Factors: Enhancing Greenhouse Gas Emission Reporting in Higher Education Institutes - *Aththudawe Gamachchige Komudya Chathurangi Kumari, Mudiyansege Ishara Dilhari Ranathunga, Matthew Pepper, Clayton McDowell, Anura De Zoysa*
375 - Assessing Environmental Impacts of PSS Business Models from a Life Cycle Perspective: A Morphological Approach - *Hariharan Thangatur Sukumar, Jayakrishna Singu, S Navaneetha Krishnan, Krishna Kumar Balaraman*
381 - Unlocking Sustainable Success: Exploring the Positive - *Rosemary Sainty*

GDI Interactive | Venue: 67.102 | Session chair: Robert Hales
154 - A review of Indigenous Inclusion in Management Education - *Anna Young-Ferris, Kerry Bodle, Ranjit Voola, Robert Hales, Jubin John*
307 - The Veiled Threat: The Curse of Dowry Still Haunts the Poor Women of Bangladesh - *Laurel Jackson, Fazle Rabbi*
410 - "First Nations Charters" in Australia's Arts and Culture Sector: A Meaningful Alternative to Reconciliation Action Plans, or Just a Rose by Another Name? - *Rod Williams, Kate Power, Samantha Cooms*

SESSION 13: PAPERS, WORKSHOPS & INTERACTIVE PRESENTATIONS CONTINUED

Time: 2.40pm - 4.20pm

ESME | Venue: 67.209 | Session chair: Admiral Manganda
322 - Gender-Specific Differences in AI-Supported Credit Allocation to Female and Male Entrepreneurs - *Lina Uebbing, Lynn Schmodde, Marius Claus Wehner*
420 - Forecasting Start-up Pre-Money Value: A Comprehensive Approach Utilizing Machine Learning and Deep Learning Models - *Minnu Pynadath, Sam Thomas, Vivek Paulose*

ESME Interactive | Venue: 67.201 | Session chair: Vera Mackie
44 - Exploring Determinants of Competitiveness in Indian Tech Start-Ups: M-TISM Approach - *Khushnuma Wasi, Nakul Parameswar*
230 - Female Social Entrepreneurs in India and Impact of Familial Relationships - *Sadaf Khurshid, Vera Mackie*
374 - A Sociometric Analysis of Connectivity and Inclusion in an Aotearoa, New Zealand Entrepreneurial Support Ecosystem - *Marissa Kaloga, Rasha Abu Safieh*
400 - Technological Advancements and Their Impact on Marketing Strategies of SMEs in Qatar - *Hitmi Khalifa Alhitmi*

LGS & OB Interactive | Venue: 67.202 | Session chair: Katie Mcintyre
170 - Navigating Turbulence: Insights into Senior Leaders' Responses to Competitors' Misfortunes Based on Early Findings - *Sachinthanee Dissanayake, Mario Fernando, Kumar Biswas*
241 - A Mixed Method Approach to Designing the Joyful Leadership Scale: Translating Discrete Emotion Theory into a Validated Measurement Instrument - *Katie Mcintyre*
106 - OB Interactive - What Can Albert Bandura's Social Learning Theory Teach Us About Artificial Intelligence? - *Tanqueray Hart*

BPISC Mixed | Venue: 67.302 | Session chair: Ryan Jang
329 - A Hybrid Multi-Criteria Decision Making Approach for Supplier Selection in Industry 5.0 Era - *Anadi Gautam, Lohithaksha Maniraj Maiyar, Indira Roy*
233 - Reimagining the Workplace: Embracing an Aging Workforce, Artificial Intelligence, and Pet Robot Dogs in Innovative Workspaces - *Adela McMurray, Ashokkumar Manoharan, Bruno Pereira, Ryan Jang and Dr J Irudhaya Rajesh*
295 - Research in Progress: AI Readiness in Action: Driving Firm Performance through IT Ambidexterity - *Hatim Urabi, Jaeyoung Cho, Yiyang Bian*
424 - Analysing the Sustainability of Regional Supply Chains: A Study of Business Process Outsourcing in Fiji - *Yogita Swamy, Arun Elias, Mathew Pepper*

CLOSING DRINKS

Time: 4.30pm - 5.30pm
Venue: UniBar, Building 12
University of Wollongong

Join us for a laid-back finale at the UniBar, where we'll wrap up with a few drinks, tasty nibbles, and a good dose of mingling! It's the go-to spot where students and academics alike kick back, so come along, relax, and toast to another fantastic year of ANZAM insights and connections.

CONFERENCE
END!

Paper Number	Paper Title	Authors Name
117	Leadership Studies in Tourism and Hospitality: Paving the Way for Sustainable Development Goals - A Systematic Literature Review and Future Research Directions	Ngo Tinh Giang Nguyen, Heidi Wechtler and Po-Hsin Lai
123	Taking Stock of Responsible Leadership Research: A Systematic Literature Review and Research Agenda	Ngo Tinh Giang Nguyen, Heidi Wechtler and Po-Hsin Lai
137	Adding value: Engaging stakeholders in higher education via the course advisory committee	Katherine Attree and Jill Bamforth
138	Integrated Risk and Resilience for Complex System Governance—Renewing the Value of Algedonic Signal Warnings	Daniel Norris and Jeff Foote
141	A systematic literature review on neurodiversity in human resource management research	Jim Andersén and Kirsi Minkkinen
148	Ready, Set, Reform? Exploring not-for-profit practitioner perceptions of readiness	Aastha Malhotra, Luke Bayliss, Govind Krishnamoorthy, Nathan Beel, Carol Du Plessis and Lorelle Burton
151	Use of Business Intelligence (BI) during Business Process Improvement Initiatives (BPIIs)	Imesha Perera and Ahangama Abeygunasekera
154	A review of Indigenous inclusion in management education	Anna Young-Ferris, Kerry Bodle, Ranjit Voola, Robert Hales, Jubin John
161	Using resilience-enhancing HRM to lessen the negative effects of techno-stress on customer-oriented prosocial behaviors	Daniel Asante and Eric Asante
162	Victorian Treaty through an Indigenous Lens: Incorporating Collective Leadership, Voice, and Identity	Kevin Moore, Pauline Stanton and Mark Jones
166	Exploring the Effect of Boardroom Gender Diversity on Financial Constraints of Firms: An International Evidence	Shahid Md Shahiduzzaman, Priyantha Mudalige, Subba Yarram, Omar Farooque, Subas Dhakal and Sujana Adapa
178	Relationship between Psychological contract and use of technology at work: a scoping review	Aditi Jamil and Arash Mashhady
184	Unveiling The Unseen: Documenting Pacific And Māori Women Academics' Experiences Of Glass Ceilings And Mentorship In Australian Universities.	Tuma Fesaitu Grieg
191	Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect	Yu-Ting (Roxie) Liu
196	Deconstructing the holistic nature of employee experience: A sociological perspective integrating agency and structure	Ramanathan Iyer, Mohan Thite and Sangita De
198	Professional development for sessional academics: Quality and engagement enhancement	Thi Tuyet Tran, Carol Bond and Sam Wilkins
202	Human Resource is not a Resource at all: A Return-on-Investment perspective	Wahed Waheduzzaman, Justine Ferrer
212	Reconsidering the Concept of User Community as a Competitive Resource for User Entrepreneurs: A Case Study of a New Boutique Winery in Japan.	Naoki Teramoto, Tokiko Nakamura, Daisuke Nishi and Hirotoshi Fukuda
216	Ego-driven fear overrides rational managerial decision-making	Gergely Duh, Leonie Hallo and Tiffany De Sousa Machado
235	Changing skills for advanced manufacturing: How vocational education responds to industry needs	Jacqueline Greentree

Paper Number	Paper Title	Authors Name
236	Evolving Managerial Cognition for Sustainability: Insights from a Longitudinal Study on a Leadership Training Program	Leonie Paul, Juha Väätänen, Hardik Bhimani and Anne-Laure Mention
238	Exploring Resilience Development in a Poly-Crisis: A Study of International Entrepreneurial Firms in a Post-conflict Emerging Economy	Visitha Amaratunge, Pi-Shen Seet and Jalleh Sharafizad
239	Does the Workspace Matter?	Aditya Moses
252	Adopting and domesticating design thinking within management subfields: The case of sport management	Greg Joachim, Katie Schlenker and Stephen Frawley
256	Exploring the correlation between the quality of service and the customer's experience on level of satisfaction, and likelihood to return and recommend the service to others	Ngan Nguyen Hoang Thanh, Lee Lichang and Hong Son Vo
272	A moderated mediation model of line manager human resource (HR) implementation: The interplay of beliefs, motivation, and attribution of intended HR practices	Andrew Ng, Hugh T. J. Bainbridge and Karin Sanders
275	A Novel Methodology to Assess the Perspective of Indigenous Communities on Multinational Operations: The Case of Fiji	Jekope Maiono, Eduardo Ordonez-Ponce, Penina Waqatabu
284	Wāhine Māori entrepreneurs and business growth: The power of social and cultural capital	Tui MacDonald, Jason Mika and Brad Jackson
285	Entrepreneurial Opportunity and Institutional Void in Emerging Markets: Current State and Future Directions	Md Reaz Uddin, Sara Ekberg and Gloria Ge
287	Examining the Paradigmatic Perspective in the Management of the Supply Chain across the Reduction-Holism Spectrum via Semi-structured Interviews with Practitioners	Daniell Wilden
294	Critical systems heuristics as a hermeneutical framework: insights from modern slavery reports of ASX50 companies	Jonathon Mackay and Ed Wray-Bliss
297	Investigating alternative pathways of justice perceptions and appraisal politics perceptions: Role of LMX and Perceived Control	Ravi Krishna Gupta, Amit Dhiman and Rajiv Kumar
301	Crisis Leadership: Unpacking Effective Leadership Attributes in the Australian Not-for-Profit Sector during COVID-19 Pandemic	Ataus Samad and Khalil Al Jerjawi
310	Inclusive and Sustainable Learning in Elite Universities: An inductive study on the experiences of Widening Participation students in Scotland	Michelle O'toole and Susan Dunnett
328	Evaluating the 2022 New Zealand Health Reforms: Insights from Event System Theory	Adeel Akmal, Nataliya Podgorodnichenko, Robin Gauld and Tim Stokes
337	The effect of leaders' dispositional resistance to change on their health and wellbeing during organizational change: The role of emotion regulation and emotional intelligence.	Alan Hudson, Peter J. Jordan, Ashlea C. Troth
346	Unveiling Antecedents of Blockchain Adoption in the Saudi Pharmaceutical Supply Chain: A Multi-Stakeholder Perspective	Amani Jaha, Vinh Thai and Ahmad Abareshi
367	The Digital Disconnect: Unravelling the Impact of Work-related ICT use after hours on quiet quitting	Jasmine Ah Kiaw Phan and Siu Gek Khor

Paper Number	Paper Title	Authors Name
370	Rediscovering Effective Leadership Attributes During Crisis in Australian Higher Education Context	Ataus Samad, Michael Muchiri and Ancy Gamage
373	Effective Collaboration in Collaborative Infrastructure Projects	Kobra Gharouni Jafari, Lara Mottee and Jennifer Whyte
374	A Sociometric Analysis of Connectivity and Inclusion in an Aotearoa, New Zealand Entrepreneurial Support Ecosystem	Marissa Kaloga and Rasha Abu Safieh
382	Systems of Innovation: A Case Study on Artificial Intelligence and the Internet of Things (AIOT) in the Illawarra Region	Katina Michael
383	Effective Conflict Resolution and Negotiation Techniques in Managing Staff During Technological and Process Change: An Interpretivist Approach	M. J. Hourani, Sean Quifors
384	Identified Positions: what are they and why do we have them	Emma Olssen
400	Technological Advancements and Their Impact on Marketing Strategies of SMEs in Qatar	Hitmi Khalifa Alhitmi
408	Mapping sustainability and governance interplay in the blue economy: A bibliometric review of contributions from Australia	Chandima Jeewanthi Hapu Achchige, Harsha Sarvaiya and Robert Hales
414	Conceptualizing an Innovative Supply Chain Model for Electronic Vehicles	Yu Cui and Prakash Singh

ABSTRACT INDEX

Abstract Number	Abstract Title	Authors Name
9	Managerial Coaching and Readiness for Change	Grace McCarthy, Sonia Bird and Julia Milner
10	Dynamic Process of Entrepreneurship, Global Trade and National Economic Growth	Kai Du
12	The Effect of Heterogeneous Ownership on Firm Performance in Nascent Fields	Sihong Lu, Di Fan and Timothy Bartram
14	Absorptive capacity and organizational resilience as antecedents for organizational innovation capability to adopt Cobots in manufacturing: A conceptual framework	Nisar Ahmed Channa, Greg Hearn and Gian Luca Casali
16	AI-Powered Smart Cities for Children with Autism: Perspectives from Parents	Arshia Kaul, Debarati Basak, Vasundhara Kaul and Suman Ananthanarayan
17	How healthcare professionals and their families experience and cope with work-related sacrifices	James Greenslade-yeats, Tago Mharapara, Janine Clemons, Katherine Ravenswood, Gil Kirton, Lesley Dixon and Nimbus Staniland
24	Sustainable HRM: A Comprehensive Review of Antecedents, Strategies and Practices driving Tripple Bottom Line Performance	Muhammad Zia Ul Haq, Youqing Fan and Thomas Kliaukar
29	The complementarity of program logic and critical systems heuristics: Critical systems practice for the evaluation of Emergency Relief in Australia	Patrick McKenna
31	The Mediating Effect of Leader-Member Exchange and Psychological Capital on engineers' perception of their Psychosocial Safety Climate	Zack Deban, Nasim Saheli and Yvonne Brunetto
32	Network Marketing Organizational Process of Legitimation: Managing the Discrepancy between Internal and External Legitimacy	Fu Dai, Anthony Ng, Ian Eddie and Sarah Eyaa
33	Psychological Safety Climate, Human Resource Practices, Employee Wellbeing of Public and Private Healthcare and Engineering Professionals	Yvonne Brunetto, Matthew Xerri, Geremy Farr-Wharton and George Kominis
34	Enhancing Organizational Resilience in Non-profit Organizations: Is Following the for-profits' Strategies a Pitfall?	Aureliu Sindila and Xueyong Zhan
37	Work passion: A leadership perspective	Velina Serafimova and Denise Jepsen
38	Work passion contagion: A multiple mediation model	Velina Serafimova and Denise Jepsen

Abstract Number	Abstract Title	Authors Name
39	Against the Clock: Leveraging Time Perception and Delegation for Enhanced Crisis Resilience	Aureliu Sindila and Xueyong Zhan
40	Job demand, job satisfaction, and time management: Through a gender lens	Cassandra Xiaoyi Liang, Linh Bui and Guihyun Park
41	Power Structure in New Product Development Projects: Past, Present, and Future Research Directions	Chia-Yang Chang
42	The maverick organisation: An initial practice theory analysis of the field and valued capital in a Defence organisation	Amanda Van de Paverd, Ree Jordan and Victor James Callan
43	Protean Career Orientation and Turnover Intention: Exploring the Mediating Effect of Subjective Career Success	Hui Hui Teow, Wee Chan and Pervaiz Ahmed
44	Exploring Determinants of Competitiveness in Indian Tech start-ups: M-TISM approach	Khushnuma Wasi and Nakul Parameswar
46	"Too poor, too shameful, too boring": Pacific workers' responses to workplace literacy and numeracy courses in New Zealand	Betty Ofe-Grant
47	Well-being of Formal Leaders: A Critical and Interdisciplinary Review of Predictors Shaping Leader Well-being	Burak Oc and Kraivin Chintakananda
48	Double-face effect of cognitive diversity on self-organizing team creativity	Tian Wang, Rebecca Dong, Candy Ying Lu, Miles Yang and Jianhua Zhu
50	Tailoring Work Redesign through Idiosyncratic Deals to Enhance Burnout Recovery: The Roles of Occupational Future Time Perspective and Perceived Control of Time	Rui Zhang
51	Power Dynamics and Leader and Follower Identity Dynamics in Organizational Discourse	Rui Zhang
54	Vision 2050: A road map for shaping impact-driven future business schools	Hafsa Ahmed and Justine Ferrer
55	Talent Value and the Impact of Context on Australian Public Service Talent Management Architecture	Max Rixe
56	The Blended Workforce in the Public Service: Effects on Middle Manager Well-being – Lessons learnt from Australia	Vindhya Weeratunga and Fiona Buick
58	Hybrid working dual-career couples: A proposed typology	Joanne Mutter
61	Women at the helm: identity anchors as a navigation tool in academic career progression	Iresha Donmanige, Shamika Almeida, Betty Frino and Rebekkah Middleton

Abstract Number	Abstract Title	Authors Name
62	Integrating Goal Setting Theory and Self-Regulation of Emotions: Exploring the Interplay between Emotions and Goal Orientation on Performace Under Limiting Conditions	Shilpa Chingan Thottathil
64	The Subjective Career Crafting of Working Mothers	Marian Crowley-Henry
65	Exploring the factors promoting social acceptance of solar energy technologies	Jane Osei, Kerry Brown and Mehran Nejati
68	Dynamic capability for innovation in the heavy industry sector	Ryan Jang, Adela McMurray, Ann-Louise Hordacre and Tim Van Erp
74	The role of dark Leadership triad and leader psychological capital in influencing Employee outcomes and attitudes: the mediating role of employee Psychological Capital and moderating role of leader-member exchange relationship	Saeed Loghman, Mauricio Ramirez-Perez and Maree Roche
75	Turning a blind eye: How wilful ignorance manifested in the Morrison government's management of aged care	Ann Dadich, Abby Mellick Lopes
77	Justice and Job Crafting: The Role of Regulatory Focus and Leader Narcissism	Gabby K.P. Choi, Raymond Loi, Stephanie W.X. Wang and Fangjian Wu
81	The Effects of Family Involvement on Corporate Governance and Firm Performance: a study on Taiwanese Publicly Listed Companies	Nguyen Duong, Shyh-Jer Chen and Phuoc Nguyen
82	"They don't know till they see what 'it' is not": How actors coordinate for distributed innovation in ecosystems	Xianxian Jiang, Andrew Burton-Jones and Jörgen Sandberg
85	Say It Out Loud or Stay Silent: Consumer Effects and Mechanisms of CEO Activism	Niko Dellner
87	Neurodivergent Women in Leadership: Challenges, Strengths, and Strategies for Organizational Inclusion	Sugandha Deva, Debora Gottardello Susan Elaine Murphy
89	Exploring the Role of Corporate Social Responsibility (CSR) Towards Achieving Saudi Vision 2030	Abdulaziz Alessa
90	Integrating Lean, Green and Industry 4.0/5.0 for Improving the Performance of Manufacturing SMEs	Niranga Silva, Dilupa Nakandala and Richard Yang
98	How Supportive Supervision Impacts Women's Careers in Patriarchal Contexts: The Mediating Role of Psychological Capital	Ashraf Farzana, Denise Jepson, Raymond Trau
100	Hidden agendas: How organizational cultures influence dark triad leader behaviors	Katrin Riisla and Dritjon Gruda
102	Conceptualising Inclusive Communicative Leadership for Disability Inclusion	Ann Jacob, Leila Afshari, Adela McMurray, Nuttawuth Muenjohn and Michael Muchiri
104	Love versus Power Orientation: Collective Imagination for a Desired Future in Rural Revitalization	Haiying Lin

Abstract Number	Abstract Title	Authors Name
107	Exploring the referents of trust in algorithm aversion	Fatemeh Jafaralijasbi, Steven Lui, John Lai and Zhijing Zhu
108	Applying punctuated equilibrium theory as a time lens for exploring HR responses to the pandemic crisis across three national contexts	John Molineux, Roslyn Cameron and Reshman Tabassum
110	Union Voice and Campaigning, and a National Ban: The case of engineered stone	Justine Ferrer and Peter Holland
111	"Just in Time" to "Just in Case" – Resilience building by Women Entrepreneurs through value constellations	Kajari Mukherjee
113	Humorous job ads and job attractiveness	David Cheng, Miaojia Huang, Rajiv Amarnani and Alexander Eapen
114	A modified world café approach to identify the core components of palliative care models for underserved populations	Ann Dadich and Caroline Laurence
115	Myth or reality: Do sustainable practices make a hotel an employer of choice for Gen Z?	Renata Casado, Benita Hube and Doina Olaru
118	The erosion and restoration of women's leadership identity and confidence: The role of external and internal mentors	Carol Gill, Isabel Metz and Jody Evans
119	Understanding Food Waste within the Aged Care Sector: A Systematic Review	Paula O'Kane, Elena Piere and Miranda Mirosa
121	Perceived AI Explainability and Employee Job Crafting: The Role of Ethical Climate	Tianyi Long and Ran Xiao
122	Factors affecting Business leaders and Board members' Work Health & Safety Governance	Yvonne Brunetto, Leigh-Ann Onnis, Ben Farr-Wharton, Aglae Hernandez Grande
124	Exploring the relationship between spiritual intelligence and employee mental well-being of temporary migrant workers in Australia	Poornima Setty, Wahed Waheduzzaman and Diana Rajendran
126	Call Lean systems by any name, it spells the same operational wonders: Sharing a tale of two operations	Ram Roy, Nick Cordery and Phil Doran
127	The diversity of emotional intelligences: the role of job characteristics	Hélène Delerue and Virginie Moisson
128	Unleashing the roles of the GSCM committee and monitoring on business performance: an empirical study	Abdullah Al-mamun and Mehadi Al Mamun
129	Employees' Perception of Corporate Social Responsibility, Ethical Leadership, Scepticism toward CSR and Meaningfulness at Work:	Deki Choden, Mehran Nejati, Ben Farr-Wharton and Azadeh Shafaei
130	When Purpose Leads to Pain: The Role of Workplace Loneliness in Nursing Outcomes	Payal Anand
132	Interaction Effects of Workplace Stressors and Employee Resilience on Depersonalization and Turnover Intentions	Samina Quratulain, Aqsa Ejaz, Abdul Karim Khan and Meghna Sabharwal

Abstract Number	Abstract Title	Authors Name
133	Influence of Leaders' Artificial Intelligence-Driven Capabilities on Business Model Innovation: The Mediating Role of Leaders' Agility	Sahadat Hossain, Mario Fernando and Shahriar Akter"
135	Generative artificial intelligence and universities in Australia and New Zealand	Ann Dadich and Subas Dhakal
136	Reimagining the Phenomenon of Continual Change from an Employee-Centric Perspective: A Conceptual Model	Paulette Brazzale
139	Overcoming or removing barriers? Social entrepreneurs' hybrid strategies for navigating external financing constraints	Niko Gerlach and Deike Schlütter
142	How STEM Women Achieve Objective Career Success through Networking: A Competence Signal Perspective	Lingyan Hu, Yan Liu and Zhaolong Fu
143	The Role of Labor Market Regulations in the Relationship between High-Performance Work Systems and Organizational Performance: A Meta-Analysis	Xiaoxuan Zhai, Fang Huang and Xiaowen Tian
144	A modest article about brilliant care	Ann Dadich
146	Unpacking the digital barriers in emerging market SMEs: Towards a process model	Michael Xiang Yao, Dan Wang and Susan Freeman
150	The role of responsible leadership in alleviating poverty through decent work and employee well-being: A case of Singapore	Nik Teck Siong Chong, Carolyn Koh, Maler Ratnam and Krishnamoorthy Renganathan
152	When East meets West: What do Chinese Employees Talk About when they Talk About Person-Organisation Fit?	Yuwei Sun and Jon Billsberry
155	Multistakeholder initiatives for sustainability: How actors perceive legitimacy	Kate Arnautovic
156	Consumer Engagement, Empowerment, and Wellbeing in Online Mental Health Communities: An Empirical Study with Implications for Health Management	Kendall Dent, Shahriar Akter and Corinne Cortese
157	High Performance Work Systems and Employee Expedience at work: A Test of Mediating Mechanisms	Aqsa Ejaz, Osama Islam, Samina Quratulain and Delphine Lacaze
159	Visibility as the conceptual basis for improving corporate responses to modern slavery transparency legislation	Bruce Pinnington and Martijn Boersma
160	The Nature, Antecedents, and Outcomes of Gig Workers' Daily Motivation Profiles: A Multilevel Latent Profile Approach	Guanyu Zhang, Lixin Jiang, Lu(Lucy) Xing and Niannian Dong
164	Hospitality Start-up in Bangladesh: Identifying factors associated with prospective graduates' self-employment transition through entrepreneurship	Mahfuja Khatan, Damian Morgan, Jenny Panchal

Abstract Number	Abstract Title	Authors Name
165	Building workplace inclusion in a hybrid environment: An exploratory study	Paula O'Kane, Sophie Gimblett, Dana L. Ott and Azka Ghafoor
167	Exploring the Impact of Psychosocial Safety Climate on Organisational Citizenship Behaviour: A Pathway to Enhanced Organisational Well-Being	G.G. Udaya Priyasantha Rathnayake, Anil Chandrakumara and Anura De Zoysa
170	Navigating Turbulence: Insights into Senior Leaders' Responses to Competitors' Misfortunes Based on Early Findings	Sachinthanee Dissanayake, Mario Fernando and Kumar Biswas
171	"Beginning Teachers' Perceptions of Mentoring, Support, and Job Demands in the First Semester of Teaching; a longitudinal qualitative investigation.	Jane Gifkins, Paula Brough and Mitchell Rapper
172	"After opening the business, I completely forgot about wellbeing": Indian immigrant entrepreneurs and their wellbeing	Nadeera Ranabahu and Poh Yen Ng
173	The Hierarchical Structure of Leadership Behaviors	Peter Yih-Tong Sun, Marc Anderson, Sudong Shang and Heyln Gang
174	Development in the Context of Electrification and the Lithium Industry: The View of the Citizens of San Pedro de Atacama	Eduardo Ordonez-Ponce
175	Stimulating Socialization in Triads. The Impact on Partitional Ambidexterity and Relational Performance	Artur Swierczek and Natalia Szozda
180	Broadening our lens: Four theoretical perspectives on industry incubation	Gaomin Liu and Glenn Hoetker
185	Enhancing individual and organisational outcomes from hybrid working through intentional management in public sector workplaces	Judy Lundy, Uma Jogulu, Helen Taylor and Sue Williamson
188	Bottleneck or Not? The Ceiling Effect of Network Closure on Individual Innovative Performance.	Stefan Breet, Lotte Glaser, Justin Jansen and Jan Dul
189	The use of experimental designs to examine causality in authentic leadership: A scoping review	Ann Dadich, Ling Abbott, Andrei Lux and Kevin Lowe
190	Am I immune to leaders' Lies? The Role of Leader Narcissism and Verbal Deception on Followers' Workplace Dignity and Job Performance	Menaka Hewawaduge, Mario Fernando and Kumar Biswas
192	Policy Support and Transnational Nascent Markets: EIF's implication on Impact Investing Infrastructure	Juan González, Benjamin Le Pendeven, Guillermo Casasnovas and Celine Louche
194	Partner selection and strategic alliance formation in the incubation stage	Gaomin Liu

Abstract Number	Abstract Title	Authors Name
203	From Calling to Rest: The Mediating Role of Work-Life Enrichment in Linking Calling to Sleep Quality, and the Moderated Effect of Overtime Frequency	Amber Yun-ping Lee, Po-Chien Chang and Heng-Yu Chang
207	Does bank-firm relationship affect ESG performance in a bank-based system?:Evidence from COVID-19 crisis period	Hideaki Sakawa, Yiuwai Wong and Naoki Watanabel
208	The influence of social capital on small business resilience: A research agenda	Hoang Thanh Van Vo, Sardana Islam Khan and Geoffrey Chapman
209	Unraveling the Roots of Quiet Quitting: Antecedents and Scale Development	Somayeh Bahmannia, Darren K.B., Kevin Lowe and Daan van Knippenberg
211	Exploring stakeholder configurations based on three dimensions of companies' stakeholder relations	Peter Hoffman, Yiyu Wang, Youngun Kim and Saileshsingh Gunessee
213	Corporate Psychopath's Exceptional Craving for Materialism, Money and Power	Clive Boddy
214	Artificial intelligence: Enhancing algorithmic platforms while diminishing workers' well-being	Vishit Trivedi
215	Why Human Resource Management Personnel Sides with Management and Fails to Deal with Bullying to the Bullied Employee's Satisfaction	Clive Boddy
217	Integrating Māori Values in New Zealand Commercial Fisheries: A Case Study of Moana New Zealand	Carla Houkamau and Robert Pouwhare
219	Employee responses to dark leadership: The role of followers' envy in knowledge-hiding dynamics	Fangping Zhao, Karen Tian, Heidi Wechtler and Judith Zhu
220	Tyranny of Women of Colour in the Academia: A Racial Literacy Perspective from Narratives	Nilufa Khanom and Tasmiha Tarafder
221	Social Implications of Industry 5.0 in Supply Chains	Wayne Ren, Vipul Jain and Mohammad Saud Khan
222	From AI to A+: The Impact of AI Usage Intention on Academic Performance, Learning Effectiveness, and University Reputation	Gazi Farid Hossain, Amaln Haque and Md Shamirul Islam
224	Financial Effects of Gender Diversity: Role of External Environment	Subba Yaram and Sujana Adapa
228	Revisiting the Case Method in the Age of Complexity	Helen Parker
229	When Work Passion Loots Leisure Time: Exploring the Dual-Edged Effect of Passion on Employee Time Poverty and Dehumanization Experiences	Shilpa Chingan Thottathil, Manoranjan Dhal and Kapil Verma

Abstract Number	Abstract Title	Authors Name
230	Female Social Entrepreneurs in India and Impact of Familial Relationships	Sadaf Khurshid and Vera Mackie
232	A multi-level, multi-actor exploration of moral market failure	Jonathan Baker
233	Reimagining the Workplace: Embracing an Aging Workforce, Artificial Intelligence, and Pet Robot Dogs in Innovative Workspaces	Adela McMurray, Ashokkumar Manoharan, Bruno Pereira, Ryan Jang and Dr J Irudhaya Rajesh
234	Excelling amidst change: Building capability during business transformation by senior entrepreneurs	Pranab Mukherjee, Ying Zhu, Subhadarsini Parida and Danny Soetanto
240	Silent Struggle for Mature-Aged Employees: How Relational Age and Voice Behavior Shape Co-Worker Trust and Task Performance in Professional Teams	Chia-yen Chiu, Sanjeewa Perera and Valerie Caines
241	A Mixed Method Approach to Designing the Joyful Leadership Scale: Translating Discrete Emotion Theory into a Validated Measurement Instrument	Katie Mcintyre
243	The Rule of Heuristics Versus Dynamic Competitive Response	Takhaui Kamzabek and Hayot Berk Saydaliev
244	What is a Maori Entrepreneur? A Ngapuhi perspective.	Jason Rogers, Naomi Birdthistle, Kerry Bodle and Richard Laferriere
246	An Empirical Investigation of Leaders' Downward Malicious Envy in Organisations	Sabreen Kaur, Herman Tse and Nathan Eva
249	Analysing critical success factors of medium and large construction projects using fuzzy analytic hierarchy process	Neda Kiani Mavi, Kerry Brown, Richard Fulford and Mark Goh
255	The Responsible Leadership Mindset: The Influence of the Mind in the Emergence of Responsible Leadership	Alice Rickert
258	Tale Of A Leader's Closet Decisions: Aspects From Goffman's Stigma Theory, Disclosure, And Voice	Charvi Hasmukh Shukla
259	Examining the Interpersonal Consequences of Proactive Work Behaviour: Can Proactivity Hurt Co-worker Relationships?	Candice Wray, Chien-Chung Kao and Yu-Hsuan Wang
262	System-level barriers to circular market emergence	Rico Boesch, Julia Fehrer, Paavo Ritala and Joya Kemper
263	Expatriate Management In The New Millennium Era: A Two-Study Perspective	Charvi Hasmukh Shukla
265	Shared Leadership in Filmmaking: A Collaborative Approach to Creativity	Simon Minaee and Dominic Gasbarro
266	Sustainable Behaviour at Work: The Role of HRM, Goal Clarity and Commitment	Joe Cooper, Nataliya Podgorodnichenko and Fiona Edgar

Abstract Number	Abstract Title	Authors Name
268	Strategic Inclusive Leadership: Making Sense of the Complexity of Diversity Management Today	Shireen Chua and Peter Sun
269	Outcomes of Employee Voice and Silence: A Systematic Literature Review	Ghulam Mustafa Mir, Shamika Almeida, Uraiporn Kattiyapornpong and Martin O'Brien
270	How networks influence supply chain innovation through public procurement: Insights from Ghanaian public works sector	Peter Adjei-Bamfo, Hadrian Djajadikerta, Ferry Jie, Kerry Brown and Reza Kiani Mavi
274	Beyond the Art in the Boardroom: How First Nations and Australian listed companies partner for the United Nations Sustainability Goals	Jacki Johnson, Paul Gollan, Mario Fernando and Catherine Moyle
277	Leadership Styles for Integrating Emerging Technologies into Banking Operations: A Systematic Review, Synthesis, and Future Research Opportunities	Brijesh Mysore Srikanth, Amlan Haque and Sardana Islam Khan
278	A tale of two apps: What platforms offer and what workers want	Lutfun Nahar Lata, Andreas Pekarek and Josh Healy
279	Reviewing green human resource management: A comparative analysis of western and non-western practices and cultural influences	Ruilin Lyu
280	Exploring a plausible future of learning for Ōtautahi, Christchurch through multi-stakeholder perspectives	Hafsa Ahmed and Cheryl Doig
281	When followers disgust toward the humble leaders: Roles of the attribution process	Fu Chen Kuo, Chia-Yen (Chad) Chiu and Nai-Wen Chi
283	Towards a a Typology of Indigenous Businesses	Michelle Evans, Kattiyapornpong and Martin O'Brien
289	Creative careers and issues of gender inequity in independent filmmaking in Australia	Louise Ingersoll
290	Impediments to Developing Full Supply Chain Maps	Prakash Singh
292	Social value creation as care: comparing the stakeholder perspectives of beneficiaries and social entrepreneurs	Diana Lorenzo-Afable
295	Research in Progress: AI Readiness in Action: Driving Firm Performance through IT Ambidexterity	Hatim Urabi, Jaeyoung Cho and Yiyang Bian
296	"I don't want to make this such a gender thing": The place of gender in implementing domestic violence policies	Ruth Weatherall and Mihajla Gavin
298	Valuing Phar Lap: Construction of a new classification system for collections valuation at Melbourne Museum (1995-2016)	Erica Coslor, Vanessa Pouthier and Yuval Millo
299	Standardising Boundaries and Factors: Enhancing Greenhouse Gas Emission Reporting in Higher Education Institutes	Aththudawe Gamachchige Komudya Chathurangi Kumari, Mudiyansege Ishara Dilhari Ranathunga, Matthew Pepper, Clayton McDowell and Anura De Zoysa

Abstract Number	Abstract Title	Authors Name
300	Namal Bandaranayake, Senevi Kiridena, Kalinga Jagoda and Jonathan Parkes	Benjamin Thomas and Revadee Vyravene
302	Creating and Capturing Value in Speciality Crop Production: An Analysis of the Hazelnut Value Chain	Namal Bandaranayake, Senevi Kiridena, Kalinga Jagoda and Jonathan Parkes
303	Artificial Intelligence Adoption in Small and Medium Enterprises: A Systematic Literature Review under the Lens of Absorptive Capacity Framework	Fany Indriyani, Adela McMurray, Bruno Pereira and Andreas Cebulla
304	The Effects of HR Strength and Intra-group Identification on Employee Performance in Bangladeshi Banks	Sardana Islam Khan, Timothy Bartram, Jillian Cavanagh and Pradeepa Dahanayake
305	Platform Worker Citizenship Behaviour: Insights from Ride Hailing Drivers and Customers in Indonesia	Ria Triwastuti
306	Reducing Job Content Plateau and Job Insecurity Through Workplace Friendship and Knowledge Transfer	Yu-Ying Lu, Chien-Chung Kao, Wei-Yu Chen and Yu-Husan Wang
307	The veiled threat: The curse of dowry still haunts the poor women of Bangladesh	Laurel Jackson and Fazle Rabbi
309	Applications of Machine Learning in Entrepreneurship using a Systematic Literature Review Approach	Fakhitah Ridzuan, Noor Ullah Khan and Nurzulaikha Abdullah
314	Deconstructing Impact Narratives in Impact and ESG Investing	James Gordon and Israr Qureshi
315	The Impact of Different Types of Customer Mistreatment on Employees' Well-being and Attitude	Yu Wu and Markus Groth
319	Exploring the relationship between Pro-social Motivation and Taking Charge Behaviour in Nurses: A moderated mediation model	Mit Chandresh Vachhrajani, Sushanta Kumar Mishra and Himanshu Rai
321	Tovo ni Bula Sautu: Sustainable Land Development in Fiji	Jekope Maiono and Diane Ruwhiu
322	Gender-Specific Differences in AI-Supported Credit Allocation to Female and Male Entrepreneurs	Lina Uebbing, Lynn Schmodde and Marius Claus Wehner
325	Cross-sector capability translation ecosystem: University-industry collaboration for grand challenges in the digital age	Zhe Cao and Martie-Louise Verreynne
326	Understanding Team Processes: The Role of Transition and Action Phases in Leadership Effectiveness in Extreme Team Contexts	Linda Baulecke and Jan Schmutz
327	Unpacking Community Resilience: Investigating key dimensions in an Indigenous community context	Monika Gupta, Preeta George and Dhirendra Mani Shukla
329	A hybrid muti-criteria decision making approach for supplier selection in Industry 5.0 era	Anadi Gautam, Lohithaksha Maniraj Maiyar and Indira Roy
331	Gender Differences in the Impact of Organizational Justice on Citizenship Behavior and Operational Effectiveness in the Aerospace Industry	Ricardo Santa, Ataus Samad, Diego Morante and Andres Rodriguez

Abstract Number	Abstract Title	Authors Name
332	The Concept Of Future Of Work From The Standpoint Of People, Processes, And Technology	Charvi Hasmukh Shukla
334	Fatherhood And Work-Life Balance: An Ethnographic Study From Lens Of The Divorced And Separated Men	Charvi Hasmukh Shukla
335	Equality, diversity and inclusion in the aftermath of the Covid-19 pandemic: The changing dynamics of job satisfaction in the UK's research and innovation ecosystem	James Richards, Siddhartha Saxena and Kate Sang
336	Revisiting intergenerational practice (IGP) theory: A decade on	Gaery Barbery, Natalie Reyes Bernard, Jennifer Kosiol and Anneke Fitzgerald
340	Navigating the Digital Wave: An Ethnographic Study of Sociomaterial Interactions in Public Sector Digital Transformation	Aristito Febrianto, Adina Dudau and Anna Morgan-Thomas
342	Sustainability in Action: How Repair Cafes Support Environmental and Social Well-being	Mamun Ala
343	AI and Gamification: Uncharted Possibility or Dangerous Pitfall?	Geoffrey Chapman and Stephanie Macht
344	Evaluating the Antifragility of Business Models in Food Delivery Logistics	George Joseph and Arun Elias
345	How the 'Future of Work' has changed skills requirements for management graduates since the millennium: A systematic literature review	Neeru Choudhary, Shilpa Jain and Hanoku Bathula
352	Sustainable project management in Australian public projects: A dynamic capabilities perspective	Richard Hughes, Kerry Brown
355	Engagement and Experiences of International Onshore Postgraduate Coursework Students in Distributed Learning Model	Subas Dhakal and Shahid Shahiduzzaman
357	Green Strategic Orientation and Sustainable Performance: Evidence from Pakistani Manufacturing Sector	Saad Mahmood Bhatti, Zafir Khan Mohamed Makhbul, Sara Kanwal and Muhammad Zia ul Haq
358	The 'Gig Slur' in the era of platform-based economy: economic perspective versus humanistic perspective	Sonika Jha and Sriparna Basu
360	Indigenous social innovation and whānau-centred design within bureaucracies	Jason Mika, Xiaoliang Niu, Chellie Spiller, Jarrod Haar, Matthew Rout, John Reid and Tane Karamaina
364	Project Manager Attributes and the Stakeholder Relationship	Alicia Gilchrist, Caroline Hatcher and Neal Ashkanasy
365	Workforce Localization: A Systematic Review, Advances, and Future Research	Ali Faqihi and Heidi Wechtler
368	Gender in and Gendering Social Exchange Theory in Leadership Research: A Problematizing Review	Karryna Madison, Nathan Eva, Helen De Cirei and Zen Goh
375	Assessing Environmental Impacts of PSS Business Models from a life cycle perspective: A Morphological Approach	Hariharan Thangatur Sukumar, Jayakrishna Singu, S Navaneetha Krishnan and Krishna Kumar Balaraman

Abstract Number	Abstract Title	Authors Name
376	Process Model of LMX Ambivalence: Mapping Attributions, Emotions, Coping and Outcomes of Subordinates	Alina Haider, Geoff Plimmer and Jane Bryson
377	Data Breaches, Employee Well-Being and Productivity: The Australian Case	Remi Ayoko, Ryan Ko, Hai Luong and Grigori Agbas
379	Navigating Digital Sustainability in Large Firms: Top Management Perspectives	Manjari Srivastava, Satish Sinha, Laszlo Sajtos, Hanoku Bathula and Rahul Singh
381	Unlocking Sustainable Success: Exploring the Positive	Rosemary Sainty
385	CEO Overconfidence Heterogeneity And Mergers And Acquisitions	Huiting Wang
391	Managing Non-Family Employees' Brand Citizenship Behaviour in Family-Owned SMEs: Investigating the Role of Family Members' Leadership Styles and Brand Psychological Ownership	Muhammad Bilal Mustafa, Mohsin Altaf and Umer Asif
407	Corporate Social Responsibility and Green Behavior: Green Work Climate and Shared Vision Perspective	Sara Kanwal, Saad Mahmood Bhatti, Mohd Helmi Ali and Muhammad Zia ul haq
410	"First Nations Charters" in Australia's Arts and Culture Sector: A meaningful alternative to Reconciliation Action Plans, or just a rose by another name?	Rod Williams, Kate Power and Samantha Cooms
411	Constant Connectivity and its Impact on Employee Well-being: A mediating Role of Cognitive Overload and Mobile Work Device Anxiety	Biswadeep Tamang, Aradhna Malik, Jaya Dantas and Piyush Sharma
417	Impact of time-independent working and location-independent working in blended work on employee job performance.	Sasimali Attanagoda, Saima Ahmad, Argho Bandyopadhyay and Shae Fan
420	Forecasting Start-up Pre-Money Value: A Comprehensive Approach Utilizing Machine Learning and Deep Learning Models	Minnu Pynadath, Sam Thomas and Vivek Paulose
421	The "real lives" of professional working mothers with children in their early years: A Socio-Ecological and Conservation of Resources approach	Afrouz Shoghi, Amanda Biggs and Ashlea Troth
424	Analysing the Sustainability of Regional Supply Chains: A Study of Business Process Outsourcing in Fiji	Yogita Swamy, Arun Elias and Mathew Pepper

WORKSHOP ABSTRACT INDEX

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08. Business Processes, Innovation and Supply Chain

Components of Circular Supply Chains - A design guide

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08. Business Processes, Innovation and Supply Chain

Components of Circular Supply Chains - A design guide

ABSTRACT:

Underpinned by the UN's sustainable development goals, supply chain sustainability is by now a business imperative. Supply chains that ignore this imperative will do so at their risk. The risk will not only come from international bodies and national and state governments, but also from customers and communities. This structured submission, therefore, describes a conceptual design guide that can be used by supply chain leaders and their followers to realise a key enabler of supply chain sustainability, being, *circular supply chains*.

Keywords: Sustainability, circular supply chains, design, systems.

Overview:

It is proposed that whilst many supply chain leaders are aware of their sustainability expectations, at the same time they are either unsure as to how to proceed in their pursuit of sustainability or they are too preoccupied with other dictated priorities (Cai & Choi, 2020). The purpose of this research, therefore, is to develop and test a circular supply chain (CSC) design guide which, if followed diligently, will ensure the attainment of genuine supply chain circularity.

Current understanding:

Some people refer to circular supply chains as closed-loop supply chains because the products manufactured by the supply chain end up back with it once the customer is finished with them. There are numerous reasons why the customer may decide they are finished with a product such as it was the wrong decision to purchase the product in the first place, the product does live up to customer expectations, the customer finds the product defective, the customer determines that the product is not fit for purpose, the customer believes the product does not represent good value for money, the product is worn or broken, or the product has simply reached the end of its useful life in the customer's assessment.

So, in the circular supply chain world, when the customer is finished with the product for whatever reason, the supply chain has workable processes in place to have the product returned to it (sometimes called reverse logistics). When the product has been safely returned, the supply chain can then either repair it and resell it, or refurbish it and resell it, or it can recycle it and sell it as the same or even a different product. Such a product 'circle' can be repeated over and over. Some writers therefore refer to circular supply chain methods as *reduce, reuse and recycle* (Roy et al., 2022).

In contrast, a linear supply chain is one where the supply chain produces a product, the customer buys it and uses it, and when the customer is finished with it, it is either 'parked' somewhere or it ends up in landfill. There is no circularity. Linear supply chains thus, are very much a *take, make, use, and dump* approach.

Almost every large business has stated that they will invest to meet zero greenhouse gas emissions targets in next 5-10 years, with consumers (and governments) increasingly conscious of the need for sustainable and ethical business practices. For example, with the impending introduction of mandatory climate-related financial disclosures introduced by the Australian Government (https://treasury.gov.au/sites/default/files/2024-01/c2024-466491-policy-state.pdf), the need for meaningful action and change from Australian industry has never been more in the spotlight.

Page 2 of 7

Circular supply chains thus, are a technique that can be (and are being) used to further a supply chain's sustainability ambitions (De Angelis et al., 2018). This is no flavour-of-the-month ambition because as well as being a socially and environmentally responsible strategy, sustainability makes good business sense (Robertson & Starr, 2022). For example, circular supply chains reduce the need for virgin raw materials (which the planet is becoming increasingly short of), circular supply chains can, if designed properly, dramatically reduce supply chain costs, and lastly, but critically, circular supply chains bring with them sustainability credentials such as certifications (see more on this in the 'Sustainable Marketing' section below). Such credentials are becoming more important for customers and their buying decisions… *in short, no sustainability certification, then no sale!*

Importantly, several examples of current day circular supply chain examples exist, e.g., IKEA's *'Furniture as a Service'* initiative (IKEA, 2024), Nike's *'Reuse a Shoe'* program (The Latch, 2024) and H&M's *'Garment Collection'* initiative for the recycling of clothing (H&M Group, 2024).

Research question:

Does the application of the integrated CSC design depicted at Figure 1, result in superior supply chain sustainability performance?

Research approach:

The integrated CSC design depicted at Figure 1 has been conceptually developed both from study of the literature and the direct observation of actual operating supply chains. The next step in the research schedule, is to conduct several (at least 10) case studies to confirm or deny its efficacy.

Findings to date:

Some authors, such as Bernon et al., (2018 and Montag et al. (2021), have proposed CSC frameworks but with a very limited number of components such as *organisation, products, and processes* only. Others, such as Govindan & Hasanagic (2018), have proposed massively complex ones. In our observations, the attainment of genuine circularity requires attention on numerous 'fronts' such as *design, sourcing, process technology, manufacturing, distribution, reverse logistics and marketing*.

Figure 1 shows each component of a conceptualised circular supply chain arrangement and the linkages between the components. As can be seen, the components are highly interrelated, and the arrangement works as a system where each component needs to function competently for the whole system to work effectively.

Page 3 of 7

08. Business Processes, Innovation and Supply Chain

Figure 1: Circular Supply Chain Components – An Integrated System (Robertson, 2021)
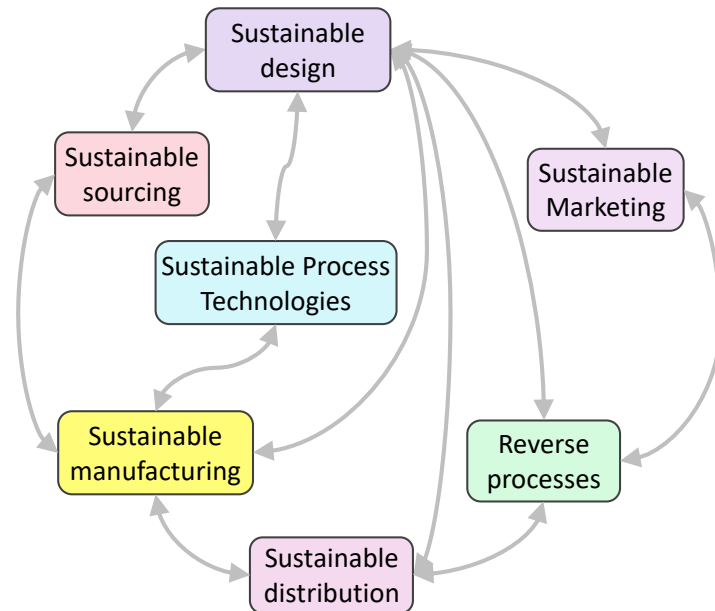
Taking each of the components in Figure 1 in turn, we have:

1. ***Sustainable design***. All SC sustainability efforts really need to start with design, i.e., how can genuine sustainability features be included in the supply chain's layout, set-up and in the products produced. Obviously, this is better done before any physical infrastructure is laid down and before any supply chain processes and process technologies are selected and made operational. Trying to retrofit sustainability features into a supply chain that was designed with the *take, make, use, and dump* mindset is very costly and difficult and is the reason that so many already established supply chains are so slow to adopt sustainability as a way of life. Take for example the steel industry. Starting from the time of the industrial revolution, steel companies, like so many other conventional manufacturing organisations, were primarily interested in taking in raw materials (iron ore, coal, limestone, ferroalloys), producing as much steel as possible (economies of scale driven) and selling it. Except for mill scale recycling and steel scrap recycling (managed by external companies), not much about conventional steel making process technologies in early use could be considered as sustainable. The reduction of iron ore in a blast furnace for example, requires vast quantities of carbon (fed in as 'coke' such that $2Fe_2O_3 + 3C \rightarrow 4Fe + 3CO_2$) resulting in molten iron that is high carbon. The molten iron, along with a component of recycled steel scrap, then has to be refined in a steelmaking furnace. This refining process of molten iron to steel gives off copious quantiles of carbon monoxide ($2C + O_2 \rightarrow 2CO$) which is subsequently flared off (generating carbon dioxide, $2CO + O_2 \rightarrow 2CO_2$) or burnt as a fuel for reheating furnaces or power generators (which also emits carbon dioxide).

   Additionally, conventional steel plants tend to be very large single sites with integrated operations. This means they are often remotely located from their markets leading to long distance transportation requirements.

   This situation changed somewhat with the introduction of the so-called mini mills. Such facilities are typically electric arc furnace based and so produce much less carbon dioxide than the blast

Page 4 of 7

08. Business Processes, Innovation and Supply Chain

furnace and oxygen steel making processes - so long of course, as the electricity supply is non-hydrocarbon fuel generated. Mini mills can also be placed much closer to their markets thus reducing distribution distances. Mini mills do rely heavily on recycled scrap steel, which, whilst a great way to preserve virgin resources and reduce total steel making energy requirements, does mean that a reliable supply of steel scrap is needed to make them viable.

In fairness, many modern day steel companies are undertaking various 'greensteel' trials such as substituting hydrogen as their prime fuel and reducing agent. However, the lead time for such a transition is long and the conversion and ongoing costs (Capex and Opex) of such a process technology change may well prove to be prohibitive for many steel companies.

Comprehensive design of supply chains and selection of process technologies is therefore crucial to sustainability performance. This of course includes the research and development efforts needed to invent/develop sustainable process technologies, and the products they produce, in the first place.

2. ***Sustainable sourcing.*** This includes supplies of raw materials, consumables (water, electricity, fuels, oils, stores), plant and equipment, services, and last but not least, personnel. Sustainable sourcing starts with a detailed definition of sustainability requirements for each supply item. Such a definition becomes the basis for all supply agreements with suppliers with the insistence that the specified sustainability requirements are met not only by the first-tier suppliers and service providers but also by the suppliers and service providers in all supply tiers (i.e., all the way back to the nth-tier supplier/service provider).

3. ***Sustainable process technologies.*** Again, ideally such a selection ought to be made before site development, construction, and plant and equipment installation. It may well be that substantial research and development efforts are required in situations where a sustainable process technology does not already exist for a given product. Sustainable process technologies are those that have levels of emissions that are below sustainability thresholds whereby such thresholds have been determined to *not* cause any permanent social, environmental, or economic damage. Sustainable process technologies also ensure the elimination of all waste, usage minimisation of virgin raw materials and all consumables, and the usage of materials that are all recyclable or compostable.

4. ***Sustainable manufacturing.*** As well as a focus on furthering the minimisation of all virgin raw material and consumable usage, sustainable manufacturing also means zero harm to all SC personnel, the maximisation of all conversion yields, the minimisation of all cycle times and supply chain costs, the elimination of all waste, compliance control of all harmful emissions, and an unending focus on product quality improvement and customer delivery performance. Such results are underpinned using professional maintenance and operational practices and procedures that ensure that operating plant and equipment is kept in peak condition and operated competently.

5. ***Sustainable distribution.*** Basically, this implies a distribution set-up that continuously strives to use less. This includes fewer packaging materials overall, less packaging materials that are non-returnable or non-recyclable, less distance to travel by co-location of facilities, less redundant transport movement and less transport corridor congestion using distribution optimisation systems, lower distribution centre carbon footprints, less transport emissions by the selection of lowest emission transport types.

6. ***Reverse supply chain processes***. The aluminium industry is a great example here. Aluminium (Al) companies have for many years now been prepared to pay for returned Al products such as aluminium cans. Because of this incentive, individual citizens eagerly collect up as many Al cans as they can because there is a reward for them to take the used cans to recycling centres. This is not a difficult model to grasp, however, unfortunately, not every supply chain sees value in

Page 5 of 7

copying it (well, not yet anyway). So, for a reverse supply chain to work, the products the SC processes must be reusable/recyclable, there must be product return routes and facilities available, and there must be incentives in place to encourage customers or other parties to collect and present the used products for return. Such presented returns then must be properly processed including any necessary transport, storage, assessment, information logging, followed by repair, refurbishment, or recycling.

7. ***Sustainable marketing.*** This is a broad marketing strategy aimed at increasing the attractiveness of an organisation's brand to retain existing customers and to attract new ones. As an example, this can be attained through the marketing and promotion of sustainable products.

Contribution and Limitations:

The results of this research will contribute to the body of knowledge around supply chain circularity, identification of the key components needed to make it happen in practice, and the interrelationships between those components. The limitation at the moment, is that the effort is still 'work-in-process'.

Implications:

Theoretical implications – Such research, when concluded, will provide both teachers and researchers with an empirically confirmed integrated CSC framework and design guide.

Practical implications – Supply chain leaders and their followers, should they so choose to do so, can apply the CSC design guide in practice to lift the performance of their whole returns management processes and in so doing heighten their supply chain sustainability performance.

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08. Business Processes, Innovation and Supply Chain

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Stream 5. Entrepreneurship and SMES

Bibliometric Analysis of Cognitive Flexibility in Entrepreneurship: Navigating Change and Adaptation

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Stream 5. Entrepreneurship and SMES

Bibliometric Analysis of Cognitive Flexibility in Entrepreneurship: Navigating Change and Adaptation

ABSTRACT: *Cognitive flexibility is a crucial capability that enables entrepreneurs to navigate change, adapt to new circumstances, and create new opportunities. However, the literature on the intersection of cognitive flexibility, entrepreneurship, and change management is fragmented and underdeveloped. This study used a bibliometric analysis method to examine published papers on these topics. We analysed 417 articles published in scientific journals between 1995 and 2024. Our analysis shows a recent surge in interest from researchers across various fields in understanding cognitive flexibility, change management, and adaptation in entrepreneurship. This study contributes comprehensive knowledge of the fragmented papers in the area. The paper concludes by discussing the implications of this shift and the underdeveloped nature of cognitive flexibility in entrepreneurship theory frameworks.*

Keywords: cognitive flexibility, entrepreneurship, adaption, change, change management, cognitive agility.

Stream 5. Entrepreneurship and SMES

Bibliometric Analysis of Cognitive Flexibility in Entrepreneurship: Navigating Change and Adaptation

In the fast-paced and uncertain world of entrepreneurship, success often centres on the cognitive abilities to adapt to change and navigate through dynamic environments. The cognitive abilities of entrepreneurs enable them to successfully overcome environmental challenges by creating innovative ideas, exploring opportunities (Conz et al., 2023; Corner et al., 2017), and strategically pivoting their businesses (Sanasi & Ghezzi, 2022). Successful entrepreneurs require a diverse set of managerial cognitive abilities, defined as mental capacities to engage in various mental tasks (Carroll, 1993), such as decision-making, problem-solving, and making or adapting to changes (Helfat & Peteraf, 2015), which are crucial in directing businesses adaptability and, ultimately, business success (Barr, Stimpert, & Huff, 1992; Barr & Huff, 1997; Thomas, Clark, & Gioia, 1993). The ability to make or adapt to changes requires the mental capacity to switch efficiently between ideas or strategies in response to changing circumstances. This mental capacity, known as cognitive flexibility (Murray, Sujan, Hirt, & Sujan, 1990), is essential in navigating the complexities of the entrepreneurial context (Gill et al., 2021; Yu et al., 2023).

Previous research has shown that cognitive flexibility is a crucial ability behind the individual-level mechanism to adapt to change (e.g., Bagheri, Newman, & Eva, 2022; Hodgkinson, 1994, 1997; Gavetti & Levinthal, 2000; Gavetti, 2005; Laureiro-Martínez & Brusoni, 2018; Tripsas, 1997). The concept of cognitive flexibility ranges from the capacity to create broad or specific categorisations of stimuli based on relevance (Murray et al., 1990) to the adaptability required to respond to changing environmental pressures (Salisbury, 2003). Cognitive flexibility in the context of entrepreneurship is defined as the mental capability of entrepreneurs to shift between different ideas, strategies, tasks, and decisions to respond to challenging and uncertain circumstances and explore entrepreneurial opportunities (Gill et al., 2021). Previous research highlights the critical role of cognitive flexibility in management, business, and entrepreneurship (Barr, Stimpert, & Huff, 1992; Eisenhardt & Graebner, 2007; Eisenhardt & Tabrizi, 1995; Hambrick & Mason, 1984; Kaplan, 2008; Louis & Sutton, 1991; Marcel, Barr, & Duhaime,

Stream 5. Entrepreneurship and SMES

2011; Mom, Van Den Bosch, & Volberda, 2007; Ocasio, 1997, 2011; Pitsi, Chandrakumara, & Wickramasuriya, 2019; Sharfman & Dean, 1997). Specifically, cognitive flexibility helps interpret environmental changes and adapt to specific situations (Ocasio, 1997, 2011; Mom et al., 2007), switch between tasks to solve problems (Sharfman & Dean, 1997), and enables managers to update their mental models. This capability allows managers to explore alternative behaviours, make strategic decisions, and implement changes (Louis & Sutton, 1991; Marcel et al., 2011; Pitsi et al., 2019; Eisenhardt & Tabrizi, 1995). Moreover, cognitive flexibility significantly affects individuals' decisions to become an entrepreneur (Dheer & Lenartowicz, 2019; Gill et al., 2021), entrepreneurial creativity (Yu et al., 2023), and their business performance (Fernández-Pérez et al., 2016).

Using a bibliometric method (Aria & Cuccurullo, 2017; Simao et al., 2021), this paper provides a better understanding of the published articles and explores the significant research works, citation/co-citation models, and evolution of the link between cognitive flexibility, entrepreneurship, and change management. This review paper takes advantage of diverse research on cognitive flexibility in entrepreneurship studies to expand our understanding of the studies conducted at the intersection of cognitive flexibility, entrepreneurship, and change management. Furthermore, we analysed the leading authors and journals and their collaboration trends, the influence of publications and authors in the development of the literature, and the shift in topic and research interests over time, and identified the emerging research areas (Xie et al., 2020).

This paper initiates a review of cognitive flexibility in entrepreneurship studies, specifically focusing on its role in navigating change and exploring its underlying concept. Following this, we present a bibliographic analysis of the published papers between 1995 and 2024 and explore the implications in a concluding discussion. Finally, we discuss findings and future recommendations.

Cognitive Flexibility in Navigating Change and Adaptation in Entrepreneurship Studies

Successful entrepreneurs are characterised by having a malleable mindset open to new ideas, not resisting change when necessary, and displaying curiosity to see change as an opportunity rather than a threat (Gill et al., 2021). Entrepreneurs position their attempts for long-term success in evolving markets

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by embracing change and adjusting their strategies (Gavetti & Levinthal, 2000; Gavetti, 2005). Gavetti and Levinthal (2000) studied the cognitive and experiential search for opportunities. They argued that entrepreneurs constantly need to prioritise and reprioritise their tasks based on shifting circumstances, market feedback, and internal resources. This dynamic task-switching demands cognitive flexibility, allowing entrepreneurs to quickly shift their attention, focus, and problem-solving strategies to tackle new challenges and explore new opportunities.

Haynie, Shepherd, Mosakowski, and Earley (2010) provided empirical evidence that cognitive adaptability, a key component of cognitive flexibility, significantly affects entrepreneurs' abilities to recognise and exploit new opportunities effectively. This adaptability is crucial not only for identifying and taking advantage of new opportunities but also for overcoming obstacles inherited in the process of entrepreneurship. Conversely, a lack of cognitive flexibility can significantly hinder an entrepreneur's progress and success. Entrepreneurs with rigid thinking, struggle to adjust their strategies in response to unexpected market shifts or customer demands (Gavetti, 2005; Gino, Argote, Miron-Spektor, and Todorova, 2010) and fail to recognise the potential of new trends or innovations.

Sarasvathy (2001) highlights the role of cognitive flexibility in entrepreneurs' reasoning and making decisions to set specific goals and work towards achieving them through careful planning and analysis (causation) or focus on leveraging existing resources and contingencies to create opportunities (effectuation). Cognitive flexibility enables entrepreneurs to adapt their strategies based on emerging opportunities and constraints (Haynie et al., 2010). By embracing cognitive flexibility, entrepreneurs can effectively navigate uncertainty and complexity develop innovative solutions and mitigate risks.

In the field of change management, Kotter (1996) emphasises the necessity of flexible thinking for successful change initiatives. His work suggests that organisational leaders who do not adapt their mental frameworks encounter resistance and fail to implement change effectively. Similarly, Eisenhardt and Martin (2000) highlighted the importance of cognitive flexibility in enabling organisations to sense changes in the business environment, grab new opportunities, and consequently reconfigure resources and processes. By adopting cognitive flexibility, firms can successfully navigate uncertainty and proactively

Stream 5. Entrepreneurship and SMES

shape their competitive landscape. At the team level, cognitive flexibility also enhances team creativity and the adoption of new approaches to problem-solving (Gino et al., 2010). Additionally, O'Connor and Ayers (2005) highlighted the significance of cognitive flexibility in organisational change, noting that inflexible thinking creates resistance to change and poor decision-making.

We present a comprehensive map of the papers published on cognitive flexibility, entrepreneurship, and change management. This study enables entrepreneurs to successfully navigate business dynamics and challenges by embracing cognitive flexibility. An overall understanding of the nexus of the fields enables entrepreneurs to adapt to changing conditions, innovate continuously, and stay ahead of the competition. This contributes to enhancing entrepreneurs' cognitive flexibility in adapting and managing change by providing them with effective entrepreneurship education and training programs and equipping them with the cognitive capabilities to overcome the challenges of the ever-changing business world.

Cognitive flexibility

Cognitive flexibility is defined as the mental ability that enables individuals to adapt their thinking and behaviour in response to changing circumstances (Foldy, Goldman, & Ospina, 2008). Individuals' cognitive flexibility reflects their ability to shift perspectives, generate alternative solutions, and adopt new ideas or approaches to solve problems. Cognitive flexibility is deeply rooted in cognitive psychology, where the concept is understood as a core component of executive functions. These functions include mental processes essential for effective behaviour regulation, such as planning and problem-solving. Cognitive flexibility involves adapting to new information, shifting attention, and switching between tasks (Sharfman & Dean, 1997; Stepich, Ertmer, & Lane, 2001). The capability develops from early infancy, as infants explore their environment, through to adulthood (Spiro et al., 1998). From the cognitive science perspective, cognitive flexibility is the ability to capture and present knowledge from different conceptual viewpoints and integrate it with the knowledge at hand to address the needs and demands of the situation (Lieberman, 2007). Evans and Stanovich (2013) argue that knowledge and thinking processes need to be flexible to be applied to current and future situations. Management scholars have similarly explained that

Stream 5. Entrepreneurship and SMES

cognitive flexibility among managers involves the ability to assess situations, appreciate diverse perspectives, and integrate them into decision-making processes (Laureiro-Martínez & Brusoni, 2018). This review paper conceptualised cognitive flexibility as entrepreneurs' mental capability to think about knowledge from different perspectives (Spiro, Feltovich, & Coulson, 1992), create connections between various contents by considering alternatives (Laureiro-Martínez, 2014; Laureiro-Martínez et al., 2018), and adapting problem-solving approaches based on changes and challenges of their tasks and their business environment (Stepich et al., 2001).

Cognitive flexibility theory (Spiro et al., 1988; Spiro, Collins, & Ramchandran, 2007) suggests that understanding cognitive flexibility involves examining information from different perspectives, contexts, and objectives. This approach helps to gain deeper insights into problems and facilitates effective solutions by mapping various concepts. The theory suggests that nurturing flexible thinking and mindset in individuals involves several steps (Spiro et al., 1988). First, flexible thinking requires exposing them to diverse representations of content. Next, it entails encouraging the comparison and linking of different concepts to create complex and interconnected scenarios within a domain. Finally, it involves integrating diverse knowledge sources for practical application. These steps are crucial because the development of cognitive flexibility is essential for transferring existing knowledge to new situations (Pitsi, Billsberry, & Barrett, 2023a; Spiro et al., 1992). Empirical studies have used various methods to measure cognitive flexibility such as self-reporting using the cognitive flexibility scale (e.g., Martin & Rubin, 1995; Martin, Staggers, & Anderson, 2011), Stroop tasks, and the Wisconsin Card Sorting Test (Hommel, Ruppel, & Zacher, 2022). The Cognitive Flexibility Scale, developed by Martin and Rubin (1995), is a widely used self-report measure that assesses an individual's ability to perceive alternatives, adapt to new situations, and generate different solutions. The scale captures the subjective aspects of cognitive flexibility that reflect how individuals perceive their adaptability (Martin & Rubin, 1995; Martin et al., 2011). These methods, particularly self-report scales, have been used by scholars in both entrepreneurship and change management fields for measuring cognitive flexibility (e.g., De Carolis & Saparito, 2006; Gill et al., 2021; Hmieleski & Ensley, 2007). For instance, Gill et al. (2021) found that

Stream 5. Entrepreneurship and SMES

cognitive flexibility positively predicts the relationship between entrepreneurial alertness and entrepreneurial intentions. Their results supported the hypothesis that individuals with higher levels of cognitive flexibility, alertness, and self-efficacy are more likely to pursue a career in entrepreneurship. Hmieleski and Ensley (2007) utilised a cognitive flexibility scale to examine its impact on the performance of entrepreneurial teams. They discovered that teams with higher cognitive flexibility demonstrated better performance and innovation.

Expanding on the cognitive flexibility theory discussed earlier, the concept of cognitive flexibility remains central in addressing environmental demands that necessitate adaptive problem-solving (Pitsi et al., 2023a, 2023b; Stenberg, 1985). Cognitive flexibility, characterised by enhanced problem-solving abilities, creativity, and mental well-being, enables individuals to effectively manage change, respond resiliently to challenges, and foster innovation within their teams (Hodgkinson & Wright, 2002). This adaptive attribute emphasises the ability to adapt to unpredictable or uncertain situations and adjust to changing circumstances (Ocasio, 2011; Sharfman & Dean, 1997). Furthermore, cognitive flexibility can be comprehensively understood within the framework of dual-process theory (Kahneman, 2011). This theory suggests that individuals switch between two thinking systems: system 1, which is fast, intuitive, and automatic, and system 2, which is slow, deliberate, and analytical, depending on task demands and contextual factors. Within this framework, cognitive flexibility allows individuals to seamlessly switch between these processing types (e.g., Diamond, 2013; Evans & Stanovich, 2013), facilitating adaptive problem-solving and effective management of change.

METHODOLOGY

The main purpose of this study is to explore the literature examining cognitive flexibility in the context of entrepreneurship that enables entrepreneurs to manage and adapt to changes and challenges using a bibliometric method (van Oorschot et al., 2018). From this, we contribute to strengthening the foundations of knowledge and understanding of entrepreneurial cognition flexibility and change management (Paul & Criado, 2020). We searched and retrieved our data set from Scopus due to its comprehensive coverage of published papers on entrepreneurship, cognitive flexibility, and change

Stream 5. Entrepreneurship and SMES

management (Linnenluecke et al., 2020; Mingers & Lipitakis, 2010), as well as its significant overlap with other databases such as Web of Science (Martín-Martín et al., 2021). We downloaded our dataset on the 28th of April 2024 and did not limit our search to any specific date or journal to include all the related papers to our research focus.

Inclusion criteria and search results

After defining our research purpose and research questions (Snyder, 2019), we specified the paper inclusion criteria, requiring that the papers in our analysis should: a) examine cognitive flexibility and change management in the context of entrepreneurship; b) be published in a journal listed in the 2023 Australian Business Deans Council (ABDC) journal quality list, and d) be in English. Therefore, we excluded published works on books, book chapters, conference papers, review articles, encyclopedias, and editorials because of the inconsistent process of their peer review. Then, we selected a broad range of keywords including: 'cognitive flexibility' and 'entrepreneurship' in the title, abstract, or keywords of journal articles. As the words cognitive flexibility and entrepreneurship can appear in any field of science and we were interested in exploring cognitive flexibility, entrepreneurship, and change management, we only included papers with at least one of the following words in the titles, keywords, and abstracts of journals: 'entrepreneur', 'cognitive flexibility', 'cognitive adapt*', 'cognitive change', 'mental flexibility' and 'flexible thinking'. We used the following command to search for the related papers: ("Cognitive flexibility" OR "Cognitive adapt" OR "Cognitive change" OR "Flexible thinking") AND ("entrepreneurship" OR "entrepreneur" OR "entrepreneurial") AND ("change management"). We also limited our search to papers published in the subject areas of business, management, accounting, social sciences, and psychology. Applying the above-mentioned search criteria, the initial paper search yielded 890 papers. Then, we removed 473 papers that were not listed in the ABDC journal quality list and performed our final analysis using 417 ABDC-listed journal articles. We used Bibliometrix-Biblioshiny R to analyse the papers (Moral-Muñoz et al., 2020).

Stream 5. Entrepreneurship and SMES

FINDINGS

Publication trends

Our analysis showed that 1,018 researchers were engaged in writing 417 papers that were published by 84 journals from 1995 to 2024. Most of the papers (n=415) had multiple authors, indicating a high collaboration among scholars in the field. Analysis of the annual publication of the papers also revealed that the number of published papers has dramatically increased since 1995 and specifically risen steeply in the last five years (2020=29, 2021=29, 2022=38, 2023=54, 2024=39) (Figure 1).

Insert Figure 1 about here

Leading journals

Strategic Management Journal leads with 31 articles, followed by *Journal of Management Studies* with 20, *Academy of Management Journal* with 19, *Journal of Business Research* with 18, and *Organisation Science* with 17, making them the most relevant sources for the papers as depicted in Figure 2.

Insert Figure 2 about here

Of the sources that published the papers, *Strategic Management Journal* with an h-index of 25, *Academy of Management Journal* with an h-index of 17, *Journal of Management Studies* with an h-index of 14, *Academy of Management Review* with an h-index of 11, and *Journal of Business Venturing* with an h-index 11 had the highest local impact in the field.

The first articles on the field were published by the *Journal of Management Studies* and *Journal of Business Research*, each published one related paper to our search in 1995. As Figure 3 indicates, *Strategic Management Journal* has steadily increased the number of articles published in the field. We also analysed the bibliographic coupling of journals that published the articles related to our search. The findings indicate three clusters of interconnected journals (Figure 4). The first cluster includes four journals including *Academy of Management, Academy of Management Review, Journal of Management,* and *Journal of Management Studies*. The second cluster includes the *Journal of Business Research, Long*

Stream 5. Entrepreneurship and SMES

Range Planning, Management Decision, and *Strategic Management Journal*. The third cluster

encompasses two journals: *Journal of Business Venturing,* and *Organisation Science*.

Insert Figure 3 about here

Insert Figure 4 about here

Authors analysis

Our analysis of the paper also showed that corresponding authors from the US (n=105) were the

leading researchers in the field far followed by researchers from the UK (n=35) and China (n=33). Figure

5 shows the corresponding authors from different countries.

Insert Figure 5 about here

The US (n=12,923), UK (n=2,989), Canada (1,337), Finland (n=1,022), and the Netherlands

(n=774) were the most cited countries in our dataset.

Regarding lead authors who published most articles in the field, we found that Andreea N. Kiss,

Dean A. Shepherd, and Jeremy C. Short were three of the most relevant authors in the field (Figure 6).

Insert Figure 6 about here

Pamela S. Barr, Kathleen M. Eisenhardt, and Donald C. Hambrick were three of the most cited by

other authors in the field (Figure 7).

Insert Figure 7 about here

Citation analysis

Citation analysis is a valuable instrument for recognising the foundational works in a field. It can

assist scholars to identify the articles that other scholars in the field referred to them as the most important

contributions. Our analysis highlighted Sara Kaplan as the leading author with 1,354 citations. The most

influential paper in the field was published by Tripsas (1997), titled "Unravelling the process of creative

destruction: Complementary assets and incumbent survival in the typesetter industry". The paper was

published by *Strategic Management Journal* and received 1,615 citations from authors around the globe

(Figure 8).

Insert Figure 8 about here

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Keyword co-occurrence

Analysis of the authors' keywords demonstrated that innovation, cognition, entrepreneurship, managerial cognition, strategic change, and cognitive flexibility were the most frequent keywords in the analysed papers (Figure 9).

Insert Figure 9 about here

Strategy (n=60) was the most frequent topic examined in the field followed by role (n=46), performance (n=42), entrepreneurial (n=40), and firm (n=36). Figure 10 demonstrates the trend topics in the field.

Insert Figure 10 about here

We also analysed the papers based on the co-occurrence of authors' keywords. As Figure 11 illustrates, six main clusters were identified from the data. Table 1 illustrates the clusters and related keywords.

Insert Table 1 about here

As analysis of the network of the authors' keywords and their co-occurrence shows (Figure 11), recent research focused on cognitive flexibility and organisational ambidexterity, performance, decision-making, and organisation.

Insert Figure 11 about here

The leading countries in collaborative research on cognitive flexibility and entrepreneurship in navigating and adapting to change

Regarding collaborations between researchers from different countries, we found that researchers from Australia had the highest collaboration with researchers from other countries and collaborated with researchers from 15 other countries. Researchers from China collaborated with researchers from 12 other

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countries followed by researchers from Canada who collaborated with 11 researchers from other countries. Figure 12 depicts research collaborations among different countries.

Insert Figure 12 about here

DISCUSSIONS

This paper aimed to provide a comprehensive map of the peer-reviewed published articles on the interplay between cognitive flexibility, entrepreneurship, and change management. The findings from our bibliometric analysis highlight a significant increase in research on the interconnections between the fields. Specifically, we found the increasing importance of cognitive flexibility in both entrepreneurship and change management research over recent years, as demonstrated by the growing number of publications, especially in the last five years. This trend stresses the critical role of cognitive flexibility in enabling entrepreneurs to adapt to rapidly changing environments (e.g., Eisenhardt & Graebner, 2007; Hambrick & Mason, 1998; Kaplan, 2008). The increasing interest among 1,018 researchers from various countries underscores the significance of entrepreneurial cognitive flexibility as a promising research area that provides deeper insights into entrepreneurship phenomena. Our keyword analysis revealed frequent use of terms such as cognitive flexibility, entrepreneurship, strategic change, and cognitive agility. This indicates a widespread recognition of these concepts within the field. The emergence of concepts such as cognitive agility, which involves rapid switching between thought processes and adaptation to new situations, suggests a nuanced understanding of how entrepreneurs can effectively respond to change. Additionally, the high level of collaboration among researchers from different disciplines and countries, as evidenced by the 415 papers with multiple authors identified in our analysis, underlines the critical role that contributions from diverse fields play in providing deeper insights into entrepreneurial cognitive flexibility.

Our bibliometric analysis opened several new research avenues for future studies. First, this study did not aim to measure the significant impact of cognitive flexibility on entrepreneurs' success and performance in managing and adapting to change. Future research can use quantitative methods such as

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meta-analysis to explore if the cognitive flexibility of entrepreneurs significantly influences their change management, adaptation, and success. Secondly, we propose conducting studies that utilise quantitative methods to investigate how cognitive agility influences entrepreneurs' success and change management. Thirdly, our study suggests that future research should prioritise integrating the concepts of cognitive flexibility and agility into entrepreneurial leadership development (Bagheri et al., 2022). This integration can enhance entrepreneurial leaders' ability to embrace change and develop effective strategies for organisational adaptation in today's volatile business environment. Exploring gender differences of entrepreneurs in their cognitive flexibility and change management and adaption has also great potential for further investigations. Finally, our review also stresses the importance of cross-cultural studies and collaboration to understand how cognitive flexibility impacts entrepreneurship in navigating change across diverse contexts.

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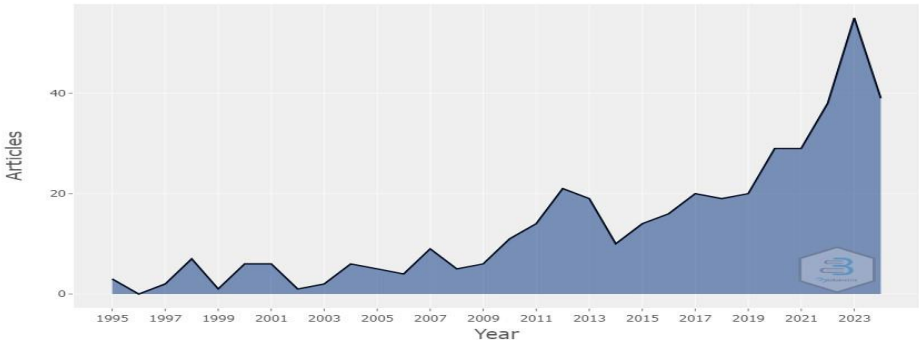
Figure 1: Annual published papers
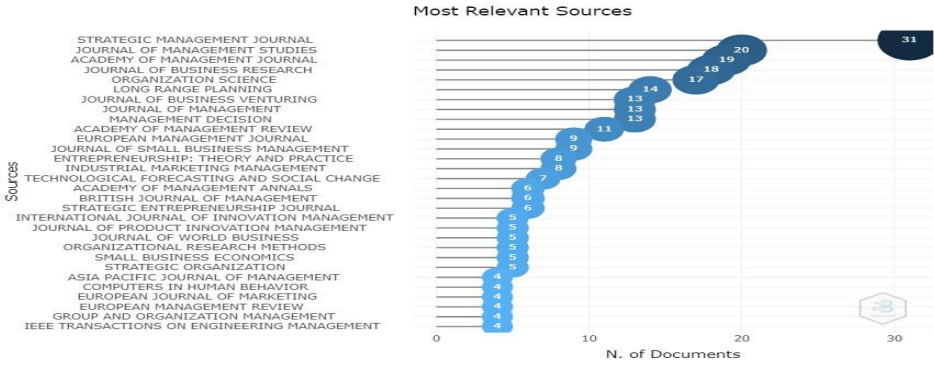
Figure 2: Most relevant sources

Stream 5. Entrepreneurship and SMES
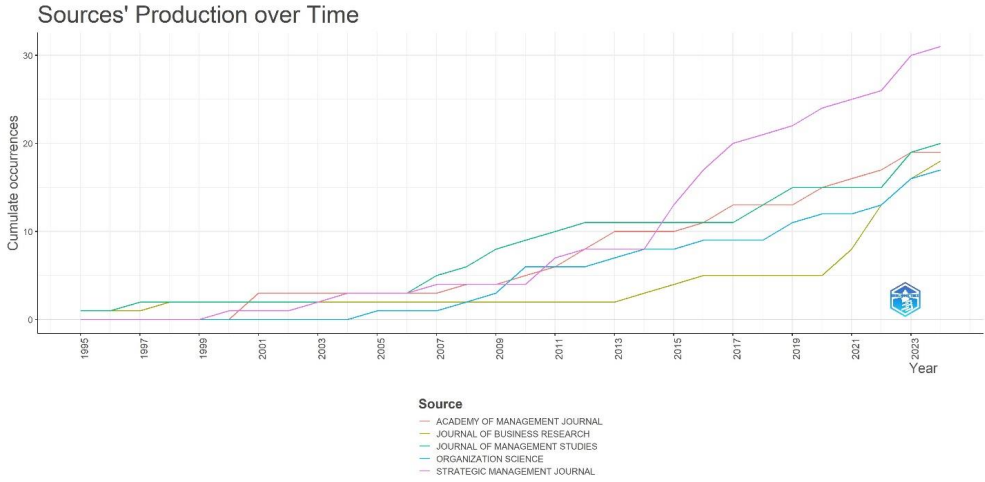
Figure 3: Sources' publication over time
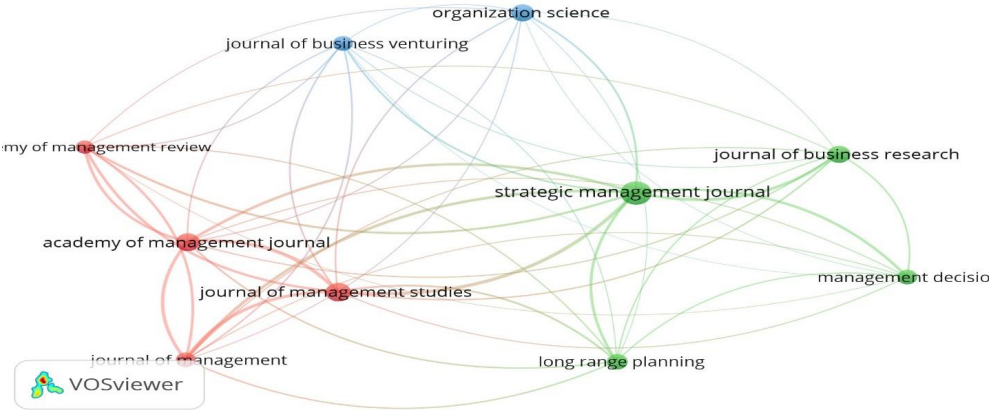
Figure 4: Bibliographic coupling of journals

Stream 5. Entrepreneurship and SMES
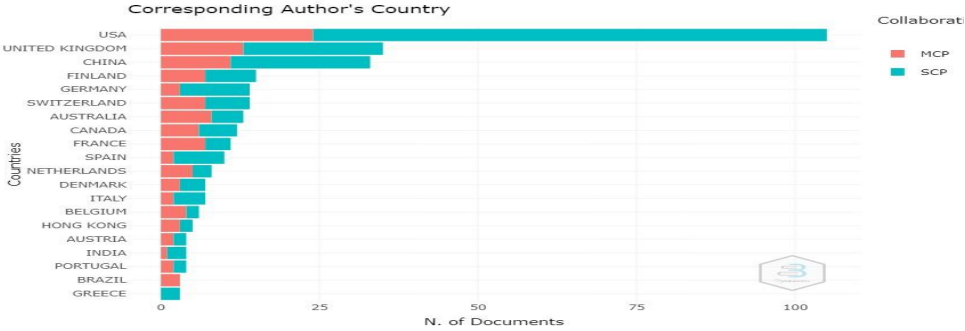
Figure 5: Corresponding author's country
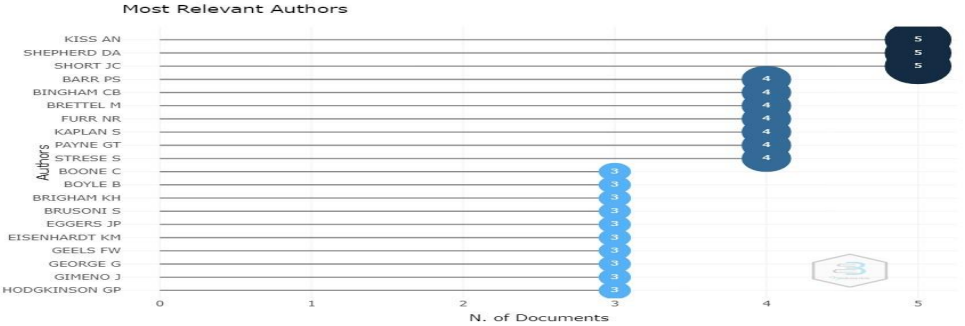
Figure 6: Most relevant authors

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Most Local Cited Sources
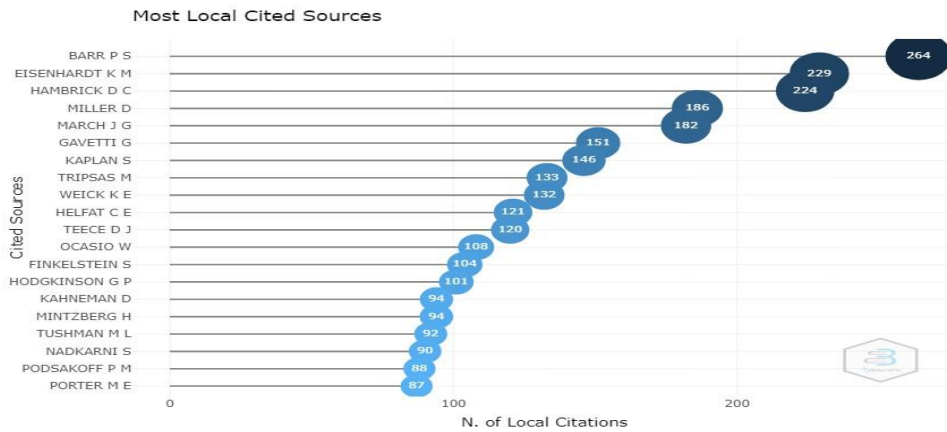
Figure 7: Most local cited authors

Most Global Cited Documents
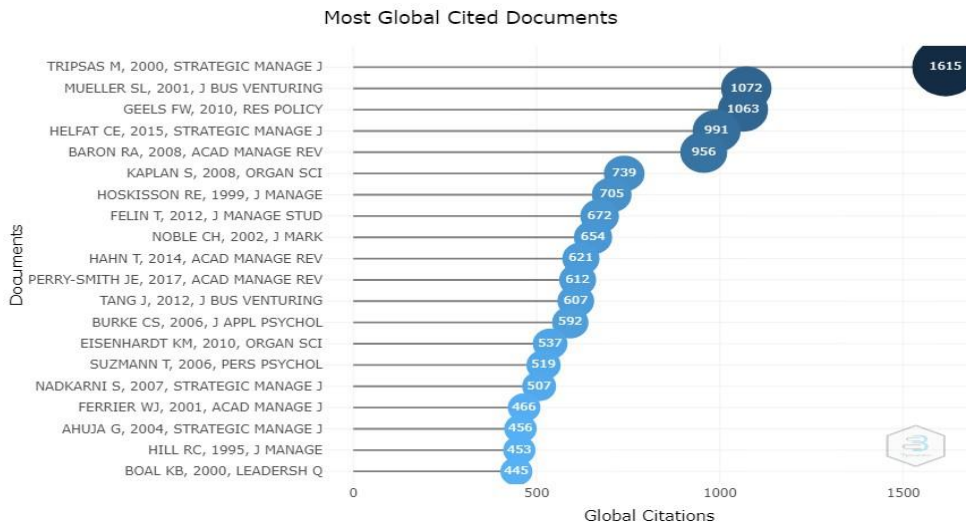
Figure 8: Most global cited paper

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Figure 9: Most frequent keywords

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Trend Topics
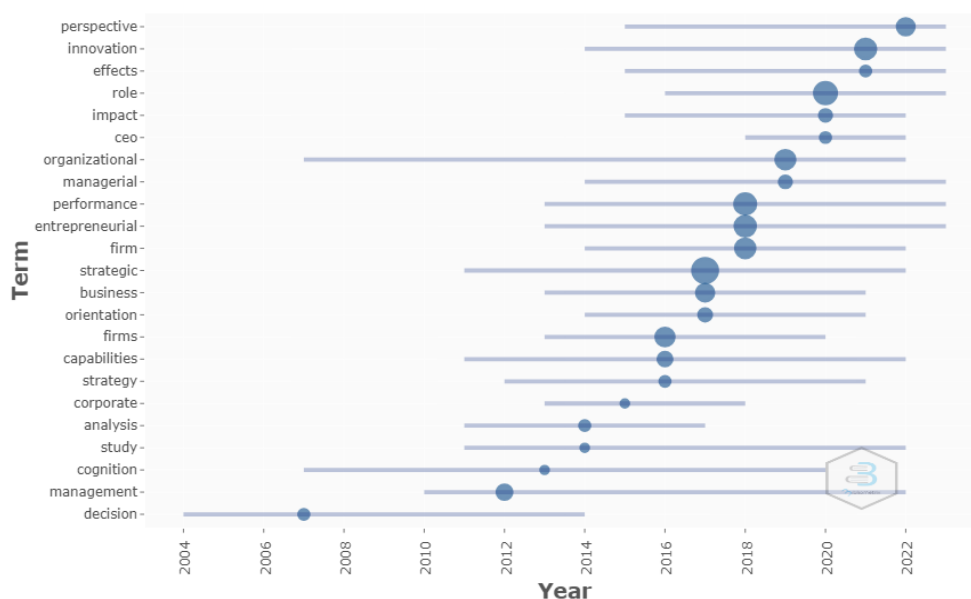
Figure 10: Most frequent research trends

Cluster	Number of keywords	Keywords
1	6	Adaptation, business model innovation, cognition, framing, learning and sensemaking
2	5	Encompasses five related keywords including ambidexterity, digitalisation, entrepreneurial orientation, family firms, and performance
3	5	business model, change management, competitive advantage, innovation, and strategic renewal
4	4	Change, cognitive flexibility, creativity, organisational ambidexterity
5	4	Ambidexterity, content analysis, entrepreneurial orientation, family firms
6	4	Cognition, competitive advantage, dynamic capabilities, strategy
7	2	decision making, entrepreneurship

Table 1: Co-occurrence of authors' keywords

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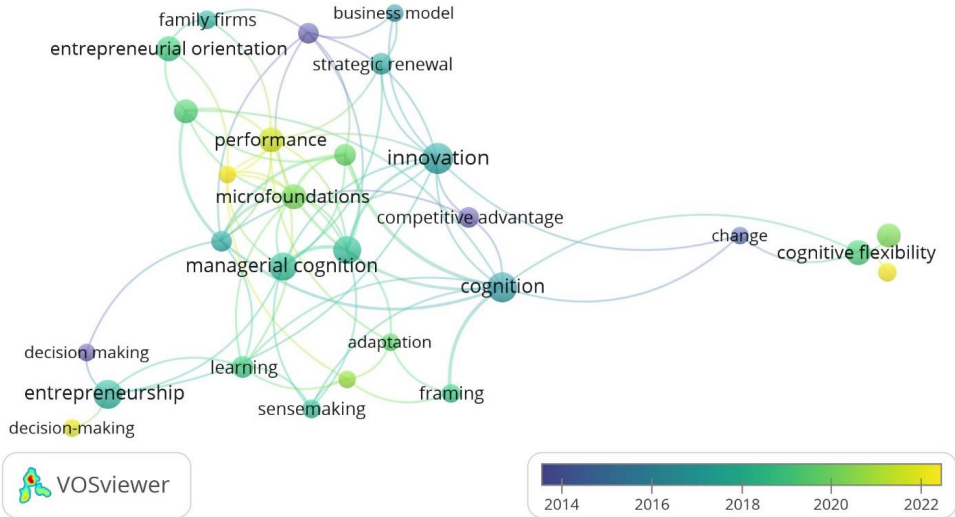
Figure 11: co-occurrence of authors' keywords
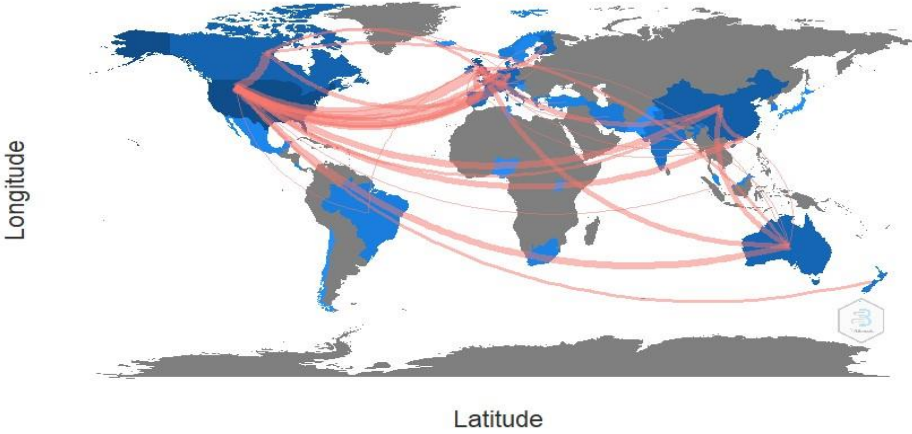
Figure 12: Research collaborations around the globe

Connectivity and autonomy in our new world of work: The role of connectivity agency as a job resource in telework arrangements

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Connectivity and autonomy in our new world of work: The role of connectivity agency as a job resource in telework arrangements

ABSTRACT

As information and communication technologies (ICTs) allow work to become increasingly detached from traditional time and space, a variety of new problematic job demands emerge. ICTs may serve as an 'electronic leash', binding an employee to their work and reducing opportunities for psychological detachment, recuperation, and work–life separation. We examine this issue within the context of the job demands-resources (JDR) framework and investigate one job resource that mitigates the effect of excessive connectivity. We find that, through burnout, hyper-connectivity increases turnover intention and reduces organisational commitment. However, connectivity agency weakens this effect. As more individuals become susceptible to the risks associated with excessive connection to work, our study provides important insights for researchers and practitioners alike.

Keywords: telework, remote work, connectivity, connectivity agency, job demands-resources, burnout

INTRODUCTION

In the contemporary work era, organisational scholars must consider new and emerging psychophysiological risk factors (Schaufeli, 2017). Indeed, as more employees engage in work patterns that are geographically-distributed and technologically-mediated, a variety of novel job demands (and job resources) emerge. *Hyper-connectivity* is a term within organisational research that refers to the state in which an employee experiences excessive technological connection to work (Kolb et al., 2012). In recent years, scholars have taken a growing interest to the 'dark sides' of technology, investigating concepts such as *technostress* (Tarafdar et al., 2007). Whilst technostress applies to the various conditions under which technology may relate to stress (e.g., through increasing uncertainty, difficulties in utilisation, or work intensification), connectivity is a unique concept that refers to one's sense of technological connection and psychological distance between themselves and their work domain (Kolb et al., 2012).

Qualitative literature (Leonardi et al., 2010; Mattern & Klein, 2022) suggests that excessive connectivity may relate to negative individual outcomes such as stress and the blurring of work and life boundaries through increased responsiveness, availability, prolonged working hours, and even digital surveillance (Bathini & Kandathil, 2020; Charalampous et al., 2022; Newbold et al., 2022). Broadly there is a lack of quantitative evidence confirming the nature of the relationship between connectivity and work outcomes, and more importantly, potential job resources to remedy these effects.

1

Stream 2: Organisational Behaviour

Connectivity and autonomy in telework arrangements

THEORETICAL BACKGROUND

Job Demands-Resources (JDR) theory

In today's rapidly evolving workplaces, researchers must investigate the factors that contribute to employee burnout to maintain a healthy and productive workforce. The *job demands-resources* (JDR) framework has been widely utilised within the past decade to assist our understanding of the pressures (demands) and support (resources) that employees have in the workplace (Bakker et al., 2023). Whilst occupations and work contexts are undoubtedly characterised by unique factors influencing psychophysiological wellbeing, the JDR model proposes that these fall into one of two categories: *demands* or *resources* (Bakker & Demerouti, 2007). Job demands are the "physical, psychological, social, or organizational aspects of [a] job" which are psychologically or physiologically costly due to requirements of sustained effort or skill (Bakker & Demerouti, 2007, p. 312). Conversely, job resources are aspects which promote physiological and psychological wellbeing, and are typically "functional in achieving work goals", "stimulate personal growth", or have a reduction effect on job demands or their relation to burnout (Bakker & Demerouti, 2007, p. 312).

The JDR model proposes that burnout is influenced by the intensity of job demands and availability of resources within one's context. Strong meta-analytic evidence supports the link between job demands and burnout (Alarcon, 2011; Aronsson et al., 2017) with demands such as role ambiguity, role conflict, workload, and job insecurity all strongly linked to burnout. As such, when an employee is subject to high job demands and an absence of adequate resources, they will experience burnout through what is labelled the *heath impairment process* (Bakker et al., 2023).

Hyper-connectivity as a job demand

Those in remote work arrangements (teleworkers) are often subject to problematic levels of work-related connection (Bleakley et al., 2022; de Klerk et al., 2021; Newbold et al., 2022; Waizenegger et al., 2020). In their qualitative study on the *connectivity paradox*, Leonardi et al. (2010) show that teleworkers experience a heightened sense of digital connection that impedes their psychological detachment and recovery from work. Büchler et al. (2020) and Fonner and Roloff (2012) largely confirm these findings, showing that hyper-connectivity leads to negative employee outcomes such as stress and decreased wellbeing. In line with JDR model's health impairment process and these prior findings on hyper-connectivity, stress/burnout and wellbeing, we first propose the following hypotheses:

> *H1: Hyper-connectivity is positively related to burnout.*
> *H2a: Burnout is positively related with turnover intention.*
> *H2b: Burnout is negatively related with organisational commitment.*

2

That is, burnout will act as a mediator between job demands (hyper-connectivity) and turnover intention and organisational commitment, because prolonged connectivity would deplete employees' energy and resources, leading to burnout, which in turn would trigger negative attitudinal and behavioural outcomes.

> *H3a: Burnout mediates the relationship between hyper-connectivity and turnover intention.*
> *H3b: Burnout mediates the relationship between hyper-connectivity and organisational commitment.*

Connectivity agency as a job resource

Within their definition of connectivity, Kolb et al. (2012, p. 269) discuss the dimension of *actor agency* (henceforth referred to as *connectivity agency*), which relates to the "level of choice, control or 'free will' that… workers have over their connectivity states". This relates to decisions about when, where, and how one connects to work through technology. Autonomy has long been acknowledged as a crucial component of work (Hackman, 1980), and in the anytime-anywhere work context, connectivity agency emerges as an important form of autonomy. Leonardi et al. (2010) and Aljabr et al. (2022) qualitatively investigate these behaviours, suggesting their importance for individual wellbeing and boundary management. These authors also detail the types of behaviours employees use to manage their connectivity, such as *segmentation* and *disconnection*. Disconnection refers to the complete disengagement of devices, by turning them off, or disconnecting them from the internet (Leonardi et al., 2010). Individuals may set particular rules regarding when or how disconnection occurs. Segmentation refers to the separation of work and life-related media, for instance, through using separate work and personal devices (Aljabr et al., 2022).

Yet whilst these behaviours have been thoroughly documented and categorised, there is little statistical evidence to test their importance. And whilst evidence demonstrates the negative effects of excessive connectivity (Büchler et al., 2020; Fonner & Roloff, 2012), the role of job resources, in this case connectivity agency, remains largely unclear. One key proposition of the JDR model is that resources can negate or even moderate the relationship between demands and the health impairment process (Bakker & Demerouti, 2014). For instance, work-life interference does not necessarily cause burnout if employees also experience feedback and autonomy (Bakker et al., 2005). Similarly, decision latitude (a job resource) can weaken the effect of work-life conflict on work-family role blurring (Glavin & Schieman, 2011). As such, we postulate that a high degree of connectivity agency will weaken the effects of hyper-connectivity upon burnout, and burnout upon the outcomes of turnover intention and organisational commitment.

> *H4a: Connectivity agency moderates the positive relationship between hyper-connectivity and burnout, such that the relationship is weakened when connectivity agency is higher.*
> *H4b: Connectivity agency moderates the positive relationship between burnout and turnover intention, such that the relationship is weakened when connectivity agency is higher.*

3

H4c: Connectivity agency moderates the negative relationship between burnout and organisational commitment, such that the relationship is weakened when connectivity agency is higher.

Figure 1 below presents the hypothesised model of our study.
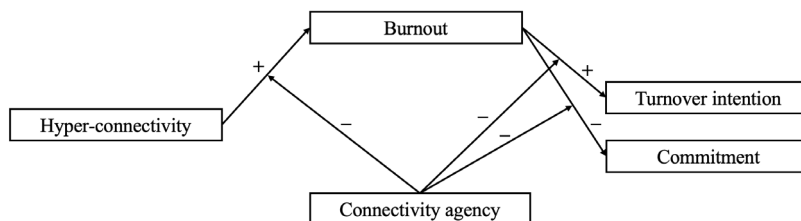
Figure 1: Hypothesised model

METHODS

Sample

To test our hypotheses, we collected data from 241 teleworkers using Prolific, an online data collection platform. We set sample screening filters within Prolific to ensure that respondents were engaged in a remote working arrangement at the time of completing the survey. However, 34 (14.1%) respondents answered "No" to the question, "This past week, have you worked remotely?". We collected data across two separate timepoints (*t1* and *t2*) which were three months apart, with *t1* launched in December 2023 and *t2* launched in March 2024. *T1* received 301 valid responses and *t2* received 256, which means the study had a retention rate of 85%. Due to an error with Prolific, we were unable to match some *t2* cases to their *t1* counterparts and removed them from the sample, yielding a final sample of 241 respondents. The mean age of the sample is 37.18, with most respondents (61.8%) identifying as male. On average, respondents had worked for their current organisation for 6.62 years and worked an average of 37.54 hours per week.

Purchasing data through services such as Prolific is becoming increasingly common in the social sciences, yet concern exists regarding non-attentive respondents and bots (Douglas et al., 2023). Whilst a variety of such online platforms exist, evidence suggests that Prolific offers some of the highest quality data amongst its competitors such as Amazon MTurk (Douglas et al., 2023; Peer et al., 2022). To mitigate the risk of non-attentive respondents, two attention-check questions were added throughout the survey: "I have never used a computer" and "I can teleport through time and space" (Huang et al., 2015).

4

Measures

Unless otherwise stated, the response scale to all survey items ranged from 1 = *strongly disagree* to 7 = *strongly agree*.

Independent variables. There were three independent variables in our data: hyper-connectivity, connectivity agency, and burnout. To measure hyper-connectivity and connectivity agency, we used the connectivity states instrument (Collins & Kolb, 2015). An example item for hyper-connectivity is "The amount of email, instant messaging, etc., I receive makes it difficult to be productive in my work" (α = .875). An example item from the connectivity agency measure is "I can regulate the time I spend communicating with teammates" (α = .878). To measure burnout, we utilised the short version questionnaire from Malach-Pines (2005). In this questionnaire, respondents are required to report how frequently they have experienced particular emotions or conditions in relation to their work. Examples include "Tired", "Worthless", and "Difficulties sleeping" (α = .944). Items ranged from 1 = *Never* to 7 = *Always*.

Dependent variables. We operationalised two dependent variables within our study. These are organisational commitment and turnover intention. We utilised the organisational commitment (Mowday et al., 1979) and turnover (Mobley et al., 1978) questionnaires to measure these variables. An example item from the organisational commitment measure is "I find that my values and the organisation's values are very similar" (α = .929). An example item from the turnover intention measure is "I often think about quitting my present job" (α = .930).

Control variables. We also controlled for a variety of personal characteristics and work-related variables. These included affect (using the item: "Were you in a good or bad mood while completing this survey?" with a 7-point Likert scale), age (nearest whole number), sex (1 = male, 2 = female, 3 = other or prefer not to say), number of dependants at home (whole number), relationship status (1 = single, 2 = married, 3 = de facto, 4 = separated or divorced, 5 = widowed), industry (a total of 21 options), tenancy (nearest whole number), work contract (1 = full-time, 2 = part-time, 3 = casual), hierarchy (1 = non-management, 2 = lower management, 3 = middle management, 4 = senior management), and average weekly work hours (nearest whole number).

Analysis

Data were analysed using linear regression techniques within SPSS using the PROCESS macro v4.2 (Hayes, 2017). The time-lag in our analysis helped to reduce common method bias. This means for the independent variables we used the data collected at *t1*, and for the dependent variables we used data collected at *t2*. A time-lag technique such as this allows for more powerful statistical insights, especially in suggesting cause and effect relationships (Gollob & Reichardt, 1987).

5

Stream 2: Organisational Behaviour

Connectivity and autonomy in telework arrangements

RESULTS

Table 1 below depicts the descriptive statistics and Pearson correlation matrix for each variable. All correlations occurred in the expected direction. We first conducted a confirmatory factor analysis to determine the discriminant validity of the included variables within our model. This was conducted in R (v. 4.2.3) using the lavaan package v. 0.6-17 (Rosseel, 2012). The hypothesised five-factor model ($\chi 2$ (619) = 1,357.660, p < .001, CFI = 0.888, TLI = 0.879, RMSEA = .070, SRMR = .067) fit the data adequately and was the best-fitting model. Additionally, we experimented with a one-factor model (i.e., loading all of the variables onto a single factor) and observed very poor fit ($\chi 2$ (629) = 4,311.186, p < .001, CFI = 0.439, TLI = 0.407, RMSEA = 0.156, SRMR = 0.170) when compared with our hypothesised five-factor model.

Next, we ran model #4 in SPSS PROCESS to test the hypothesised base mediation effect of burnout between hyper-connectivity and the dependent variables (organisational commitment and turnover intention). The regression results of this analysis are depicted in Table 2. We observed the expected relationships between hyper-connectivity and burnout, and burnout and the dependent variables. Thus, supporting Hypotheses 1, 2a, and 2b. The results also show a full mediation effect of burnout between hyper-connectivity and organisational commitment (*direct effect* = –.203, *SE* = .150, *95% CIs* = [–.5001, .0937], *p* = .178, *indirect effect* = –.189, *SE* = 0.070, *95% CIs* [–.337, –.066]), and hyper-connectivity and turnover intention (*direct effect* = .072, *SE* = .151, *95% CIs* [–.0288, .174], *p* = .159, *indirect effect* = .117, *SE* = 0.030, *95% CIs* [.063, .174]) through the mediating effect of burnout. Thus, our data support Hypotheses 3a and 3b, suggesting that burnout fully mediates the relationship between hyper-connectivity and the dependent variables (organisational commitment and turnover intention). Next, we used PROCESS model #58 to investigate the two-stage moderating effect of connectivity agency. The regression output results are depicted below in Table 3. The results suggest that the interaction between burnout and connectivity agency to predict the dependent variables is statistically non-significant. This would suggest that the proposed two-stage moderation effect is not significant, but first- and/or second-stage moderation may still occur. Correspondingly, to probe this further, we used PROCESS models #7 and #14 to test the first- and second-stage moderation effects respectively and independently.

6

Table 1: *Descriptive statistics and correlation matrix (N = 241)*

	Mean	SD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1. Affect	5.35	1.21	1														
2. Age	37.18	11.1	.11	1													
3. Sex	1.4	0.53	−.06	−.10	1												
4. Dependents	1.53	2.57	**.13***	.00	-.07	1											
5. Relationship	1.75	0.808	0.08	.348	−.03	.10	1										
6. Industry	12.06	4.55	−.00	−.02	**.169***	.02	**−.13***	1									
7. Tenancy	6.54	6.62	0.05	**.53***	−.05	.01	**.27***	−.05	1								
8. Contract	1.18	0.44	**.14***	−.02	.10	−.11	**−.13***	−.03	−.07	1							
9. Hierarchy	2.02	1.04	0.01	**.27***	**−.20***	**.35***	**.15***	−.08	**.28***	**-.24***	1						
10. Hours	37.54	8.89	−.01	.03	**.13***	.07	**.14***	.01	.11	**−.72***	**.24***	1					
11. Hyper- connectivity	16.59	6.64	−.01	−.02	−.05	.02	.01	.02	−.04	**−.20***	**.14***	**.16***	1				
12. Connectivity agency	18.45	5.43	.07	.04	−.00	.01	.04	−.01	.08	**.12***	.01	**−.13***	**−.47***	1			
13. Burnout	24.54	12.33	**.37***	**−.18***	.10	−.03	−.01	.01	−.09	−.01	.00	.09	**.36***	**−.26***	1		
14. Org. Commitment	64.61	15.55	**−.31***	.04	.02	.11	.05	.00	.02	.00	**.20***	−.02	**−.14***	.09	**−.32***	1	
15. Turnover	9.9	5.5	.08	**−.16***	−.04	−.09	−.06	.02	−.08	−.03	**−.13***	.00	**.22***	**−.14***	**.46***	**−.73***	1

*Notes. N = 241; * p <.05; ** p < .01.*

7

Table 2: *Regression analysis of base mediation effect (hyper-connectivity → burnout → organisational commitment / turnover intention)*

Predictor	B	SE
DV: Burnout		
Controls		
Affect	**−3.034****	. 581
Age	**−.194***	.077
Sex	2.346	1.353
Dependents	−.078	.291
Relationship	.945	.936
Industry	.002	.156
Tenancy	−.002	.126
Contract	**5.112***	2.273
Hierarchy	.779	.789
Hours	**.240***	.114
Antecedents		
Hyper-connectivity	**.666****	.107
R²	**.536****	
DV: Org. commitment		
Controls		
Affect	**3.680****	.800
Age	−.113	.101
Sex	2.752	1.773
Dependents	−.059	.379
Relationship	.924	1.222
Industry	.082	.203
Tenancy	−.105	.164
Contract	1.797	2.992
Hierarchy	**3.651****	1.029
Hours	3.680	.800
Antecedents		
Burnout	**−.284****	.086
Hyper-connectivity	−.203	.150
R²	**.494****	
DV: Turnover intention		
Controls		
Affect	**−.806****	.273
Age	−.030	.034
Sex	−1.304	.606
Dependents	−.051	.129
Relationship	−.068	.417
Industry	.032	.069
Tenancy	.028	.056
Contract	−1.746	1.022
Hierarchy	−.683	.351
Hours	−.082	.051
Antecedents		
Burnout	**.175****	.029
Hyper-connectivity	.072	.051
R²	**.544****	

Notes. N = 241; * p <.05; ** p < .01.

8

Stream 2: Organisational Behaviour

Connectivity and autonomy in telework arrangements

The model #7 results (first-stage moderation) support Hypothesis 4a. We observed a statistically significant interaction effect between connectivity agency and hyper-connectivity when predicting burnout ($B = -.047$, $SE = .018$, $p = .010$). This effect is depicted in Figure 2. When interpreting the results of moderated-mediation, we achieved statistically significant results with the dependent variables of turnover intention (*index of moderated-mediation = –.008*, *SE = .004*, *95% CIs [–.017, –.0006]*) and organisational commitment (*index of moderated-mediation = .013*, *SE = .008*, *95% CIs [.002, .031]*).

Confirming the results of model #58, the results of model #14 (second-stage moderation) did not show a significant second-stage moderation effect of connectivity agency. We observed statistically non-significant results of the interaction effect between burnout and connectivity agency when predicting organisational commitment ($p = .445$) as well as turnover intention ($p = .807$). As such, Hypotheses 4b and 4c were not supported.
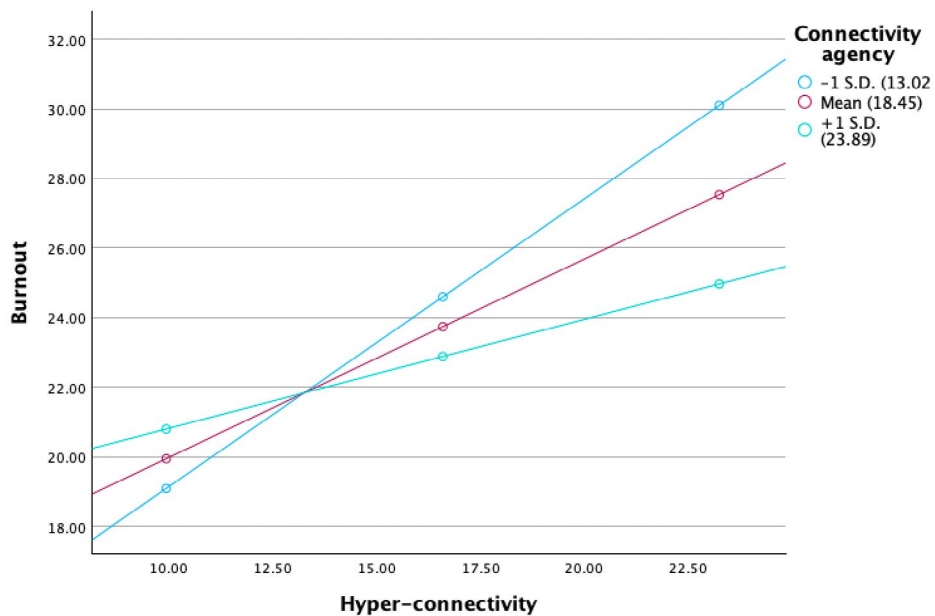
Figure 2: Interaction between connectivity agency and hyper-connectivity in predicting burnout

9

Table 3: *Regression results with connectivity agency as first- and second-stage moderator*

Predictor	B	SE
DV: Burnout		
Controls		
Affect	**−2.907****	.575
Age	**−.197****	.076
Sex	1.782	1.350
Dependents	−.104	.287
Relationship	.942	.926
Industry	.005	.154
Tenancy	.000	.125
Contract	**5.297***	2.242
Hierarchy	.980	.782
Hours	**.222***	.113
Antecedents		
Hyper-connectivity	**1.444****	.354
Connectivity agency	.627	.355
Interaction		
Hyper-connectivity*connectivity agency	**−.047***	.018
R²	**.314****	
DV: Org. commitment		
Controls		
Affect	**3.787****	.810
Age	−.128	.103
Sex	2.704	1.777
Dependents	−.089	.382
Relationship	1.137	1.243
Industry	.083	.204
Tenancy	−.904	.165
Contract	1.781	2.999
Hierarchy	**3.721****	1.035
Hours	−.007	.810
Antecedents		
Burnout	**−.441***	.215
Hyper-connectivity	−.257	.165
Connectivity agency	−.399	.299
Interaction		
Burnout*connectivity agency	.009	.012
R²	**.498****	
DV: Turnover intention		
Controls		
Affect	**−.819****	.277
Age	−.028	.035
Sex	**−1.298***	.608
Dependents	−.048	.130
Relationship	−.094	.425
Industry	.032	.069
Tenancy	.027	.035
Contract	−1.747	1.027
Hierarchy	−.694	.354
Hours	−.081	.051
Antecedents		
Burnout	**.192****	.073
Hyper-connectivity	.081	.056
Connectivity agency	.051	.131
Interaction		
Burnout*connectivity agency	−.001	.004
R²	**.544****	

Notes. N = 241; * p <.05; ** p < .01.

10

Figure 3 below displays the path diagram depicting the relationships between our included variables and their unstandardised Beta coefficient.
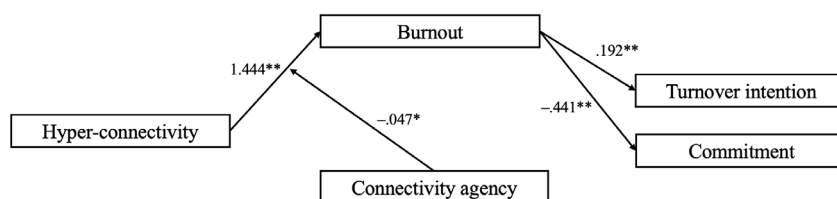
*Notes. N = 241; * p <.05; ** p < .01.*

Figure 3: *Summary of model results*

DISCUSSION

As work and technology become increasingly intertwined and enable anytime-anywhere work arrangements, novel job demands emerge. Our results support previous efforts (Büchler et al., 2020; Fonner & Roloff, 2012) showing that excessive technological connectivity can lead to counterproductive work outcomes. We expand upon this proposition by showing that, through the mediating mechanism of burnout, hyper-connectivity leads to turnover intention and reduced organisational commitment. In line with the propositions of the JDR model, our results also suggest that connectivity agency (a job resource), mitigates the impact of hyper-connectivity upon burnout. This is an important contribution, as there is a dearth of quantitative empirical evidence examining the effectiveness of these behaviours, or job resources which can mitigate the effects of excessive connectivity. However, we did not observe connectivity agency moderating in the second stage, that is, between burnout and the outcome variables. This suggests that whilst connectivity agency is an important resource for mitigating hyper-connectivity, it is not effective in reducing the effect of burnout upon employees' organisational commitment or intention to leave their organisation. This could be attributed to the fact that burnout typically manifests after prolonged exposure to stress (Maslach & Leiter, 2016), thus rendering connectivity agency either too late or insufficient in mitigating its negative impact on work outcomes. Additionally, the reasons behind low organisational commitment and turnover intention may be multifaceted. As such, it becomes difficult to link connectivity agency as a moderating factor in this relationship.

OPPORTUNITIES FOR FUTURE RESEARCH

We believe our study opens a few notable avenues for academic discussion and inquiry. One such avenue is the nature of hyper-connectivity. Through their development of the constant connectivity scale, Büchler et al. (2020) detail antecedents of constant connectivity such as an alignment between work device perceptions and occupational identity, susceptibility to social pressure, and visibility of colleagues'

11

communication practices. The question emerges as to whether hyper-connectivity is a job demand itself, or rather a product of job demands (e.g., norms for responsiveness or *telepressure*). Whilst our research operationalises hyper-connectivity as a demand, we understand the potential limitations in this practice and encourage scholars to consider alternate approaches.

Secondly, additional 'states' of connectivity exist within its conceptualisation. These include *hypo-connectivity*, *requisite connectivity*, and *flow*. Since we focussed solely on hyper-connectivity in this paper, this poses a significant limitation of our study. Future research may consider implementing or adapting the other factors included within existing connectivity scales (Büchler et al., 2020; Collins & Kolb, 2015) to examine their varying roles as job demands (or resources). For instance, where hyper-connectivity serves as a demand, may connective flow serve as a job resource? Particularly in relation to teleworkers' isolation and social connection (Antunes et al., 2023), hypo-connectivity appears to be an important and worthwhile avenue for future research efforts.

Finally, by demonstrating that excessive connectivity can indeed serve as a problematic job demand, we believe future research should consider job resources to mitigate this effect alongside higher connectivity agency. The question emerges as to whether factors like trust, team norms, organisational policies, and even individual personalities can provide a measurable effect which mitigates hyper-connectivity and its impact on burnout.

CONCLUSION

Our study provides three important contributions to the extant literature concerned with the JDR model, technological connectivity, and the individual-level outcomes of teleworking. Firstly, we link hyper-connectivity to the JDR framework, showing that it can lead to negative outcomes through the health impairment process. Secondly, we examine new outcomes associated with hyper-connectivity by linking it to turnover intention and reduced organisational commitment. And finally, we provide evidence that connectivity agency can serve as a crucial job resource that mitigates the effect of hyper-connectivity on burnout. As more employees engage in telework and become susceptible to the risks associated with excessive technological connection to work, our research provides important insights for both researchers and practitioners alike.

12

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13

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15

Stream 4: Gender, Diversity and Indigeneity

The Provision of Culturally Safe Care for the Sexual and Gender Minority Older Adult in Australian Residential Aged Care Facilities

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Stream 4: Gender, Diversity and Indigeneity

Abstract:

The global population of those over 65 is rising sharply, underscoring the need for specialised care in aged care services, particularly for sexual and gender minorities who have historically faced marginalisation. This study examines the perceptions of aged care workers in Australian residential aged care facilities regarding the provision of culturally safe care for sexual and gender minority older people through the lens of social capital theory. Employing qualitative methods, 52 interviews explored the barriers and challenges encountered by aged care workers in providing culturally safe care. Key findings include identification of resident sexual orientation and/or gender identity, understanding the history of this population, and the bias and attitudes of staff and other residents. Implications for practice are presented.

Keywords: Culturally Safe Care; Aged Care Worker; Sexual and Gender Minority; Residential Aged Care Facility

Overview:

The ageing global population faces increasing vulnerabilities due to physiological, social, and economic factors (Cox & Pardesani, 2017). Older sexual and gender minority (SGM) individuals, referred to as residents in this paper, face heightened risks due to historical marginalisation (Cox & Pardesani, 2017), yet remain underserved and understudied.

Health disparities for residents are significantly worse than their cis-gender, heterosexual counterparts, with older SGM adults benefitting less from societal changes than younger ones (Bailey et. al., 2022). This emphasises the need for specialised services and skilled professionals capable of providing culturally safe care (CSC), termed safe care in parts of this article. Such care requires a thorough understanding of SGM histories and inequities, along with personal reflection to adequately address their unique needs (Crameri et. al., 2015).

Social capital theory (SCT) posits that social networks, relationships, and norms or reciprocity and trust within a community enhance coordination and cooperation for mutual benefit (Putnam, 1995). Widely recognised in social sciences, it has been applied to examine the health, and social networks of older sexual and gender minorities (Cronin & King, 2014; Erosheva et. al., 2016; King & Cronin, 2016; King & Stoneman, 2017; Lottmann & King, 2022). However, bridging (connections linking diverse groups) and bonding (close-knit relationships within homogenous groups) social

2

capital (Putnam, 1995) has not been explored to determine if they enhance safe care between aged care workers (ACWs), also called workers throughout the paper, and residents.

The research investigates how workers perceive providing safe care for residents in Australian residential aged care facilities (RACFs) through the lens of social capital theory. This article focuses on specific aspects of the broader project.

Current understanding:

An extensive literature review was conducted; however, this article will only highlight key areas: (i) health disparities and visibility of sexual and gender minorities, (ii) aged care services in Australia, education for workers and the role of SGM champions, (iii) culturally safe care, and (iv) social capital theory.

Research by Altman and Symons (2016), Arimoro (2022), Chaney et. al. (2020) Kim (2012), Lin et. al. (2016), and Yadegarfard (2019) highlights how laws, cultures, and beliefs affect SGMs globally, fostering stigma, discrimination, rejection, and violence, contributing to healthcare disparities (Meyer, 2016). Sexual and gender minorities face more severe health disparities than their heterosexual counterparts (Connors et. al, 2020; Fredriksen Goldsen et. al., 2014). A notable development in early 2024 was the release of "Rainbow Realities," a report providing comprehensive data on Australia's SGM community's health and wellbeing, addressing the fragmented approach previously in place.

Literature explores residents' visibility, risks of 'coming out' in RACFs and consequences of remaining invisible (Stein et. al., 2010; Sussman et. al., 2018; Westwood, 2016). Stein et. al. (2010) found residents often feel unsafe disclosing their sexual orientation and/or gender identity, fearing ostracism or neglect by staff and non-SGM residents.

The literature review of aged care services in Australia highlights the 2021 Australian Royal Commission into Aged Care Quality and Safety. This report, distilled into sections on the current aged care system and recommendations for reform, overlooked the distinct needs of residents.

Challenges in adhering to professional nursing codes and quality standards (Nursing and Midwifery Board of Australia, 2023; The Aged Care Quality and Safety Commission, 2022) often

3

overlook the specific needs of sexual and gender minorities due to broad interpretations. For example, Standard 7 of the Aged Care Quality Standards state that organisations should have a skilled and qualified workforce to provide safe and respectful care services. However, it does not specify the required skills of define safe and respectful care, particularly for residents. Educational deficiencies exacerbate the problem, as some workers mistakenly believed that treating everyone the same equates to equality (Donaldson & Vacha-Haase, 2016; Willis et. al, 2016). Healthcare professionals and researchers advocate for improved training that reflects contemporary knowledge, attitudes, and skills (Donaldson et. al., 2019; Lecompte et. al., 2021). For instance, SGM champions are staff trained to enhance awareness of sexual and gender minority-specific needs, fostering inclusivity in aged care settings (Hafford-Letchfield et. al., 2018; McPhail & Furlop, 2016; Simpson et. al., 2018).

The concept of culturally safe care in this research is based on Ramsden's 2002 work, who pioneered this construct in relation to the Māori peoples of Aotearoa (New Zealand). The core principle is empowering care recipients to determine if health services are safe for them (Ramsden, 2002). Recently, this concept has been extended to SGM healthcare leading to specific frameworks (Crameri et. al., 2015; Mukerjee et. al., 2021), and contemporary definitions of safe care. Tan and Ling (2022) conducted a narrative review of international literature on safe care for sexual and gender minorities, identifying ten articles that explore or define this concept. Despite advances, gaps persist in applying safe care, particularly for residents in aged care facilities.

Finally, discussions of social capital by theorists like Bordieu (1986), Colemen (1982, 1988, 1990) and Putnam (1993, 1995, 2000), reveal different foundational ideas of social capital however are all relevant in contexts involving human relationships and may be particularly pertinent for marginalised groups such as older residents (Cronin & King, 2014; King and Cronin, 2016).

Research question:

As a result of the review of the literature, a gap was found in the perceptions of workers in providing safe care for residents in Australian aged care facilities and the impact on the provision of safe care. This overarching research will be explored in greater detail through a series of research questions. This article will look at preliminary findings associated with one research question:

4

What are the perceived barriers and challenges to the provision of safe care for residents living in residential aged care facilities by workers?

Research approach:

The research employed an interpretivist paradigm and adopted a qualitative methodology to explore perceptions regarding care for residents in aged care facilities. This methodological choice is aligned with the aim to delve into individual and collective insights influencing the provision of safe care.

Data collection involved two groups: aged care workers and residents, or from their Next-of-Kin or Enduring Power of Attorney if the resident could not participate. Workers completed a demographic survey detailing their sexual orientation, gender identity, ethnicity, age, education, and position within the organisation, to aid data analysis and identify trends.

Semi-structured interviews with workers followed, covering their understanding of safe care, use of social capital in care, and perceived barriers and challenges. For residents, the interview protocol aimed to elicit their understanding of safe care and ways to influence workers' provision of care through social capital. Data from this cohort is not discussed as data collection is ongoing.

Ethics approval was obtained. After receiving clearance, aged care facilities were invited to participate. Recruitment flyers were distributed to employees by the facility seeking volunteers. Thematic analysis of data was conducted manually after interviews were completed.

Findings:

Fifty-two interviews were conducted with workers from three facilities, demographic data of workers is summarised in Table 1. Findings revealed (i) difficulty identifying residents' sexual orientation and gender identity, (ii) lack of knowledge about older residents' unique histories and (iii) biases and attitudes within the facilities including residents that do not identify as a sexual and gender minority.

5

Regarding the first finding, workers reported that without residents explicitly disclosing they cannot personalise care. One respondent stated "I've been in aged care for 31 years and my belief is to tailor resident's individual needs according to preferences. I would say we probably haven't provided that as we've not known there's been people in our care". Another participant added, "sometimes LGBT residents can't be open to other people, they may feel awkward, they won't inform other people that they are LGBT". At one facility with two openly gay residents, over 15% of respondents claimed they had never cared for SGM residents, even though these two residents were in their care.

A second finding was that while many activities of daily living remain the same, the psychosocial and emotional needs of residents might differ due to past experiences. One participant noted that "I think not understanding their residents or their background and what they need. That's definitely a barrier". Another reflected on training video's they had viewed, stating they were "about older gay people's experience in life…, what they've gone through and their journeys, some of them were quite impactful". A further participant said, "you want to learn more about the LGBTIQ people that you're looking after because that will help you reflect what they want more accurately in their care plan". These interviews suggest that targeted education may improve understanding of the challenges faced by older sexual and gender minorities.

A third finding included biases and attitudes within facilities. One participant revealed, "There may be that perception that it's not acceptable, and I'm not going to look after that person". This attitude extended to other residents, as one respondent suggested "In aged care, you've got a majority of residents that may have biases…they might ostracise them …it's hard to keep them included when other residents might not understand…it's hard to explain to that generation".

6

Table 1: Preliminary Demographic Data from Aged Care Workers

Category	Details	Frequency (Percentage)
Gender	Man	n=5 (9.5%)
	Woman	n=47 (90.5%)
	Trans	n=0 (0%)
Sexual Identity	Asexual	n=4 (7.5%)
	Bisexual	n=3 (5.5%)
	Gay	n=1 (2%)
	Prefer not to say	n=4 (7.5%)
	Questioning or Unsure	n=3 (5.5%)
	Straight	n=37 (71%)
Ethnicity	Asian	n=18 (35%)
	Asian/Nepalese	n=1 (2%)
	Aussie	n=1 (2%)
	Middle Eastern	n=1 (2%)
	Nepalese	n=1 (2%)
	Other (not specified)	n=1 (2%)
	White/Caucasian	n=28 (53%)
	White/Multiple ethnicities	n=1 (2%)
Age Range/Average (in years)	17-65 (Average 37.8)	
Disability	Yes	n=2 (4%)
	Prefer not to say	n=1 (2%)
Highest Nursing Qualification	High School Certificate	n=6 (11.5%)
	Certificate III	n=25 (48%)
	Diploma	n=3 (5.5%)
	Bachelor	n=12 (23%)
	Post Graduate Certificate	n=3 (5.5%)
	Post Graduate Diploma	n=2 (4%)
	Master	n=1 (2%)
Length of Time at Organisation	2 days – 5 years*	
Cared for Sexual Gender Minority	Yes	n=26 (50%)
	No	n=26 (50%)

*Of the 52 worker interviews conducted, 7 participants (13%) had been at the organisation 3 months or less with no previous aged care experience.

7

Contribution and Limitations:

This article examines barriers and challenges to providing safe care for older residents in aged care facilities. Unlike previous studies that focussed on care perceptions and standards (Furlotte, 2016; Lecompte, 2021), this research specifically investigates hindrances to safe care in Australian aged care facilities, a relatively unexplored area.

The theoretical contribution of the broader research will apply the theory of bridging and bonding social capital to assess the impact on the provision of safe care. Cronin and King (2014) highlighted the role social capital has on understanding resident's social networks, yet its direct connection to safe care in facilities remains under researched.

A key aspect of the broader research involves residents in defining safe care, ensuring the concept is grounded in their real experiences. This approach aims to reveal how social capital between workers and residents influences care, offering insights into potential facilitators and barriers.

The research aims to enhance theoretical knowledge and provide practical strategies for developing, delivering, and evaluating safe care. It may also introduce new methods of data collection in this often-marginalised group. However, the study is limited to one state in Australia using qualitative methods, which may not capture the full diversity of experiences and opinions. Expanding the research across multiple regions using mixed methods could deepen understanding and validate findings more broadly. Additionally, the limited number of residents and the diversity within the SGM community are constraints, particularly given the topics' sensitivity.

Implications:

Notwithstanding potential academic contributions, significant insights are expected to drive policy and practice changes in aged care facilities to better serve residents. For example, introducing a comprehensive admission assessment about sexual orientation and gender identity could be impactful. Additionally, targeted training on the history of this group and its effects on health and ageing could benefit staff. Furthermore, making facility environments accommodating to sexual and gender minorities could help integrate this diversity for both staff and other residents. Interviews revealed

8

that workers recognise that older sexual and gender minorities seek the same fundamental needs as everyone else: respect, understanding, agency, and love. Alas, the implementation of culturally safe care remains elusive. Further research through interviews with residents is required to address these unanswered questions.

9

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13

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14

Stream 8. Business Processes, Innovation and Supply Chain

A Dyadic Investigation of Product Characteristics, Relational Embeddedness, and Digital Transformation in Buyer-Manufacturer Relationships

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1

Stream 8. Business Processes, Innovation and Supply Chain

A Dyadic Investigation of Product Characteristics, Relational Embeddedness, and Digital Transformation in Buyer-Manufacturer Relationships

ABSTRACT: *The concept of a product is extremely important for effective supply chain management, with product typology influencing the ability to meet customer expectations. Advancements in technology are transforming products and supply chains, leading to the emergence of digital supply chains. These chains take advantage of cloud solutions and intelligent systems for resource allocation and decision-making. Digital transformation encourages integration and closer interorganizational relationships, which are classified as structural and relational embeddedness. This research investigates the influence of digital transformation and relational embeddedness on product types within supply chains. The study empirically examines the characteristics of functional and innovative products and analyses the intensity of relational embeddedness and digital transformation. It encompasses hypothesis formulation, research methodology, cluster analysis, and discussion.*

Keywords: product typology, supply chain, dyads, digitalization.

INTRODUCTION

Although the concept of a product is widely investigated in the marketing literature (Kotler, 1994; Kotler, 2005), it has also been a vital issue for effective supply chain management (Fisher, 1997). Specifically, product typology determines the ability of the supply chain to meet customer needs and expectations, which constantly growing with the availability of products. This directly affects the products offered by supply chains, which become enhanced, ensuring high quality standards (Lim and Srai, 2018; Lotfi et al., 2013). In other words, the complexity of products determines the structure of supply chains (Lim and Srai, 2018).

The product offered by supply chains is changing under the influence of new technologies. The fourth industrial revolution (Industry 4.0), which is the digital transformation of industry (Pfohl, Yahsum Kurnaz, 2015), implies changes in the product itself, including its servitization (Ziaee Bigdeli et al., 2017) within product and service systems (Baines et al., 2007). The digital transformation of the industry is also a contribution to the establishment and development of a digital supply chain (Calatayud, Mangan, and Christopher, 2019), which is capable of providing the market with individualized products and services. In

2

Stream 8. Business Processes, Innovation and Supply Chain

digital supply chains, the use of cloud solutions is becoming common, enabling the integration of all links in the supply chain, where intelligent systems support decision making and ensure the allocation of resources in line with market needs.

These changes imply integration and closer links in the supply chain (Lotfi et al., 2013). Therefore, when considering the digital supply chain, one should not only discuss the aspect related to the use of new technologies in these structures, but also build and shaping inter-organizational relationships. The review of prior research on interorganizational relationships in supply chains (Villena, Revilla, and Choi, 2011) clearly demonstrates two distinctive groups of conceptual approaches to relationships: formal approaches focusing on structure connections (Capaldo, 2007), which can be called the structural embeddedness, and informal approaches, referred to as relational embeddedness (Cousins et al., 2006; Johnston et al., 2004). The product typology in supply chains in the era of digital transformation has not been extensively not discussed in prior studies. This makes the concept of product typology inadequately recognized and embedded, especially in the area of rapidly progressing technological changes, including digital transformation. Consequently, this paper aims to determine the importance of digital transformation, accompanied by relational embeddedness, for the product typology in supply chains.

As relational embeddedness requires two companies to participate in the arrangement, in this study, we specifically investigate dyads constituted by the manufacturer and its buyer in different industries. The contribution of research is twofold. First, the study empirically tests the main characteristics of functional and innovative products in supply chains. Second, the research investigates the intensity of relational embeddedness and digital transformation from the perspective of the main characteristics that define functional and innovative products.

In the following section of the article, the literature review is conducted, and the hypotheses have been formulated. Hypotheses connect the product typology in the supply chain with relational embeddedness and digital transformation by examining the two-tier arrangements established by the manufacturer and its buyer. The research framework and methodology are then outlined, followed by the analysis of the results. Finally, the discussion and further research developments have been demonstrated.

3

Stream 8. Business Processes, Innovation and Supply Chain

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Functional and Innovative Products in Supply Chains

In his seminal study, Fisher (1997) distinguishes two basic and extreme types of products for supply chains, namely functional products and innovative products. They differ in terms of specific attributes, including predictability and variability of demand, product life cycle, profit, product differentiation (individualization), the volume per SKU, out-of-stock cost, and risk cost (Fisher, 1997; Lamming, 2000; Christopher and Towill, 2002; Lee, 2004; Godsell, et all, 2011). Prior studies highlight that these characteristics constitute a core, referred to as DW3V (Duration of Life Cycle, Time Window for delivery, Volume, Variety and Varability). It distinguishes the product that determines the way supply chains operate.

In line with his conceptualization, functional products meet the basic needs of customers. These are standard common products, such as bread, butter, yogurt, and toothpaste, involving fast-moving consumer goods (FMCG). Functional products are products characterized by stable demand (with demand variability below 10%), which can be easily predicted (forecast errors usually do not exceed 10%). These are products with a long-life cycle over 2 years, and as such, they are not offered at seasonal sales. It is also associated with a stable sales margin, which does not exceed 20%. They remain somewhat undifferentiated, with at most 20 variants of products. A functional product is a mass-marketed product. Fisher (1997) also addressed category-specific costs. The out-of-stock cost and risk costs associated with the obsolescence of these products are low. This is due to the low average out-of-stock rate, which for these products typically does not exceed 2%.

However, innovative products have characteristics that are opposite to those of functional products. According to Fisher (1997), innovative products are characterized by high variability (with a demand variability coefficient above 10%) and demand unpredictability (forecast errors for these products are greater than 40%). These are products that are offered by a given supply chain for a maximum of one year, which means that they have a short life cycle. Therefore, they are sold at a fairly high margin, ranging from 20 to 60%. The diversity of the product offering is very large while maintaining a short delivery time of products to the market, not exceeding 2 weeks, specifically when made to order. These products typically generate high inventory and risk costs.

4

Stream 8. Business Processes, Innovation and Supply Chain

Relational Embeddedness

Relational embeddedness is based on the history of interactions between supply chain participants, their obligations, trust, friendship, respect, reciprocity (Villena, Revilla, and Choi, 2011). Through repeated transactions, the parties demonstrate their credibility in building reciprocal relationships. Relational embeddedness entails the strength of the relationship built over time and focuses on personal bonds between decision makers of partner companies. Therefore, it refers to informal relationships and the impact of social ties on the economic behavior of entities, including trust, which characterizes the relationships between network members (Cousins et al., 2006; Johnston et al., 2004).

Relational embeddedness highlights the quality of relationships and places emphasis on the value created by partners as part of established cooperation. In other words, it determines which resources will be available and to what extent. Thus, key aspects of relational embeddedness thus include interpersonal trust, trustworthiness, overlapping identities, and a sense of interpersonal closeness or solidarity. The quality of bonds within the relational dimension is built on two concepts: closeness and trust (Nahapiet and Ghoshal, 1998). They represent increasingly deeper levels of relational quality: through personal knowledge in relationships (closeness in relationships) to a deep sense of trustworthiness in contact and fidelity in the exchange of resources, which is a kind of interpersonal trust (Moran, 2005).

Relational closeness between companies shapes the willingness of each party to actually provide resources; a given company is more willing to provide information, know-how, or assistance to other firms when they establish a close relationship. Individuals who are in close contact are generally more willing to take the time to explain, detail, or listen to new or complex ideas thoroughly (Granovetter, 1985; Uzzi, 1996). Close contacts are also a basis for supporting and encouraging innovative ventures, giving the company the opportunity to transform ideas into successful projects. Therefore, relational closeness should have a positive impact on both performance-oriented and innovation-oriented activities, as on well as their outcomes (Moran, 2005).

Burt (1992), on the other hand, emphasizes that ensuring a reliable flow of information depends on trust in the information provided and the care with which entities look after their interests. More generally, where

5

Stream 8. Business Processes, Innovation and Supply Chain

there is high trust in relationships, more interactive and adaptive exchanges can occur, allowing for the discovery and implementation of innovations (Moran, 2005). Trust stimulates especially those relationships that can serve to strengthen and build social capital (Coleman, 1990). As Nahapiet and Ghoshal (1998) argue, trust motivates entities to deepen relationships and continue interactions.

According to Moran (2005), relational embeddedness supports and encourages innovative ventures, which should have a positive impact on both performance-oriented and innovation-oriented activities, thus supporting the production of innovative goods. In light of this, we argue that functional products, as more standardized, typical, and routinely manufactured products, require a weaker level of relational embeddedness than innovative products. Therefore, we present the following hypotheses:

> *Hypothesis 1. Stronger relational embeddedness contributes to innovative products in dyads.*
> *Hypothesis 2. Weaker relational embeddedness contributes to functional products in dyads.*

Digital Transformation

Digital transformation is a complex concept that denotes an innovative process of creating new applications for the development of a company or sector. This concept includes digitization, that is, the process of recording, processing, storing, and presenting data, information, and knowledge in numerical form (Łobejko et al., 2019). The goal of digital transformation is to make the best possible use of digital data to improve or accelerate the performance of tasks in organizations and entire supply chains. These are the benefits of having digital information and the ability to process data using electronic devices (Sugay et al., 2019). Consequently, digitalization can be defined as the process of using digital technologies and information to virtualize business operations through the diffusion of technology in each functional area of the company (Muro, Liu, Whiton and Kulkarni, 2017). Based on that, digital transformation is a multidimensional process of convergence of the real and virtual worlds, which becomes the main driver of innovation and changes in the economy (Łobejko et al., 2019, p. 48). This is a particular organizational change that results in the penetration of digital technology through all areas of the company's operations. It is the integration of technologies and business processes that interpenetrate and support each other (Wtulich, 2016). Digital

6

Stream 8. Business Processes, Innovation and Supply Chain

transformation is part of interorganizational relationships in which new technologies are used in both products and processes (Kleiner and Sviokla, 2017). It allows the company to make extensive use of the data and information collected and building new services and products, expanding the current offer, and adapting it to the individual needs of customers. These are also activities related to the modification of supply chain processes using the opportunities offered by new technologies in the field of Industry 4.0. Digital transformation is also a key tool enabling the integration of companies (Graham and Smart, 2010), making buying experiences engaging and unforgettable for customers (Piotrowicz and Cuthbertson, 2014). Airbnb can serve as an example of digital transformation, as it provides accommodation services in a new, digital way, thus competing with global hotel chains. The Airbnb platform connects people looking for accommodation with those who have apartments for rent. Other examples are Uber and Netflix, which also use new technologies to create an innovative business model. The virtual world, the Internet, is a space where customers connect with suppliers, as a result of which customers gain access to services or products. Platforms and applications become the environment for information exchange between companies participating in interorganizational exchange.

The digital transformation of supply chains in terms of both customer experience and manufacturing is related to innovative products. Product innovations require the use of new technologies in both distribution and manufacturing. For example, in the fashion industry, which is considered typical for innovative products, there is widespread use of omnichannels and new technologies, both in-store and out-store (Blázquez, 2014; Mosquera et al., 2018). Footwear manufacturers are increasingly using 3D printing in the manufacturing of running shoes (Kwon et al., 2017). Adidas announced that its goal is to create perfectly fitting footwear. During a store visit, the customer is asked to run on a treadmill for a few minutes. The data obtained and foot scan will determine the production of a personalized 3D printed shoe. This is very different from functional products, where digitization is often limited. For example, in the FMCG industry and the Procter&Gamble (P&G) supply chain, the use of digital transformation is often limited to cooperation with suppliers and customers. The operations in this case are performed manually, and the company does not

7

Stream 8. Business Processes, Innovation and Supply Chain

intend to implement any automation. The use of artificial intelligence, augmented reality, and 3D printing does not provide satisfactory results. Therefore, we present the following hypotheses:

Hypothesis 3. Stronger digital transformation contributes to innovative products in dyads.
Hypothesis 4. Weaker digital transformation contributes to functional products in dyads.

RESEARCH DESIGN

Sample Characteristics and Data Gathering

To carry out the study, a quantitative survey was applied as a data collection was applied. The survey questionnaire covered a number of variables examining relational embeddedness, product characteristics, and digital transformation. The structure of the questionnaire was developed to be applicable to both manufacturers and their buyers. In this dyadic research, we applied matched dyads to estimate the level of agreement and symmetry within dyads. This means that we solicited both parties to evaluate their perception of the same relationship (Roh et al., 2013). To conduct the survey, we identified a group of 37 manufacturers and 74 buyers from various industries and firm sizes. Of these two groups, a target number of 30 manufacturers and 68 buyers agreed to participate in the study. Then, both groups were asked to respond to the questions in a survey and, depending on the role in the relationship, provide us with the contact information for the manufacturer or buyer. The identified counterpart in a relationship was provided with a questionnaire to complete. After screening the surveys and removing observations with missing values, a total of 86 matched buyer-manufacturer sets were used to test the hypothesized model. Figure 1 shows the sample breakdown.

Figure 1

Construct Measurement

Relational embeddedness. This construct is defined by closeness and trust (Nahapiet and Ghoshal, 1998), which are referred to as interpersonal trust, credibility, ensuring a reliable flow of information, a sense of

8

Stream 8. Business Processes, Innovation and Supply Chain

closeness or solidarity, mutual perception of each other, perception of cooperation and commitment to cooperation in a dyad, sharing sensitive information, frequency of contacts, resolving conflicts.

Product characteristics. The most common features include: the length of the product life cycle, lead time, and a special (individualized) order, nature of demand, its variability, production, and sales volume, diversity, and variability of the product offering (Aitken et al., 2003; Christopher and Towill, 2002).

Digital transformation. This construct is defined by the use of new technologies and the sharing of technological knowledge between the companies, specifically: digital data: large data sets, cloud computing, digital twin, connectivity: Internet of things and machine communication, mobile applications and services, including wearable devices and computers, automatic identification of cargo, analytics and artificial intelligence: artificial intelligence, advanced analytics and data mining, cyberphysical systems and control towers, automation and robotization: advanced robotics, cobots and 3D printing, extended and virtual reality, blockchain technologies, use of technological knowledge by suppliers (McKinsey&Company, 2015; Lee, Kao, and Yang, 2014; Roland and Berger, 2015).

Research Analysis

Research Procedure

The research process included several stages of analysis. In the first step, a large number of variables was reduced to obtain a more consistent and precise picture of the analyzed constructs. In the next stage of the research process, cluster analysis was applied to form homogeneous groups demonstrating the similarity between the dyads (Kaufman and Rousseeuw, 2005). Following the recommendations of Ketchen and Shook (1996), hierarchical cluster analysis followed by *k-means* cluster analysis was used. Finally, Kruskal-Wallis one-way analysis of variance for ranks (Corder and Foreman, 2009) was employed to evaluate the classification results.

9

Stream 8. Business Processes, Innovation and Supply Chain

Principal Component Analysis (PCA)

PCA was carried out individually for three groups of variables manifesting relational embeddedness, product characteristics, and digital transformation. The results of PCA within the space of 19 variables for relational embeddedness revealed a two-factorial solution, which covered a total number of 18 variables with factor loadings over .6, total variance of 73.4%, and Cronbach α over the threshold of .7 - Table 1.

Table 1

Similarly, the initial group of 30 variables that manifest product characteristics was reduced by PCA to 19 variables, which formed 5 constructs and indicated a total variance of 76.6% - Table 2.

Table 2

Finally, of 15 variables demonstrating digital transformation, a group of 14 variables covered two constructs indicating a total variance of 85.4% - Table 3.

Table 3

Cluster Analysis

The factor scores obtained in the previous stage were used as criteria in hierarchical cluster analysis to group the dyads, Tables 4 and 5. Three clusters were used to carry out *the* cluster analysis to assign each case to the appropriate cluster. The criterion for the membership of the cluster was the minimal Euclidean distance between each case. The outcome of the *k-means* cluster analysis was compared with the class assignment obtained from the hierarchical cluster analysis and indicated a high level of agreement (Krieger and Green, 1999).

Table 4

Table 5

To further validate the results, the Kruskal-Wallis test was performed for the components used as clustering criteria. Of the 9 constructs, 6 components formed the clusters. The components RE_IS, PC_SLF, and PC_C did not differentiate the created classes. However, the remaining 6 components are significant as grouping criteria with a significance of $p < 0.05$. The clusters obtained contained a diverse share of the research sample.

10

Stream 8. Business Processes, Innovation and Supply Chain

Cluster 1 included 35% of the sample, cluster 2 consisted of roughly 47%, while cluster 3 covered 18% of the analyzed dyads. Judging on the scores of product characteristics, group 1 can be referred to as the innovative product cluster, cluster 2 can be labeled as innovative with product individualization, while cluster 3 can be referred to as the functional product cluster. Tables 4, 5 and Figure 2 show the intensity of individual components in given clusters.

Figure 2

DISCUSSION

The results of the study suggest a modification of the product typology introduced first by Fisher (1997). The ubiquitous individualization of products, access to information, and blurring of boundaries between organizations and supply chains are changing the existing product typology in the supply chain, which appears to be too narrow and limited.

Specifically, the product life cycle is a characteristic that appears to be insignificant in the supply chain. In none of the identified classes, the product life cycle turned out to be important for supply chains, thus not differentiating the obtained groups. Most products offered in supply chains are characterized by a life cycle that does not exceed 2 years, which is becoming a ubiquitous trend. Interestingly, the products delivered by supply chains are changing more frequently to adapt the offer to the dynamics of customer expectations. Horn (2000) emphasizes that 50% of the annual revenues of companies operating in various sectors come from new products introduced to the market within the last three years. This dramatically changes the supply chain portfolio, as products with long life cycles are constantly disappearing from the product offering.

Another important characteristic is the lead time, which is long for functional products and short for innovative products (Fisher, 1997). On the basis of the research results, the importance of this characteristic in the product typology is clearly visible. It is characteristic for both functional and innovative products, where the lead time of standard and special orders can be considered short. Consequently, shortening the lead time is important, both for innovative and functional products in all 3 clusters. More importantly, the diversified and variable product offer is also characterized by a short lead time, not exceeding 2 weeks.

11

Stream 8. Business Processes, Innovation and Supply Chain

The third product characteristic differentiates supply chains in terms of sales volume, which in the case of manufacturers can also refer to the production volume. The results show that the production volume is important for suppliers and manufacturers offering customized products. However, high volumes do not favor the flexibility of the supply chain and are rather associated with mass production (Christopher and Towill, 2002; Aitken et al., 2003). Therefore, we argue that the large volumes of products in the investigated dyads are more related to the concept of mass customization.

Diversity and variability are another important characteristic that differentiates products in the supply chain. The results obtained demonstrate that this characteristic is specifically important for the innovative cluster with product individualization.

The nature of demand, similar to the product life cycle, is a characteristic that does not differentiate the product typology. It might be due to the fact that using quantitative and statistical methods to plan and forecast demand is difficult when the short life cycle products are considered. Demand planning for these products should be rather based on the experience of managers, and as such, the nature of demand is not a characteristic that is important in the investigated dyads.

In the result of the conducted analysis three groups were distinguished, cluster 1 – the innovative product cluster, the innovative product cluster with individualization, and the functional product cluster.

The first class includes the dyads that deliver the innovative products, mainly representing the clothing industry. The second group is mainly formed by the dyads operating in the automotive, computer, and electronics industries, while the third cluster includes the dyads belonging to the consumer goods industry. The dyads in cluster 1 admittedly use new technologies, but they are not applied to share technological knowledge between companies. Interestingly, relational embeddedness is not important in this class, as the factor scores for this construct remain negative. Cluster 2 includes the dyads that deliver innovative and individualized products, and a huge number of them have been introduced to the market during the last year. These are complex products, requiring high technological knowledge, and a short lead time of special order not exceeding two weeks. Sharing technological knowledge is important in this class, while establishing relational embeddedness does not play a significant role.

12

Stream 8. Business Processes, Innovation and Supply Chain

The results obtained in clusters 1 and 2 do not support for hypothesis 1, which posits that stronger relational embeddedness contributes to innovative products in dyads. The results in cluster 1 corroborate that new technologies are important for manufacturing and delivering innovative products. In cluster 2, technological knowledge is shared, but new technologies are not applied. Consequently, the results partially support hypothesis 3, which posits that stronger digital transformation contributes to innovative products in dyads. Class 3 consists of dyads that deliver functional products and establish strong relational embeddedness. Cooperation between manufacturers and buyers in the investigated dyads is characterized by commitment, trust, partnership, and closeness of relationships, as evidenced by the results. The partners in the dyads consider each other as members of a team. However, technologies and sharing technological knowledge are not important in this group. Based on that, the results for class 3 do not provide support for hypothesis 2, as the dyads actually establish strong relational embeddedness when delivering functional products. At the results same time, the obtained provide support for hypothesis 4, which posits that weaker digital transformation contributes to functional products in dyads.

RESEARCH DEVELOPMENTS

The results obtained in this paper might be a good starting point for further research and analysis on the role of digital transformation in the products for supply chains. Further research could benefit from the exploration of subsequent progressive technological changes regarding both the product itself and the supply chain. Particularly, it could be interesting to investigate the direction of the development of product offering in terms of its individualization, innovation, servitization, and ecology, which might change the current approach toward an integrated, independently thinking supply chain focused on the customer.

13

Stream 8. Business Processes, Innovation and Supply Chain

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15

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16

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17

Stream 8. Business Processes, Innovation and Supply Chain

Table 1. The results of PCA for relational embeddedness.

	Relational embeddedness	Components		Cronbach
		RE_T	RE_IS	α
RE_1	The buyer and manufacturer view themselves as integral members of the same team	**.831**	.257	**.966**
RE_2	The buyer is proud to work with the manufacturer	**.703**	.490	
RE_3	The foundation for the buyer's and manufacturer's commitment to collaboration is sharing the same values	**.670**	.504	
RE_4	The buyer and manufacturer trust in each other continues to grow, with a reduction in opportunistic behaviour	**.635**	.582	
RE_5	Buyer trusts that the manufacturer will not disclose sensitive information	**.787**	.395	
RE_10	The buyer and manufacturer view each other as reliable partners.	**.727**	.549	
RE_12	The buyer and manufacturer engage in conflict resolution through a social mechanism (e.g., negotiation, discussion, compromise) rather than a contractual mechanism (rigid formal regulations using the court route, arbitration, etc.).	**.808**	.323	
RE_15	Should any difficulties arise, both the buyer and the manufacturer can rely on each other for mutual assistance in resolving them	**.777**	.494	
RE_16	The buyer anticipates that the manufacturer will implement the necessary adjustments in response to changing operating conditions.	**.767**	.339	
RE_17	The buyer expects the highest level of cooperation from the manufacturer	**.875**	.194	
RE_18	In a reciprocal relationship, the buyer reciprocates favors with the manufacturer	**.710**	.605	
RE_6	The buyer trusts the manufacturer, because manufacturer provides key information	.270	**.812**	**.906**
RE_8	The buyer contacts his producer frequently	.453	**.601**	
RE_9	The manufacturer receives any information from the buyer that can help him	.503	**.575**	
RE_11	The buyer and the manufacturer exchange information informally and in a timely manner	.507	**.660**	
RE_13	When misunderstandings arise, the buyer tries not to blame the manufacturer for them	.216	**.861**	
RE_14	The buyer does not hold a grudge against the manufacturer for unresolved past problems	.302	**.787**	
RE_19	The buyer receives fair compensation for his/her contribution to forming relationships with the manufacturer.	.357	**.704**	

Table 2. The results of PCA for for the product characteristics.

	Product characteristics	Components					Cronbach
		PC_Ind	PC_Inn	PC_F	PC_SLF	PC_C	α
PC_1	The manufacturer realizes individual orders of the buyer - this applies to both quantity and time	**.796**	.340	−.078	−.188	.127	**.715**
vPC_3	The manufacturer adapts its product offering to the needs and requirements of the buyer, is able to highly customize the product	**−.668**	.513	.052	−.144	.110	

18

Stream 8. Business Processes, Innovation and Supply Chain

PC_4	Buyer and manufacturer cooperate in designing new products	**.892**	.105	−.027	.207	.054	
PC_5	The manufacturer has a range of customized products as well as standard products	**.758**	−.195	−.063	−.278	.224	
PC_6	The manufacturer is able to adjust the product while maintaining a high production volume	**.865**	.023	.105	.111	.157	
PC_16	The variety of products produced is large, it is a diverse range of products	**.639**	.459	.149	−.222	.220	
PC_7	Products supplied to buyers can be considered innovative	.158	**.756**	.220	−.114	.154	**.848**
PC_8	The manufacturer introduces product innovations (defined as the improvement or development of novel, innovative products) each year	−.099	**.858**	.313	−.025	.098	
PC_9	During the year, the number of new product launches is high	.043	**.817**	.113	.094	−.212	
PC_13	The products delivered to buyers are characterised by a high degree of complexity.	.582	**.614**	.006	−.192	.375	
PC_15	The lead time of the buyer's special order can be considered short (not exceeding 2 weeks)	.582	**.583**	−.216	−.147	.258	
PC_14	The lead time of the buyer's standard order can be considered short (not exceeding 2 weeks)	.052	.121	**.811**	.069	.101	**.810**
PC_17	Flexibility of production diversity, including the increase / decrease of assortment diversity is high (product MIX)	.168	.344	**.744**	−.076	−.150	
PC_21	There are many substitutes for the products offered by the manufacturer	−.148	.156	**.874**	−.054	.089	
PC_12	The life cycle of the products offered by the manufacturer and is short, does not exceed 1 year	−.061	−.083	.043	**.898**	−.010	**.730**
PC_27	The unit price of the products is low	.062	.016	−.103	**..872**	.133	
PC_28	The offered products are characterized by a short time of use	−.160	−.196	.471	**.513**	.173	
PC_22	The manufacturer's product offerings are competitive in the market against those of major competitors	.151	−.025	.168	.063	**.799**	**.718**
PC_30	Manufacturers often run promotions for their products	.321	.208	−.066	.158	**.774**	

Table 3. The results of PCA for the digital transformation in dyads.

	Digital transformation	Components		Cronbach
		DT_T	**DT_KS**	α
DT_1	Big data technologies are used	**.813**	.300	**.984**

19

Stream 8. Business Processes, Innovation and Supply Chain

DT_2	Cloud computing technologies are used	**.798**	.377	
DT_3	Digital twin technologies are used	**.815**	.377	
DT_4	Internet of Things and Machine to Machine communication technologies are used	**.915**	.308	
DT_5	Mobile applications and services, including wearable devices and computers are used	**.925**	.245	
DT_6	Automatic cargo identification, including barcodes, QR codes and RFID technologies are used	**.880**	.280	
DT_7	Artificial Intelligence technologies are used	**.875**	.394	
DT_8	Business Intelligence technologies are used	**.861**	.307	
DT_9	Advanced analytics and data mining technologies are used	**.918**	.234	
DT_10	Cyber-physical and Control towers technologies for supply chain integration are used	**.888**	.283	
DT_11	Advanced robotics and 3D printing technologies are used	**.921**	.199	
DT_12	Augmented and virtual reality technologies are used	**.851**	.362	
DT_14	In the supply chain the technological expertise of its suppliers and manufacturers are used	.385	**.804**	**.780**
DT_15	In the supply chain the technological expertise of its buyers is used	.194	**.909**	

Table 4. Kruskal-Wallis Test and the intensity for product characteristics across the clusters.

				Cluster		
	Kruskal-Wallis H	*df*	**Asymp. Sig.**	**1**	**2**	**3**
PC_Ind	13.873	2	.001*	−.43409	1.64164	−.29005
PC_Inn	12.681	2	.003**	.73155	−.62860	.21316
PC_F	10.701	2	.004**	−.08384	−.30096	.82549
PC_SLF	2.800	2	.247 (ns)			
PC_C	2.386	2	.303 (ns)			
			No. of dyads	**30**	**40**	**16**

Table 5. Kruskal-Wallis Test and the intensity for relational embeddedness and digital transformation across the clusters.

				Cluster		
	Kruskal-Wallis H	*df*	**Asymp. Sig.**	**1**	**2**	**3**
RE_T	15.307	2	.000*	−.41234	−.27897	1.65752
RE_IS	4.821	2	.090(ns)			
DT_T	12.924	2	.002**	.47866	.06801	−1.41244
DT_KS	10.540	2	.004**	−.55896	1.05370	−.61684

Notes:
* *p* < .05
** *p* < .01
*** *p* < .001
(ns) – not significant at *p* < .05

20

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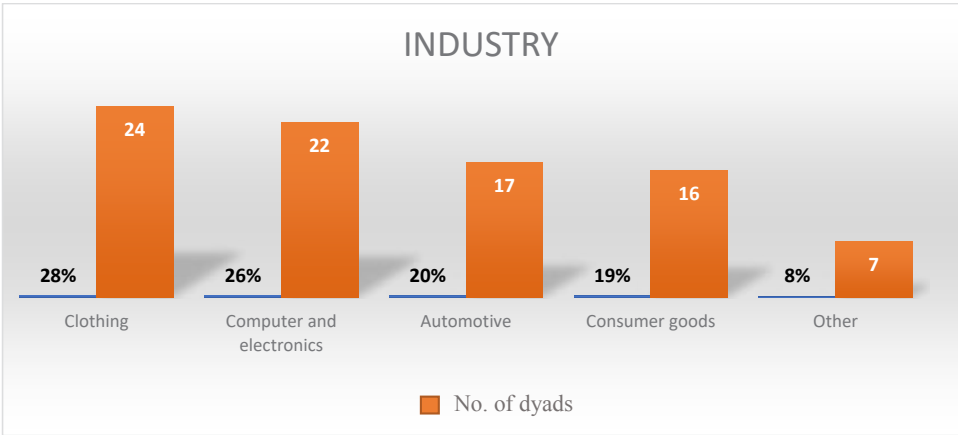
Figure 1. Sample breakdown.
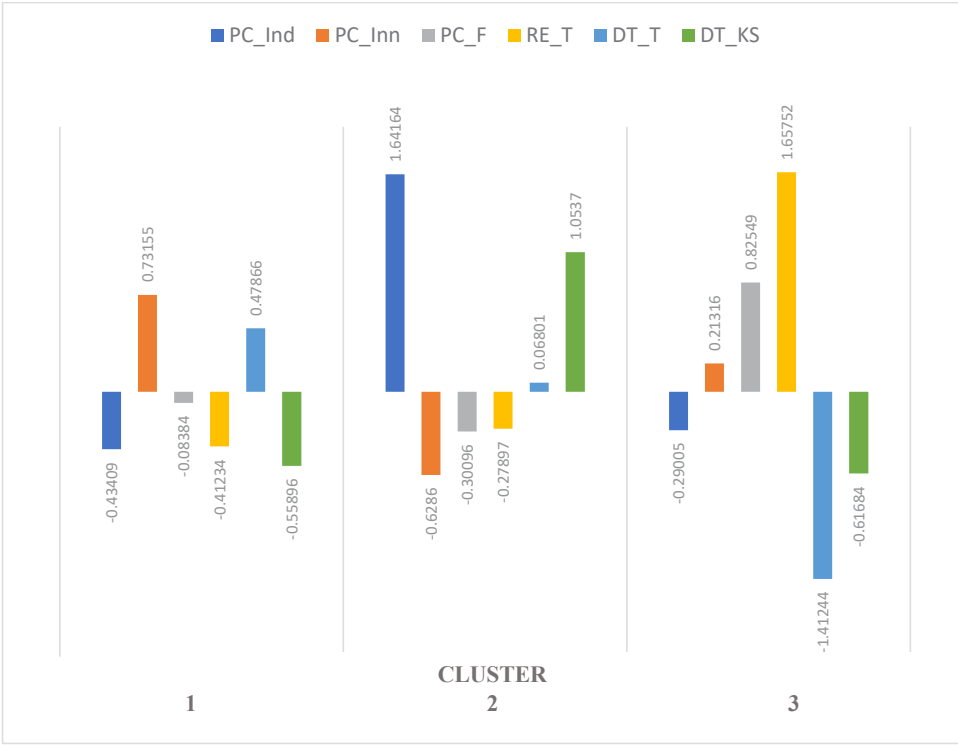
Figure 2. The intensity of product characteristics, relational embeddedness and digital transformation across the clusters.

21

NAVIGATING REPUGNANCE: HOW PSYCHIC DISTANCE AND (UN-)FAIRNESS IMPACT PUBLIC ACCEPTANCE OF MNE CROSS-BORDER ACQUISITIONS

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NAVIGATING REPUGNANCE: HOW PSYCHIC DISTANCE AND (UN-)FAIRNESS IMPACT PUBLIC ACCEPTANCE OF MNE CROSS-BORDER ACQUISITIONS

ABSTRACT: This manuscript proposes a comprehensive theoretical framework to address (public) repugnance in cross-border mergers and acquisitions (M&A). By integrating concepts of psychic distance, perceptions of unfairness, stakeholder engagement, and transparency, it offers a nuanced understanding of the societal challenges faced by multinational enterprises (MNEs) during international acquisitions. Additionally, it highlights the role of corporate social responsibility (CSR) as a strategic tool for implicit transparency, fostering trust, and reducing M&A uncertainty. This manuscript contributes to the existing literature by extending the application of transparency and CSR mechanisms, offering actionable strategies for MNEs to enhance societal acceptance and ensure the long-term success of cross-border M&A activities.

Keywords: fairness, merger and acquisition, multinational enterprises, psychic distance, repugnance.

1

INTRODUCTION

The contemporary landscape of mergers and acquisitions (M&A) for multinational enterprises (MNEs) is increasingly fraught with public scrutiny and societal disapproval, particularly when deals involve significant cultural or ethical concerns (Galpin, 2021; Zollo & Meier, 2008). For instance, the relatively recent merger attempt between ride-hailing giants Uber and DiDi in China collapsed amid public anxieties about data privacy and potential monopolistic practices (Hornby & Huang, 2022). Similarly, the attempted acquisition of British defense contractor Ultra Electronics by a private equity firm with ties to a Chinese state-owned enterprise faced vehement opposition from U.K. lawmakers citing national security risks (BBC News, 2021). The recent wave of consolidation within the pharmaceutical industry further exemplifies the growing public scrutiny surrounding M&A deals, raising concerns about rising drug prices, reduced access to essential medications, and diminished investment in research and development for critical new treatments (Jia et al., 2023).

This phenomenon, particularly evident in cross-border deals with ethical or cultural concerns (Galpin, 2021), can be attributed to repugnance (Nia & Sorrentino, 2010) driven by the psychic distance (Hobden, 2006) between MNEs and the societies they impact. This manuscript proposes a theoretical framework to investigate how MNEs can navigate this challenge. We posit that psychic distance and perceptions of unfairness act as independent variables, potentially mediated by (public) repugnance, ultimately influencing societal acceptance of the M&A deal. Moreover, we explore how stakeholder engagement and transparency, as moderating variables, can mitigate the negative effects of psychic distance and perceptions of unfairness. The primary research questions guiding this study are – *How do psychic distance and perceptions of unfairness influence public repugnance towards cross-border M&As?* and – *In what ways can stakeholder engagement and transparency mitigate the adverse impacts of psychic distance and perceived unfairness?*

This article follows a structure that guides our investigation of the proposed questions. First, we develop a theoretical framework based on the concepts of psychic distance, fairness, and stakeholder engagement. In this section, we investigate how psychic distance, which encompasses perceived

2

geographical, cultural, and moral differences, can create psychological barriers in cross-border M&A activities. We also explore the notion of *fairness*; particularly how perceived inequities can lead to public repugnance and opposition. Additionally, we address the role of stakeholder engagement in mitigating these negative perceptions. Next, we propose a conceptual model that illustrates the interrelationships among these concepts and develop propositions to guide our theorizing. These propositions address the effects of psychic distance and perceived unfairness on public repugnance and societal acceptance, and how stakeholder engagement and transparency can moderate these effects. Finally, we discuss the implications of our conceptual framework for multinational enterprises (MNEs) and policymakers. For MNEs, understanding these dynamics is crucial for successful cross-border operations, while policymakers can use these insights to create supportive regulatory environments. We also outline potential avenues for future research, suggesting areas where empirical investigation could test and enhance our understanding of these complex interactions.

THEORETICAL FRAMEWORK

In this section, we introduce our theoretical framework (Figure 1) that illuminates the multifaceted interplay between psychic distance, perceptions of unfairness, and public repugnance within the context of cross-border mergers and acquisitions (M&As) (Kostova & Roth, 2008; Doh & Teece, 2003). At a deeper level, our framework also underscores the critical role of transparency (Donaldson & Preston, 1995; Yakis-Douglas et al., 2017; Ott, 2020) and corporate social responsibility (CSR) (Arouri, Gomes, & Pukthuanthong, 2019) in attenuating these challenges.

INSERT FIGURE 1 HERE

Psychic Distance

Psychic distance refers to the psychological barrier arising from perceived geographical, cultural, or moral differences between individuals and an event or entity (Hobden, 2006). In the context of M&A, psychic distance can manifest when MNEs engage in cross-border transactions that are perceived as opaque or lacking ethical considerations (Nia & Sorrentino, 2010). This alienation fosters a sense of

3

repugnance, a term utilized by Nussbaum (2004) to describe actions that violate deeply held moral values. For instance, societal anxieties might center around potential job losses, environmental degradation, or the erosion of cultural identity (Cuervo-Cazurra & Daughton, 2008). Empirical research in the field of international business has shown that psychic distance can significantly affect the success of cross-border operations (Johanson & Vahlne, 1977; Woo, 2023; Yildiz & Fey, 2016). When MNEs fail to bridge the psychic distance, they risk facing substantial opposition from local communities and stakeholders. This opposition can manifest in various forms, such as public protests, negative media coverage, and political interference, all of which can jeopardize the success of the M&A deal (Nia & Sorrentino, 2010).

The study by Child, Ng, and Wong (2002) further emphasizes that psychic distance impacts internationalization decisions, with evidence from Hong Kong firms showing that this barrier can deter firms from entering foreign markets. Similarly, Kontinen and Ojala (2010) highlight the role of psychic distance in the internationalization pathways of family SMEs, suggesting that overcoming this distance is crucial for successful expansion. Another stream of research discusses the multilevel nature of psychic distance and its significant impact on SME internationalization, indicating that both individual and organizational levels of psychic distance must be managed (Safari & Chetty, 2019).

Differently, O'Grady and Lane (1996) introduce the concept of the "psychic distance paradox," where firms entering seemingly similar markets still experience significant challenges due to overlooked cultural nuances. Chen et al. (2020) explore how firm heterogeneity moderates the effects of psychic distance on outward foreign direct investment, suggesting that more adaptable firms can better navigate these barriers, while Kraus et al. (2015) examine how perceptions of risk are influenced by distance in internationalization decisions, highlighting that greater perceived distance increases perceived risk and hesitancy. In a more recent meta-analytical review Beugelsdijk et al. (2018) revealed that cultural distance—a key component of psychic distance—consistently affects firm internationalization outcomes. This comprehensive analysis underscores the importance of cultural understanding in mitigating psychic distance. Understanding and addressing psychic distance is crucial for MNEs to foster a positive reception in the host country. For example, cultural integration efforts, local community engagement, and

4

transparent communication strategies can help mitigate the negative impacts of psychic distance (Chen et al., 2020). By recognizing and proactively managing the elements that contribute to psychic distance, MNEs can enhance their legitimacy and acceptance in foreign markets. Hence, we formulate the following:

Proposition 1: Psychic Distance Increases Public Repugnance.

In this context, psychic distance creates a sense of alienation and mistrust between the MNE and the target society. This distance can lead to misunderstandings and negative perceptions, fostering repugnance. For example, a foreign company acquiring a local firm might be viewed with suspicion if there are significant cultural differences or a history of conflict between the countries involved (Johanson & Vahlne, 1977). Nevertheless, there appears to be a more nuanced relationship that involves institutional elements.

Fairness and Institutional Theory

The concept of fairness (Folger & Cropanzano, 2001), as rooted in institutional theory (Glynn & D'aunno, 2023; Scott, 1987; Suddaby, 2010), is critical in understanding public perception and acceptance of M&A activities. Fairness can be defined as the perception that outcomes and processes are just, equitable, and morally acceptable (Scott, 2008). According to Sunstein (2005), public perception of fairness plays a crucial role in shaping the approval or disapproval of M&A deals. This is particularly true in cases where mergers and acquisitions appear to disproportionately benefit a small group of executives and shareholders at the expense of employees, consumers, and the broader community. Such perceptions of unfairness can significantly widen the psychic distance between the MNE and the target society, intensifying feelings of repugnance.

Folger and Cropanzano (2001) in their 'Fairness Theory' suggest that justice is fundamentally about accountability. They argue that individuals assess fairness by evaluating whether actions and outcomes are consistent with moral principles and societal norms. This perspective aligns with the notion that perceived fairness in M&A processes is not merely about the final outcomes but also about the transparency and integrity of the processes leading to those outcomes. Kokaz (2005) expands on this by theorizing international fairness, emphasizing the importance of equitable treatment across borders. In the context of

5

M&A, this means that foreign and domestic stakeholders should perceive the transactions as fair and beneficial (Folger & Cropanzano, 2001). When M&As are seen as exploiting local resources or disregarding local socio-economic realities, they are likely to be perceived as unfair, exacerbating public repugnance. Furthermore, Husted and Folger (2004) discuss the interplay between fairness and transaction costs (Williamson, 1989; Williamson & Masten, 1999), highlighting that perceived unfairness can increase the costs associated with organizational transactions due to the need for additional efforts to gain stakeholder acceptance and mitigate resistance. This is particularly relevant in M&A activities where the perceived inequities can lead to increased scrutiny and regulatory hurdles, thus raising the transaction costs.

From a different angle, Rothstein and Stolle (2008) introduce the idea that institutional trust and social capital are built on perceptions of fairness within a society. They argue that when institutions, including MNEs, behave in ways that are perceived as fair, they contribute to higher levels of generalized trust among the public. Conversely, perceived unfairness in M&A activities can erode this trust, leading to social and political backlash. Empirical research supports these theoretical insights. For example, studies have shown that M&As perceived as unfair due to massive layoffs, wage cuts, or environmental harm tend to face greater public opposition and regulatory challenges (Ashraf, Doytch, & Uctum, 2021; Doytch & Ashraf, 2022; Ly-My, Le, & Park, 2024). This opposition is not only a reaction to the immediate impacts but also a broader expression of distrust and moral disapproval. Perceived unfairness in M&A activities creates a sense of alienation and moral outrage among the public. (Rothstein & Stolle, 2008). This perception can lead to significant psychic distance, wherein the MNE is viewed with suspicion and hostility. For instance, if an M&A deal is perceived to disproportionately benefit top executives and shareholders while neglecting the well-being of employees, consumers, and the local community, it is likely to be met with strong public repugnance (Nia & Sorrentino, 2010). Such negative perceptions are amplified in cases where there is a history of conflict or exploitation, as the perceived unfairness reinforces existing mistrust and resentment. Thus, ensuring fairness in both the processes and outcomes of M&A activities is crucial for minimizing public repugnance and fostering a positive reception in the host

6

society (Rothstein & Stolle, 2008). When the outcomes of an M&A deal are perceived as unfair, it can lead to strong negative reactions from the public. Perceived unfairness can arise from job losses, perceived exploitation, or the belief that the deal primarily benefits a small elite. Such perceptions can significantly increase public repugnance (Sunstein, 2005). Therefore, we propose the following:

Proposition 2: Perceived Unfairness Increases Public Repugnance.

Institutional theory suggests that organizations must gain legitimacy to succeed, and this legitimacy is often dependent on societal norms and values (DiMaggio & Powell, 1983). When M&A activities are perceived as unfair, they can lose legitimacy in the eyes of the public, leading to increased resistance and potential failure of the deal (Scott, 1987; Suchman, 1995).

For example, the backlash against the acquisition of a major local brand by a foreign MNE perceived as unfairly leveraging its market power can lead to consumer boycotts and regulatory hurdles. In this sense, Jeong and Kim (2019) highlight the balance between legitimacy and efficiency in corporate actions, emphasizing that organizations must align their strategies with societal expectations to maintain legitimacy. In the context of M&A, this means that deals perceived as unfair or exploitative can significantly undermine the legitimacy of the involved MNEs, regardless of the potential economic efficiencies gained. For example, Zucker (1989) combines institutional theory with population ecology, arguing that legitimacy is essential for organizational survival. Without legitimacy, organizations lack the historical continuity and societal support necessary for sustained success. This perspective underscores the critical role of public perception in the long-term viability of M&A activities. Along the same lines, Adams (2018) explores the concept of institutional legitimacy, noting that legitimacy is granted by societal actors based on adherence to accepted norms and values. In M&A scenarios, if the public perceives that a deal violates these norms—such as fairness and equity—the involved entities can face significant legitimacy crises. Deephouse and Suchman (2008b) further elaborate on legitimacy within organizational institutionalism, stating that it encompasses pragmatic, moral, and cognitive dimensions. For M&A activities, this means that legitimacy is not just about legal compliance (pragmatic) but also about moral acceptability and alignment with societal values (moral and cognitive legitimacy).

7

Differently, Burdon and Sorour (2020) discuss the evolution of compliance culture in the UK financial services sector, highlighting how legitimacy evolves through consistent adherence to ethical standards and societal expectations. MNEs engaged in M&A must similarly cultivate a compliance culture that aligns with the host society's values to maintain legitimacy. Díez-Martín, Prado-Roman, and Blanco-González (2013) differentiate between various types of legitimacy and their impact on organizational success (Deephouse & Suchman, 2008a). They argue that beyond gaining initial legitimacy, organizations must continually adapt to evolving societal norms to sustain success. In M&A contexts, this means that ongoing engagement with local stakeholders and transparent practices are essential. To solidify our next proposition we integrate the above arguments with a recent work of Suddaby, Bitektine, and Haack (2017) where the authors review the concept of legitimacy, emphasizing its dynamic nature and the role of societal actors in conferring legitimacy. They suggest that public perception can rapidly shift, especially if M&A activities are seen as violating ethical standards, leading to rapid delegitimation. In this context, we propose:

Proposition 3: Public Repugnance Decreases Societal Acceptance of M&A.

Public repugnance (Hancock, 2004) can manifest as public protests, negative media coverage, and political opposition, all of which can hinder the acceptance and success of the M&A deal. This repugnance arises when M&A activities are perceived to violate societal norms of fairness and equity, resulting in significant legitimacy loss. For instance, if a foreign MNE acquires a local company and is perceived to exploit local resources or dismiss local employees unfairly, this can lead to widespread public backlash (Nussbaum, 2004). Public repugnance can lead to significant reputational damage and operational challenges for the MNE. Negative media coverage can tarnish the MNE's brand, while public protests and political opposition can result in regulatory scrutiny and legal challenges. This not only increases the transaction costs associated with the M&A but also threatens the long-term success and integration of the acquired entity. By recognizing and addressing the societal norms and values that underpin legitimacy, MNEs can better navigate the complexities of cross-border M&A.

8

Stakeholder Engagement and Transparency

Effective stakeholder engagement and transparency are crucial strategies for MNEs to reduce psychic distance and perceptions of unfairness, thus mitigating repugnance. Stakeholder theory posits that organizations must consider the interests of all parties affected by their actions, not just shareholders (Freeman, 1984). By actively involving stakeholders—such as employees, customers, suppliers, and local communities—in the M&A process, MNEs can build trust and reduce opposition. For example, a recent work by Shah and Guild (2022) emphasizes the importance of a well-defined stakeholder engagement strategy, particularly for technology firms. This systematic engagement is essential for fostering understanding and cooperation, which are vital for reducing psychic distance and perceptions of unfairness during M&A activities. Their focus on structured engagement strategies aligns with insights from Kujala et al. (2022), who highlight that ongoing dialogue, transparency, and responsiveness are key to building long-term, trust-based relationships with stakeholders. Together, these perspectives underscore the necessity for MNEs to adopt a proactive and structured approach to stakeholder engagement to mitigate public repugnance effectively.

On the other hand, Greenwood (2007) critiques superficial applications of stakeholder engagement, arguing for deeper, substantive interactions that go beyond mere corporate responsibility rhetoric. This aligns with Desai (2018)'s model of collaborative stakeholder engagement, which integrates theories of organizational legitimacy and learning. Desai (2018) suggests that collaborative engagement—through consultations and participatory decision-making—can enhance organizational legitimacy and learning, thereby reducing psychic distance and public repugnance. Both Greenwood (2007) and Desai (2018) emphasize that true engagement involves actively listening to and addressing stakeholder concerns, moving beyond tokenistic gestures. Another recent study by Hughes and colleagues (2022) explores the relationship between stakeholder engagement and firm performance, finding that effective engagement can leverage the knowledge and insights of diverse stakeholder groups. This perspective complements Shah and Guild (2022)'s emphasis on systematic engagement and Kujala et al. (2022)'s focus on long-term relationship building. By integrating stakeholder insights, MNEs can not only reduce psychic

9

distance but also enhance the overall success of the M&A by incorporating valuable perspectives from stakeholders. This integration helps to foster a sense of shared purpose and alignment, which is crucial for smooth M&A transitions. In this respect, we formulate the following:

Proposition 4: Stakeholder Engagement Moderates the Relationship Between Psychic Distance and Public Repugnance.

Effective engagement includes consultations, participatory decision-making, and addressing stakeholder concerns, which can mitigate the negative effects of psychic distance (Freeman, 1984). Reducing the perceived distance between the MNE and local stakeholders fosters a sense of shared purpose and alignment, thereby reducing the likelihood of public repugnance.

For instance, if a foreign MNE is acquiring a local company, involving local employees, customers, and community leaders in the decision-making process can help address fears and concerns about job security, product quality, and community impact. This inclusive approach can transform potential adversaries into allies, smoothing the integration process and enhancing the legitimacy of the M&A deal. By adopting a transparent and inclusive stakeholder engagement strategy, MNEs can proactively manage perceptions of unfairness and build a foundation of trust with all affected parties. This not only reduces the risk of public repugnance but also contributes to the long-term success and sustainability of the M&A activity.

Another imperative mechanism is perpetuated by transparency which involves open and honest communication about the intentions, processes, and expected outcomes of an M&A deal (Ott, 2020). It plays a critical role in alleviating fears and suspicions, making the process more acceptable to the public (Donaldson & Preston, 1995). Detailed disclosures about the strategic benefits of the merger, potential job impacts, and plans for community engagement can help address concerns and build support among stakeholders. A growing body of literature explored the roles of transparency. For instance, Yakis-Douglas et al. (2017) explore how transparency in M&A strategy, especially when communicated to investors, can predict positive outcomes during organizational transitions. They find that transparent communication can significantly enhance investor confidence, as it reduces uncertainty and builds trust.

10

This insight complements an earlier Donaldson & Preston's (1995) assertion that transparency can alleviate public fears and suspicions, suggesting that the positive effects of transparency extend beyond public perception to include financial stakeholders as well. More recently, Ott (2020) highlights the importance of risk reporting in M&A activities, particularly through detailed disclosures in regulatory filings like the 10-K. Ott (2020) argues that transparent risk reporting can mitigate the perception of unfairness by openly addressing potential risks and negative impacts associated with the M&A. This aligns with the broader argument for transparency (Donaldson & Preston, 1995) and extends it by emphasizing that clear communication about risks is as crucial as communicating benefits. By providing a balanced view of both opportunities and risks, MNEs can foster a more realistic and less biased understanding among stakeholders.

Following a slightly different logic, Arouri, Gomes, and Pukthuanthong (2019) examine the role of corporate social responsibility (CSR) in reducing M&A uncertainty. They argue that firms with strong CSR practices are perceived as more trustworthy and transparent, which can mitigate uncertainty and stakeholder concerns during M&A activities. This perspective ties into the broader discussion on transparency by suggesting that CSR initiatives can serve as a form of implicit transparency, enhancing the overall perception of fairness and reducing public repugnance. By integrating CSR into their transparency efforts, MNEs can further bolster stakeholder trust and support. Transparency in the M&A process can reduce perceptions of unfairness by providing clear and honest information about the deal. This includes communicating the benefits, addressing concerns, and being open about potential negative impacts. Transparency can thus reduce the intensity of public repugnance (Donaldson & Preston, 1995).

Drawing from Yakis-Douglas et al. (2017), Ott (2020), and Arouri et al. (2019), we can notice that transparency involves a multifaceted approach. Communicating strategic benefits, as Yakis-Douglas et al. (2017) suggest, involves clearly articulating the strategic benefits of the merger to investors and other stakeholders to build confidence and reduce uncertainty. Detailed risk reporting, emphasized by Ott (2020), involves being transparent about potential risks and negative impacts to mitigate perceptions of unfairness and build a balanced understanding among stakeholders. Leveraging CSR for implicit

11

transparency, highlighted by Arouri et al. (2019), involves integrating CSR initiatives into communication strategies to further reduce M&A uncertainty and stakeholder concerns. In this context, we propose:

Proposition 5: Transparency Moderates the Relationship Between Perceived Unfairness and Public Repugnance.

DISCUSSION AND CONTRIBUTION

This manuscript introduces a theoretical framework to help MNEs navigate public repugnance in cross-border M&A deals, focusing on the roles of psychic distance, perceptions of unfairness, and public repugnance to foster societal acceptance. It extends existing literature on M&A and stakeholder management by enhancing the understanding of transparency's role in mitigating public repugnance, specifically addressing how transparency manages psychic distance and perceptions of unfairness (Ott, 2020; Yakis-Douglas et al., 2017). Moreover, it integrates CSR insights, positioning CSR as a strategic tool for implicit transparency that builds stakeholder trust and reduces repugnance (Arouri et al., 2019).

The framework also offers practical strategies for MNEs, including conducting thorough due diligence, engaging proactively with stakeholders, and maintaining transparent communication to develop socially responsible M&A strategies (Kostova & Roth, 2008). It suggests that CSR initiatives can act as a form of transparency, enhancing the narrative around M&A activities and fostering goodwill. Additionally, the framework broadens the concept of psychic distance beyond cultural and institutional differences to include public perceptions and societal acceptance, linking it directly to public repugnance and providing a more comprehensive view of the challenges in international acquisitions (Kogut & Singh, 1988).

Ultimately, this framework provides a robust foundation for understanding and addressing public repugnance, offering a detailed roadmap for practical application in international business and M&A. Future research could empirically test this framework across various contexts using methodologies like structural equation modeling and multi-level modeling, potentially refining strategies and expanding the understanding of factors influencing public repugnance and stakeholder acceptance.

12

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13

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14

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15

FIGURE 1

Theoretical Framework

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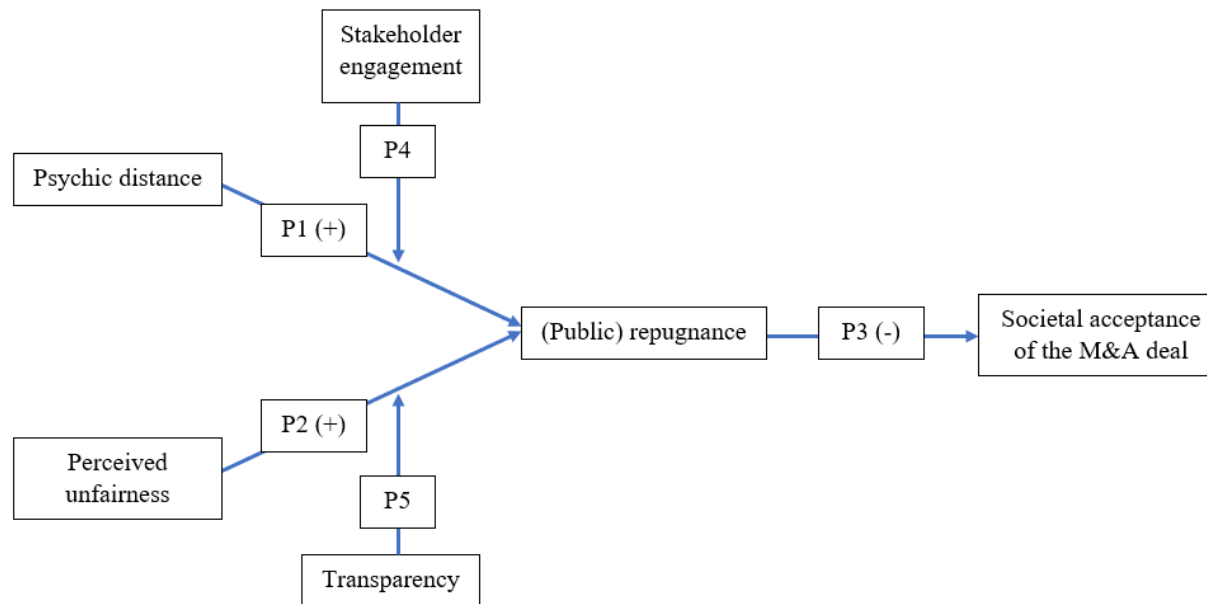
Handling identity threats:

The dynamics of identity work and moral emotions

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Handling identity threats through suppression or adaptation:

The dynamics of identity work and moral emotions

ABSTRACT: Extant research has long recognized the link between the experience of emotions and identity work in organizations, but it has not considered the distinctive effects of *moral* emotions in the ways that threats to identity are experienced and handled. This is an important gap to address, since shifting patterns of moral emotions have undermining or energizing effects, with implications for the forms of identity work – how individuals struggle to maintain a coherent sense of self in the face of threats to their identity – in which individuals engage. Furthermore, the possibilities for identity work have consequences for the lives of individuals, inter-group tensions and inclusion within organizations, all of which need managerial attention. Therefore, this article is concerned with theorizing how threats to identity work may involve responsive pathways through patterns of moral emotions, shaped by particular organizational conditions. We theorize how different pathways through moral emotions may favor identity work of one of two kinds, focused on either self-suppression or adaptation.

Keywords: identity work, identity threat, moral emotions

INTRODUCTION

Individuals can struggle to maintain and present a coherent sense of self in the presence of challenges to their identity, and their efforts to address these challenges constitute identity work (Brown, 2015), a struggle which intrinsically involves emotions (Beech, Gilmore, Hibbert & Ybema, 2016; Brown, 2022). Research connecting individual identity work and the experience of emotions has been collated and codified in Winkler's (2018) systematic review. It established that such research was largely focused on the emotions experienced in situations of identity work, including how successful or unsuccessful identity work led to such emotions. The review also established that there was a need for further attention in a number of areas, including "…the role of emotions in problematizing identity [and] the emotional constitution of the identity work experience" (Winkler, 2018, p120). The theoretical work we provide in the current article contributes to the development of understanding in this space. In building that contribution, we also address another gap: the need for attention to *moral* emotions in the study of identity work, a category that Winkler (2018) did not consider in his review (the term 'moral emotion' is absent from their study) and remains under-researched. As we shall argue, moral emotions have a particular role in identity work dynamics.

A functional perspective on moral emotions argues that they are concerned with helping people to fit, connect and thrive as social beings, in contrast basic emotions, which are focused on individual

1

satisfaction and physical survival (Author, 2024; Giner-Sorolla, 2013). Thus, while moral emotions share self-referential physiological responses with basic emotions – they trigger action through embodied systems by motivating individuals to respond in certain ways (Fischer & Manstead, 2016 and Giner-Sorolla, 2013; 2018) – they "…take as a goal something other than one's own immediate material or sensual self-interest" (Giner-Sorolla, 2013, p17). The function of moral emotions – such as shame, guilt or pride – is to guide behavior in relation to social norms and expectations (Fischer & Manstead, 2016) and these can be more powerful influences than basic concerns for individual self-interested wants and needs (Jacobs Hendel, 2018). Thus, the way that moral emotions are experienced and guide action can have important effects on identity work, which is concerned with how we present ourselves in social contexts.

Identity work describes the ways that individuals seek to present themselves to others when striving for a coherent sense of self, in social contexts which may threaten or challenge that sense of self (Alvesson & Willmott, 2002; Brown, 2017; Brown, 2022). Moral perceptions of appropriate or inappropriate behavior and self-expression will clearly impact on this form of work. Since moral emotions signal a sense of alignment or mis-alignment (through transgressions by ourselves or others) with community norms, which has implications for whether we are successful or not in the moment of self-presentation as part of, say, a community or profession (Ahuja, 2022; Callagher, Elsahn, Hibbert, Korber & Siedlok, 2021; Schaumberg & Skowronek, 2022). In any case, identity work is an inherently emotional struggle as Beech and colleagues (2016) have argued, and "…identity is not just dependent on how we think about, reflect upon and imagine ourselves, but moreover how we feel about ourselves too" (Brown, 2022, p33).

We are concerned with theorizing how threats to identity work may lead to the experience of *particular* moral emotions and *transitions between* moral emotions, leading to two alternative pathways for responding to identity threats. First, identity work focused on (self) suppression, that initially involves moral emotions of shame or guilt, patterns of stigmatization and/or unresolved conflict and ends in despair. Second, adaptive identity work that, under particular conditions, translates identity threats into new possibilities through mobilizing the generative potential of hope.

2

IDENTITY WORK AND IDENTITY THREATS

Individuals engage in identity work to support a coherent and distinctive presentation of who they are by "…forming, repairing, maintaining, strengthening or revising the constructions" to reflect, externalize and communicate their sense of self (Alvesson & Willmott, 2002, p626). Identity work is understood to be a highly complex and contextualized process that is resourced, enacted and characterized in a variety of ways that include discursive processes, symbolic actions and embodied performances (Brown, 2017; Conroy & O'Leary-Kelly, 2014; Ladge, Clair & Greenberg, 2012; Perrott, 2019; Riach & Cutcher, 2014).

The complexity of process and intention involved in identity work means that the resultant identity constructions may be experienced as tenuous or precarious (McGivern, Currie, Ferlie, Fitzgerald & Waring, 2015; Petriglieri, Ashford & Wrzesniewski, 2019). Thus, identities are often vulnerable to disruption through identity threats, which can be difficult and disruptive when they prevent individuals from supporting, for example, professional or role identities that are essential for the achievement of individuals' goals (Callagher et al., 2021). Organizations can be a common site of such hard-to-resolve threats in relation to identity work, for example through coercive, invasive and undermining performance assessments (Knights & Clarke, 2014; Shams, 2019), experiences of challenges to professional values (Grimes, 2018; Kyratsis, Atun, Phillips, Tracey & George, 2017; McGivern, Currie, Ferlie, Fitzgerald & Waring, 2015) or a lack of recognition that leads individuals to "…feel misidentified – when they believe their colleagues do not recognize their work-related identities" (Meister, Jehn & Thatcher, 2014, p488). In identity threats can be experienced through direct discrimination in organizations when some individuals use "…stereotypical talk, [which] refers to identity work whereby managers enact their stereotypical conceptions of 'the other' to bolster their self-image and 'inferiorize' 'the other'" (Koveshnikov, Vaara & Ehrnrooth, 2016, p1353).

Overall, individuals in organizations can be at risk of experiencing identity-related threats, tensions and conflicts of many kinds. These experiences can be "…fraught with fear, anxiety, angst, and trepidation [and] reconciling identity tensions and conflict implies various negative emotions" (Winkler, 2018, p123).

3

THE DYNAMICS AND EFFECTS OF MORAL EMOTIONS

Effects that lead to acceptance and self-suppression in response to identity threats

The insights that have been developed in focused studies about particular moral emotions can sometimes be counterintuitive. For example, Ellemers (2018, and see also Ellemers et al, 2019) has demonstrated that shame and guilt may lead to avoidance, rather than behavioral change. Their work has shown that: "These emotional states can make people feel so bad about themselves […] that they are difficult to cope with in a constructive way. The experience of shame and guilt about moral lapses or shortcomings therefore easily tempts people into self-justifying explanations for their behavior, as the consequences of admitting to moral failure are so devastating" (Ellemers, 2018, p152). Thus, we can infer that in some circumstances the identity threat that would follow from an experience of shame or guilt is countered simply by denial of a transgression, where that is feasible for the transgressor.

The struggle to accept shame or guilt can be explained, at least in part, by considering that the functions of moral emotions have developed in relation to 'social survival', as argued by Fischer and Manstead (2016), and thus relate directly to identity work and the positioning of the individual in the social context. In this vein, Ellemers' (2018) work shows connections between intrapersonal and interpersonal effects. There is a level of functional conflict between self-regulation and (authentic) communication (Giner-Sorolla 2013, 2018) in the potential for action that follows from an experience of shame or guilt. The drive to *both* express *and* contain emotion at the same time interferes with the enactment of different behavior on the interpersonal level in response to these moral emotions, which in turn impairs the ability to adapt and present oneself coherently in a troublesome social context (Hibbert, 2023).

The suppression of identity work can also involve processes that connect shame and stigma: "…[processes of] internalization of norms, emotions and a sensitivity to shame, function to shape everyday comportment, manners and restraint [and] those who are unable to live up to particular norms and expectations often experience stigma, with some people enduring stigma so regularly and/or powerfully that they internalize a sense of shame and a lack of dignity in ways that create profound suffering and 'spoiled' identities" (Brown, 2022, p 31; and see also Grandy & Mavin, 2014). Brown's (2022) point here

4

is that failure to manage or counter experiences of shame has enduring effects that we would see as stigma, and this profoundly disrupts identity work. Thus, identity threats can be particularly difficult and disruptive when they prevent individuals from supporting professional or role identities, if they foreground and stigmatize a non-work identity characteristic (Fernando, Reveley & Learmonth, 2020; Lee and Lin, 2011; Wesley, 2002). Such threats draw identity work away from the professional domain and undermine an individual's integrated sense of self.

To combat shame related to non-work identities, individuals may strive harder to foreground a strong professional identity as a 'shield'. However, the strong presentation of a professional identity can lead to friction when multiple professions interact in the same organizational context. In such cases, when individuals from different professions find themselves in conflict, protracted struggles and cycles of negative emotion can result (Ahuja, 2022; Huq, Reay & Chreim, 2017). Furthermore, strong protective responses difficult to mobilize when stigmatization and shame are unabating. Alternative responses that avoid such protracted struggles that are more likely to be mobilized in such cases can include 'living with' the identity threat through seeking external emotional support (Meister, Sinclair & Jehn, 2017) or by cultivating 'numbness' to the pain that the identity threat entails (Shepherd & Williams, 2016). Similarly passive responses can also include the suppression of a particular characteristic of the self through compartmentalization (Kennedy-Macfoy, 2013; Perrott, 2019; Shams, 2019). All these responses involve suppression of some part of the self, whether through displacement (a professional shield), disconnection (numbness) or distancing (trying not to 'take the identity threat personally', by living with it). Thus:

> *Proposition 1*: Where negative moral emotions of guilt or shame are experienced on an extended and continuing basis, identity threats are likely to lead to identity work focused on suppression of aspects of the self.

One issue that arises from self-suppression in the context of identity threats, linked to negative moral emotions (such as guilt and shame), is that it places a draining burden of emotion regulation on the individual, that weakens both the emotional and cognitive resources (Bataille & Vough, 2022; Johns, Inzlicht, & Schmader, 2008) for identity work. At the same time, actions that deal with identity threats

5

through self-distancing (from lower status identities) can also hinder collaboration with, and the interests of, others with the same identity (Kane & Levina 2017), undermining potential collective resources for more adaptive or threat-resistant responses. This could lead individuals into a transition from the short-term experience of shame or guilt into a longer-term experience of a future-oriented moral emotion, namely despair (Steinbock 2014). In this vein, Mendonca, D'Cruz and Noronha (2022), in their study of low-caste cleaners in India, describe how their research participants expressed helplessness as attempts to background some identity aspects behind the notion of a "good worker" just re-produced a diminishing culture of servitude in a different way. In this way, attempts to support a transition to positive moral emotions through making work meaningful were thwarted by a context in which disrespectful treatment, that leads to negative moral emotions and stigmatization, prevailed (Ford, Agosta, Huang & Shannon 2018). Thus:

> *Proposition 2: Where guilt or shame are accompanied by (or cause) stigmatization, the emotional energy to support other, more positive forms of identity work focused on re-constructing identities or challenging threats, is diminished and there is a transition to despair.*

Clearly, the main driver behind suppression as an identity work response to identity threat(s), in association with the experience of negative moral emotions, is the continuing nature of the threat(s). However, it also seems to be the case that individuals affected in this way are brutally forced to conclude that the suppressed aspect of their identity has little value in their organizational context. Thus:

> *Proposition 3: A transition to despair is accompanied by the individual concluding that their suppressed identity is not valued by the organization.*

Effects that lead to adaptive identity work

The influence of contextual factors interacts with intrapersonal factors. Notably, the individual's potential and motivation towards thoughtful engagement, in response to identity threats associated with experiences of moral emotions, is important. This is because both 'hot' emotion and 'cold' cognition are involved in deciding how to behave, act and present oneself in social contexts where moral emotions have been triggered (Henik, 2008). Effects on identity work behavior and action can also be based on thoughtful observation as well as the direct experience of moral emotions. Thus, observing moral excellence –

6

examples of behavior or action that fit with the ideals and aspirations for ethical behavior in a given context – can be associated with the stimulation of positive moral emotions (Ford, Agosta, Huang & Shannon, 2018) which enable creative responses (Conway, Tugade, Catalino, & Fredrickson, 2013). In contrast, an observation of shame experienced by another is likely to be experienced as a normative pressure to avoid that behavior (Schaumberg & Skowronek, 2022). Both effects will have implications for possible identity work, as individuals judge themselves against positive and negative moral standards in the social context. Arguably then, a self-reflexive response (Hibbert, 2021; Hibbert, Beech, Callagher & Siedlok, 2022) to moral emotions is involved in the construction of their effects and the adaptive behaviors that do or do not follow from them (Ellemers et al, 2019; Gilbert, 2019). Where this self-reflexive capability is mobilized effectively, reflection on the cause of moral emotion through a thoughtful appraisal of the situation is more likely (Giner-Sorolla, 2013).

Thus, to avoid the constrained and diminishing effects of suppressive identity work in response to experiences of negative moral emotions, the possibility for thoughtful appraisal in response to an identity threat is essential. There are conditions that favor such a response. Petriglieri, Ashford and Wrzesniewski (2019, p153) have identified the emergence of "holding environments" in which such thoughtful approaches may be mobilized more easily. These spaces are constructed collectively and so require the support of others with similar experiences, to provide workspaces in which the community can support each individual's construction of a desired identity (Bertolotti, Tagliaventi & Dosal 2021; Petriglieri & Petriglieri, 2010). Where that desired identity has moral characteristics (it represents desirable ethical standards), others may be seen as influential role models. Gill (2023, p677) explains how these role models can influence identity work:

> "…coworkers may identify [others as] moral exemplars. Five forms of social influence emanate, often unknowingly, from these exemplars: encouraging, evoking, edifying, enacting, and exemplifying."

In addition, observing moral excellence can also be associated with the stimulation of positive moral emotions (Ford, Agosta, Huang & Shannon, 2018) that provide the energy for action. Taken together, such

7

influences can stimulate the drive and capacity for "identity-restructuring responses" (Petriglieri, 2011, p648) that respond to threats by reconfiguring identity constructions. Through thoughtful appraisal, the individual can carefully consider social relations in the context in which the emotion was experienced, taking account of positive (and negative) exemplars and reaching their own conclusions, in order to decide how to act or behave (Jordan, Flynn & Cohen, 2015; Hibbert, Mavin & Beech, 2022).

Identity-restructuring responses are also dependent on the resources individuals can mobilize to respond in this way. These may include resources from a less threatened identity position (Brown & Coupland, 2015), or the learning that is possible when collectives work through situations involving difficult emotions (Corlett, Ruane & Mavin, 2021), or other resources that the local context affords (Kyratsis, Atun, Phillips, Tracey & George, 2017; Tracey and Phillips, 2016). Recent research has suggested the resources afforded by the context may be widened, in increasingly virtualized working environments, to include digital material that supports alternative interpretations and shifts in contextual positioning (Bonneau, Aroles & Estagnasié, 2023).

However, the efficacy, desirability and resourcing of a restructuring response to an identity threat may be dependent on particular combinations of moral emotions (Abbate, Misuraca, Roccella, Parisi, Vetri & Miceli, 2022; Jeong, Sun & Fu, 2020), along with whether and how the individual feels the threatened identity is mutable, and the degree of importance that they attach to the particular (aspect of their) identity (Meister, Jehn & Thatcher, 2014; Meister, Sinclair & Jehn, 2017). For example, a senior surgeon in a hospital setting might feel that her professional identity is important and inviolable, while a professor of management who is also a patient in the same setting might feel quite differently. Once the issue of mutability is established, the role of different combinations of moral emotions can also be considered. Moral emotions are generally argued to support more ethical decision making (Jeong, Sun & Fu, 2020) but different combinations can lead to different choices. For example, despite an experience of shame or guilt, in the absence of empathy for third parties, individuals may resource reparative actions to an injured party at the expense of others rather than accepting a need for reconstruction and costly personal reparation (Abbate, Misuraca, Roccella, Parisi, Vetri & Miceli, 2022; Sekerdej & Giner-Sorolla, 2022). In addition,

8

where there is a strong sense of pride through identification with a group that is involved in a transgression, then reparative action towards an injured party is also less likely (Bernhard & Labaki 2021). However, when guilt and empathy are both experienced, individuals may take personal responsibility and alter (aspects of) their identity, or alternatively background and foreground different aspects of it from situation to situation (Fernando & Kenny 2021) as part of a behavioral response aimed at reparation.

Transitory background / foreground responses require more work and are less desirable, even when they are triggered in response to a sense of responsibility for a situation, when it is possible to conceive of and achieve longer term adaptation that has enduring effects. Such adaptation entails more reconstructive identity work that seeks to re-align multiple characteristics within a broader sense of self (Barker Caza, Moss & Vough, 2018). For example (and without any notion of transgression as a driver in this case), university academics may rebalance their identities towards a presentation of self as research oriented, education oriented, or engaged scholars focused on impact. This rebalancing involves a different presentation of self while activities related to all three categories may continue. When re-construction can be crafted in such a way to be meaningful and acceptable for the individual, and in effect the adaptation is experienced as possible and desirable, it may help individuals to translate identity threats into identity opportunities that are more hopeful (Bataille & Vough, 2022). This kind of transition to a more positive moral emotional state can lead to more flexible and creative responses:

> "As a result of the hope that stems from identity opportunities, […individuals will…] will be open to creative ways to approach the opportunity and engage in more divergent thinking than those facing a threat." (Bataille & Vough, 2022, p98; and see also Conway, Tugade, Catalino, & Fredrickson, 2013).

The possibility of a transition to more positive moral emotions is also enhanced by the possibility of support from others in the organization (Ford, Agosta, Huang & Shannon 2018). Thus, summarizing the preceding points leads to the following propositions:

> ***Proposition 4a***: *When the experience of the identity threat is related to a particular and contained transgression of norms and experience of moral emotion, either directly or vicariously, (rather*

9

than a long-term, discriminatory, negative climate that leads to stigmatization), responding to identity threats through adaptive, reconfiguring identity work is favored.

Proposition 4b: When the experience of negative moral emotion relates to one's own transgression and accompanied by empathy that promotes personal engagement and responsibility, responding to identity threats through adaptive, reconfiguring identity work is favored.

Proposition 4c: When there is a supportive group or community that provides a "holding environment" for identity reconstruction, responding to identity threats through adaptive, reconfiguring identity work is favored

Proposition 4d: When there are exemplar(s) of moral excellence within the context who provide models around which identity opportunities can be constructed, responding to identity threats through adaptive, reconfiguring identity work is favored.

Proposition 4e: When identity opportunities can be crafted to provide the experience of hope, a moral emotion of possibility that supports energy and creativity, responding to identity threats through adaptive, reconfiguring identity work is favored.

The consideration of the role of moral emotions shows that adaptive, reconfiguring and reconstructive identity work is more likely under a very particular set of conditions, and it is not necessarily the case that *all* of these conditions need to be met. Arguably, the key step is the achievement of a transition from seeing identity threats as purely negative to a transition to identity opportunities, with the accompanying shift to hope. In addition, however, there will be aspect(s) of identity that are felt to be of less value to the individual – that can be let go – and others which become the core around which reconstruction takes place. This argument leads to the following additional proposition:

Proposition 5: A transition to hope and effective identity adaptation may be accompanied by a perception that the organization provides identity opportunities.

DISCUSSION AND CONCLUSION

The insights in this paper show how moral emotions and identity work are connected and why that matters.

10

The characterization of the role of shame, which induces stigma, adds to understandings of discriminatory identity threats and how these impact on individuals and communities (Callagher, El Sahn, Hibbert, Korber & Siedlok, 2021; Kane & Levina, 2017). These insights illuminate the suffering associated with suppressive identity work responses, such as compartmentalization, that may follow such threats (Kennedy-Macfoy, 2013; Shams, 2019). These moral emotional dynamics are also salient in considering how, when individuals have strong professional identities that conflict with other identities it can tie up "…professionals in a kind of futile resistance […and eventually a…] persistent identity struggle that renders professionals vulnerable to deep insecurities regarding their worth" (Ahuja, 2022, p1).

Shame and stigmatization, when they cannot be averted (Frandsen & Morsing, 2022), can lead to despair. In cases of enduring identity threats experienced through either unresolved inter-professional conflict or discriminatory behaviors, the emotional energy to support other more positive forms of identity work, focused on adapting and re-constructing identities, will be diminished through shame and in the long term, through the experience of despair. For managers, the emergence of this kind of climate would evidently be problematic, as it would be likely to lead to negative perceptions of the organization and the loss of staff who have other employment options, as indicated in Figure 1.

Figure 1 about here

Moral emotions also figure significantly in explaining how identity work focused on adaptation may unfold, as indicated in Figure 2. Where the identity threat results from one's own self-undermining transgressions (think, for example, of something regarded as 'unprofessional') then either shame or (more likely) guilt (Abbate, Misuraca, Roccella, Parisi, Vetri & Miceli, 2022; Schaumberg & Skowronek, 2022) are likely to be experienced. When this experience of negative moral emotion is combined with a more positive experience of empathy (Sekerdej & Giner-Sorolla, 2022), personal adaptive identity work can follow. This adaptive work is aimed at repairing one's standing with the victim(s) or observers of the transgression.

When the moral emotional conditions are right (and whether the individual facing an identity threat is in any way culpable or not), adaptive identity work can also take place in emergent holding environments

11

that are co-constructed (Petriglieri, Ashford & Wrzesniewski, 2019). However, we have explained how the identity work in such situations is likely to be associated with a transition between negative moral emotions (such as shame or guilt) and a positive moral emotion – hope – since it is *that* transition that allows identity threats to be reconceptualized as identity opportunities. This also adds to debates on positive emotions that align with the broaden-and-build theory: we explain how such emotions are generative and support creative action (Conway, Tugade, Catalino, & Fredrickson, 2013). There is also scope for direct management action to support such transitions through modelling and legitimating empathy, and consequently an opportunity for empirical research to explore and confirm the effects of this kind of intervention.

Figure 2 about here

The pathways characterized in Figures 1 and 2 add to current debates on identity work. The literature has tended to focus on the tenuous nature of identity, which leads to ongoing identity work to maintain a coherent sense of self (Alvesson & Willmott, 2002; Brown, 2017). This helps to explain the moment-to-moment challenge of identity work, which is sometimes an unresolved struggle (Beech et al., 2017). The contextual conditions favor particular moral emotions which, when experienced, lead to effects on the aims of identity work, the repertoire of action that it comprises and the energy that drives it.

The characterization of the intrinsic connections between identity work to handle identity threats and pathways through moral emotions may also be significant for debates about why emotion regulation in organizations may be challenging and sometimes problematic, especially for those attempting to support a particular position in an organization, such as the role of a leader (Sirén, He, Wesemann, Jonassen, Grichnik & von Krogh, 2020). In contrast to the normalized expectation that emotions are to be avoided, we have explained how particular patterns of moral emotions may be unavoidable –and in some cases, necessary and desirable. Furthermore, given our need for our identities to be recognized and the emotional struggle this always entails (Brown, 2022), an awareness of the dynamics of identity work and moral emotions also adds to the potential for us to understand how demanding this can be for diverse members of an organization. There is an opportunity for research to build on and develop these insights.

12

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14

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15

FIGURES

Figure 1: Dynamics and consequences of identity work and moral emotions leading to suppression
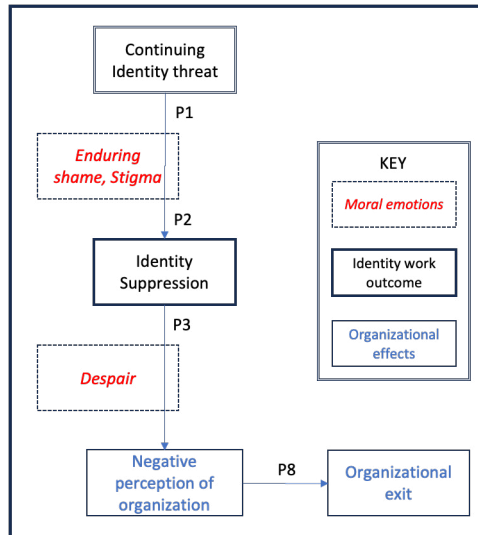
Figure 2: Dynamics and consequences of identity work and moral emotions leading to adaptation
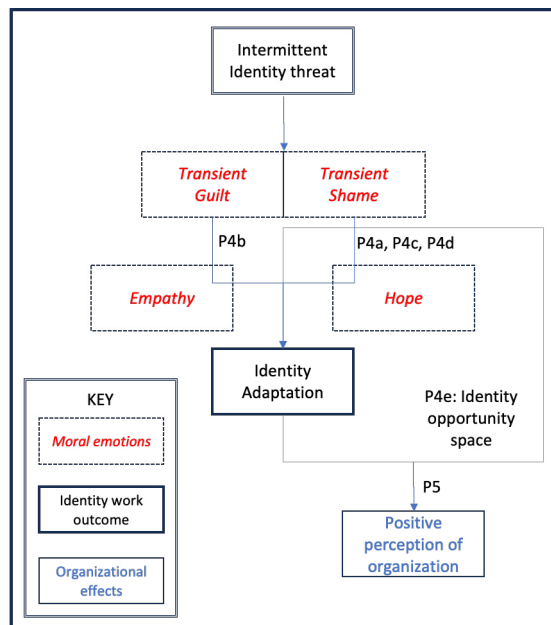
16

Stream 4. Gender, Diversity & Indigeneity

Potential influence of Cobots intervention on Australian manufacturing workforce diversity: A conceptual paper

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Stream 4. Gender, Diversity & Indigeneity

Potential influence of Cobots intervention on Australian manufacturing workforce diversity: A conceptual paper

ABSTRACT: *The Australian workforce has diversified in the last decade, driven by state, industry, and institutional strategies. Despite these changes, the manufacturing industry lags in workforce diversity, which is attributed to inherent barriers such as unattractive job perceptions and the physical nature of the work. Various HR studies recognise diversity as a vital labour strategy, providing benefits such as innovative ideas, improved understanding of customer needs, and a competitive edge. In the context of Industry 4.0, technological intervention is vital for the manufacturing sector, and diversified ideas are crucial for its successful implementation. As a recent technological development, collaborative robots (Cobots) have been introduced to the manufacturing sector to improve efficiency and productivity; however, they present new opportunities and challenges for a diversified workforce. The study provides the potential conceptual model to map the diversity enablers/ barriers with Cobots intervention strategies to build the collaborative and diversified workforce under Induatry4.0.*

Keywords: Diversity, Equity and Inclusion, Cobots, Collaborative robots, Manufacturing

OVERVIEW

Australia is widely recognised as a global leader in diversity, and extensive research has been conducted on the country's progress toward achieving greater workforce diversity (Davies, Ruzbacky, and Hare, 2023; Jacob, Grosse, Morana, and K¨onig, 2023a; Yadav and Lenka, 2020). However, the manufacturing industry in Australia is often criticised for its lack of diversity, as it is predominantly male-dominated, with older employees (Dagher, D'Netto, and Sohal, 1998; Workplace Gender Equality Agency, 2019). There is a public perception that manufacturing jobs require physical strength, making them more suitable for younger male employees (Lawson and Ossolinski, 2010; Sung and Choi, 2021). Nevertheless, existing literature reveals a gap in understanding the specific diversity barriers faced by the Australian manufacturing industry. While many studies discuss barriers to workforce diversity in terms of the Australian workforce and various other industries (Kiradoo, 2022; Lightfoote, Deville, Ma, Winkfield, and Macura, 2016), they fail to address the complexities of the Australian manufacturing sector, which consists of 16 unique sub-sectors.

Successful diversity initiatives require coordination across multiple fronts. Diversity cannot be achieved through single strategies alone, but it should be an integral part of broader business strategies (Wentling, 2004). Recent studies have found that under Industry 4.0 (I4.0), the current phase of digitisation in the manufacturing industry, technological competencies are essential for the future

Stream 4. Gender, Diversity & Indigeneity

workforce (Li, 2022). The World Economic Forum further estimates that, by 2025, 50% of all employees will need reskilling due to the adoption of new technology (Klaus and Saadia, 2020). Collaborative robots, or cobots, are a recent technological intervention for manufacturing processes. The term "cobot" originated from the research discipline of Human-Robot Collaboration (HRC), which aims to facilitate collaboration between robots and humans in task execution within a shared space (Faccio, Granata, Menini, Milanese, Rossato et al., 2023; Jacob et al., 2023a). The lack of diversity in the manufacturing sector necessitates a review of the literature on the barriers to diversity in this sector and consideration of how diversity may change with the implementation of I4.0 technological advancements in particular cobots. This study therefore proposes a conceptual model to explore the potential impact of cobot adoption on diversity barriers in the Australian manufacturing sector.

LITERATURE REVIEW

Diversity Barriers

While past literature has not specifically explored diversity barriers in the manufacturing industry, previous research across many industries has identified several potential barriers to diversity, equity and inclusion (DEI). A lack of diversity in top positions, unconscious bias, resistance to change, a lack of accountability for diversity and inclusion, and tokenism have all been identified as barriers to a more diverse workforce (Bryce, Far, and Gardner, 2019; Kiradoo, 2022).

Wentling (2004) categorised diversity barriers into three main groups: (a) barriers in the work environment, (b) barriers related to individuals in corporations, and (c) barriers associated with diversity initiatives. This paper builds on these categorisations to consolidate potential barriers identified in more recent literature under three main headings: institutional and structural, operational, and individual.

Institutional and Structural Barriers

Also known as organisational barriers in some studies, institutional and structural barriers encompass the diversity barriers created by the work environment or its leaders (Marín-Spiotta, Barnes, Berhe, Hastings, Mattheis et al., 2020; Wentling, 2004). The institutional and structure-related barriers that directly impact DEI identified in prior research are summarised in Table 1.

Stream 4. Gender, Diversity & Indigeneity

Table 1: Institutional barriers

Identified Institutional barriers	Reference
• Inconsistencies between organisational policies and practices regarding DEI • Poor adaptation to change and new initiatives to support diversity. • Inequitable practices in hiring, promoting and job placement for minority groups • Leadership perception of family and lifestyle justifications of diverse groups.	Allison (1999); Lightfoote et al. (2016), Spector, Asante, Marcelin, Poorman, Larson et al. (2019)
• Competing agendas (other organisational priorities overshadowing diversity initiatives), • The size and complexity of the corporation (larger organisations with many departments and branches complicating the implementation of diversity initiatives), and • Economic changes (decreased financial resources and employee redundancies)	Bryce et al. (2019); Wentling (2004)
• Unconscious bias in recruitment and promotion processes • Inequitable opportunities for career growth • Complexity of organisations and subcultures • Occupational sex segregation • Hostile work environment	Greider, Sheltzer, Cantalupo, Copeland, Dasgupta et al. (2019); Kiradoo (2022); Thomas (2014); Wilson, DePass, and Bean (2018)

In the context of manufacturing, every organization commonly faces structural and institutional barriers. Nankervis, Connell, Cameron, Montague, and Prikshat (2021) highlight that as the future workforce becomes more reliant on technology and digital skills under I4.0, organizational leadership and HR professionals need to modify strategies and thoroughly investigate ways to overcome institutional barriers. Therefore, implementing new initiatives to support diversity and change hiring and promotion practices are valuable adjustments to create a diverse workforce in manufacturing organizations, drawing inspiration from the hospitality industry (Madera, Dawson, and Neal, 2018). The key concern of manufacturing HR professionals to demonstrate the direct financial impact (Return On Investment) on diversity initiatives to better prospects for organisation future (Wentling, 2004).

However, both institutional and structural barriers ultimately affect the sense of belonging of underrepresented groups (Heath, Carlsson, and Agerström, 2023). In the manufacturing sector, shaping an inclusive organizational culture helps retain employees. Previous studies have shown that a sense of belonging greatly influences job considerations among minority groups, which is also prevalent in the manufacturing sector (Heath et al., 2023; Madera et al., 2018; Tilo, 2023).

Operational Barriers

Operational barriers, also known as process barriers, encompass requirements for specific physical skills, safety-related issues, and work-life balance (Greider et al., 2019; Lightfoote et al., 2016; Stedmon, Howells, Wilson, and Dianat, 2012). Traditional manufacturing jobs rely on human physical and cognitive skills rather than technology (Li, 2022). Factors related to the traditional design of manufacturing jobs, such as long working hours, physically demanding tasks,

Ergonomic issues, safety issues, and repetitive and monotonous work may discourage some under-represented groups, such as women and younger workers, from pursuing careers in manufacturing (Sánchez-Hernández, González-López, Buenadicha-Mateos, and Tato-Jiménez, 2019). Greider et al. (2019) highlighted task related sex segregation as a gender-specific barrier in STEM-related fields, and social and cultural factors, along with gender specific skill categorisation, negatively impact the retention of women employees. Manufacturing businesses require employees with a variety of skills to pursue different product–market strategies (Queensland government, 2022) . This will enhance the flexibility of teams and tasks, enabling them to embrace new innovations and emerging technologies.

Individual Barriers

A poor organisational culture with insufficient policy support fosters individual diversity beliefs and practices, creating an unfavourable environment for a diversified workforce. This includes limited skill development opportunities, emotional conflicts, and employee resistance for certain groups. Wentling (2004) identified employees' poor understanding of the value of diversity, insufficient support from existing employees, and slow involvement as key individual-level barriers to implementing successful diversity initiatives.

Stream 4. Gender, Diversity & Indigeneity

Furthermore, socioeconomic barriers such as cultural barriers and network disparity (lack of industry network for some social groups) can hinder prospects of diverse job applicants, directly impacting the recruitment process (Wilson et al., 2018). These barriers experienced by individuals, along with unconscious bias and cultural prejudices within an organisation, limit the entry and retention of under-represented groups, across sectors (Lightfoote et al., 2016). Major sociocultural barriers to women entering and remaining in the workforce have been identified from both organisational and employee perspectives. Organizational-based sociocultural barriers include the industry's image, male-dominated training courses, biased recruitment practices, and the culture and working environment. Barriers also arise when individuals feel uncertainty about their career or because they have significant family commitments (Bryce et al., 2019).

A recent study conducted by Davies et al. (2023) emphasised that flexible working practices, such as part-time work, compressed hours, and job sharing, are crucial for improving diversity because they address some of these identified concerns, and expand the pool of available talent. Manufacturing jobs typically require more physical presence, making it challenging for HR professionals to implement flexible work arrangements commonly seen in other industries. However, the advancements brought by Industry 4.0 have the potential to reshape traditional work methods and introduce more flexible schedules, which can attract a diverse range of individuals. Therefore, the following section explores the existing literature on the potential relationship between cobots intervention (i.e. the introduction of cobots to a manufacturing organisation) and diversity enablers from a strategic perspective.

Human and Robot Collaboration and Diversity, Equity, and Inclusion

Dean and Spoehr (2018) emphasised the necessity of technology-driven processes and product innovations to overcome employment challenges in the manufacturing industry, suggesting that Industry 4.0 could mitigate future job scarcity, precarious work, and job losses. But this will only occur if there is a parallel emphasis on competitiveness through higher value manufacturing, expansion of markets and innovative products, and upskilling and reskilling the workforce. For instance, when automation is introduced, there is always a concern about existing employees losing their jobs, especially if the organization's market share does not grow. However, by providing reskilling opportunities for surplus employees to adapt to new technologies, not only can we ensure

Stream 4. Gender, Diversity & Indigeneity

job security for our current employees, but also increase the organization's capacity. Cobots offer one component of how this transition strategy might happen although there are challenges to consider. Cobots, also known as collaborative robots, are designed to work closely with human operators on the same task (Kopp, Baumgartner, and Kinkel, 2021). Unlike industrial robots, cobots emphasise the elimination of space between the user and the robot (Adriaensen, Costantino, Di Gravio, and Patriarca, 2022). As such, the literature discusses different ways cobots intervention affects work design, safety and the performance of employees (Angulo, Chacón, and Ponsa, 2022; Paliga, 2022). Cobots could offer opportunities to replace complex and repetitive tasks while fostering an accommodating environment for diverse work groups, including those who might require assistance (Djuric, Urbanic, and Rickli, 2016; Gambao, Hernando, and Surdilovic, 2012). For example, one of the key contributions of robots is to reduce or aid their human counterparts in performing the dirty, dangerous or dull jobs (Sherwani, Asad, and Ibrahim, 2020). However, even though cobots could be used to improve task performance, such as reducing completion time, minimising errors, and improving safety, they may create an extra burden for their human partners, requiring additional training, specialised knowledge, and technical abilities (Matheson, Minto, Zampieri, Faccio, and Rosati, 2019).Wang (2019) introduced the idea that human operators and cobots should work together as symbiotic teams, complementing each other's strengths and weaknesses. The combination of human decision-making power with the robot's strengths of endurance and precision could be important to the competitiveness of small and medium enterprises (SMEs) (Mouad Bounouar, 2022).

In Industry 4.0, the utilisation of cobots in specific tasks not only provides support to existing workers but also creates new job opportunities (Villani, Pini, Leali, and Secchi, 2018). They help to reduce physical ergonomic issues, monotonous work, and enhance human decision-making abilities, going beyond just performing physical tasks (Villani, Pini, Leali, and Secchi, 2018). This is particularly beneficial for improving the diversity of the workforce by offering new employment opportunities with digital, technological, and decision-making skills, which provide greater opportunities for growth (Acemoglu and Restrepo, 2019). Furthermore, technology has the potential to promote workforce diversity by enabling flexible work arrangements that provide employees with greater autonomy and improve their work-life balance. For instance, rather than requiring employees

to be physically present, specific tasks can be assigned to cobots, allowing employees to work remotely for certain decision-making processes or to continue their work whenever they are available.(Dean and Spoehr, 2018; Oyekan, Hutabarat, Tiwari, Grech, Aung et al., 2019). Yan and Jia (2022) have identified that ergonomic factors, robot motion-based factors, anthropomorphism (the attribution of a human being's characteristics to a non-human object like a robot), and robot sociability are key factors improving human-robot collaboration. That is, if adopted intelligently, cobots can potentially make manufacturing jobs more appealing to underrepresented groups which would in turn strengthen manufacturers' labour and skills talent pool.

Therefore, this study aims to develop a conceptual model that explores the potential for cobotic intervention and its impact on diversity barriers.

DIVERSITY ENABLERS

The review of literature revealed a range of barriers to diversity in manufacturing, which encompass institutional, process, and individual obstacles. The institutional/structural barriers are closely tied to organisational culture, and individual barriers also stem from issues related to organisational culture. Therefore, fostering an inclusive culture becomes paramount in overcoming these obstacles, and a sense of belonging has been identified as a catalyst for diversity in addressing these common issues.

Work-Life Balance

HR policies and processes that improve work-life balance have been demonstrated to attract a wider talent pool, including underrepresented groups (De los Reyes, 2000; Greider et al., 2019). While the many industry sectors have successfully introduced work-life balance initiatives post-pandemic, the manufacturing industry continues to face challenges due to perceived limitations imposed by traditional manufacturing processes (Madera et al., 2018). Industry 4.0 technology provides opportunities for enhanced flexibility, where digital connectivity, cloud-based apps, VR/AR-based tasks, and increased opportunities for online professional development can enable employees to work from home (Dean and Spoehr, 2018), thus positively impacting work-life balance. Magoshi and Chang

Stream 4. Gender, Diversity & Indigeneity

(2009) showed that manufacturing companies such as Toyota and Hitachi successfully implemented family-friendly plans to establish the Work-life balance as a part of diversity management.

Konrad, Yang, and Maurer (2016) outlined in their study seven strategies to enhance work-life balance across industries. These include flexible work scheduling, options for working from home, job sharing, reduced work hours, compressed work weeks (less than 5 days), part-time employment for professional/technical/managerial staff, and access to dependent care resources and referral services. Sánchez-Hernández et al. (2019) highlighted that workers form younger generations and women prefer to work with companies that offer flexible work arrangements, such as flexible scheduling and work-from-home options. As such, providing improved work-life balance may be an enabler to improve the representation of women and younger workers in manufacturing.

The business case for manufacturing organizations to invest in cobots is usually based on performance, efficiency and safety imperatives. Cobots are embedded with safety modes such as safety-rated monitored stop, hand-guiding operation, speed and separation monitoring, and power and force limiting (Burden, Caldwell, and Guertler, 2022) and therefore cobots have the potential to elevate worker conditions and make specific tasks safer (Adriaensen et al., 2022). Cobots are also designed to relieve workers of heavy and repetitive tasks while allowing them to use their creativity and flexibility (Matheson et al., 2019). Therefore, a cobot intervention may potentially relieve diversity barriers related to the physical nature of work in manufacturing.

Physical Ergonomics

Physical ergonomics, as highlighted by Riedelbauch, Höllerich, and Henrich (2023, p. 43652), focuses on assessing the impact of workloads on the human body to prevent muscle, nerve, and joint disorders. Equally important, cognitive ergonomics is dedicated to promoting mental health and perceived comfort, underscoring the value placed on the holistic well-being of employees (Stedmon et al., 2012). Physical skills are highly demanded in manufacturing jobs, which makes physical ergonomics particularly important. However, this emphasis on physical strength can create biases among supervisors and reinforce stereotypes that act as barriers for women and other underrepresented groups seeking to enter the manufacturing industry (O'Brien, Scheffer, Van Nes, and Van der Lee, 2015). In

Stream 4. Gender, Diversity & Indigeneity

contrast, there is a requirement to improve employees' digital, technical, and personal skills to align with the demands of Industry 4.0 (Rainnie and Dean, 2021). Industry 4.0 technologies can also assist with reducing physically demanding tasks. For example, a robot or cobot may hold or move heavy objects that workers previously handled manually.

Considering the impact of technology on physical ergonomics is, therefore, crucial for enhancing employees' capabilities, effectiveness, safety, ease of performance, and overall quality of life (Reiman, Kaivo-oja, Parviainen, Takala, and Lauraeus, 2021). Additionally, as the proportion of older workers in the workforce is expected to increase, minimising the physical ergonomic impact of tasks becomes essential and positively impacts the retention of older workers in manufacturing jobs (Stedmon et al., 2012).

Given these considerations, it is not enough to view physical ergonomics as a potential barrier to a diversified workforce. We must also recognise it as a powerful tool, an enabler for such diversity. This recognition should not be a passive acknowledgement but an active integration into a conceptual model for managing physical ergonomics. By doing so, we can foster a more inclusive and diverse workforce where every individual's unique needs and capabilities are accommodated.

Cobots thus have the potential to elevate working conditions and workers' well-being in workplace contexts. As the cobot lies at the intersection between technology and humans, it is apparent that its development, design, and use draw on principles of ergonomics (Lorenzini, Lagomarsino, Fortini, Gholami, and Ajoudani, 2023). For example, performing a pick and place task with a cobot could make the process more efficient and also safer for the human operator as the cobot does the heavy lifting (Jacob, Grosse, Morana, and König, 2023b).

Sense of Belonging

Belonging encompasses the feeling of being accepted, included, and valued by others. It is a fundamental human need that greatly influences one's health, abilities, relationships, and overall well-being (Roberts, 2020). A sense of belonging is fostered by an inclusive culture within an organization, which promotes a healthy, happy, safe, and productive environment (Ahn and Davis, 2020).

Stream 4. Gender, Diversity & Indigeneity

Tilo (2023) found that the drive to experience a sense of belonging in the workplace, whether as a part of a team or within the broader organisation, is influencing the career choices of many individuals. A majority expressed that they would consider leaving their job if they did not feel a sense of belonging at their company. This poses a significant challenge in retaining underrepresented groups within organisations. While diversity management practices have primarily focused on increasing the representation of women, people of different generations, and other marginalised groups in the workplace, inclusion practices aim to ensure equal access to decision-making, resources, and opportunities for career advancement (Shore, Cleveland, and Sanchez, 2018). This creates a sense of belonging for underrepresented groups and promotes a positive, diverse culture by reducing bias and discrimination. The sense of belonging encourages employees to stay with the organization, which ultimately impacts business success by fostering innovation, increasing engagement, attracting new talent, and boosting productivity (Ahn and Davis, 2020; Pedler, Willis, and Nieuwoudt, 2022; Ramirez, 2023).

Therefore, our conceptual model recognizes the importance of a sense of belonging as a key driver of diversity in building a collaborative workforce for the future under Industry 4.0.
. In practice, in I4.0, the implementation of cobots for certain tasks could support existing workers and create jobs (Villani et al., 2018) for diverse workgroups (Acemoglu and Restrepo, 2019). However, prevailing understanding how specific cobot interventions influence diversity enablers remains underexplored.

CONCEPTUAL MODEL

The conceptual model in Figure 1 brings together the diversity enablers identified in manufacturing with the potential for cobot intervention to improve workforce diversity. The model consolidates the recent technological solution (cobots) intervention and the potential of cobots to enhance diversity enablers in the manufacturing sector, which is currently undergoing Industry 4.0 developments. In the context of Industry 4.0, cobot interventions have been identified as impacting workplaces in three ways: making tasks safer and more efficient, creating jobs for more diverse workforces, and reducing physical strains. Therefore, to build a collaborative workforce that can adopt new technological and

digital innovations, it is essential to enhance workforce capabilities to meet the future labour demand of manufacturing organizations. Hence, this model provides a novel way of collaborating diversity and technological strategies to address the future workforce requirements with innovative, collaborative, and diversified skills.
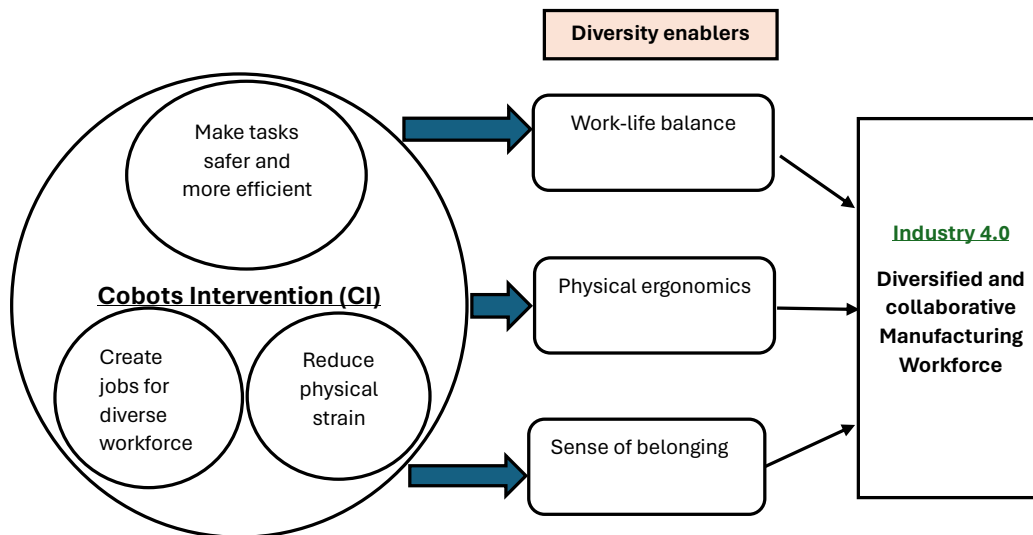
Figure 1: Cobots' intervention in promoting diversity for a stronger workforce in I 4.0

The conceptual model presented in Figure 1 is built upon a thorough literature review. Future research should focus on exploring how cobots can improve employee belonging and contribute to a better work-life balance. Furthermore, it should address the physical ergonomic challenges associated with traditional manufacturing jobs, with the aim of creating more opportunities for underrepresented groups to enter the current and emerging manufacturing jobs within the context of Industry 4.0.

CONCLUSION

This paper presents a conceptual model based on the literature that suggests cobots may have the potential to enable collaborative and diverse work environments by influencing diversity enablers such as work-life balance, physical ergonomics, and a sense of belonging. The paper contributes to the

Stream 4. Gender, Diversity & Indigeneity

literature on workforce diversity in the manufacturing industry by offering new perspectives on integrating technology to provide opportunities for a diversified workforce. It sheds light on barriers to DEI (Diversity, Equity, and Inclusion) in the Australian manufacturing sector, providing a conceptual framework that, with future empirical research, may help manufacturers attract and retain a diverse workforce through the strategic alignment of technology and diversity.

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3. Sustainability and Social Issues

Does a sustainable career exist in the gig sector? A qualitative study of gig workers in China

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1

3. Sustainability and Social Issues

Does a sustainable career exist in the gig sector? A qualitative study of gig workers in China

ABSTRACT: *A sustainable career is increasingly crucial in the changing job market, but existing literature often overemphasises individual agency and lacks empirical grounding in diverse cultural contexts. This study uses the Person-Environment (P-E) fit theory to explore Chinese gig workers' perceptions of sustainable careers. Semi-structured interviews with 42 workers across ride-hailing, online retail, and food delivery sectors reveal experiences of transition, turbulence, dissonance, and harmony. These insights highlight the complex determinants of gig work sustainability. Introducing the 'Gig Worker Perceptions Quadrants,' this study emphasises the interaction between individual attributes and the gig environment. The paper concludes by exploring cultural and contextual influences on sustainable careers, addressing theoretical and practical gaps.*

Keywords: Sustainable career; the P-E Fit theory; China; gig work; harmony

INTRODUCTION

Technological advancements and the need for a flexible labour market have fuelled the gig economy's growth, leading to a shift from conventional employment to a more versatile workforce. In China, the gig economy has surged, with gig workers reaching 200 million in 2020 (People's Daily Online, 2022). Despite the opportunities, gig work often involves temporary contracts, low pay, job insecurity, and limited career advancement (Kaine & Josserand, 2019), making it challenging for workers to build sustainable careers (Caza et al., 2022). Given these complexities, it is crucial to understand the factors contributing to sustainable career development among Chinese gig workers. Sustainable careers are fulfilling, adaptable, and associated with increased job satisfaction, engagement, and productivity (De Vos et al., 2020). However, there is a significant knowledge gap in this area.

This study adopts the Person-Environment (P-E) fit theory (Edwards et al., 2006; Su et al., 2015) to explore sustainable careers in China's gig economy. The P-E fit theory posits that job satisfaction and performance improve when individual characteristics align with the work environment (Vianen et al., 2010). However, this theory needs further exploration in the context of sustainable careers and gig work.

2

3. Sustainability and Social Issues

We address these limitations by focusing on China's cultural element of harmony, which involves positive relationships and collective well-being (Leung et al., 2011). Integrating harmony into the P-E fit model provides a comprehensive understanding of sustainable careers for Chinese gig workers who face challenges related to job security, income stability, and work conditions. Our analysis reveals four working experiences: transition, turbulence, dissonance, and harmony, highlighting harmony's central role in sustainable careers. This study expands the understanding of sustainable careers by incorporating cultural elements, addressing unique challenges Chinese gig workers face, and informing interventions and policies.

Sustainable Careers

Sustainable careers involve dynamic experiences shaped by individual agency, external factors, and the fit between the individual and their career over time (Heslin et al., 2019; Valcour, 2015; Van der Heijden & De Vos, 2015). Achieving a sustainable career requires balancing short-term and long-term needs, considering employability, and integrating sustainability into education and career development (Newman, 2011). Key indicators include health, happiness, and productivity, impacting well-being and career success (De Vos et al., 2020). Prioritising one indicator at the expense of others, such as productivity over health, undermines career sustainability (Aksoy & Arli, 2019). These interrelated indicators significantly impact sustainability (Magnano et al., 2019).

Empirical evidence on sustainable careers is limited, and research on balancing these indicators is scarce. Critics argue that sustainable career theory is grounded in neoliberal individualism, ignoring structural inequalities and ecological sustainability (Bal et al., 2021). The theory's individualistic focus can undermine the preservation of diverse resources and values (Tomlinson et al., 2017). Sustainable careers should be revised to include an alternative 'anchoring point' to retain their value (Bal et al., 2021).

Different contexts shape sustainability, encompassing environmental, social, economic, and cultural dimensions (Baruch, 2015). Understanding sustainable careers requires considering cultural diversity and contextual differences. Indigenous cultures view sustainability as harmony between humans and nature, preserving traditions and knowledge (Scheyvens et al., 2017). Western societies see sustainability as protecting the environment for future generations (De Vos & van der Heijden,

3

2017). East Asian cultures link sustainability to collective harmony and reverence for nature's interconnectedness (Kim & Markus, 1999).

Lastly, sustainable career theory may not reflect modern career realities, where individuals navigate multiple careers or transitions, deviating from traditional long-term stability (Rubery et al., 2018). Critics suggest that the theory is more applicable to linear, stable career paths (Sullivan & Baruch, 2009), and it may not fully capture the dynamics of non-traditional or gig economy careers. A holistic, context-sensitive approach is needed, considering the complex interplay of individual, familial, organisational, societal, and institutional factors shaping career sustainability.

Person-environment fit theory

The P-E fit theory is widely employed in careers research to explore the alignment between individuals and their work environments (Guan et al., 2021; Su et al., 2015). P-E Fit Theory has significantly contributed to understanding the factors influencing job satisfaction and performance. Studies consistently demonstrate that a strong alignment between an individual's skills, abilities, and interests with job requirements positively affects job satisfaction and performance (Oh et al., 2014; Raja et al., 2020). Similarly, matching an individual's values, goals, and personality with the organisation's culture and values fosters job satisfaction and a sense of belonging (Van Vianen, 2018).

However, critiques of the P-E fit theory argue that it may oversimplify individuals' complex career experiences (Akkermans & Kubasch, 2017). The theory's static nature may not account for the dynamic trajectory of career development, where fit with the work environment evolves due to changing personal circumstances or job demands. Furthermore, insufficient empirical evidence supports the theory's relevance to marginalised and underrepresented groups, such as gig workers. These groups may encounter systemic barriers preventing them from finding work environments that align with their personality, values, and skills (Kaine & Josserand, 2019).

In the context of Chinese gig workers, the P-E fit theory becomes a valuable framework for understanding their sustainable careers. Assessing the fit between gig workers' skills, values, and needs with the gig work environment can shed light on their job satisfaction and overall career well-being. However, it is crucial to analyse the theory's applicability and limitations in this unique work

4

context, where gig workers face distinct challenges regarding job security, pay, and social protection. A comprehensive understanding of the P-E fit theory's implications for sustainable careers in the Chinese gig sector will contribute to more effective interventions and policies to support gig workers in pursuing fulfilling and sustainable work experiences.

Careers of gig workers

The gig economy's emergence has transformed the work landscape, particularly in China, and brought increased attention to understanding gig workers' careers (see, for example, Chin et al., 2022; Hong et al., 2022). The literature on gig workers employs various terms interchangeably, such as contingent workers (Wilkin, 2013), on-call workers (Xu et al., 2023), platform workers (Karanović et al., 2021), and freelancers (Felfe et al., 2008), leading to conceptual complexity and inconsistency. For clarity, we take Spreitzer et al. (2017)'s definition of gig workers as individuals connected directly with clients on short-term work via a digital platform. Despite the growing recognition of the importance of studying gig workers' careers, research in this area remains limited.

Existing studies have focused on two primary aspects. Firstly, they explore the unique career development challenges faced by gig workers due to the absence of traditional organisational career paths (Caza et al., 2022). Gig workers must manage their careers and seek opportunities for skill development and advancement independently. Secondly, researchers investigate the factors influencing the success of gig workers' careers (Kost et al., 2020). Notably, skills, experience, network, and reputation are critical determinants of success (Granger et al., 2022). Successful gig workers leverage their expertise and experience to build strong client networks and establish positive industry reputations. However, gig workers also confront challenges in achieving career sustainability, such as irregular work availability, competition from fellow gig workers, and the absence of essential benefits and protections, like healthcare and retirement savings (Ashford et al., 2018).

Crucially, gig workers' career sustainability is inherently linked to the broader social and economic context in which they operate. Factors such as work opportunities, access to training and education, and government policies and regulations significantly shape gig workers' career trajectories (Kost et al., 2020). Recent research emphasises the role of digital platforms such as Uber

5

and DoorDash in shaping gig workers' careers (Muntaner, 2018). These platforms facilitate convenient client connections and work opportunities but introduce new challenges, such as heightened competition, platform fees, and reduced control over work processes and outcomes (Peticca-Harris et al., 2020).

Theoretical advancement in the understanding of sustainable careers necessitates empirical substantiation and consideration of contextual configurations within career research. A sustainable career perspective offers a valuable framework to synthesise and analyse the gig work literature, encompassing the dimensions of person, context, and time. By adopting this perspective, researchers can gain deeper insights into the dynamics of gig workers' careers and their long-term viability. This study, therefore, seeks to explore and answer the following research question: we explore the following research question: ***How do gig workers in China experience and perceive their work in terms of sustainable careers?***

METHOD

Research Context

Our study focuses on China's gig economy, the largest globally (People's Daily Online, 2022). It has flourished due to technological advancements, evolving consumer preferences, and labo u r market changes. The gig economy includes ride-hailing, food delivery, freelance design, writing, and programming. Despite offering flexibility, gig work in China faces challenges like job insecurity, low pay, long hours, and limited benefits (He et al., 2021). Mobile payment technology, such as Meituan Dianping, accelerates this workforce, offering multiple income streams through a single platform. We researched three major sectors: ride-hailing, online retail, and food delivery, selecting top platforms: Didi Chuxing and Meituan Dianping for ride-hailing; Meituan Dianping and Ele.me for food delivery; and Taobao and JD.com for online retail.

Access and Sample

We used purposeful sampling to recruit gig workers from the six platforms via social media groups like WeChat and Weibo. We posted advertisements detailing the study's purpose and participation

6

criteria, yielding 71 potential participants. After screening, we selected 42 participants, ensuring diversity in experiences, gender, age, income levels, and educational backgrounds.

Semi-Structured Interviews

An inductive qualitative approach was used to understand gig workers' lived experiences and challenges (Symon et al., 2018). We conducted online semi-structured interviews, benefiting from easy access, cost-efficiency, and increased privacy (Salmons, 2009). Flexible interview protocols allowed the exploration of sustainable careers and new themes.

Data Preparation and Analysis

Interviews were recorded, transcribed in Mandarin, and translated into English. We used thematic analysis (Braun & Clarke, 2012), reviewing transcriptions and audio recordings to familiarise ourselves with the data. Systematic coding captured crucial concepts using deductive and inductive approaches (Linneberg & Korsgaard, 2019). Initial codes were analysed to develop broader themes, ensuring an accurate representation of gig workers experiences. Themes like job security, benefits, and professional identity were synthesised to understand sustainable careers in China's gig economy comprehensively.

FINDINGS

Our analysis of Chinese gig workers' sustainable careers revealed that the concept of harmony is central. Four dimensions emerged: turbulence, transition, dissonance, and harmony.

Turbulence

Participants described the gig work's initial appeal with flexibility and potential profits. However, they encountered hidden pressures such as fluctuating demand, income insecurity, and lack of work-life balance. For instance, Zhao Min found the reality tough: 'I had to do everything... still struggled to get everything done.'

The deceptive allure of gig work led to stress and burnout. Participants mentioned unpredictability and uncertainty: 'It is a constant state of uncertainty that makes it hard to feel secure in my gig career' (Zhang Li).

Transition

7

Many participants viewed gig work as temporary, seeking stable careers with reliable income and social benefits. Yang Jun said, 'As a self-employed individual, I cannot access social benefits. Therefore, I must seek a career that can offer me a stable income.'

Participants also aimed for career growth and development, using gig work to support short-term needs while pursuing long-term goals: 'My true passion lies in marketing... gig work doesn't provide the same career growth opportunities' (Zhang Li).

Dissonance

Participants expressed a lack of professional identity and autonomy, leading to job dissatisfaction. Wang Dan noted, 'I feel like I'm just a faceless worker in this gig economy. There's no sense of professional identity or growth.'

Limited control over work and stigmatisation also contributed to dissonance. Yang Yang stated, 'Some customers are nice, but others treat me like trash. To them, I am just there to serve their needs.'

Harmony

Some participants thrived by aligning their expectations with gig work's dynamic nature. Zhang Wei shared, 'I get to work on my own terms... Now, I feel so much more relaxed.'

Cultural fit and long-term partnerships with platforms also enhanced career sustainability. Liu Tao said, 'Taobao provides a place for people to achieve their business dreams.'

Participants emphasised the positive impact on their offspring, finding purpose and energy in their work: 'My driving force is my son; he is why I pour my heart and soul into everything I do' (Yang Li).

These themes of thriving amid challenges, cultural fit, long-term partnership, and legacy contribute to the concept of harmony in sustainable careers for Chinese gig workers. Recognising these aspects leads to greater satisfaction and long-term fulfillment.

DISCUSSION

Critics argue that sustainable career literature overemphasises individual actions, neglecting systemic factors impacting career sustainability (Bal et al., 2021). It fails to account for diverse cultural

8

3. Sustainability and Social Issues

backgrounds, genders, abilities, and socioeconomic statuses (Retkowsky et al., 2023). To address these complexities, intersectionality must be considered (Akkermans & Kubasch, 2017). Additionally, sustainable career theory often suits traditional career paths but might not fully address non-traditional paths (Rubery et al., 2018).

Using P-E Fit theory, our study explores sustainable careers of Chinese gig workers in ride-hailing, online retail, and food delivery. The findings provide critical insights, highlighting P-E fit's significance in shaping perceptions and experiences. The Chinese concept of harmony emerged as central, indicating that achieving harmony between the individual gig worker and the gig work environment is crucial for perceiving sustainable careers.

Gig Worker Perceptions Quadrants

Our findings are represented in a chart (Figure 1) with Environment (X-axis) and Person (Y-axis). This visual representation helps us understand how various dimensions relate to the perceived sustainability of careers in the Chinese gig sector. The X-axis ranges from a hostile to a favourable environment. The Y-axis captures the spectrum from struggling to flourishing regarding personal experiences and development.

Turbulence: Lower-right quadrant—favourable environment but a struggling person. This scenario depicts a conducive gig work setting with stable platforms and opportunities. However, individual gig workers grapple with personal challenges that impede their ability to thrive. Turbulence exemplifies the initial hurdles some gig workers face to establish their career footing.

Transition: Upper-left quadrant—hostile environment but flourishing individual. Within this realm, gig workers embark on a transformation, guided by the realisation that their growth demands a new career context. Transition epitomises a phase where gig workers reassess their career trajectories, inspired by personal growth or new aspirations.

Dissonance: Lower-left quadrant—struggling individual in a hostile environment. This quadrant captures the experience of incongruity between the gig worker and the gig work environment. Dissonance signifies a discordant relationship where the gig sector's demands and characteristics do not align with the worker's aspirations, values, or capabilities.

9

3. Sustainability and Social Issues

Harmony: Upper-right quadrant—balance between person and environment. This alignment reflects a harmonious coexistence where neither side dominates. Harmony is a perceptual dimension, evident in those who thrive amidst challenges by seeing them as opportunities. These individuals possess a flourishing mindset, leveraging the gig sector's dynamism.

A crucial aspect of harmony is recognising that the sector's challenges can be reframed as platforms for personal growth. Individuals embracing this perspective often have a long-term vision for themselves and their legacy, extending to their offspring. This resonates with a cultural desire to create enduring opportunities for the next generation, embedding values and work ethic within their family lineage (Yao et al., 2020). Moreover, these individuals often establish a deep connection with their platforms, discovering a culture that aligns with their principles and encourages a sense of partnership.

Dynamic Nature

Themes and experiences in the gig economy are not confined to specific quadrants; they can shift and interact over time. Participants' perceptions of sustainable careers evolve, and factors influencing their experiences may change as their gig work journey progresses. For instance, a gig worker initially in the turbulence quadrant might move towards harmony as they develop skills and a positive outlook. This shift could occur as they identify strategies to navigate challenges and cultivate a harmonious relationship with their work environment.

The dynamic interplay between these quadrants involves intricate shifts based on personal growth, external circumstances, and evolving career goals. The dotted lines in the chart symbolise the potential for individuals to navigate their journey across these quadrants multiple times during their careers. This dynamic nature reflects the complexity and adaptability within the gig sector, highlighting the need for comprehensive and context-specific approaches to understanding sustainable careers among gig workers in China.

Perception of Gig Work as a Sustainable Career

Our study outlines key characteristics of gig work in China through participants' narratives, shedding light on the opportunities and challenges gig workers face. The flexibility of gig work is highly valued by those with caregiving responsibilities or a desire for work-life balance. However, it also comes

10

with demanding workloads and extended hours for those compensated per-task. Compensation concerns are prevalent, with many gig workers earning low wages, especially in urban areas with high living costs. Our analysis reveals the complex and connected nature of gig workers' work environments, and their perceived career sustainability is contingent upon the fit between personal and contextual factors.

Moreover, our analysis supports the notion that a sustainable career may exist within the gig sector. The concept of 'harmony' emerges as a fundamental aspect of gig workers' perceived sustainable careers, signifying a seamless integration of their personal and professional lives, leading to fulfillment and balance in their gig work pursuits. This concept of harmony is multifaceted and deeply rooted in Chinese culture, diverging from the Western idea of harmony centred around social justice and equality (Leung et al., 2011). In China, harmony is contextualised, influencing decision-making across all facets of social activities (Yao et al., 2020). Harmony is defined as the dynamic motion of existence, where all components necessitate mutual support to sustain the perpetual motion of the universe (Wang & Juslin, 2009). Harmony, in the context of gig workers' sustainable careers, involves interconnectedness and balance within the gig work ecosystem (Baruch, 2015).

Crucially, our findings highlight the temporal dimension in sustainable careers, emphasising the cyclical, self-regulatory process of how individuals' career needs and experiences evolve or remain stable over time (De Vos et al., 2020). Gig workers who perceive their careers as sustainable adopt a long-term orientation in career planning, considering future benefits and legacy for their offspring. This dynamic approach empowers individuals to adapt and seize opportunities for ongoing learning and growth in response to changing circumstances. Therefore, sustainable careers go beyond merely maintaining a job; they involve nurturing human and career development by continually redefining person-career fit as circumstances change. The time dimension plays a pivotal role in sustainable careers, emphasising the need for long-term planning and adaptability in career development (Van der Heijden et al., 2020). Recognising the time and career decisions in broader family and social contexts is critical to understanding sustainable careers in precarious contexts. Recognising the ever-changing nature of work and life circumstances, individuals can proactively

11

shape their career trajectories, making informed decisions that align with their evolving aspirations and values.

In this light, the theme of harmony illuminates how, amidst the impermanence and flux of gig work, gig workers strive to find perpetual alignment between their expectations and the ever-shifting gig environment. Harmony becomes an ongoing process rather than an ultimate destination (Wang, 2013). We challenge the notion of sustainable careers as fixed endpoints, proposing they are better understood as fluid journeys (De Vos et al., 2020). These journeys involve traversing the identified quadrants of transition, turbulence, dissonance, and harmony—a continuous exploration yielding insights, growth, and adaptability. Emphasising the harmony quadrant's role, our research suggests that sustained periods of alignment amplify the likelihood of a sustainable career. However, this does not imply an unchanging future; instead, it acknowledges that individual circumstances and environmental factors are prone to change, potentially leading to shifts between quadrants. We assert that the notion of a 'truly' permanent, sustainable career is elusive in the contemporary labour market. Instead, the perpetual motion—akin to interconnected voices creating harmony—fuels the dynamism and efficiency of the broader labour landscape (Baruch, 2015). The continual flux of gig workers' career trajectories fuels the vitality and evolution of the gig economy, underscoring its resilience and adaptability.

CONCLUSIONS

Using the P-E Fit theory, our study focused on sustainable careers in the Chinese gig economy, revealing that gig workers' perceptions of career sustainability are significantly influenced by harmony, transition, dissonance, and turbulence. By exploring these themes, we gained insights into the challenges and aspirations of gig workers, highlighting the importance of the fit between individuals and their work environment. This understanding has practical implications for gig workers, organisations, and policymakers. Gig workers can benefit from recognising their position within the identified quadrants and adjusting their strategies to achieve a sustainable career. Organisations can use these insights to design tailored support mechanisms to improve gig workers' well-being, while policymakers should promote fair wages, work-life balance, and access to training.

12

3. Sustainability and Social Issues

Our study has several limitations. The findings are based on a specific sample of Chinese gig workers, limiting generalizability to other regions and sectors. Additionally, reliance on self-reported data may introduce bias, and the study's cross-sectional nature provides only a snapshot of gig workers' experiences. The impact of the COVID-19 pandemic, which occurred after data collection, is not reflected in our findings. Furthermore, our study does not fully capture the diverse experiences across different cultural backgrounds, genders, abilities, and socioeconomic statuses. Despite these limitations, the research significantly contributes to understanding sustainable careers in the gig economy, emphasising the theme of harmony and encouraging further exploration of this dynamic and evolving field.

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17

3. Sustainability and Social Issues

Table 1

Participants' characteristics.

E-retailer participants								
Pseudonyms	Gender	Age	Platform Affiliation	Marital Status	Education Level	Gig Sector Experience	Gig Work Motivations	Future Gig Sector Involvement Intention (Next 3 Years)
Wang Fang	Female	31	Taobao	Divorced	Bachelor's Degree	4 years	Autonomy, Creativity	Likely
Li Yang	Male	40	JD.com	Married	High School Diploma	7 years	Career Growth, Income	Likely
Wang Wei	Female	28	Taobao	Married	Bachelor's Degree	3 years	Autonomy, Creativity	Likely
Yang Jun	Female	23	JD.com	Married	High School Diploma	4 years	Career Growth, Income	Unlikely
Zhao Jun	Female	26	Taobao	Single	Bachelor's Degree	2 years	Autonomy, Creativity	Likely
Wang Dan	Female	31	JD.com	Divorced	High School Diploma	5 years	Career Growth, Income	Do not know
Zhao Min	Female	25	Taobao	Single	Bachelor's Degree	4 years	Autonomy, Creativity	Do not know
Liu Tao	Male	33	JD.com	Married	Bachelor's Degree	6 years	Career Growth, Income	Likely
Zhao Qian	Female	24	Taobao	Married	Bachelor's Degree	3 years	Autonomy, Creativity	Do not know
Sun Jie	Female	25	JD.com	Single	High School Diploma	5 years	Career Growth, Income	Likely
Wang Gang	Male	30	Taobao	Married	Bachelor's Degree	4 years	Autonomy, Creativity	Likely

18

Wang Yi	Male	28	Taobao	Married	Bachelor's Degree	6 years	Autonomy, Creativity	Do not know
Qi Yang	Female	31	JD.com	Divorced	High School Diploma	5 years	Career Growth, Income	Likely
Zhao Min	Female	28	Taobao	Married	Bachelor's Degree	4 years	Autonomy, Creativity	Do not know
Liu Tao	Male	31	JD.com	Married	Bachelor's Degree	6 years	Career Growth, Income	Unlikely
Qian Xi	Female	23	Taobao	Married	Bachelor's Degree	3 years	Autonomy, Creativity	Likely
Sun Jie	Female	28	JD.com	Divorced	Master's Degree	5 years	Career Growth, Income	Unlikely
Liu Xia	Female	27	Taobao	Married	Bachelor's Degree	4 years	Autonomy, Creativity	Unlikely
Zhang Lin	Female	30	JD.com	Married	Master's Degree	6 years	Career Growth, Income	Likely

Ride-hailing participants

Pseudonyms	Gender	Age	Platform Affiliation	Marital Status	Education Level	Gig Sector Experience	Gig Work Motivations	Future Gig Sector Involvement Intention (Next 3 Years)
Zhang Wei	Male	38	Didi Chuxing	Single	Bachelor's Degree	3 years	Flexibility, Income	Likely
Zhang Li	Female	26	Didi Chuxing	Single	Bachelor's Degree	2 years	Flexibility, Income	Unlikely
Chen Ya	Female	32	Meituan Dianping	Married	High School Diploma	4 years	Flexibility, Income	Do not know
Zhang Jie	Male	34	Meituan Dianping	Married	High School Diploma	5 years	Flexibility, Income	Likely
Wang Xia	Male	28	Didi Chuxing	Single	High School Diploma	3 years	Flexibility, Income	Likely

19

3. Sustainability and Social Issues

Hu Li	Male	31	Didi Chuxing	Married	High School Diploma	4 years	Flexibility, Income	Likely
Yao Wei	Male	27	Didi Chuxing	Single	Bachelor's Degree	3 years	Flexibility, Income	Do not know
Qi Min	Male	42	Didi Chuxing	Married	Bachelor's Degree	2 years	Flexibility, Income	Likely
Chen Nan	Male	29	Didi Chuxing	Married	High School Diploma	4 years	Flexibility, Income	Do not know
Zhang Chao	Male	40	Meituan Dianping	Married	High School Diploma	7 years	Work-Life Balance, Income	Unlikely
Yang Yang	Male	31	Meituan Dianping	Married	Bachelor's Degree	4 years	Work-Life Balance, Income	Unlikely
Li Xian	Male	50	Didi Chuxing	Married	High School Diploma	8 years	Flexibility	Do not know
Chen Yuan	Male	32	Didi Chuxing	Married	High School Diploma	4 years	Social networks Income	Unlikely
Yang Li	Male	44	Meituan Dianping	Married	High School Diploma	5 years	Flexibility, income	Likely
Food delivery participants								
Pseudonyms	Gender	Age	Platform Affiliation	Marital Status	Education Level	Gig Sector Experience	Gig Work Motivations	Future Gig Sector Involvement Intention (Next 3 Years)
Chen Qi	Female	23	Ele.me	Single	High School Diploma	3 years	Skill Development, Income	Do not know
Li Ye	Male	25	Ele.me	Single	High School Diploma	1 year	Skill Development, Income	Likely
Chen Yu	Male	27	Ele.me	Married	Bachelor's Degree	2 years	Skill Development, Income	Likely

20

3. Sustainability and Social Issues

Name	Gender	Age	Platform	Marital Status	Education	Experience	Concerns	Likelihood
Xie Na	Female	24	Ele.me	Single	High School Diploma	2 years	Skill Development, Income	Do not know
Li Nan	Male	31	Ele.me	Married	High School Diploma	1 year	Skill Development, Income	Likely
Li Ming	Male	22	Ele.me	Single	High School Diploma	1 year	Skill Development, Income	Do not know
Wang Ping	Male	34	Meituan Dianping	Single	Bachelor's Degree	3 years	Work-Life Balance, Income	Unlikely
Wang Li	Male	34	Meituan Dianping	Divorced	High School Diploma	5 years	Work-Life Balance, Income	Unlikely
Zhang Qiang	Male	28	Meituan Dianping	Single	High School Diploma	4 years	Work-Life Balance, Income	Unlikely

21

Table 2

Overview of the emerged themes

Perceived gig work experience	Meaning	Themes	P-E Fit
Turbulence	Turbulence refers to the dynamism of the gig sector characterised by promising opportunities, potential for good profit, career autonomy and an engaging working environment. Yet, gig workers are struggled to capitalise these benefits due to poor adaptability, lack of skill development or career motivation.	Deceptive allure Hidden pressures Fragmented fulfilment Fleeting Prospects	**Person-Sector mismatch**: Turbulence illustrates how the apparent appeal of the sector can collide with the realities of individual strengths and preferences. This mismatch generates an environment where gig workers experience internal turbulence as they endeavour to reconcile their personal attributes with the fast-paced and fluctuating demands of the gig economy.
Transition	Gig work is perceived as an interim arrangement by participants as they actively seek more stable and secure career options for the long term to meet their advancing skills, adaptability and career aspirations.	Job security and benefits Pursuit of personal passions Skill development and career advancement	**Person-Career mismatch**: Gig workers who are looking to transition may be seeking opportunities that offer clearer career paths, growth prospects, and professional development. If they see limited potential for advancement or skill development within the gig work context, they may be more inclined to transition to other career options that provide better long-term prospects.
Dissonance	This theme implies a lack of fit or compatibility between gig workers and their work environment. It suggests that gig workers may not fully resonate with the tasks they perform or the platforms they work on, leading to a sense of	Lack of professional identity Autonomy and control Stigmatisation	**Person-Environment mismatch**: It reflects the degree of congruence between gig workers and the broader work and social contexts. When there is dissonance, gig workers may experience a lack of fit between their skills, values, or expectations and the tasks, culture, or values promoted by the platform.

	dissatisfaction or disconnect.		They may also feel undervalued and lacking career identity. This mismatch can lead to job dissatisfaction or a feeling of being misaligned.
Harmony	This theme represents a perceived state in which gig workers find a suitable balance and alignment between their skills, interests, and the demands of the gig economy. It indicates that gig workers are content with their work arrangements, experience job satisfaction, and achieve a sense of fulfilment in their careers.	Thriving amid challenges Cultural fit Long-term partnership Legacy	**Person-Environment Fit:** Gig workers demonstrate a strong sense of alignment between their skills, family situations, career expectations, and future planning, and the demands and opportunities presented by gig work.

Person
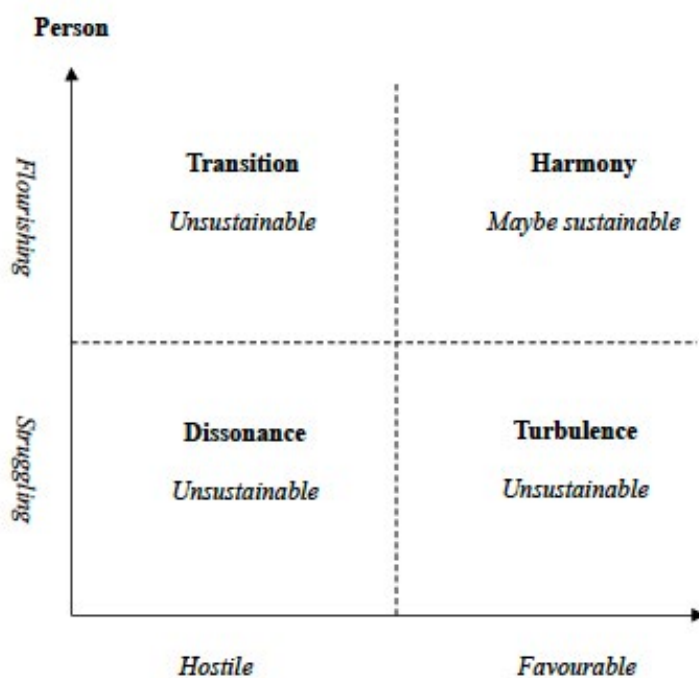
Figure 1. The Gig Worker Perceptions Quadrants

23

Stream 6: Leadership, Governance and Strategy

Leading with a Managed Heart: Understanding How Leader Emotional Labor Shapes Followers' Work Engagement?

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1

Stream 6: Leadership, Governance and Strategy

Leading with a Managed Heart: Understanding How Leader Emotional Labor Shapes Followers' Work Engagement?

ABSTRACT: *Much theory and evidence confirm that leader emotional displays can influence followers' emotional and cognitive experiences and shape their work outcomes. However, less is known about the influence on followers when leaders use emotional labor during work interactions. This study explores the relationship between leader surface/deep acting and followers' work engagement directly and through mediating pathways of leader liking (i.e., affective path) and attribution of sincere intent (i.e., cognitive path). These relationships were tested using a Pakistan sample of 102 leaders and 303 followers employing a multisource time-lagged design. We find that leader surface acting negatively influences followers' work engagement directly and indirectly through leader liking. Moreover, leader deep acting indirectly influences followers' work engagement. We discuss the implications.*

Keywords: surface and deep acting; leader-follower influences; affective reactions; cognitive interpretations; work engagement; multilevel design.

INTRODUCTION

Emotional influences facilitate many leadership processes and outcomes (Van Knippenberg & Van Kleef, 2016). It is well-established that the leader positive and negative emotional displays during work interactions can shape followers' work outcomes such as task performance (e.g., Wang & Seibert, 2015), job satisfaction (e.g., Fisk & Friesen, 2012), engagement and burnout (e.g., Ten Brummelhuis, Haar & Roche, 2014), and citizenship behaviors (e.g., Koning & Van Kleef, 2015). Research in this domain has tended to presume that emotions displayed by leaders, in general, are authentically felt and spontaneous (Wang & Seibert, 2015). Much less is known about the influences on followers when leaders use emotional labor to express emotions. Emotional labor refers to effortful strategies that involve the management of feelings to create an observable facial and bodily display (Hochschild, 1983; Grandey, England & Boemerman, 2020). Surface acting is one strategy where individuals change outward emotional expression without trying to feel the displayed emotions internally. For example, smiling and showing a calm exterior while the leader is really experiencing inner turmoil. In deep acting, individuals try to match internal feelings with external emotional expression by changing the meaning of a situation (Huang, Chiaburu, Zhang, Li & Grandey, 2015). For example, a team leader shows confidence in their team members after a project's failure and helps them learn from this event.

2

Stream 6: Leadership, Governance and Strategy

Leaders often need to rely on emotional regulation strategies because leadership involves conveying meaning through expressing emotions they may not genuinely feel (Humphrey, Pollack & Hawver, 2008; Fisk & Friesen, 2012). For example, Humphrey (2012) documented that managers engage in surface and deep acting when interacting with employees. Differences have been found around the influence of leader emotional labor on followers. Some researchers (e.g., Wang & Seibert, 2015; Fisk & Friesen, 2012) found adverse effects on both leaders and followers, while others found positive effects (Humphrey, Ashforth & Diefendorff, 2015; Humphrey et al., 2008). Perhaps there are underlying processes that determine positive versus negative outcomes, but these factors have remained less examined. Therefore, it espouses an exciting question: *When leader emotional labor create a positive or negative influence on followers, and what is the role of the underlying mechanisms in such influences?* To answer this question, we tied our inference to previous work (e.g., Wu, Tung & Lo, 2020; Wang & Seibert, 2015) and tested affective and cognitive processes suggested by Emotions as Social Information (EASI) theory and Attribution theory to explain leader-follower influences.

Specifically, we expect that leader emotional labor will shape followers' work engagement directly and through indirect pathways of affective reactions and cognitive interpretations. That is, leader surface acting will predict followers' liking for the leader (i.e., affective reactions), ultimately shaping their engagement in work. Moreover, using deep acting by the leader will lead followers to attribute sincere intent to the leader display (i.e., cognitive interpretations), in turn making them more engaged. These ideas were tested using a Pakistan sample of 102 leaders and 303 followers. By doing so, we intend to extend empirical evidence on the crossover influences of leader emotional labor on followers and advance understanding of the mediating processes underpinning such relationships.

This paper contributes in several ways. First, by testing the two parallel mediating mechanisms, that are followers' liking and followers' attribution of sincerity, this research moves beyond the previous focus and sheds light on the underlying processes of how leader emotional labor is likely to shape followers' work outcomes. Second, we added to the work engagement literature by including new and theoretically relevant intrapersonal and interpersonal predictors of engagement. Third, we addressed the dearth of leadership and workplace emotions research in non-western countries by sampling from

3

Stream 6: Leadership, Governance and Strategy

Pakistan, providing empirical insights from an under-explored cultural context. Our study model is shown in Figure 1.

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Insert Figure 1 about here.
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THEORY AND HYPOTHESES DEVELOPMENT

Leader emotional labor and followers' work engagement

EASI theory posits that leader emotional expressions can shape followers' work outcomes by stimulating affective reactions and cognitive interpretations in their minds (Van Kleef, 2009). Leadership roles involve complex emotional regulations in which leaders must experience and express various emotions, requiring them to vary the valence and intensity of such expressions (Humphery et al., 2008). Gross (1998) defined emotional labor as a process by which "individuals influence which emotions they have, when they have them, and how they experience and express [those] emotions" (p. 275). Emotional labor can be practiced using different strategies to regulate outward expressions, providing verbal and nonverbal cues to others in the workplace (Humphery, 2023), with evidence suggesting that others (here, followers) can differentiate between different guises of emotional labor (Mo & Shi, 2017; Yam, Fehr, Keng-Highberger, Klotz & Reynolds, 2016). Since leaders and followers frequently interact and work interdependently to carry out work tasks, these emotional cues are crucial in establishing leader-follower crossover effects.

Surface acting and deep acting are primary strategies that individuals use to manage their feelings and create an observable facial and bodily display. Surface acting involves changing outward emotional expression without trying to feel the displayed emotions internally. The crux of surface acting is to disguise what the actor feels and pretend to feel what they do not (Hochschild, 1983). This is achieved by changing physiological signs such as facial and vocal expressions and body language. Because of discrepancies between internal feelings and external expression, surface acting may appear deceptive or insincere to observers, leading them to make perceptions of apathy (Rafaeli & Sutton, 1987). Alternatively, deep acting involves matching internal feelings with external emotional expression (Huang et al., 2015) and is primarily achieved via cognitive change and attention deployment (Fisk &

4

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Friesen, 2012; Grandey et al., 2020). Due to the congruence between internal feelings and external expression, deep acting may appear genuine and sincere to observers, and it is usually referred to as acting in good faith (Lartey, Amponsah-Tawiah, & Osafo, 2019). Although deep acting is imperfect and less authentic than genuine emotions, it is still an effective way of regulating emotions to match organizational display rules (Fisk & Friesen, 2012).

There is ample empirical evidence that using emotional labor has both positive and negative implications for the actor. For example, Humphery (2023), in a recent meta-analysis based on 175 primary studies, documented that surface acting has negative consequences toward job satisfaction and job burnout, while deep acting has positive effects. Although the evidence of leader-follower crossover effects is evolving (e.g., Wu et al., 2020; Moin, 2018; Wang and Seibert, 2015), but no past research has tested the relationship between leader surface/deep acting and followers' work engagement. Moreover, there is a dearth of empirical evidence from non-western countries. We argue that when leader use surface acting, the apparent emotional discrepancy can push followers to perceive this situation as unpleasant and feel the cognitive burden, leaving them with less mental energy to engage in work tasks. Conversely, deep acting reflects transparent efforts and emotional congruence, which can lead followers to engage more (because there will be less need to invest cognitive resources to identify emotional discrepancies). Thus, we propose:

Hypothesis 1: Leader surface acting will be negatively related to followers' work engagement.

Hypothesis 2: Leader deep acting will be positively related to followers' work engagement.

Mediating role of followers' liking for the leader

Liking is a critical aspect of the leader-follower relationship, and effective leaders take deliberate measures to enhance their liking among followers (Sy, 2010; Martin, 2015). We might expect a leader who is consistently grumpy and angry to be less liked by their subordinates. For instance, Koning and Van Kleef (2015) found that leader positive emotions can enhance their liking among followers and vice versa. However, the influence of leader emotional labor on followers' liking remains untested. Perhaps, when followers observe surface acting, they respond with a negative emotional reaction by labeling such behaviors as inauthentic, which can detriment their feelings for the leader. On the other

5

Stream 6: Leadership, Governance and Strategy

hand, extant research shows that when followers like their leaders, they exhibit positive work outcomes such as increased job satisfaction (Sy, 2010) and better-quality relationships. Thus, we posit the following:

Hypothesis 3a: Leader surface acting will be negatively related to followers' liking for the leader.
Hypothesis 3b: Followers' liking for the leader will be positively related to followers' work engagement.

Drawing on the affective reaction mechanism of EASI theory, we further argue that followers' liking for the leader acts as a mediator in the relationship between leader surface acting and followers' work engagement. Previous research has utilized the EASI theory to explain the process of how leader emotional labor may impact followers' work outcomes (e.g., Wang & Seibert, 2015); however, evidence on the precise mediating mechanisms is lacking. Perhaps the emotional discrepancy attached to leader surface acting signals a lack of genuine concern and trust, which followers then respond with adverse reactions in the form of reduced liking and negative work behaviors. Therefore, we expect (reduced) followers' liking for the leader to indirectly convey the negative impact of leader surface acting on followers' work engagement.

Hypothesis 3c: Followers' liking for the leader mediates the relationship between leader surface acting and followers' work engagement.

Mediating role of followers' attribution of sincere intent

EASI and attribution theories posit that leader emotional expressions (here, using emotional labor) can trigger an inferential process in followers' minds to make sense of the leader behavior through causal explanations. In this process, followers may attribute intentions of sincerity or manipulation to such emotional expression (Eberly & Fong, 2013; Dasborough & Ashkanasy, 2002). Deep acting is associated with higher levels of authenticity compared to surface acting. Leaders who act deeply strive to feel the emotions they need to express internally. Such leaders may appear more authentic, socially competent, and interpersonally sensitive. Followers of such leaders may attribute this emotional congruence to acting in good faith and hence consider their leader sincere to both them and the organization (Dasborough & Ashkanasy, 2004; Hunt, Gardner & Fischer, 2008). In addition, such

6

Stream 6: Leadership, Governance and Strategy

positive attributions of leader may benefit followers' work outcomes due to positivity spillover. Hence, we propose the following:

Hypothesis 4a: Leader deep acting will be positively related to followers' attribution of leader sincere intent.

Hypothesis 4b: Followers' attribution of leader sincere intent will be positively related to followers' work engagement.

We further expect that followers' attribution of leader sincere intent can mediate the relationship between leader deep acting and followers' work engagement. For instance, when followers think their leader makes conscious and transparent efforts to show empathy through congruent feelings, this may signal sincerity on leader part, and followers may reciprocate such efforts with greater work engagement. Previous research (e.g., Eberly & Fong, 2013) has used cognitive interpretations and attribution processes to explain how leaders can engender positive and negative emotions in followers, but no previous study has used this mechanism to examine the impact of leader emotional labor on followers. Thus, we posit the following:

Hypothesis 4c: Followers' attribution of leader sincere intent will mediate the relationship between leader deep acting and followers' work engagement.

METHODOLOGY

We utilized a multisource time-lagged research design to improve the causal relationships and mitigate common method bias (Podsakoff, MacKenzie, Lee & Podsakoff, 2003).

Sample and data collection

Data was collected using surveys from managers (leaders) and their direct reports (followers) working in different industries in Pakistan. Data collection was divided into two parts: (a) managers completed a survey on surface acting and deep acting, and (b) one week later, direct reports completed a survey on their managers (i.e., liking for the leader and attribution of sincerity) and themself (i.e., work engagement). Managers were recruited via professional networks, and the research purpose was explained to them. We distributed 200 surveys to managers and received 102 completed surveys (response rate of 51%). Subsequently, 500 surveys were distributed to direct reports using a matching

7

Stream 6: Leadership, Governance and Strategy

technique, and 303 completed surveys were returned (response rate of 60.6%). Overall, our sample showed most leaders were male (77.5%) and had small-sized teams (6-10 followers), with 68.6% holding a minimum of a master's degree qualification and 64.7% working more than 40 hours a week. Followers were predominantly male (63.0%), with 70.3% holding a master's degree qualification or higher, and the majority (58.4%) worked more than 40 hours a week.

Measures

In addition to demographic information, leaders and their followers were requested to report on the following variables. The reliabilities of the measures are shown in Table 1.

Leaders

 Surface acting and deep acting were measured among leaders (only) using an 11-item scale (7 items for surface and 4 items for deep acting) adopted from Diefendorff, Croyle, and Gosserand (2005) modified to measure leader emotional acting during interaction with followers, coded 1= strongly disagree, 5= strongly agree. A sample item is "I try to actually experience the emotions that I must show to my subordinates" (deep acting).

Followers (one week after the leaders' survey)

Followers' liking for the leader was measured using a four-item scale adopted from Engle & Lord (1997), coded 1= strongly disagree, 5= strongly agree. A sample item is "Working with my manager is a pleasure." Followers' attribution of leader sincere intent was measured among followers using five items by Dasborough and Ashkanasy (2004), coded 1= not at all, 5= to a large extent. A sample item is "Regarding the general behavior of your manager, to what extent do they behave as per moral conviction? Work engagement was measured using a 15-item scale by Shuck, Adelson, and Reio Jr (2017), coded 1= strongly disagree, 5= strongly agree. This composite measure includes questions on cognitive, emotional, and behavioral engagement with work. A sample item is "I really push myself to work beyond what is expected of me."

Controls

We controlled for both leaders' and followers' demographics on: Age (in bands, 1=18-25 years, 2=26-35, 3=36-45, 4=46-55, 5=56-65 years) and Tenure (in bands, 1=less than 6 months, 2=6 months-

8

Stream 6: Leadership, Governance and Strategy

1 year, 3=1-2 years, 4=2-3 years, 5=3-5 years, 6=more than 5 years). Team size (1=1-5 followers, 2=6-10 followers, 3=11-15 followers, 4=16+ followers) was also controlled as typically practiced in leader-follower studies (Chi & Ho, 2014).

Analysis

We followed Ten Brummelhuis et al. (2014) and conducted a multilevel analysis with the MLwiN program because we had multilevel data with followers nested in leaders. We used a two-level model, with the first level being followers (n= 303) and the second level being leaders (n= 102). Leader (level 2) variables were centered on the grand mean due to having no Level-1 variance (Enders & Tofighi, 2007). We followed standard practice and also centered predictor variables to the grand mean (e.g., Ten Brummelhuis et al., 2014). We ran several models to establish (1) direct crossover effects and (2) mediation effects.

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RESULTS

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Following the approach of Ten Brummelhuis et al. (2014), we determined the proportion of variance attributed to the two levels of analysis toward follower outcomes. The analysis resulted in the amount of variance attributed to the leader level (level 2) as 23.4% for follower engagement, 53.1% for leader liking, and 21.6% for leader sincerity attributions. Thus, significant amounts of variance are left to be explained by leaders, which justifies our multilevel approach (LeBreton & Senter, 2008). Descriptive statistics for the study variables are shown in Table 1. It shows variables are largely significantly correlated and in the expected directions.

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Insert Table 1 about here.

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Multilevel Models

Results of the multilevel models towards followers' engagement through followers' liking for the leader and followers' attribution of the leader sincere intent (as mediators) are presented in Tables 2-3.

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Insert Tables 2-3 about here.

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9

Stream 6: Leadership, Governance and Strategy

Table 2 shows that leader surface acting is significantly related to leader liking (β= -.16, p=.007) and that leader deep acting is significantly related to leader sincerity attribution (β= .09, p=.028). Table 3 shows that leader surface acting is significantly related to follower work engagement (β= -.07, p=.0486) while deep acting is not significant (p>.05). Table 3 also shows that towards follower work engagement, both leader liking (β= .17, p< .001) and leader sincerity attribution (β= .12, p< .001) are significantly related. Further, the addition of leader liking as a mediator fully mediates the direct significant relationship between surface acting and follower work engagement, which drops to non-significance (β= -.03, p=.170). These significant direct and mediation effects support all hypotheses except Hypotheses 2. Although leader deep acting is not related to follower work engagement, but leader deep acting is significantly related to leader sincerity attribution, which in turn is significantly associated with follower work engagement. These results may suggest a possible indirect relationship and partial support for hypothesis 4c.

DISCUSSION

The primary objective of this research study was to examine whether and how leader emotional labor (i.e., use of surface and deep acting) shapes followers' work engagement directly and through mediation pathways of followers' liking for the leader and followers' attribution of the leader sincere intent. Our findings provide empirical evidence for these relationships.

The results show that leader surface acting has a significant negative relationship with followers' work engagement, which aligns with previous research (e.g., Yam, Fehr, Keng-Highberger, Klotz & Reynolds, 2016; Fisk & Friesen, 2012). One unanticipated finding is that leader deep acting was not significantly related to followers' work engagement. It might be that deep acting is not apparent to followers and passes through complex mechanisms to influence follower outcomes indirectly.

Results also indicate that followers' liking for the leader plays a direct and mediation role in leader-follower crossover effects. Leader surface acting was negatively associated with the leader liking, aligning with the previous research on interpersonal influences of emotional labor (e.g., Yang, Huang, and Zhou, 2021). The positive effect of leader liking on followers' work engagement was consistent with extant research (e.g., Bharanitharan, Lowe, Bahmannia, Chen & Cui, 2021; Sy, 2012). Moreover, we find support for the novel indirect effect of leader surface acting on followers' work engagement via

10

Stream 6: Leadership, Governance and Strategy

followers' liking for the leader. The affective reaction mechanism of EASI theory (Van Kleef, 2009) explains this result. For example, when leader surface acting intensifies, followers may take this behavior as unpleasant and manipulative, making them feel negative and respond with reduced liking. Further, this situation could manifest in an emotional burden (e.g., processing leader emotions and related information) and a negative reciprocation in terms of reduced work input (here, work engagement).

Results also support the role of followers' attribution of leader sincere intent in leader-follower influence. Deep acting by the leader was positively associated with followers' attribution of leader sincere intent, which then was positively related to followers' work engagement. These findings align with the previous research (e.g., Schmodde & Wehner, 2023; Eberly & Fong, 2013) on the beneficial role of cognitive attributions. This phenomenon is explained by the tenet of inferential processes under EASI theory (Van Kleef, 2009) and attribution theory (Heider, 1958). These theories suggest that leader emotional display (here, via deep acting) triggers a sense-making process in followers' minds, leading them to make causal explanations of leader behavior. For example, during a crisis like Covid-19, a leader may deeply act and alter the meaning attached to a crisis situation to modify its emotional influence on followers. This particular behavior may be inferred as sincere and empathetic by the followers, possibly leading to enhanced work engagement.

Theoretical contributions

This study makes three contributions. First, we added to research focused on understanding leader-follower emotional influences (e.g., Ashkanasy & Kay, 2023; Van Kleef & Côté, 2022) by putting forward a novel model involving two parallel mediation pathways. Our study is one of the first to extend EASI theory to emotional labor research and empirically disentangle the affective reaction and cognitive interpretation mechanisms linking leader emotional labor with followers' work engagement. In doing so, we responded to calls for more research on the underlying mechanism of leadership affect-related influences (Van Knippenberg & Van Kleef, 2016).

Second, our study adds to the employee engagement literature by moving beyond the conventional focus on intrapersonal determinants of work engagement (e.g., job demand and resources; see Mazzetti et al., 2023 for a recent meta-analysis); our results show that employee work engagement can also be

11

Stream 6: Leadership, Governance and Strategy

shaped by interpersonal factors (here, leader emotional labor). This focus is important given the modern workplace trends around display rules, work teams, and task interdependence. Third, our work adds to empirical evidence from an underexplored cultural context (Lam et al., 2012).

Practical implications

Our study informs practice in several ways. First, the findings highlight the need for managers to be mindful of the adverse effects of using surface acting in workplace interactions. Followers are likely to identify emotional discrepancies in leader display and could respond with adverse affective reactions, attribution of manipulation, and disengagement. Hence, managers need to avoid the frequent use of surface acting and practice deep acting when they are required to regulate emotions to match the organizational display rule.

Second, employee engagement is a cornerstone of individual and organizational performance; we recommend that organizations consider interpersonal determinants of engagement, especially how leaders regulate and express emotions. In particular, training programs can be designed to enhance leaders' emotional intelligence (Geßler et al., 2021) – e.g., enabling them to use deep acting to lessen the emotional burden and develop emotional empathy (McKenzie, Olson, Patulny, Bellocchi & Mills, 2019). Such leaders are more likely to be liked and perceived as sincere by their followers because of emotional congruence and transparent efforts. Third, leaders in high power distance cultures may be seen as role models, and their practice of surface acting may creep into followers, making them emotionally burdened and disengaged (future research can examine this relationship).

LIMITATIONS AND FUTURE RESEARCH

As with all research, our study has some limitations which future researchers can address. A primary limitation of our work is the use of self-reported data, which can weaken the causality between study variables. Nevertheless, we applied a one-week time lag between the measurement of predictor and outcome variables and collected multisource data (i.e., leader and follower surveys) to enhance confidence in our findings. This approach is predominant in the literature (e.g., Ten Brummelhuis et al., 2014). Still, future research can adopt a longitudinal design to replicate our multilevel model (e.g., measuring and analyzing daily or weekly fluctuations in emotional labor and crossover effects). Moreover, although we sampled from Pakistan, we did not measure the specific cultural characteristics

12

Stream 6: Leadership, Governance and Strategy

such as power distance. Future research on leader-follower emotional influences in non-western countries may examine the role of organizational hierarchies and related power distance to get better insights (Li, Sun, Taris, Xing & Peeters, 2021).

CONCLUSION

Emotional display is an essential tool that leaders utilize to influence and motivate followers. Yet, the understanding is limited about the impact of leader emotional labor on followers. Drawing on EASI and attribution theories, we theorized and found that leader surface acting triggers affective reactions in followers, resulting in reduced leader liking and less work input. Conversely, leader deep acting is likely to start inferential processes in followers' minds, resulting in positive attributions for the leader and enhanced work engagement. Our study suggests that the influence of leader emotional labor on followers' work outcomes is complex and passes through multiple (parallel) indirect pathways.

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13

Stream 6: Leadership, Governance and Strategy

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17

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18

Figure 1. Study Model
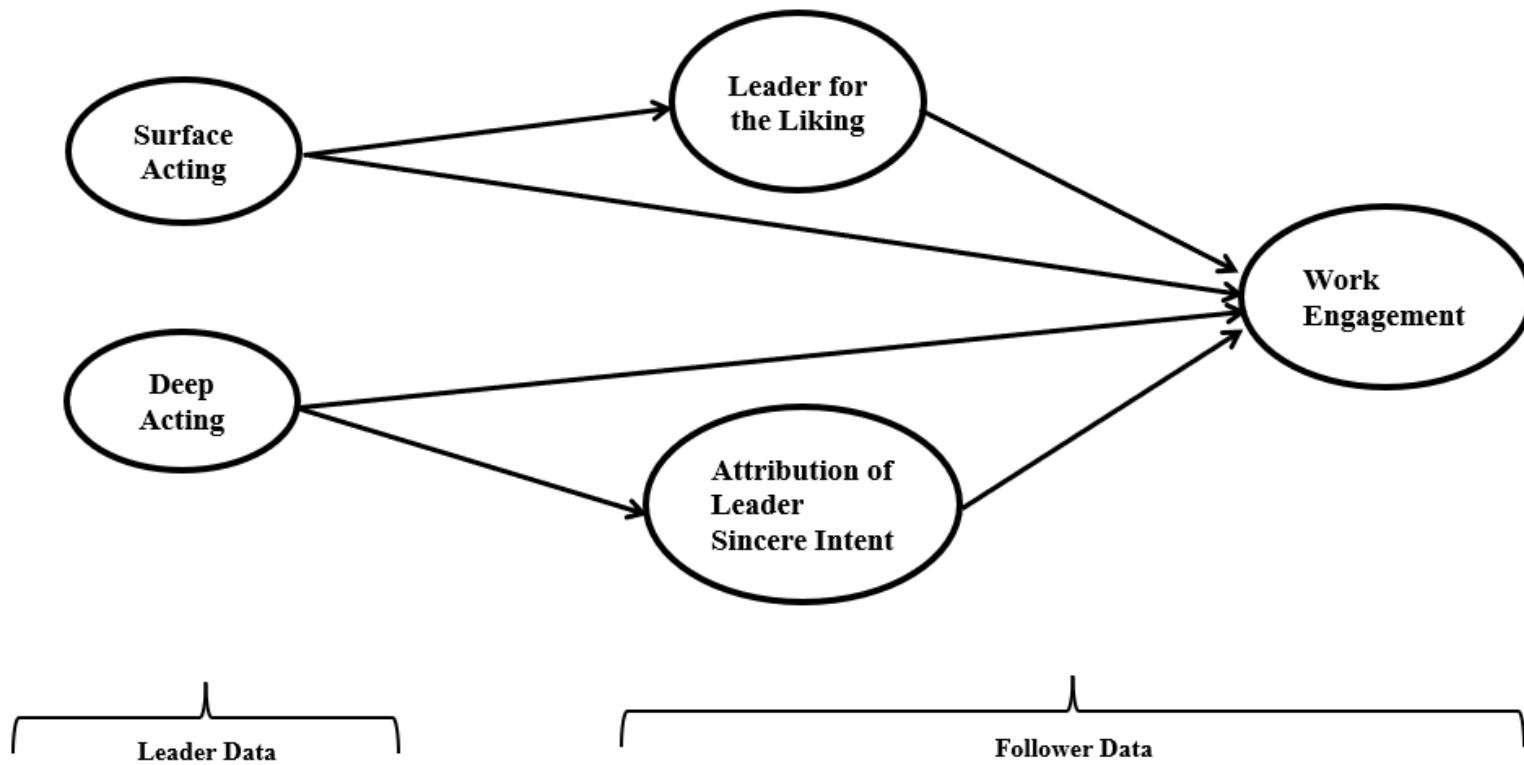
Stream 6: Leadership, Governance and Strategy

Table 1. Correlations and Descriptive Statistics of Study Variables

Variables	M	SD	Alpha (α)	1	2	3	4	5
Followers:								
1. Age	2.17	.85		--				
2. Tenure	3.00	1.34		.36**	--			
3. Leader Liking	3.58	.80		-.06	.02	--		
4. Attribution of Leader Sincere Intent	3.59	.42		.00	.04	.39**	--	
5. Employee Engagement	3.72	.42		-.01	.09	.46**	.42**	--
Leaders:								
1. Age	2.49	1.03		--				
2. Tenure	2.96	1.01		.52**	--			
3. Team Size	2.27	1.14		.45**	.38**	--		
4. Surface Acting	3.28	.67		-.12	-.12	-.07	--	
5. Deep Acting	3.73	.53		.04	.13	.02	-.12	--
Leader + Follower Combined:								
1. Surface Acting (L)			.78	--				
2. Deep Acting (L)			.71	-.23**	--			
3. Leader Liking (F)			.85	-.21**	.09	--		
4. Attribution of Leader Sincere Intent (F)			.76	-.11†	.13*	.62**	--	
5. Employee Engagement (F)			.79	-.15**	.10†	.46**	.44**	--

N=303 followers and N=102 leaders. †p< .1, *p<.05, **p<.01. (L)= Leader, (F)= Follower

Table 2. Multilevel Results towards Follower Liking for the Leader & Follower Attribution of Leader Sincere Intent

	Follower Liking for the Leader					
	Null Model		Control Model		Leader Direct Effects Model	
	β	SE	β	SE	β	SE
Intercept	3.582‡	.07	3.582‡	.07	3.583‡	.06
Age (L)			.01	.08	-.00	.08
Age (F)			-.04	.05	-.04	.05
Tenure (L)			.02	.08	-.00	.08
Tenure (F)			.04	.03	.03	.03
Team Size (L)			-.01	.07	-.01	.06
Surface Acting (L)					-.16**	.06
Variance level 2 (L)	.34‡ (53.1%)	.06	.34‡	.06	.31‡	.06
Variance level 1 (F)	.30‡ (46.9%)	.03	.30‡	.03	.30‡	.03
-2 Log Likelihood	643.261		641.509		635.649	
	Follower Attribution of Leader Sincere Intent					
	Null Model		Control Model		Leader Direct Effects Model	
	β	SE	β	SE	β	SE
Intercept	3.543‡	.05	3.543‡	.05	3.543‡	.05
Age (L)			-.01	.06	.00	.06
Age (F)			.06	.05	.06	.05
Tenure (L)			.03	.06	.01	.06
Tenure (F)			-.02	.03	-.01	.03
Team Size (L)			.05	.05	.05	.05
Deep Acting (L)					.09*	.05
Variance level 2 (L)	.11‡ (21.6%)	.04	.11**	.04	.10**	.04
Variance level 1 (F)	.40‡ (78.4%)	.04	.39‡	.04	.39‡	.04
-2 Log Likelihood	638.942		634.796		631.154	

Note. *p < .05, **p < .01, ‡p < .001. N=303 followers and N=102 leaders. (L)=Leader, (F)=Followers. SE = standard estimate.

21

Table 3. Multilevel Results towards Follower Work Engagement

	Null Model		Control Model		Leader Direct Effects Model		Follower Mediator Effects Model	
	β	SE	β	SE	β	SE	β	SE
Intercept	3.720‡	.03	3.720‡	.03	3.720‡	.03	3.720‡	.02
Age (L)			-.00	.04	-.01	.03	-.01	.03
Age (F)			-.04	.03	-.04	.03	-.03	.03
Tenure (L)			.06*	.03	.05	.03	.05	.03
Tenure (F)			.04*	.02	.04*	.02	.03*	.02
Team Size (L)			-.00	.03	-.00	.03	-.01	.02
Surface Acting (L)					-.07*	.04	-.03	.04
Deep Acting (L)					.04	.04	.01	.03
Leader Liking (F)							.17‡	.03
Attribution Sincere Intent of Leader (F)							.12‡	.04
Variance level 2 (L)	.04‡ (23.4%)	.01	.04‡	.01	.04‡	.01	.02*	.01
Variance level 1 (F)	.13‡ (76.6%)	.01	.13‡	.01	.13‡	.01	.11‡	.01
-2 Log Likelihood	316.447		307.016		302.566		233.364	

Note. *p < .05, **p < .01, ‡p < .001. N=303 followers and N=102 leaders. (L)=Leader, (F)=Followers. SE = standard estimate.

22

Were You Listening? Exploring the Moderating Roles of Voice Entitlement and Supportive Voice Climate

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Were You Listening? Exploring the Moderating Roles of Voice Entitlement and Supportive Voice Climate

ABSTRACT

Employee voice has gained an increasing amount of academic interest in recent years. However there has been a limited understanding to what drives an employee to speak up or not and how this varies over time to reach an outcome. This paper introduces the concept of voice entitlement and presents a sequential research design aimed to examine how an employee's voice is affected by voice entitlement and the supportive voice climate to measure an employee's affective commitment and turnover intention within the workplace. Findings from 720 full-time employees showed that voice entitlement and supportive voice climate were significant moderators. Implications and future research agenda are outlined.

Keywords: employee voice, voice entitlement, supportive voice climate, expectancy theory, commitment, turnover intention

INTRODUCTION

For decades, the concept of employee voice has been a focal point in academic discussions about workplace dynamics. Albert Hirschman's (1970) seminal work, Exit, Voice, and Loyalty: Responses to Decline in Firms, Organisations, and States, spurred scholars across disciplines to explore employee voice. Since the 1980s, both Organisational Behaviour (OB) and Employment Relations/Human Resource Management (ER/HRM) have given considerable attention to this concept (Wilkinson, Gollan, Kalfa & Xu, 2018). However, these disciplines examine employee voice differently. OB views voice as discretionary, future-oriented behaviour aimed at improving a situation or oneself (Morrison, 2011, 2014). In contrast, ER/HRM perspectives are based on the belief that employees have a fundamental right to influence workplace matters that affect them (Kaufman, 2014).

This study adopts voice from an ER/HRM approach as it aligns better with the theory and hypotheses building used in the context of this research. As such, employee voice is defined as "the ways and means through which employees attempt to have a say and potentially influence organisational affairs about issues that affect their work and the interests of managers and owners" (Wilkinson, Donaghey, Dundon & Freeman, 2014, p. 5). When deconstructing this definition, we can see key voice dimensions emerge such as 'attempt to have a say', 'influence organisational affairs', 'issues that affect work' and 'interests of managers and owners'. To put it simply, employee voice can be defined as having a say in the workplace. Employees do frequently encounter situations where they have to choose whether to speak up or remain silent about important workplace concerns (Morrison,

1

2023). This study looks at the influence of a supportive voice climate and voice entitlement – a new concept highlighted in this study.

Voice entitlement can be defined as the individual belief and expectancy to a right to have a say about matters in the workplace that affect personal and work interests (Guarin, Edwards, Townsend & Wilkinson, 2024a, under review). It is comprised of three dimensions: expectancy to voice, right to voice and voicing for decision-making. Expectancy to voice refers to the expectation that an employee's voice must be heard and listened to because they are important. Right to voice refers to the belief that an employee has a right to speak up in the workplace. Voicing for decision-making refers to the belief that employees should always have a say about decisions that affect them. We argue that all these dimensions under voice entitlement moderates voice in the workplace.

The contribution of this study is to investigate the moderating role of voice entitlement and supportive voice climate on attempts to voice, being listened to and the outcomes of affective commitment and turnover intention. Drawing from Townsend, Wilkinson, Dundon and Mowbray (2022), this study suggests that the path any voice attempt may follow through to an outcome is affected by external and internal organisational factors, with a highlighted focus on voice entitlement and an organisation's supportive voice climate. Furthermore, this study uses a sequential research design to collect data for the variables in three separate waves to advance our understanding of the dynamic behaviour of employee voice (Morrison, 2023).

THEORETICAL BACKGROUND AND HYPOTHESES

This section of the paper introduces the theoretical model (Figure 1), the theoretical lens applied, and the hypotheses proposed for the study.

Insert Figure 1 here.

Attempts to Voice, Voice Entitlement and Being Listened to

Employees who actively communicate their concerns are more likely to have their voices heard by managers compared to those who do not. Engaging with voice mechanisms increases the likelihood that an employee's voice will be processed and listened to by the appropriate recipient. Attempts to voice

2

at work can occur through formal or informal mechanisms, such as grievance procedures or one-on-one discussions (Mowbray, Wilkinson & Tse, 2015). Research suggest that merely having the opportunity to voice is enough for individuals to feel listened to (Lind & Tyler, 1988; Early & Lind, 1987). As such:

Hypothesis 1: Attempts to voice at T1 has a positive relationship with voice listened at T2.

According to expectancy theory (Vroom, 1964), employee behaviour is influenced by their belief that their efforts will lead to desired outcomes. An employee's motivation to voice concerns is often self-driven and not necessarily for the organisation's benefit (Wilkinson, Barry & Morrison, 2020). Employees are more likely to voice their opinions if they believe they can influence their work environment (Kopelman & Thompson, 1976). Voice entitlement suggests that employees feel entitled to voice their opinions because they see it as a right and believe it will impact decision-making (Guarin et al., 2024a). We argue that this sense of entitlement prompts organisations to be more responsive and listen to employees. Entitlement is linked to confidence, making employees more influential and persuasive (Kipnis & Lane, 1962), and therefore more likely to be heard by managers. Van Dyne, Kamdar, and Joireman (2008) suggested that when voicing is part of the job (voice legitimacy), employees are expected to speak up and be listened to, as managers perceive their feedback as valuable. Furthermore, when employees feel entitled to voice their concerns, managers are held more accountable to listen and respond. Indeed, a strong sense of voice entitlement leads to more frequent voicing and greater likelihood of being listened to. Therefore:

Hypothesis 2: Voice entitlement at T2 moderates the relationship between attempts to voice at T1 and voice listened at T2.

Voice Listened, Supportive Voice Climate and Workplace Outcomes

Expressing one's voice is a form of human right and dignity (Gorden, 1988). In the workplace, employee voice has been found to be related to positive organisational outcomes like intention to remain (Avery, McKay, Wilson, Volpone & Killham, 2011), justice perceptions (Cohen-Charash & Spector, 2001), employee attitudes (Purcell, Kinnie, Hutchinson, Rayton & Swart, 2003), outcome satisfaction, job satisfaction and organisational commitment (Colquitt, Conlon, Wesson & Porter, 2001). Employee voice depicts a form of commitment and concern for the organisation and as a result, managers listen

3

and recognise employees who speak up (e.g., Burris, 2012). A recent study showed that employee perceptions of internal organisational listening were positively related with employees' perceived relationships with their organisation (Qin & Men, 2021). Indeed, from an employee perspective, expressing voice and then being listened to makes one feel like they are respected and that they belong with the organisation. Accordingly, this commitment to the organisation is directly linked to an employee's intention to stay with their organisation (Pinho, Ana & Dibb, 2014). Therefore:

Hypothesis 3: Voice listened at T2 has a positive relationship with affective commitment at T3.

Hypothesis 4: Voice listened at T2 has a negative relationship with turnover intention at T3.

Burris (2012) suggested that management can either act on or disregard employee voice. We argue that when managers listen to employee voice, it positively impacts the employee-organisation relationship. These positive impacts (as detailed in hypotheses 3 and 4) are amplified when organisational policies, practices, and culture set expectations for managers to listen to voice attempts. Employees respond to their environment based on its perceived meaning and significance (Thomas, Clark & Gioia, 1993). According to Bowen and Ostroff (2004), consistency between managerial actions and organisational practices produces strong, positive employee outcomes. Appropriately designed HR practices, such as a supportive voice climate, are key predictors of organisational commitment and job satisfaction (Osterman, 1994; Arthur, 1992). Nishii (2006) suggested that employees actively interpret HR practices, impacting their commitment and job satisfaction, which in turn affects organisational performance. Nishii and Wright (2008) emphasised the importance of the relationship between HR practices and organisational effectiveness within strategic HRM. Thus, employees are likely to respond more positively (e.g., increased commitment) when managers listen to their voice in a supportive environment where employee voice is encouraged and expected. Therefore:

Hypothesis 5: Supportive voice climate at T2 moderates the relationship between voice listened at T2 and affective commitment at T3.

Hypothesis 6: Supportive voice climate at T2 moderates the relationship between voice listened at T2 and turnover intention at T3.

4

METHODOLOGY

Sampling Strategy

The study employed purposive sampling, recruiting participants from Prolific. Participants were required to be full-time employees aged 18 to 70 and work in one of the following sectors: architecture and construction, business management & administration, education & training, finance, government & public administration, medicine, hospitality & tourism, information technology, manufacturing, marketing & sales, retail, science, technology, engineering & mathematics, transportation, and distribution & logistics. The companies included small and medium-sized enterprises, large private enterprises, or publicly listed/traded enterprises, to represent a broad spectrum of organisations utilizing various voice mechanisms. The sampling method was based on Freeman, Boxall, and Haynes (2007) and targeted participants from the USA, the UK, Australia, and Canada to ensure a higher likelihood of English-speaking participants.

Sample

The number of participants for each of the three time waves were 1101, 884 and 799 respectively. 875 participants completed both T2 and T3. 796 participants completed both T1 and T3. 720 participants completed all time waves and were checked to be the dataset used for the study. The average age across the sample was 39 years old. The study sample indicated that 423 (58.8%) were male and 297 (41.2%) were female. 140 (19.4%) indicated they were from Australia, 159 (22.1%) were from Canada, 216 (30%) were from the UK and 205 (28.5%) were from the US.

Procedure

The online surveys were administered and distributed via Prolific, measuring voice dimensions, workplace outcomes, and demographic data without collecting personally identifiable information. All measurements used Likert scales and were created using LimeSurvey. Participation was voluntary, and participants were monetarily rewarded for completing and submitting the survey. Data collection occurred at four-month intervals: T1 in June 2023, T2 in October 2023, and T3 in February 2024.

Measurement Variables

5

All voice scales were developed by Guarin, Edwards, Townsend and Wilkinson (2024b, under review). See Appendix A for all scales used for this study. All voice items can be responded with (1 = 'strongly disagree', 5 = 'strongly agree').

Attempts to Voice (AV) in T1 was measured using a 4-item scale designed for employees to self-evaluate their efforts to demonstrate voice behaviour in the workplace. An example item was 'I make efforts to ensure my voice is heard in the workplace.'

Voice Entitlement (VE) in T2 was measured using the 9-item scale to measure an employee's entitlement to voice. This scale is composed of three subscales: Expectancy to Voice, Right to Voice and Voicing for Decision-making. *Expectancy to Voice* (ETV) in T2 was a 3-item subscale which measured an employee's expectancies about the involvement and impact of their voice in the workplace. An example item was 'I expect my managers to regularly ask my views about work.' *Right to Voice* (RTV) in T2 was a 3-item subscale that measured the employee belief that voice is a right. An example item was 'I have every right to raise concerns about issues that affect me in the workplace.' *Voicing for Decision-making* (VDM) in T2 was a 3-item subscale that measured the extent to which an employee might agree that their voice should be a part of decision-making in the workplace. An item was 'Employees should always have a say in changes and processes that affect them.'

Voice Listened (VL) in T2 was measured using a 4-item scale that measured an employee's rating of how their voice gets listened to in the workplace by their manager. An example item was 'If I raise concerns to my manager, they always respond.'

Supportive Voice Climate (SVC) in T2 was measured using a 7-item scale designed to measure an employee's view of the organisation's voice environment. An example item was 'Employees are in an environment where their voices are taken into consideration.'

Affective Commitment in T3 was measured using the 8-item Affective Commitment Scale (ACS) developed by Allen and Meyer (1990). This scale measured the employee's emotional attachment, identification with, and involvement in an organisation (Allen & Meyer, 1990). The ACS can be answered with a 7-point scale (1 = 'strongly disagree', 7 = 'strongly agree'). An example of an

6

item in the scale was 'I really feel as if this organisation's problems are my own.' *Turnover Intention* in T3 was measured using a 3-item scale by Meyer, Allen and Smith (1993). The scale can be appropriately responded with (1 = 'strongly disagree', 7 = 'strongly agree'). An example item was 'I frequently think about leaving my current employer.'

RESULTS

Descriptive Statistics

The descriptive statistics for this study are all displayed in Table 1.

Insert Table 1 here.

Correlation Analyses

Table 1 reveals a significant positive relationship between attempts to voice and voice listened ($r = .31$, $p < 0.05$). This result supports hypothesis 1. As hypothesised, the results suggest that the more likely an employee attempts to voice, the more likely they are listened to in the workplace. Table 1 further reveals a significant positive relationship between voice listened and affective commitment ($r = .43$, $p < 0.05$). This result supports hypothesis 3. As hypothesised, being listened to in the workplace makes one feel like they belong and matter, developing a form of emotional attachment to the organisation. Table 1 also indicates that a significant negative relationship between voice listened and turnover intention exists ($r = -0.38$, $p < 0.05$). This result supports hypothesis 4. As hypothesised, being listened to develops a form of commitment and hence the willingness to remain with the employing organisation.

Confirmatory Factor Analysis (CFA)

The CFA was performed using the MPlus program. A CFA for the base model and the nested model were conducted initially then a Chi-square difference test was performed.

6-factor CFA. This CFA analysed the following measures as a 6-factor analysis: attempts to voice (AV – 4 items), voice entitlement (VE – 9 items), voice listened (VL – 4 items), supportive voice climate (SVC – 7 items), affective commitment (AC – 8 items), and turnover intention (TI – 3 items). The CFA reported the following results: Chi-square = 2733.33, DF = 545, Chi-square/DF = 5.02, RMSEA = 0.07, CFI = 0.89, TLI = 0.88, and SRMR = 0.08. The overall fit of the CFA 6-factor

7

model is great to excellent for all indices. The standard factor loading values for the 4 items from the AV scale ranged from 0.81 to 0.92; the 9-item VE scale ranged from 0.49 to 0.74; the 4-item VL scale ranged from 0.80 to 0.89; the 7-item SVC scale ranged from 0.87 to 0.90; the 8-item AC scale ranged from 0.36 to 0.90; and the 3-item TI scale ranged from 0.90 to 0.95. We can infer that each scale and each measurement item (observed variable) for all variables in the study has good explanatory power for its corresponding dimension (latent variable).

1-factor CFA. To be able to perform a Chi-square difference test, a 1-factor CFA was conducted with the following results: Chi-square = 11952.55, DF = 560, Chi-square/DF = 21.34, RMSEA = 0.17, CFI = 0.45, TLI = 0.42, and SRMR = 0.15. The standard factor loading values for the 4 items from the AV scale ranged from 0.39 to 0.47; the 9-item VE scale ranged from 0.01 to 0.41; the 4-item VL scale ranged from 0.67 to 0.71; the 7-item SVC scale ranged from 0.82 to 0.85; the 8-item AC scale ranged from 0.23 to 0.60; and the 3-item TI scale ranged from -0.48 to -0.59.

Chi-square difference test. The two models resulted in a Chi-square difference of 9219.22, with a difference of 15 degrees of freedom. The test indicates that the constraints of the 1-factor model significantly worsened the model fit compared to the 6-factor model, as it extremely exceeds the critical value of 25.00 for 15 degrees of freedom at the 0.05 significance level. The test indicates that the more complex structure of the 6-factor model provides a significantly better fit to the data than the 1-factor model. This suggests that a single factor is not sufficient to explain the relationships among the variables used for the study and that a multi-factor structure of the base model is justified.

Moderation Analyses

To test the moderation hypotheses 2, 5 and 6 proposed for the study, PROCESS macro, model 21 in SPSS was used (Hayes, 2018).

Moderation analysis (Table 2) was conducted to investigate the moderating role of voice entitlement on the relationship between attempts to voice and voice listened. The overall model was significant, $F(3, 716) = 34.52$, $p < .001$, $R^2 = 0.13$ which indicates that the amount of variance explained in voice listened by the model is 13%. The results revealed that the interaction between attempts to voice and voice listened was significant, $b = 0.14$, $t = 2.35$, $p = .02$, 95% CI [0.02, 0.26].

8

The conditional effects of the moderator (voice entitlement) were revealed to be significant. The coefficient for voice attempt predicting voice listened was significant (p<0.001) but varied at the low (3.46), medium (3.99) and high (4.51) values of voice entitlement with $b = 0.18$, $b = 0.25$ and $b = 0.33$ respectively. As seen on Figure 2, the weakest levels between attempts to voice and voice listened occurred when voice entitlement was low; and the strongest when voice entitlement was high. As such, the findings of the study support hypothesis 2.

Insert Table 2 here.

Insert Figure 2 here.

Moderation analysis (Table 3) was conducted to test hypothesis 5. The overall model was significant, $F(4, 715) = 78.28$, $p < 0.001$, $R^2 = 0.30$ which indicates that the amount of variance explained in affective commitment by the model is 30%. The results revealed that the interaction between voice listened and supportive voice climate was significant, $b = 0.15$, $t = 3.56$, $p = .00$, 95% CI [0.07, 0.24]. The estimated conditional effects of the moderator (supportive voice climate) were revealed to be significant. The coefficient for voice listened predicting affective commitment was significant (p<0.05) but varied at the low (2.39), medium (3.40) and high (4.41) values of supportive voice climate with $b = 0.17$, $b = 0.33$ and $b = 0.48$ respectively. As illustrated on Figure 3, the weakest levels between voice listened and affective commitment occurred when supportive voice climate was low; and the strongest when the level of supportive voice climate was high. Therefore, the results support hypothesis 5. Furthermore, the index of moderated moderated mediation was significant (0.02, 95% CI [0.00, 0.05]). This suggests that the combined moderation effects of the moderators on the mediation pathway from attempts to voice to affective commitment through voice listened are statistically significant. We also tested the conditional indirect effects of attempts to voice through voice listened on affective commitment (Table 4). The results revealed that the indirect effect of attempts on affective commitment through being listened varies depending on the levels of voice entitlement and supportive voice climate. Specifically, the indirect effect is significant across all levels of voice entitlement and supportive voice climate. The effect is strongest at high levels of both voice entitlement and supportive voice climate ($b = 0.15$). Table 4 suggests that a supportive voice climate

9

enhances the positive impact of attempts to voice on affective commitment through being listened, particularly when voice entitlement is also high.

<div align="center">

Insert Table 3 here.

Insert Figure 3 here.

Insert Table 4 here.

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The moderation analysis (Table 3) supported hypothesis 6. The overall model was significant, $F(4, 715) = 41.83$, $p < 0.001$, $R^2 = 0.19$, which indicates that the amount of variance explained in turnover intention by the model is 19%. The results revealed that the interaction effect between voice listened and supportive voice climate was significant ($b = -0.17$, $t = -2.83$, $p = .00$, 95% CI [-0.30,-0.05]). The conditional effects of the moderator (supportive voice climate) were revealed to be significant. The coefficient for voice listened predicting turnover intention was significant ($p<0.001$) but varied at the low (2.39), medium (3.40) and high (4.41) values of supportive voice climate with $b = -0.37$, $b = -0.55$ and $b = -0.72$ respectively. Figure 4 shows that the weakest levels between voice listened and turnover intention occurred when supportive voice climate was low; and the strongest when the level of supportive voice climate was high. The index of the moderated moderated mediation was found to be significant (-0.02, 95% CI [-0.06, -0.00]). This finding suggests that the combined moderation effects of voice entitlement and supportive voice climate on the mediation pathway from attempts to voice to turnover intention through voice listened are statistically significant. We also tested the conditional indirect effects of attempts to voice through voice listened on turnover intention (Table 5). The results revealed that the indirect effect of attempts on turnover intention through being listened varies depending on the levels of voice entitlement and supportive voice climate. Specifically, the indirect effect is significant across all levels of voice entitlement and supportive voice climate. The effect is strongest at high levels of both voice entitlement and supportive voice climate ($b = -0.23$). Table 5 suggests that a supportive voice climate enhances the positive impact of attempts to voice on the intention to remain through being listened, particularly when voice entitlement is also high.

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Insert Figure 4 here.

Insert Table 5 here.

10

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DISCUSSION

Theoretical Implications

This study's findings suggest several theoretical implications. Morrison (2023) reviewed voice and silence studies over the past decade, highlighting gaps in the literature, particularly the need for research on the development and change of voice and silence over time. Although this study uses a sequential research design, results indicate that voice entitlement and a supportive voice climate significantly moderate voice-related outcomes such as commitment and turnover intention over time. The study offers insights into factors that facilitate the pathway of voice before reaching an outcome (Townsend et al., 2022). Morrison (2023) also noted the lack of understanding regarding what influences an individual's decision to speak up or remain silent in the moment. Guided by expectancy theory, this study suggests that factors like expectancy, the belief that voice is a right, decision-making, and a supportive voice climate can influence the decision to voice. Future research should further explore voice entitlement and expectancy theory within the voice literature.

Managerial Implications

Employee voice is a significant form of workplace proactivity. Effective communication is crucial for successful management (Keyton, 2017). Results suggest that a supportive voice climate encourages more voice attempts and listened voice, benefiting both employees and management. Employees exhibit greater commitment and satisfaction, while management gains valuable information to improve working conditions. Managers should respond to employee voice with support and consideration (Klaas, Olson-Buchanan & Ward, 2012). Employee voicing indicates organisational commitment (Burris, 2012), and it is the organisation's accountability to nurture this workplace attitude. Additionally, voice entitlement among employees prompts them to voice their opinions, expecting to be heard and involved in decision-making. Managers should, therefore, actively listen and incorporate employee feedback to promote that a consistency between HR practices and a supportive voice climate exists.

Limitations and Future Research

This study addresses several limitations identified by Prolific (2023). Despite features to mitigate rapid-responder bias, the first-come, first-serve rule means responses predominantly came

11

from participants active at the survey's initial distribution time. The study may also exhibit WEIRD bias, being skewed towards Western, Educated, Industrialised, Rich, and Democratic individuals (Henrich, Heine & Norenzayan, 2010). Selection bias is another concern, questioning whether participants were genuinely interested in the study or merely motivated by monetary rewards. Finally, satisficing may occur as participants, using Prolific to earn money, might prioritise speed over response quality.

In terms of future research, employee voice should further be studied on how it is processed over time (Morrison, 2023) within the workplace to reach an outcome. Employee voice is dynamic and more research is encouraged regarding the internal and external factors that affect important outcomes for both the employee and the organisation (Townsend et al., 2022). Morrison (2023) also pointed out that there has been very limited research that have studied the effects of voice behaviour on supervisors or colleagues. Since this study examined the impact of voice entitlement and a supportive voice climate on employees, perhaps future research can examine employee voice entitlement from a managerial perspective.

CONCLUSION

This study investigated the moderating roles of voice entitlement and a supportive voice climate. As a theoretical contribution, this study introduced the concept of voice entitlement and provides an insight to what may potentially influence an employee to speak up or not in the moment: expectancy to voice, the right to voice, for decision-making and because of an organisation's supportive voice climate. This study also raises the importance of examining employee voice as a dynamic construct and the path voice follows through to reach an outcome over time. The application of expectancy theory allowed this study to be able to explain the behaviour of employee voice in a lens that looks at motivation for desired outcomes. However, as outlined in future research, there is still a large body of work needed to fully understand employee voice through new theories and lenses.

12

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Wilkinson, A., Barry, M., and Morrison, E. (2020). Toward an integration of research on employee voice. *Human Resource Management Review*, 30(1)

16

Figure 1: Theoretical model for the study
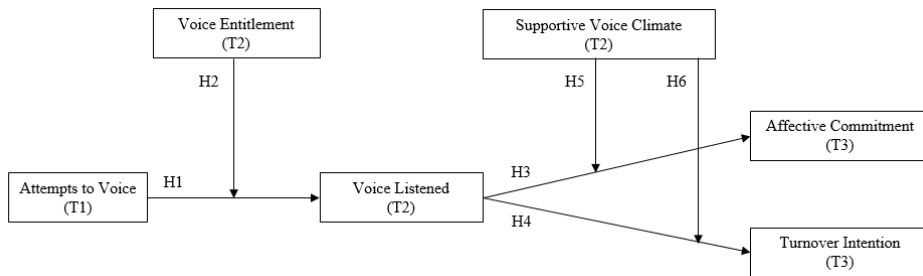
Figure 2: Moderation by Voice Entitlement for Hypothesis 2

17
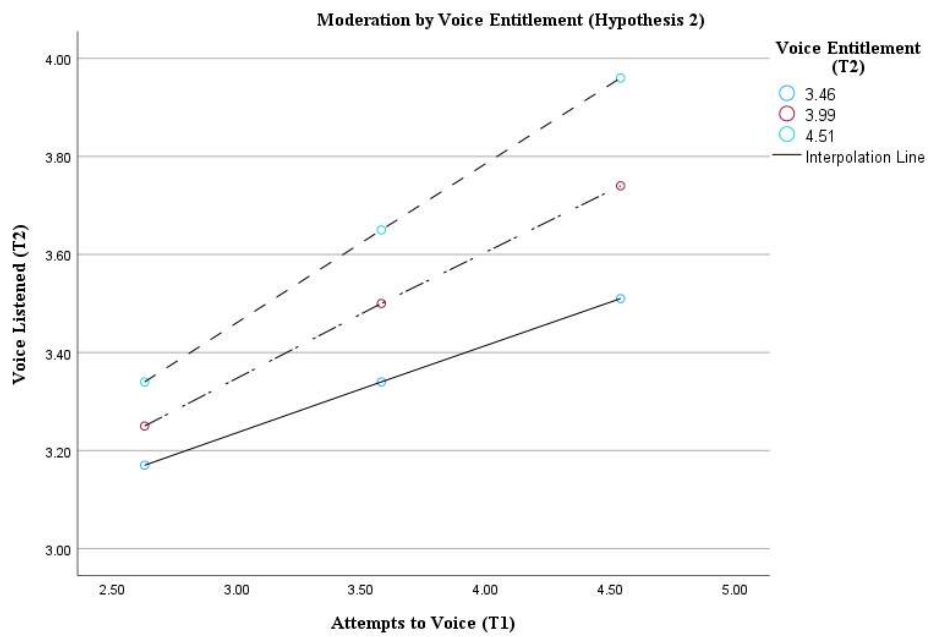
Figure 3: Moderation by Supportive Voice Climate for Hypothesis 5

Moderation by Supportive Voice Climate (Hypothesis 5)
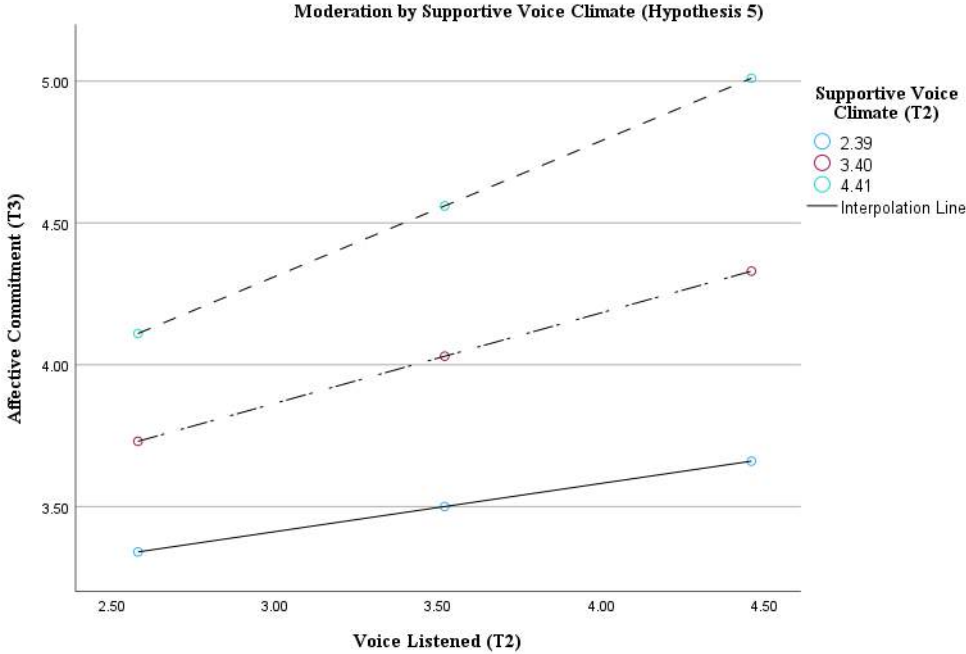
Figure 4: Moderation by Supportive Voice Climate for Hypothesis 6

Moderation by Supportive Voice Climate (Hypothesis 6)

18
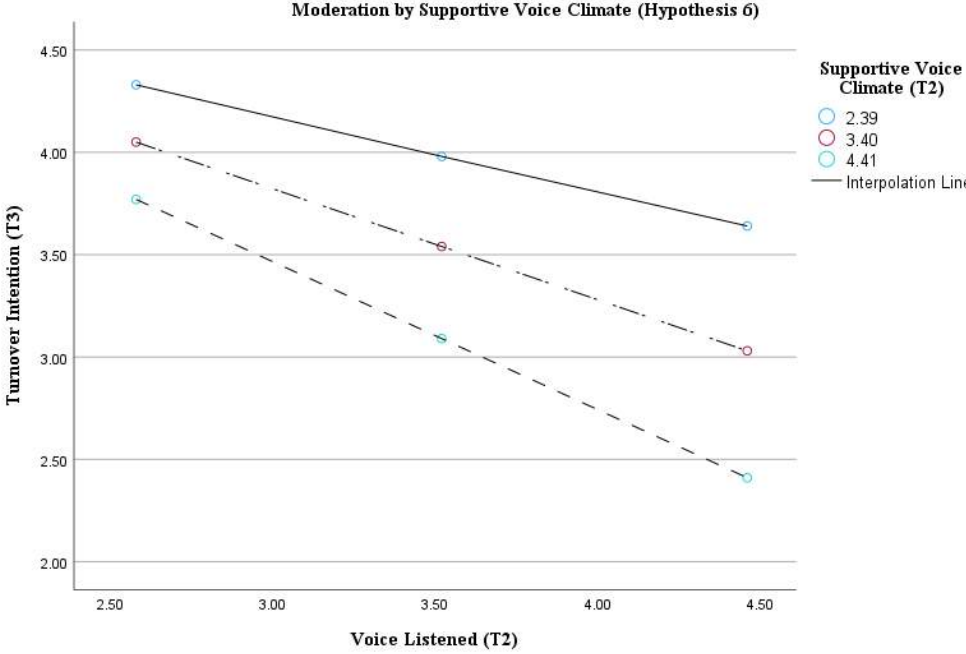
Table 1: Means, standard deviations, correlations and reliabilities for the study

	Mean	SD	1	2	3	4	5	6	7	8	9
1 Attempts to Voice (T1)	3.58	0.95	**(0.93)**								
2 Voice Entitlement (T2)	3.99	0.53	0.33**	**(0.82)**							
3 Expectancy to Voice (T2)	3.67	0.77	0.43**	0.78**	**(0.74)**						
4 Right to Voice (T2)	4.35	0.55	0.22**	0.75**	0.41**	**(0.82)**					
5 Voicing for Decision-Making (T2)	3.94	0.72	0.08*	0.77**	0.32**	0.44**	**(0.80)**				
6 Voice Listened (T2)	3.52	0.94	0.31**	0.24**	0.35**	0.15**	0.04	**(0.92)**			
7 Supportive Voice Climate (T2)	3.40	1.01	0.36**	0.21**	0.35**	0.10**	0.00	0.68**	**(0.96)**		
8 Affective Commitment (T3)	4.13	1.52	0.33**	0.21**	0.35**	0.10**	0.01	0.43**	0.50**	**(0.92)**	
9 Turnover Intention (T3)	3.42	2.01	-0.22**	-0.12**	-0.24**	-0.05	0.02	-0.38**	-0.38**	-0.72**	**(0.95)**

$*p < .05$; $**p < .01$
$n = 720$; Scale reliabilities are in **(parentheses)**.

19

Table 2: Moderated regression analysis for Hypothesis 2

Predictor	Voice Listened (T2)			
	b	se	t	*p*
Constant	3.42	0.86	3.95	0.00
Attempts to Voice (T1)	-0.30	-0.24	-1.27	0.20
Voice Entitlement (T2)	-0.20	0.22	-0.94	0.34
Interaction	0.14	0.60	2.35	0.02
Model Summary (*n* = 720)	$F(3, 716) = 34.52, p < .001, R^2 = 0.13$			

Table 3: Moderated regression analyses for Hypotheses 5 and 6

Predictor	Affective Commitment (T3)				Turnover Intention (T3)			
	b	se	t	*p*	*b*	se	t	*p*
Constant	2.04	0.47	4.33	0.00	5.37	0.67	8.00	0.00
Attempts to Voice (T1)	0.25	0.05	4.61	0.00	-0.14	0.07	-1.87	0.06
Voice Listened (T2)	-0.20	0.14	-1.35	0.17	0.49	0.20	0.23	0.81
Supportive Voice Climate (T2)	-0.01	0.16	-0.09	0.92	0.17	0.22	0.77	0.44
Interaction	0.15	0.04	3.55	0.00	-0.17	0.06	-2.83	0.00
Model summary (*n* = 720)	$F(4, 715) = 78.28, p < 0.001, R^2 = 0.30$				$F(4, 715) = 41.83, p < 0.001, R^2 = 0.19$			

20

Table 4: Conditional indirect effects of Attempts to Voice (T1) through Voice Listened (T2) on Affective Commitment (T3)

Voice Entitlement (T2)	Supportive Voice Climate (T2)	Effect	BootSE	BootLLCI	BootULCI
3.46	2.39	0.03	0.01	0.00	0.07
3.46	3.40	0.06	0.02	0.02	0.10
3.46	4.41	0.08	0.03	0.03	0.15
3.99	2.39	0.04	0.02	0.00	0.09
3.99	3.40	0.08	0.02	0.04	0.13
3.99	4.41	0.12	0.03	0.06	0.19
4.51	2.39	0.05	0.03	0.00	0.11
4.51	3.40	0.10	0.03	0.05	0.17
4.51	4.41	0.15	0.04	0.08	0.24

Table 5: Conditional indirect effects of Attempts to Voice (T1) through Voice Listened (T2) on Turnover Intention (T3)

Voice Entitlement (T2)	Supportive Voice Climate (T2)	Effect	BootSE	BootLLCI	BootULCI
3.46	2.39	-0.06	0.03	-0.13	-0.01
3.46	3.40	-0.09	0.03	-0.17	-0.03
3.46	4.41	-0.13	0.04	-0.22	-0.05
3.99	2.39	-0.09	0.03	-0.16	-0.03
3.99	3.40	-0.13	0.03	-0.21	-0.07
3.99	4.41	-0.18	0.04	-0.27	-1.02
4.51	2.39	-0.12	0.04	-0.21	-0.04
4.51	3.40	-0.17	0.04	-0.27	-0.09
4.51	4.41	-0.23	0.06	-0.36	-0.13

21

APPENDIX A

Attempts to Voice
1. I make attempts to express my thoughts about issues in the workplace
2. I make efforts to ensure my voice is heard in the workplace
3. I freely express my views and concerns in the workplace
4. I speak up at work

Voice Entitlement
Expectancy to Voice
1. I expect to have a say in department meetings if things do not seem right
2. I expect my managers to regularly ask my views about work
3. My opinions about work matters are important in the workplace

Right to Voice
1. I have every right to raise concerns about issues that affect me in the workplace
2. It is right that employees can speak up about issues that concern them in the workplace
3. I believe that my voice in the workplace should be respected

Voicing for Decision-Making
1. Employees should always have a say in changes and processes that affect them
2. My co-workers and I should always be consulted about changes in the workplace instead of just being informed
3. Employees should be a part of final decision-making processes

Voice Listened
1. If I raise concerns to my manager, they always listen
2. If I raise concerns to my manager, they always respond
3. If I raise concerns to my manager, I'm always given an answer
4. If I speak up to management, I am always given a response

Supportive Voice Climate
1. Employees are encouraged to speak up and highlight management decisions that they disagree with or consider problematic
2. Employees are encouraged to raise issues with management decisions at work
3. Employees are in a supportive environment where they can freely express their voice
4. Employees are encouraged to speak up if they have concerns or issues about organisational affairs
5. Employees are given the opportunity to speak up about issues that concern them
6. Employees are in an environment where their voices are taken into consideration
7. My organisation encourages employees to have their say about things that matter to them

Affective Commitment
1. I would be very happy to spend the rest of my career with this organisation
2. I enjoy discussing my organisation with people outside it
3. I really feel as if this organisation's problems are my own
4. I think that I could easily become as attached to another organisation as I am to this one
5. I do not feel like 'part of the family' at my organisation
6. I do not feel 'emotionally attached' to this organisation
7. This organisation has a great deal of personal meaning for me
8. I do not feel a strong sense of belonging to my organisation

Turnover Intention
1. I would frequently think about leaving my current employer

22

2.   It is likely that I would search for a job in another organisation
3.   It is likely that I would actually leave the organisation within the next year

23

Stream 1: Human Resource Management

Title: Efficacy of talent attraction and retention in African Tribal leadership

Efficacy of talent attraction and retention in African Tribal leadership

Prof Anna-Marie Pelser

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1

Stream 1: Human Resource Management

Title: Efficacy of talent attraction and retention in African Tribal leadership

Efficacy of talent attraction and retention in African Tribal leadership

ABSTRACT

Talent management is crucial for global leaders, especially in small and medium enterprises, but conceptual research is limited. Most studies focus on the Western perspective, highlighting gaps and a lack of empirical evidence. There's a global talent management crisis, with Africa experiencing significant brain drain. The specific issue is the absence of a talent management framework for African tribal leaders to enhance their leadership and community welfare. This study aimed to create such a framework, rooted in human capital, social capital, and African traditional leadership theories. Using an inductive phenomenological qualitative approach and social constructivism paradigm, data was collected through focus group discussions with 104 tribal authority members and HR practitioners. Thematic analysis revealed the framework's potential for future generations.

Keywords: Africanisation; Leadership; Talent; Talent Attraction; Talent Management; Talent retention;

Much research on talent management focuses on the Western perspective, yet significant shortcomings remain (Cappelli, 2023; Rothwell, 2023). Despite extensive studies and the often confusing association with succession planning (Rothwell, 2010), talent management continues to face global crises. Tansley (2011) describes talent as the human capability to reach the greatest heights. A major barrier to effective talent management is the lack of a clear definition; scholars often tailor definitions to fit their studies (Gallardo-Gallardo, Dries, & Gonzalez-Cruz, 2013). Various scholars (Kontoghiorghes & Frangou, 2009; Lockwood, 2006; Meyers & Van Woerkom, 2014) see talent management as a set of human resource practices in both public and private sectors. However, these definitions need refinement to avoid being one-sided.

2

Beyond definitional issues, other factors hinder talent management. The exclusive approach to talent management, which focuses on individuals with specific skills, knowledge, and experience for competitive advantage (Iles *et al*., 2010), is particularly problematic. This approach limits organizations by not recognizing everyone's potential, focusing mainly on human capital. Consequently, this method can impede the identification and development of talent. The study's objectives were to identify these barriers to talent management and propose solutions to overcome them.

PROBLEM STATEMENT

Cappelli (2015) found that companies favor external hiring for strategic jobs due to financial reasons. However, the scarce talent supply leads to stagnation in talent development. Cappelli recommends internal hiring and development to address this issue. Rothwell (2010) emphasizes hiring high performers and high-potential candidates for competitive advantage but notes these individuals often leave if dissatisfied, making strategic talent development essential for retention.

Khilji and Schuler (2018) highlighted a gap in global macro talent management studies, noting the lack of attention to macro factors like talent migration and national policies affecting global competitiveness (Khilji & Schuler, 2017). Sparrow, Brewster, and Chung (2017) emphasized considering macro environmental factors such as demographics, talent mobility, national culture, and economic conditions.

While many talent management frameworks exist from a Western perspective, none address African leadership. Mbigi (2002) describes African leadership as culturally driven, with April and Peters (2011) emphasizing collectivism. Talent scarcity is a significant concern in Africa, exacerbated by brain drain (Docquier, 2017).

RESEARCH QUESTION

How effective is attraction and retention of talent from an African tribal leadership perspective?

3

Aim

The aim of this study is to assess the efficacy of Talent attraction and retention from the Perspective of African Tribal Leadership.

LITERATURE REVIEW

Theoretical Framework

This study was anchored by three theories to underpin the study; namely: Human capital, Social capital, and the African Traditional Leadership Theory.

Human Capital Theory

Human capital is crucial for business success, emphasizing investment in training and education to boost productivity and efficiency (Grigorescu *et al*., 2021; Blundell *et al*., 2021; Becker, 1999; Tan, 2014). Developed by economists Gary Becker and Theodore Schultz, it highlights the economic value of human resources' unique capabilities and competitive advantage.

Social Capital Theory

Social capital, as defined by Lin (2001), is the investment in social relationships with expected returns. It examines the value in social networks and how tribal leadership perspectives foster strong community connections, influencing talent management outcomes and creating opportunities (Lin, 2001).

African Traditional Leadership

African leadership philosophy, rooted in collectivism, emphasizes collective success over individual achievement (Mbigi, 2002). Fundamental values include moral values, traditional customs, and norms. Ubuntu, expressing African unity, can enhance talent management through community engagement and collaboration (April & Ephraim, 2010; April & Shockley, 2007; Van Der Colff, 2003).

4

Talent Management Strategies

Talent attraction

Kaye (2002) indicates that attractive strategies counteract turnover and enhance employee retention. These strategies include employee engagement, upward mobility, staff recognition, performance appraisal, career development, motivation, and satisfactory pay (Armstrong & Taylor, 2014). Talent attraction and retention add value to organizations. Continuous learning and growth are crucial, improving individual and organizational performance (Dittmar, 2012). Empowerment through training and development programs is essential.

Talent retention

Talent retention is defined as an organization's ability to reduce attrition (McKinsey & Company, 2001) and minimize turnover (Andreas *et al*., 2006). Tribal leaders recognize and appreciate their talent's contributions. Ibidunni *et a*l. (2016) mention that workplace recognition boosts productivity and commitment. Tribal leaders provide regular feedback, acknowledge achievements, and celebrate milestones, fostering a sense of value and belonging, thus enhancing loyalty and commitment. Effective tribal leaders set high standards, inspiring others to strive for excellence and motivating talented individuals to stay (Bans, 2021).

Machinery and technology

The introduction of machinery and technology prompts organizations to downsize and restructure, aiming to retain and train competent workers, incurring training costs. Technological advances improve efficiency, but dissatisfied trained employees may leave (Bryant & Allen, 2013). Retaining trained staff enhances organizational effectiveness, focusing resources on current employees rather than new hires.

5

Mobility

Advances in technology impact organizations both positively and negatively. The internet provides easy access to information but can also facilitate job hunting, predicting organizational change (Bryant & Allen, 2013). Globalization increases diversity and market competition, influencing employee decisions and resulting in global competition for skills and talent mobility (Kaye, 2002; Armstrong & Taylor, 2014).

Retention strategy

Employee retention strategies focus on human capital, reducing turnover, and retaining competent staff (Mathis & Jackson, 2003). These strategies enable knowledge management and organizational structure, interfacing with organizational and human resource development. Priority should be given to hiring, training, development, performance reviews, communication, job security, motivation, and a safe working environment. Alignment with the organizational strategic plan is essential. Analyzing external (political, technological, economic, legal, environmental) and internal (finance, operations, organizational structure, HR management) factors is crucial (Strickland *et al*., 2016). Key retention factors include leadership, company image, recruitment costs, career development, and performance recognition (Armstrong & Taylor, 2014).

METHODOLOGY

This study used a social constructivism worldview, fitting qualitative research to develop a talent management framework for tribal leaders. The paradigm aligns with the study's methodology and objectives, suitable for data collection and analysis. An exploratory approach utilized structured questionnaires in focus group interviews. Purposive expert sampling selected ten villages from sixty, with eight confirming participation (Armstrong & Taylor, 2014).

6

Research Approach

The researcher used a qualitative approach to explore participants' meaningful ideas and experiences. Phenomenology examines human experiences, emotions, and attitudes to understand meaning (Worthington, 2010; Law & Shafey, 2019). Basic qualitative research similarly seeks meaningful ideas from human experiences to improve life (Worthington, 2010).

Research Design

Exploratory research design explored participants' meaningful ideas and life experiences using qualitative methods and open-ended questions (Saunders *et al*., 2016).

Data collection instrument

A qualitative approach was used through focus group discussions with a structured interview guide. Structured interviews, with consistent wording, provide in-depth knowledge and ensure all participants have an equal chance to speak (Bryman & Bell, 2019; Remenyi, 2013). These interviews are straightforward and effective for qualitative research (Bryman & Bell, 2019).

Sampling and sampling size

This study used non-probability sampling, interviewing 104 tribal authorities from eight villages to gain knowledge and meaningful ideas (Bryman & Bell, 2019).

Data coding and analysis

Consent forms, interview guides, and permission letters were issued to participants, who signed consent forms after a briefing. Data was recorded in video and audio formats and then transcribed and analyzed (Saunders *et al*., 2016). Data analysis involved categorizing, theming, and coding (Creswell & Poth, 2018). The researcher wrote notes, converted data into scripts, coded, and categorized it. Audio

7

records were compared with notes, transcribed, and analyzed for meaningful ideas. Themes and subthemes were identified using color coding. Direct observation of participants' interactions with questions was also conducted.

Data quality

The researcher's role was pivotal in the study, enhancing transparency and trustworthiness (Barrett *et al*., 2020). She developed the interview guide with open-ended questions and conducted audio recordings during focus group discussions. To ensure data credibility, the researcher reviewed recordings and compared them with notes. Various methods and procedures were used to align with the study's objectives. The researcher assessed data quality before analysis and provided detailed context descriptions, informing theory and methodology development, and ensuring transferability. Confirmability was achieved by including quotes and visiting the house of traditional leaders to confirm the talent management framework for tribal leaders.

Ethical considerations

Research ethics involves the appropriateness of researchers' behavior regarding participants' rights (Saunders *et al*., 2019). Adhering to De Vos *et al*. (2005) standards, the researcher obtained ethical clearance and shared the approved proposal and consent form with participants, who completed the consent form after a briefing. Confidentiality was maintained throughout.

DISCUSSION

The findings were categorized into themes, with the focus now on the effectiveness of talent attraction and retention.

Theme 1: Effectiveness of talent attraction and retention

8

Retention focuses on keeping competent staff and reducing turnover, which affects organizational development and HR (Mathis & Jackson, 2003). Effective talent attraction relies on retention strategies. Turnover, caused by job dissatisfaction and work-life imbalance, negatively impacts production (Hodges, 2003).

Limited resources

Limited resources are a widespread problem, with poor maintenance affecting organizational efficiency and effectiveness. Despite directives, roads remain unmaintained, and the tendering system for resource maintenance fails society. As a result, resources will deplete over time.

Participant TA 05, response: "Water and sanitation are still a problem. Pit toilets are still being used in villages even at health facilities and schools. Poor infrastructure causes the talent loss. In other areas environment is not conducive to work."

Participant TA 06, response: "The government is failing our community because we have land for farming, but we do not have enough agricultural resources for cultivation. There is shortage of water around this area. We requested department of agriculture to help with irrigation system so that we empower youth and women in our community through cultivation. Sports and recreational centres not in use because of shortage of resources."

Participant TA 05 concurs with Participant TA 06 that limited resources serve as the barriers to socioeconomic development. Tribal leaders strive to overcome the barrier of limited economic resources by facilitating access to capital and resources for aspiring entrepreneurs. They explore partnerships with financial institutions, NGOs, and development agencies to provide microfinance, grants, or loans for small-scale businesses. Tribal leaders establish community funds or savings groups for example, trust fund to pool resources and provide financial support to entrepreneurs (Marshal *et al.*, 2020).

9

Tribal leaders collaborate with government, NGOs, and private sectors to develop infrastructure like educational and vocational centers, fostering talent development and providing essential resources (Barkhuizen *et al.*, 2020).

Political interference

Political interference affects public and private sectors. Government departments, led by politicians (e.g., Members Executive Council), rely on employees for administration, making decision-making complex (Barkhuizen *et al.*, 2020).

Participant TA 06, response: "Tribal authorities face numerous issues since the introduction of democracy. Local municipalities now control village resources like land, farming, and mining. Previously, our forefathers freely cultivated land, farmed cattle, hunted, and fished without cost. Chiefs allocated communal land, and proof of residence was issued by traditional authorities. Now, municipalities share power and issue proof of residence, previously a source of income for tribal authorities. Applications are required for commercial fishing rights, biodiversity conservation, animal identification marks, farm feeds, and livestock registration, all now managed by the government. Land is sold by municipalities, and mines, though economic pull factors, cause air pollution and illegal mining. These resources, once protected by tribal authorities, are neglected, leading to disasters. We lost many during COVID-19, and many are still unemployed after widespread retrenchments." The response from participant TA 6 is that Municipalities play a crucial role in ensuring compliance with fishery and farming regulations.

The Department of Agriculture, Forestry, and Fisheries issues fishing licenses upon meeting requirements, while SAMSA provides safety certificates per the Marine Living Resource Act No.18 of 1998. Forestry practices must comply with the Forestry Act 2014 and the National Forestry Act 1998. The Restitution of Land Rights Act 22 of 1994 ensures fair land distribution. Indigenous knowledge, including inherited cultural norms and values (Mushi, 2009), benefits individuals and society.

10

Traditional practices supported local communities, renewing forests and developing skills, but modern media now dominates.

Undocumented records

"What's not documented is not done." Documentation serves as a reference, ensures cultural norms' sustainability, and aids future generations. It also helps trace records, supports organizational improvement, and can be used against employees if needed.

Participant TA 4, alluded that: "Most work is unrecorded, stories unwritten. Cultural taboos and gender disparity prevent sharing, like traditional male circumcision. Accurate, timely, and reliable data is needed to manage village activities." Participant TA 2, alluded that: "Indigenous knowledge is shared through storytelling, drama, poems, and music. Illiteracy among older council members and poor communication hinder record-keeping and local development plans. Youth disengagement also poses a structural barrier."

Both participants agree that indigenous knowledge, though intangible, poses a threat to local knowledge because it isn't recorded. Keeping records ensures sustainability for future generations. Indigenous knowledge involves passing down cultural norms and values (Mushi, 2009), forming intellectual skills that benefit individuals and society. These skills are intangible and passed through generations, guided by traditional customs. Indigenous knowledge is an intangible asset in traditional leadership, playing a pivotal role in sustainable development.

Collapsed system.

Since democracy, systems have collapsed due to frequent policy changes, poor monitoring, corruption, and fraud. Despite yearly budgets allocated for maintenance and replacement, effective implementation rarely occurs, hindering development.

11

Participant TA 3, alluded that: "Collapsed systems, lack of resources, structural issues, and poor infrastructure maintenance hinder talent attraction and retention. Without patriotism, identifying talent is difficult as people leave and don't return." Participant TA 1 supported TA 2, indicating that collapsed systems and poor infrastructure maintenance hinder rural development, causing brain drain. Talent scarcity in Africa is severe, with many seeking opportunities abroad (Docquier, 2017). Structural problems are a primary cause of these challenges.

Poor mentoring and coaching

Unmonitored training programs lead to poor mentoring and coaching. Organizations provide training for performance improvement, but skills and knowledge often remain unused. Effective mentoring and coaching are crucial; otherwise, training becomes fruitless expenditure due to its budget (Docquier, 2017).

Participant TA 6, alluded that: "We work haphazardly without recognition, leading to low motivation. Despite training, we still lack mentors." Participant TA 7, alluded that: "Mentoring starts early; parents instill values, model behavior, and coach children in culture, supported by the whole community". Participant TA 8, share the same sentiment with Participant TA 8: "Mentoring and coaching are scarce; post-training monitoring and evaluation can enhance community development."

Mentoring and coaching are crucial for performance management and effectiveness. Participants emphasized mentorship's role in post-training development, especially for youth and women (Dashper, 2020). Tribal leaders mentor promising individuals, guiding talent development (Royo et al., 2019), preserving traditional practices, and ensuring continuity of cultural heritage.

Cultural loss

Cultural loss, driven by globalization, TV, internet, and social networks, erodes traditional norms and values. Old languages fade, replaced by media language, impacting education. This merging of cultural ideas results in cultural diffusion.

12

Participant TA 2, alluded that: "Our village faces cultural diffusion and dilution; clan names and tribes are dying, and we're losing our cultural roots." Participant TA 6, share the same sentiment with Participant TA 2: "We've lost our cultural identity due to migrant workers marrying locals, leading to cultural dilution."

Participants emphasized valuing African cultural identity. Leaders appreciate international collaborations to promote cultural exchange and diversity in talent management, fostering inclusive environments and innovation (Berraies, 2020). Customary practices shape talent development (Logan et al., 2019). Decolonizing narratives harmonize relationships, integrating indigenous knowledge (Lyons et al., 2020). Cultural identity attracts talent (Kim et al., 2021).

CONCLUSION

The study aimed to propose strategies for effective talent attraction and retention, which was achieved. Objectives and research questions were met and discussed. Future research was recommended, focusing on attracting and retaining talent from an African tribal leadership perspective. Study demarcation was a limitation.

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17

Leadership entrapment:
A review and framework for management research

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ABSTRACT:

Leaders can often become stuck, or entrapped in patterns of thinking, behaving and feeling rendering them unable to address complex challenges within rapidly changing environments. Research has captured this experience with a range of concepts, resulting in a fragmented and inconsistent literature where studies exploring the same phenomenon are not recognized as such. Following an in-depth review of such studies, we map existing knowledge on this topic and introduce the overarching concept of *leadership entrapment* as a way to integrate insights into a coherent research agenda focused on this phenomenon. Finally, we propose an integrated framework to provide clarity and structure to the literature and to guide future research aimed at recognizing, preventing, and addressing leadership entrapment.

Keywords: Leadership entrapment, integrated framework, complex challenges

It has been long recognized that leaders have to address complex challenges in high-velocity environments (Bourgeois & Eisenhardt, 1988) and extreme context (Hannah, Uhl-Bien, Avolio, & Cavarretta, 2009). However, nowadays complexity is ubiquitous with the emergence of generative AI, geopolitical changes, and societal grand challenges such as climate change and sustainability (George, Howard-Grenville, Joshi, & Tihanyi, 2016). These are just a few of the challenges forcing leaders to "adapt in ways that successfully address the needs of a shifting environment" (Uhl-Bien & Arena, 2018, p. 89). Yet, leaders often find themselves 'stuck' within certain patterns of thinking, behavior, and emotions (Drummond & Hodgson, 2011; Lewin, 1938; Rubin & Brockner, 1975; Uhl-Bien & Arena, 2018) which prevents them from developing adaptive responses for themselves, their teams, and their organizations (Uhl-Bien, 2021).

This experience of being stuck has been explored in multiple studies, via a range of constructs and theories. A common term used to capture the experience is that of *entrapment*, typically defined as a psychological state, and more specifically, the subjective feeling of being unable to escape an undesirable situation, despite desire to do so (Gilbert & Allan, 1998). This conceptualization draws on evolutionary psychology (e.g., Dixon, 1998), specifically the idea of "arrested flight" – a defensive strategy used by animals exposed to inescapable threats or attacks. While the "dangers" experienced by leaders in a complex world are certainly of a different nature, the experience of perceived blocked or unavailable escape routes (i.e., solutions) when addressing complex challenges is in many ways the same. Most importantly, this experience has important consequences on the performance and well-being of leaders (e.g., (Meerts, 2005); (Wilson & Zhang, 1997); (Zhang & Baumeister, 2006); (Zhang, Harrington, & Sherf, 2022); (Zheng, Wu, Zheng, & Pan, 2022)). As such, taking stock of the knowledge related to this phenomenon, along with revealing gaps and opportunities for further understanding is important. In this paper, we provide an integrative review of the knowledge on this topic, and generate an overall framework that can serve as blue-print for future research aimed at helping leaders prevent, recognize, and address leadership entrapment.

1

LEADERSHIP ENTRAPMENT

Entrapment and leaders

The experience of entrapment for decision-makers was described as ubiquitous and significant over 40-years ago (Brockner, Shaw, & Rubin, 1979; Teger, 1980); however, progress on understanding the experience of leadership entrapment, especially beyond its manifestation in relation to decision-making, remains limited. The concept of entrapment has been applied to leadership to describe what leaders felt during COVID-19 when unable to deal with unclear demands from followers (Zheng et al., 2022), or entrapment by a protagonist whereby a leader is induced into committing a "morally undesirable act", which may enable the protagonist to influence the leader's later decision-making (Sheard, Kakabadse, & Kakabadse, 2011, p. 89). It has also been used to explain intractable political conflicts (Watkins, 2007), escalation of commitment (e.g., Wilson & Zhang, 1997), or processes like organizational and technological path dependence (e.g., Sydow, Schreyögg, & Koch, 2009; Walker, 2000) to mention just a few of the well-known phenomena that are related to, or forms of, entrapment. Even when the term "leadership entrapment" is used in the literature, the focus is on facets of the construct specific to the situation studied, often informed by different theoretical perspectives employed. For instance, the aforementioned study on leaders during COVID-19 (Zheng et al., 2022) draws on defeat and entrapment theory used in psychology, while the study on induced morally questionable acts (Sheard et al., 2011) draws on a conceptualization of entrapment from law enforcement. Moreover, there is a multitude of factors that can lead to, or facilitate, the experience of entrapment: for instance, authors have referred to the potentially entrapping nature of the leader/follower relationship (Uhl-Bien, 2021), previous arguments or rhetoric (Morin & Gold, 2010; Park, 2017; Risse, 2000; Schimmelfennig, 2009), leadership styles (Tierney & Tepper, 2007), the leader's gender (Archer & Kam, 2022; Giacomin, Tskhay, & Rule, 2022), and even the leadership identity (Haslam, Ryan, Postmes, Spears, Jetten et al., 2006).

Leadership entrapment conceptualization

We position *leadership entrapment* as an overarching concept elevated from its use for

2

particular situations and under various related terms in order to recognize that the fundamental experience captured across many studies under a range of concepts is actually the same – that is, the experience of leaders in a challenging, undesirable situation perceiving a lack of viable escape routes (or solutions) due to personal and/or situational factors. To illustrate how the experience of entrapment may be described by a leader, we draw from Gilbert and Allan's (1998) original conceptualization of entrapment where a distinction was made between internal and external entrapment. A leader may express internal entrapment with phrases such as 'I want to get away from myself', 'I would like to escape my thoughts and feelings', and 'I feel trapped inside myself'. Externally focused expressions may include 'I am in a situation I feel trapped in', 'I am in a relationship I can't get out of', and 'I feel trapped by other people'. (Gilbert & Allan, 1998). This also raises the question of awareness in relation to the experience of being trapped, which we address next.

Subjective and objective entrapment

The literature generally considers that entrapment would be recognized by the individual and is measurable by self-report scales. We define this experience as *subjective leadership entrapment*, as while it is "real" to the individual, it may be prone to a range of influences which distort the accuracy of the way the experience is perceived, including "self-serving biases" or pervasive organizational, social, and cultural factors (Drummond & Hodgson, 2011, p. 137; Michel, 2014). This specification also helps to recognize that a leader may be entrapped, but not necessarily perceiving the situation as such, and therefore not able to self-report on it: indeed, evidence suggest that leaders may be 'blind' to their entrapment and may only recognize such entrapment in hindsight (Michel, 2014). Where a leader is unaware of their entrapment, other individuals such as co-workers may recognize their colleague's entrapment from a more independent perspective. We define this experience as *objective leadership entrapment*, and suggest that future research would benefit from acknowledging the potential for these distinct manifestations of entrapment.

In this paper, we delve deeper into exploring what is known about leadership entrapment, aiming to provide a mapping of the relevant literature and synthetize the existing knowledge into a

3

framework that can guide future research on this topic. First, we summarize key insights from an in-depth literature review, highlighting concepts, theories, and approaches to measurement that are relevant to understanding leadership entrapment. Based on the insights from the literature review, we argue that leadership entrapment as an overarching concept provides a new frame of reference to explore why leaders become stuck in their thinking, behaving, and feeling. We next present an integrated framework to inform consideration and exploration of the experience of leadership entrapment. Finally, we highlight the contributions this review, and the proposed integrated framework, have to offer future researchers.

THE LITERATURE REVIEW

As mentioned before, leadership entrapment is seriously consequential and can have psychological consequences such as stress and anxiety (Lim, Crane, & Kansakar, 2019), and performance consequences such as leader's underperformance and failure to achieve their mission (Meerts, 2005; Zheng et al., 2022). Recognition of the potential consequences of entrapment to leaders, their teams and organizations, and society more broadly, motivated us to undertake a literature review to more fully understand leadership entrapment and raise awareness of how leaders can more effectively manage forms of entrapment, minimize adverse consequences, and better address grand challenges (George et al., 2016). Our first goal for the literature review was to bring clarity to the myriad of concepts that have been associated in the literature with entrapment, showing how they overlap or relate to the focal concept of leadership entrapment. Our second goal was to organize the relevant literature and bring together different conversations into an integrated framework which "enables the synthesis of knowledge from across research approaches in a fragmented field" (Cronin & George, 2023, p. 168) to guide further theorizing by future researchers.

Review methodology

We undertook the integrative review using the process indicated in Figure 1.

Insert Figure 1 about here.

We initially started our search using key relevant terms ("leadership", "leader", and the

4

"entrap*" stem word to capture studies referring to "entrapping", "entrapped" or "entrapment"). This led to the discovery that entrapment as a term has been used broadly across many fields. We then limited the search to studies that are relevant to social sciences (i.e., excluding for instance articles from medicine or biology, where entrapment is used with a different meaning), but deliberately maintained a broad view of bodies of literature beyond the leadership literature, such as rhetorical entrapment (Morin & Gold, 2010; Park, 2017; Schimmelfennig, 2001), career or role entrapment (Chang, Wang, She, Zhang, Tsamlag et al., 2019; Drummond & Chell, 2001; Ellis, 2017; Lim et al., 2019), and entrapment relating to mental health (Forkmann & Teismann, 2017; Höller, Kremers, Schreiber, & Forkmann, 2022; Panagioti, Gooding, Taylor, & Tarrier, 2013; Siddaway, Taylor, Wood, & Schulz, 2015) to capture the full richness and depth of understanding what is known about entrapment in general. This generated a list of over 160,000 entries. After title screening and ultimately abstract screening, 5,340 were retained. After de-duplication and excluding of articles referring to non-relevant versions of entrapment (e.g., legal entrapment), the number of items retained was reduced to 192 items. When reviewing these articles more closely, we noted different but still relevant terms, such as cognitive entrenchment (Dane, 2010); commitment to the status quo (Chiu et al., 2022; Hambrick, Geletkanycz & Fredrickson, 1993); partisanship (Van Bavel & Pereira, 2018); and work embeddedness (Bernhard-Oettel, Stengård, Leineweber, Westerlund, Peristera et al., 2020; Stengård, Bernhard-Oettel, Berntson, & Leineweber, 2017), offered further opportunities to enhance our understanding. To explore these terms further, we used snowballing and citation tracking techniques to expand our search and identified a further 302 relevant items, bringing the total number of items identified directly relevant to our review to 494.

Review findings

Lack of recognition of the similarities of leader experience

Our review of the literature revealed that although there is a substantial knowledge on this phenomenon, three aspects of the existing work limit its effective use in both future research and management practice. First, entrapment has been conceptualized as a subjective feeling (De Beurs,

5

Cleare, Wetherall, Eschle-Byrne, Ferguson et al., 2020; Forkmann, Teismann, Stenzel, Glaesmer, & de Beurs, 2018), but also as an outcome (Sheard et al., 2011), a process (Brockner & Rubin, 1985), a conflict between restraining and driving forces (Brockner & Rubin, 1985; Rubin & Brockner, 1975), or in other domains, a antecedent of depression, anxiety or stress (Gilbert & Allan, 1998). Second, the multitude of conceptualizations seems to be determined by the context in which the phenomenon is studied, often without recognizing the communality of the experience documented across studies. For example, studies refer to entrapment within commitments made within alliances (Kim, 2011), entrapment within behavior boundaries established by social identities (Sharp, 2009), and the phenomenon is also often defined in different terms, such as intractable conflicts (Watkins, 2007), or escalation of commitment to failing courses of action (Brockner & Rubin, 1985). Third, studies tend to focus narrowly on specific entrapment factors or entrapment scenarios, such as the entrapping effect of follower's unclear demands during the COVID pandemic (Zheng et al., 2022), or entrapment by a protagonist whereby a leader is induced into committing a "morally undesirable act", which may enable the protagonist to influence the leader's later decision-making (Sheard et al., 2011, p. 89). The result is a fragmented literature with a multitude of concepts used to explore such instances of entrapment, but which doesn't recognize that the phenomena they capture are in fact very similar in terms of the experience of the leader. This limits our ability to fully capitalize on the knowledge accumulated, and to progress our understanding of the phenomenon.

Leadership entrapment can take many forms

We aimed to identify the different forms of entrapment studied in the literature, with particular focus on studies that capture the experience of leadership entrapment, but also studies focused on other forms of entrapment that could inform the understanding of leadership entrapment. In this first category, we included studies that specifically used the concept of leadership entrapment, but also studies that use different concepts but address situations where leaders are in unpleasant or undesired situations from which they wish to escape (or solve), but they perceive that escape (or a solution) is not possible. A list of such articles with a short summary showing their relevance is provided in Table

6

1.

Insert Table 1 about here.

Leadership entrapment has been studied in relation to decision-making processes (Becker, 1960; Brockner & Rubin, 1985; Brockner et al., 1979; Drummond & Hodgson, 2011); ways of working and organizational features (Proctor, 1993; Rumelt, 2011); leader's gender (Archer & Kam, 2022; Arnold, 2014; Giacomin et al., 2022; Rapino & Cooke, 2011; Samuelson, Levine, Barth, Wessel, & Grand, 2019); actions of other leaders (Sheard et al., 2011); politics (Campbell, 1969); leader/follower relationships (Uhl-Bien, 2021; Zheng et al., 2022); career decisions (Bratcher, 1982; Crane, Phillips, & Karin, 2017); promises and commitments (Gunia, Sivanathan, & Galinsky, 2009; Haack, Schoeneborn, & Wickert, 2012); alliances (Morin & Gold, 2010; Park, 2017; Risse, 2000; Schimmelfennig, 2009); leadership rhetoric (Petrova, 2016); role stereotypes (Gabel, Hughes, & Daniels, 2008; Swartz, Gabel, Hughes, & Irani, 2009); role stigma (Kreiner, Mihelcic, & Mikolon, 2022; Paetzold, Dipboye, & Elsbach, 2008); harmful leadership styles (Tierney & Tepper, 2007); and even the leader identity itself (Haslam et al., 2006). The richness and diversity of research using entrapment in the leadership domain identified in this category indicated that an integrated framework is needed to bring clarity and organization to the literature.

Other forms of entrapment are relevant to understanding leadership entrapment

In seeking a broader perspective on leadership entrapment, we created a second category of studies and included explorations of entrapment in other domains, but that are useful in understanding leadership entrapment; we list those identified in Table 2, again, with an explanation of their relevance.

Insert Table 2 about here.

These additional forms of entrapment include entrapment within relationships (Adjei, 2017; Landenburger, 1989; Shearson, 2021; Taylor, 2020; Tolmie, Smith, & Wilson, 2023; Tolmie, Smith, Short, Wilson, & Sach, 2018; Torres, Navarro, Gutiérrez, Tarragona, Imaz et al., 2016); cultural entrapment (Eggerman & Panter-Brick, 2010; Gilbert, Gilbert, & Sanghera, 2004); forms of gender

7

and related social entrapment (Phoenix, 1997; Richie, 2003; Vasavi, 2014); institutional entrapment (Cheon, 2008; Katz & Acquah, 2022; Park, Shin, Han, Kang, Cheon et al., 2011); social entrapment (Douglas, Tarrant, & Tolmie, 2021; Gilbert & Gilbert, 2003; Katz & Acquah, 2022; Long, Chen, Hu, Chen, Cao et al., 2022; Moe, 2007; Ptacek, 1999); symbolic entrapment (Sharp, 2009); and system entrapment (Taylor, 2020, 2022; Tolmie et al., 2023). We also include here studies on concepts that appeared to relate to entrapment such as cognitive rigidity (Morris & Mansell, 2018); partisanship (Van Bavel & Pereira, 2018); socio-cultural conservatism (Van Hiel & Mervielde, 2003; Van Hiel, Onraet, Crowson, & Roets, 2016); and polarization (Salvi, Iannello, Cancer, Cooper, McClay et al., 2023). In alignment with existing leadership literature, the review indicates that entrapment is a multi-level phenomenon (Osborn, Hunt, & Jauch, 2002; Salter, Sharp, & Chen, 2013; Sleesman, Lennard, McNamara, & Conlon, 2018) with internal and external entrapment potentially arising from the leader themselves, from relationships, other people, and social and cultural aspects of a leader's situation.

To begin the organization of the literature, we thematically categorized the identified uses of entrapment in Tables 1 and 2, to introduce an initial overarching structure. We labelled these themes as 'forms of entrapment'. The forms of entrapment include entrapment within cognitive patterns, decision-making, stated positions and rhetoric, relationships with others, cultural and social expectations, and within organisational aspects and by oneself. We have aligned those forms of entrapment with Gilbert and Allan's (1998) original internal and external entrapment conceptualisation, as discussed previously, within the integrated framework (Figure 2).

Theoretical perspectives in understanding leadership entrapment

We focused next on reviewing theories used to explain entrapment, as provided in Table 3.

Insert Table 3 about here.

Given the complexity of the phenomenon, it is no surprise that many theories have been put forward to explain how entrapment arises. Examples of theories used include prospect theory (Kahneman & Tversky, 1979); self-presentation theory (Staw, 1976); escalation of commitment theory (Brockner & Rubin, 1985); and self-determination theory (Ryan & Deci, 2017). When we

8

applied those theories to leadership entrapment, we recognized theoretical themes, so we created five categories of theories to use within the integrated framework, labeled as 'leadership motivations': desire to maintain image or status, desire to avoid social isolation; desire to avoid unpleasant thoughts; desire to avoid unpleasant situations, and desire to appear competent as a decision-maker.

Consequences of leadership entrapment

In seeking to understand the potential consequences of entrapment, we identified two broad categories of such consequences, as listed in Table 4.

Insert Table 4 about here.

First, there are psychological consequences for the leader, including depression, anxiety, impaired well-being, burnout, feeling bad, reduce job satisfaction, and suicide ideation (Gilbert & Allan, 1998; Lim et al., 2019; O'Connor & Kirtley, 2018; Williams, 1997; Zheng et al., 2022). Second, there are performance consequences, such as inability to close a deal (Meerts, 2005); making decisions regarding investments (Wilson & Zhang, 1997); difficulties in providing appropriate advice (Zhang et al., 2022); remaining in loss making endeavors (Zhang & Baumeister, 2006); compromising of a leader's mission (Zheng et al., 2022); or constrained social sensemaking activities leading to potential disaster (Weick & Sutcliffe, 2003). Therefore, we conclude that leadership entrapment can have serious consequences, for a leader their teams and organizations, and society more generally.

Measurement of entrapment

Finally, we sought to understand how entrapment had been measured and provide a list of identified scales in Table 5.

Insert Table 5 about here.

The self-reporting scales derived from a 16-item entrapment scale developed by Gilbert and Allan (1998) have tended to retain the internal/external structure and appear to have global generalizability – Gilbert and Allan's (1998) entrapment scale has successfully translated and used in a broad range of languages and cultures, including German (Trachsel, Krieger, Gilbert, & Holtforth, 2010); Chinese (Chang et al., 2019; Xu, Yu, Tsamlag, Zhang, Chang et al., 2021); and Turkish (Akin

9

& Akin, 2015; Akin, Uysal, & Akin, 2012). Short form entrapment scales have been developed to enhance usability, including an 8-item integrated entrapment/defeat scale (Griffiths, Wood, Maltby, Taylor, Panagioti et al., 2015) and a 4-item entrapment-specific scale (De Beurs et al., 2020). Entrapment related items have been developed, or integrated, into scales for specific circumstances. Examples include scales for carers of people with dementia (Martin, Gilbert, McEwan, & Irons, 2006); those experiencing caregiver burdens (Stommel, Given, & Given, 1990); and for those entrapped within intimate partner violence (Torres et al., 2016). However, none of these scales are developed with a focus on the specific experiences of leadership entrapment.

THE INTEGRATED FRAMEWORK

In summary, the proposed integrated framework (Figure 2) captures the findings from the above review and discussion.

Insert Figure 2 about here.

The review indicates there are multi-level individual, relational, and other factors which may contribute to the leader's perception of themselves and the world around them. Such factors inform the leader's leadership motivations and how they think, behave, and feel as a leader within in an organization located within a broader social and cultural landscape. The factors and motivations (Figure 2) may lead to the leader being entrapped within forms of entrapment (Tables 1 and 2). Such experiences may lead to psychological and performance consequences (Table 4). Using this framework, we can speculate on the experience of leadership entrapment further. We speculate that the experience of entrapment is influenced by the complex interactions and relationships between the identified factors, motivations, forms of entrapment, and how a leader evaluates their situation, i.e., the more controlling an event or circumstances are perceived to be, the more likely it is to decrease an individual's sense of autonomy (Deci & Ryan, 1985; Reeve, 2023; Ryan & Deci, 2017). Specifically, we would consider it likely that the leader's evaluation of their ability to develop and execute escape routes or solutions in the face of their leadership circumstances, will have a material impact upon their evaluation of their entrapment (Schultze, Pfeiffer, & Schulz-Hardt, 2012). Furthermore, we speculate

10

that the experience of entrapment is unique to each leader and may pervade the leader's thinking, behaving, and emotions as leader, regardless of whether or not they are subjectively aware of their entrapment. Such entrapment will be informed by feedback, and lessons learned through experience (Brockner & Rubin, 1985; Staw, 1981). In light of this, we consider it likely that through the complex interaction of factors, a leader's experience of entrapment could fluctuate rapidly across shorter and longer time frames (Stenzel, Holler, Rath, Hallensleben, Spangenberg et al., 2020; van Ballegooijen, Littlewood, Nielsen, Kapur, & Gooding, 2022). For example, a leader may feel they are entrapped within unclear follower demands and that relationship during a meeting (Zheng et al., 2022), but not in the next meeting with their peers. However, over the longer term, a leader may also feel entrapped , for example, by their roles and their workplace (Bernhard-Oettel et al., 2020; Stengård et al., 2017), or by the organisational culture (Weick & Sutcliffe, 2003), i.e., leadership entrapment can occur at multiple levels (Osborn et al., 2002; Salter et al., 2013; Sleesman et al., 2018).

CONCLUSION

In conclusion, we have undertaken a comprehensive literature review of and applied the findings to leaders. This has led us to define leadership entrapment as the experience of leaders in a challenging, undesirable situation perceiving a lack of viable escape routes (or solutions) due to personal and/or situational factors. The current literatures relating to differing forms of entrapment do share many similarities which have enabled us to position leadership entrapment as an overarching concept sitting above the specific causes of entrapment by focusing on the *experience* itself. By seeing these similarities and integrating the different conversations within the literature, we have developed an integrated framework which can be built upon for future theorizing and research.

CONTRIBUTION

The review has resulted in the three contributions to the extant literature, a critical review of the literature and an integrated framework which offers current and future researchers several new avenues for exploring leadership entrapment. By taking a critical view of the extant literatures and raising awareness of potential limitations of existing studies. We have raised awareness of the

11

inconsistent use of the term "entrapment", and to show how the fragmentation of the literature constrains a comprehensive understanding of how leaders become entrapped from both internal and external circumstances. Furthermore, we have identified research gaps in how leadership entrapment is experienced, its socioemotional consequences for the leader, and its organizational impacts. Based upon our review findings, we propose an integrated framework to organize the existing fragmented and diverse literature, as applied to the concept of leadership entrapment.

Our comprehensive review of the potential factors and circumstances which may lead to leadership entrapment allows us to suggest specific research that should be conducted in terms of deepening our understanding of why leaders fail to adapt to complex challenges, or why sometimes they do things that seemingly do not make sense. We envision studies that capture such phenomena from the leaders' perspective, as the way we define the concept of leadership entrapment highlights the subjective experience of the leaders in those situations. Equally important, our review highlights not only consequences in terms of performance, but also the negative impact the experience of entrapment has on leaders. This line of future research fits well with the increasing interest for understanding well-being in organizations (Hannah, Perez, Lester, & Quick, 2020), where leaders are an important factor for the climate they set. We suggest studies that uncover the causes of toxic environments by exploring the struggles leaders face when entrapped, along with suggesting studies on how their experience of entrapment can be prevented, or once occurred, how it can be managed.

We also suggest the development of a measurement scale for leadership entrapment, facilitating sufficient nuance and granularity by illustrating how entrapment can be measured (based on previous work), and by highlighting the need to identify whether the leadership entrapment is predominantly internal or externally generated. Finally, we recommend researchers explore how to reduce or eliminate leadership entrapment through coaching, training, or other change management interventions. This may be specifically focused on internal entrapment and the leader's thoughts and perspective-taking, or supporting leaders to accept, make sense of, and navigate external entrapment.

12

Table 1 – Concepts capturing (directly or indirectly) the experience of leadership entrapment

Form of entrapment	Name	References	Explanation
Entrapment within relationships with others	Leadership entrapment	Zheng et al. (2022)	Leaders were unable to fulfil their leader roles due to unclear and difficult demands placed upon them by followers.
	Leadership entrapment	Sheard et al. (2011)	The authors define leadership entrapment as "situations where a person induces another to commit a morally undesirable act, such as corruption, which the person otherwise would have not committed." (Sheard et al., 2011, p. 89).
	Alliance and alliance negotiation entrapment	Kim (2011); Norheim-Hansen and Meschi (2021)	Alliances and agreements made by leaders, organisations, or nations forces them into unwanted situations (e.g., having to help an ally even if that is costly or problematic). The construct is similar to the construct of decision-making entrapment (see below), applied to the particular case of alliances and agreements.
	Moral entrapment	Haack et al. (2012)	Leaders may become entrapped in being required to fulfil promises and commitments.
	Vicarious entrapment	Gunia et al. (2009); Olivola (2018)	Where leaders have connections with other leaders, mutual support expectations to each other's agendas may compel leaders to provide ongoing commitment to other leaders' failing course of action. This construct connects decision-making entrapment with similar constructs such as moral entrapment.
Entrapment within stated positions and rhetoric	Argumentative self-entrapment	Risse (2000)	Strong commitment to a particular position or argument can lead to constraints in future negotiations or debates when the position or the argument were formulated without due diligence. A modern example is the use of social media posts taking a particular stance that later can be problematic for the leader.

	Rhetorical entrapment	Park (2017)	Rhetorical entrapment occurs when "leaders experience future constraints from their audiences in their policy options due to their initial rhetoric" or public commitments (Park, 2017, p. 490). This construct is similar to argumentative self-entrapment and alliance entrapment.
Entrapment within decision-making processes	Decision-making entrapment	Brockner and Rubin (1985)	This is the well-known case of escalation of commitment: investing time, energy, or an identity into a course of action or goal, and persisting with it in spite of negative outcomes or the action leading to unwanted results. Leaders are constrained by commitment to previous decisions made.
	Double locked in	Aronsson, Dallner and Gustafsson (2000); Bernhard-Oettel et al. (2020)	Leaders may feel stuck in both their workplace and their profession due to difficulties in finding new roles due to lack of opportunity in new professions or organizations. This construct is similar to decision-making entrapment, but applied to employment.
	Entrapment within career decisions	Lim et al. (2019)	Career choices made by leaders may not remain optimal, but the consequences and costs of change may be high particularly with age and seniority. This construct is similar to decision-making entrapment, but applied to career decisions.
	Entrapment within low mobility jobs	Crane et al. (2017)	Certain professions have very specific skills which, when developed over considerable timeframes, may constrain leaders seeking to transition to new professions or careers. This construct is similar to decision-making entrapment, in the context of job choices.
	Job embeddedness	Harman, Lee, Mitchell, Felps and Owens (2007); Mitchell, Holtom, Lee, Sablynski and	There are many legacy choices arising from individual, family, and community attachments making a leader believe they cannot leave their job.

14

Erez (2001)

	Political entrapment	Campbell (1969)	When committing to and championing initiatives, leaders may be constrained by the need or desire to ensure that such initiatives are only favorably considered.
	Role entrapment	Gabel et al. (2008); Lim et al. (2019)	Negative stereotypes regarding personal characteristics of specific leaders can constrain leaders from career selection and progression. The consequences may be similar to other forms of career, role, or job entrapments, but does not involve the leader 's choice or decision.
	Role stigma entrapment	Kreiner et al. (2022); Paetzold et al. (2008)	Stigma of a leader's role, personal characteristics, occupation, organisation, or industry may constrain future career choices. This construct is similar to role entrapment, with similar consequences to other form of career, role, or job entrapments.
Entrapment within organizational aspects	Organizational characteristics	Proctor (1993); Rumelt (2011)	Organizational characteristics may prevent leaders when seeking to adapt activities in response to situational changes, or seeking to create competitive advantage.
Entrapment by self	Self-entrapment	Michel (2014)	Leaders may become entrapped without the entrapment being recognized by them and they carry it from leadership position to leadership position.

Table 2 – Entrapment-related concepts that can be useful in conceptualizing and theorizing leadership entrapment

Form of entrapment	Name	References	Definition
Entrapment within relationships with others	Abusive relationship entrapment	Taylor (2020); Tolmie et al. (2018)	Abusive relationship involving coercive and controlling behaviours by the abuser may create a sense of loss of autonomy and control in the leader. This form of relationship entrapment may be similar to leadership entrapment (Zheng et al., 2022).
	Gender entrapment	Arnold (2014); Richie (1996); Vasavi (2014)	Leaders of any gender will need to navigate the social and personal expectations of their chosen gender within the culture in which they operate.
	Relationship expectation entrapment	Hall and Baym (2012)	Relationship expectations of how and when people will communicate and maintain contact with each other constrain leaders, particularly when operating in hybrid and remote working practices. This may be related to other forms of relation-based entrapment.
	Role captivity	Pearlin, Mullan, Semple and Skaff (1990)	The need and desire to care for followers as part of the leadership role may constrain leaders decision-making regarding followers, or create a sense of excess obligation to followers. This form of entrapment is similar to leadership entrapment (Zheng et al., 2022), and abusive relationship entrapment.
	Symbolic entrapment	Sharp (2009)	When navigating social identities with others, leaders may not be able to go beyond behaviors socially agreed for those identities. This construct may be similar to other relationship-based forms of entrapment.
Entrapment within organizational	Institutional entrapment	Cheon (2008); Katz and Acquah (2022)	Leaders may feel entrapped by the labels or categories assigned to them by organisations and institutions. This form of entrapment relates in some ways to cultural entrapment, and also other forms of organisational and role entrapment.

aspects

Entrapment within cognitive patterns	Social entrapment	Douglas et al. (2021); Moe (2007)	The lack of response from other organisations, institutions, or teams due to decisions about the individual leader, could constrain a leader seeking assistance towards goals. This form of entrapment is similar to organisation characteristics and role entrapment.
	Cognitive rigidity	Morris and Mansell (2018)	Leaders may tend to use default patterns when seeking to resolve situational challenges, even when the patterns are outdated or obsolete. This may be a cognitive antecedent to forms of entrapment.
	Partisanship	Brandt, Evans and Crawford (2015); Lammers, Koch, Conway and Brandt (2017); Van Bavel and Pereira (2018)	Leaders may be constrained in sense-making and decision-making within their own political partisanship, or that of others. This may be a cognitive antecedent to forms of entrapment.
	Self-certainty	García-Mieres, Usall, Feixas and Ochoa (2020)	Excessive self-certainty of belief may constrain leaders ability to take new perspectives or take on board others ideas and suggestions. This may be an antecedent to forms of entrapment, and related to cognitive entrenchment, cognitive rigidity, and partisanship.
	Social-cultural conservatism	Van Hiel et al. (2016)	In this construct, leaders may be constrained by their own conservative values, or those held by a socially and culturally conservative organization or communities. For a leader personally, this may be a cognitive antecedent to entrapment, and otherwise similar to cultural entrapment and organization characteristics.
	Socio-cultural polarization	(Salvi et al.,	Embracing polarization, leaders hold views which prevents sensemaking involving

17

		2023)	information or others from outside sources. This construct may be similar to socio-cultural conservatism and partisanship.
	Trauma entrapment	Taylor (2020)	Having states of mind which devalue or undermine their self-perception may constrain the leader's ability of leaders to perceive their strengths and abilities accurately. This may be an antecedent to entrapment and may be related to cognitive rigidity, or negative versions of self-belief.
Entrapment within cultural and social expectations	Cultural entrapment	Weick and Sutcliffe (2003)	Organizations (and communities) may create environments which are conducive to entrapment and keep themselves and their employees locked into established behavioral patterns. This form of entrapment is similar in some ways to organizational characteristic entrapment.
	Social-cultural entrapment	Eggerman and Panter-Brick (2010); Gilbert, Gilbert and Sanghera (2004)	The multiple social expectations, rules, and values present in the leader working environment may intersect in a way that constrains a leader sensemaking and decision-making options. This form of entrapment is similar to aspects of organisation characteristics and cultural entrapment.
	System entrapment	Taylor (2020)	The lack of response and potentially stereotypic judgement of others when seeking assistance, may hinder leaders being able to support themselves and their followers. This construct is similar to social, cultural, and institutional entrapment.
Entrapment within decision-making processes	Entrapment within deskilled or low skilled jobs	Lim et al. (2019); Scherer (2004)	Selection of low skilled or deskilled jobs may constrain leader's later career trajectories and choices. This construct is similar to decision-making entrapment applied to career choices.

Table 3 – Categories of theories used to explain entrapment, applied to leadership entrapment

Leadership motivations	Theories	Application to leadership entrapment
Desire to maintain image or status	Involuntary subordinate perception theory (Gilbert, 2000)	Leaders may become entrapped when they are forced to be lower in the social hierarchy than others, and as a result, a leader may be motivated to try and maintain their status, image, and social rank.
	Self-justification theory (Martens & Orzen, 2021)	Leaders may be entrapped when needing to justify previous decisions that have not yielded good outcomes to avoid the cognitive dissonance of perceiving themselves as a poor decision-maker whilst being motivated to appear competent and successful as a decision-maker.
	Self-presentation theory (Drummond & Hodgson, 2011)	Leaders may become entrapped in thinking and behaving which support their desire to look good in their own eyes and the eyes of others in pursuit of maintaining their image, reputation, or brand.
	Social comparison theory (Sturman & Mongrain, 2008)	Leaders may become entrapped in social comparisons with others, such as leadership peers, and seeking to maintain their position within the social hierarchy and as an insider, rather than an outsider who may become socially isolated or ostracized.
	Social rank theory (Gilbert & Allan, 1998)	A leader may become entrapped as a subordinate to another leader who is more powerful or senior. See Involuntary subordinate perception theory above.

Desire to avoid social isolation	Self-determination theory (Ryan & Deci, 2017)	A leader may become entrapped in the thinking and behaving required to satisfy or reduce threats to their basic psychological needs for autonomy, competence, and relatedness, i.e., to be able to make their own decisions, to be and to be seen as competent, and to have positive relationships with others.
Desire to avoid unpleasant thoughts	Dissonance theory (Festinger, 1957)	A leader could be entrapped in thinking patterns which avoid or reframe information which causes discomfort, or which is inconsistent with their expectations and how they see the world, therefore seeking to avoid unpleasant thoughts.
Desire to appear competent and successful as a decision-maker	Sunk cost theory (Thaler, 1980)	A leader may become entrapped in their perception of previous investment costs, be unable to let go of that investment and continue their investment hoping for an eventual return in order to maintain their image, reputation, and status.
	Prospect Theory (Kahneman & Tversky, 1979)	A leader may become entrapped in thinking and behaving which seeks to avoid risk and losses and to maintain their image, reputation, and image.
	Escalation of commitment theory (Brockner & Rubin, 1985)	Leaders may become entrapped through continuing to invest in failing courses of action so that they are able to maintain their image as a competent and successful decision-maker.
Desire to avoid unpleasant situations	Defect and entrapment theory (Gilbert & Allan, 1998)	Leaders may become entrapped by their efforts to avoid being threatened by aggressors by keeping themselves small to avoid unpleasant situations.
	Threat rigidity hypothesis (Staw, Sandelands, & Dutton, 1981)	When placed in a threat situation, a leader's most well-learned or dominant responses may occur, leading to the restriction of information processing and a reduction in considered options focusing on the avoidance of unpleasant situations.

Leadership
motivations

20

Table 4 – Consequences of leadership entrapment

Consequence	References	Description
Psychological consequences		
Anxiety	Gilbert, Allan, Brough, Melley and Miles (2002); Griffiths, Wood, Maltby, Taylor and Tai (2014); Kendler, Hettema, Butera, Gardner and Prescott (2003); Siddaway et al. (2015)	Perceived entrapment may lead to anxiety.
Cognitive-being emotional state	Cramer, Rasmussen and Tucker (2019)	Entrapment may be experienced as an "emotional state of urgency" (Cramer et al., 2019, p. 1).
Depression	Brown, Harris and Hepworth (1995); Choi and Shin (2023); Gilbert and Gilbert (2003); Gilbert, Gilbert and Irons (2004); Taylor, Gooding, Wood and Tarrier (2011)	Perceived entrapment may lead to sub-clinical and clinical depression.
Feeling bad about themselves	Zhang and Baumeister (2006)	Decision-makers may feel distressed for enduring psychological pain and losses when using self-esteem motivations in decision-making.
Feeling of being	Brockner and Rubin	Individuals may feel conflicted between the possible alternatives of actions available.

21

conflicted	(1985)	
Needing to seek social support	Taylor (2020)	When entrapment becomes severe, seeking out social support may be required.
Negative mental health outcomes	Cramer et al. (2019); Lim et al. (2019)	Perceived entrapment can result in adverse mental health symptoms and increased stress.
Suicidality	Clarke, McEwan, Ness, Waters, Basran et al. (2016); Forkmann and Teismann (2017); Rasmussen, Cramer, Nascimbene, Robertson, Cacace et al. (2023); Shelef, Levi-Belz, Fruchter, Santo and Dahan (2016); Taylor, Wood, Gooding and Tarrier (2010); Vasavi (2014)	Perceived entrapment may lead to suicide or self-harming ideation, attempts, and suicide.

Performance consequences

Continuation with under-performing partnerships	Drummond (1995)	Business partnerships may fail when continued investment in a failing strategy continue.
Defeat of leader's mission	Zheng et al. (2022)	Entrapment within the leader/follower relationship and unclear follower demands, may lead to failure to achieve leadership goals and their ability to lead.
Degradation of	Weick and Sutcliffe	Persistent patterns of thinking and approaching situations, can lead to degraded sensemaking and

sensemaking	(2003)	sense-giving during events.
Entrapment within failed goals	Zheng et al. (2022)	Where desired goals have not been achieved, individuals cannot escape from the associated failure.
Hiring an incompetent employee	Drummond (1994)	Entrapment in organizational hiring processes and political pressures may lead to the hiring of incompetent staff, which may create a further entrapment.
Inability to close a deal	Meerts (2005)	An entrapped negotiator may not be able to close a sought-after deal leading to individual and organizational difficulties.
Inappropriate decision-making	Brockner and Rubin (1985); Drummond (2004); Drummond and Hodgson (2011)	Decision-makers may make decisions based upon their personal needs for self-justification, to maintain social rank, etc. rather than pertinent decision variables.
Investment choices and losses	Meerts (2005)	Investments in assets, investments, and partnerships may constrain leaders ability to escape from such investments or recover losses (with or without further escalation of investment).
Leader underperformance	Meerts (2005); Staw and Ross (1987)	Leaders may be constrained by underperforming leaders, or leaders who self-justify their maintaining an erroneous position as strong leadership.
Reduction in decision-making options	Meerts (2005)	Entrapment may lead to a reduction in decision-making options at a later date, or at the conclusions of negotiations.
Under-performing businesses	Drummond (2004); Drummond and Hodgson (2011)	Entrapment may lead to being unable to escape from poor-performing business situations, leaders may suffer the gradual decline of businesses over months or years.
Unintended	Meerts (2005)	As a result of entrapped negotiations, unintended consequences may arise which benefits third

| consequences | parties, constrain future decisions, or extract high costs of remaining within the agreement. |

Table 5 – Entrapment measurement scales

Instrument	References	Structure and example items	Sample
Entrapment scale	(Gilbert & Allan, 1998)	16-item self-report questionnaire with two subscales: Internal Entrapment (6-items), and External Entrapment (10-items). Internal entrapment items include: • I want to get away from myself. • I would like to escape my thoughts and feelings. • I feel trapped inside myself. External entrapment items include: • I am in a situation I feel trapped in. • I am in a relationship I can't get out of. • I feel trapped by other people.	Sample One - This consisted of 302 university undergraduates (69 males, 233 females). Sample Two - Participants were 90 depressed patients (42 males and 48 females)
Entrapment scale short form	De Beurs et al. (2020)	4-item self-report questionnaire with two subscales: Internal Entrapment, and External Entrapment • I feel I'm in a deep hole I can't get out of. • I feel trapped inside myself. • I often have the feeling that I would just like to run away.	Samples were taken from hospital admissions presenting with an episode of self-harm at two Scottish general hospitals.
Entrapment scale short	Griffiths et al. (2015)	8-item self-report questionnaire with 4-items related to entrapment	Community sample - A sample of 262 participants (age range 18 to 85 years; $M = 26.86$ years, $SD = 10.49$; 26% male) was recruited via social media ($n = 159$), and various

form		• I would like to escape from my thoughts and feelings. • I would like to get away from who I am and start again. • I can't see now way out of my current situation.	community settings in Manchester, England (*n* = 103). Caregiver sample - 163 formal caregivers (care practitioners, nurses, activities coordinators, and care support workers) in North Wales. Psychosis Sample - 78 participants experiencing symptoms of psychosis North-West England. PTSD Sample - 96 people who were identified as having previously experienced a traumatic experience (
German version of the Entrapment Scale	Trachsel et al. (2010)	Translation of the original Gilbert and Allan (1998) Entrapment Scale.	Sample One (pen and paper) (N=170) 56.5% female, 43.5% male Sample Two (online) (N=370) 63.2% female, 36.8% male; Sample Three (Retest assessment) (N=100) 64.0% female,
Chinese version of the Entrapment Scale	Chang et al. (2019); Xu et al. (2021)	Chinese translation of the Gilbert and Allen (1998) scale.	Sample N=304 participants (men who have sex with men) from four districts in Shanghai, China. Sample Participant were transgender women sex workers in Shenyang and Guangzhou, China (N=198).
Iranian version of the Entrapment Scale	Tarsafi, Kalantarkousheh and Lester (2021)	Iranian version of the Gilbert and Allen (1998) scale.	Sample Sample of 306 students (102 men and 204 women).

26

	Ghamarani, Hossein Siadatian and Pishdad (2014)	Iranian version of the Gilbert and Allen (1998) scale.	Sample A total of 162 students (60 males and 102 females) of Isfahan University of Medical Sciences.
Dutch version of the Entrapment Scale	Parra, van Bergen, Dumon, Kretschmer, La Roi et al. (2021)	Dutch version of the Gilbert and Allen (1998) scale.	
Korean version of the Entrapment Scale	Choi and Shin (2023); Lee and Cho (2012)	Korean version of the Gilbert and Allen (1998) scale.	No further information available.
Spanish version of the Entrapment Scale	Ordóñez-Carrasco, Cuadrado-Guirado and Rojas-Tejada (2020)	Spanish version of the Gilbert and Allen (1998) scale.	
Turkish version of the Entrapment Scale	Akin and Akin (2015); Akin et al. (2012)	Turkish version of the Gilbert and Allen (1998) scale.	No further information available.
Carer's Entrapment	Martin et al. (2006)	12-item scale, using a 5-point Likert scale, adapted from the Gilbert and Allan (1998) scale. Items	70 participants were informal carer's drawn from an Alzheimer's carer's database.

27

Scale		include:	
		- I am in a situation I feel trapped in. - I have a strong desire to escape from some of my responsibilities of caring. - I feel trapped by my obligations and responsibilities.	
Caregiver Burden Scale- Entrapment	Stommel et al. (1990)	9-item subscale using a 5-point Likert scale. Items include: - I feel overwhelmed by the problems I have caring for x. - I feel I was forced into caring for x. - I feel trapped by my caregiving role.	Caregivers in the US Midwest. Caregivers' acceptance criteria were they were family members and were the primary caregivers of a patient with Alzheimer's.
Partner Violence Entrapment Scale	Torres et al. (2016)	36 dichotomous (true/false) items in a six-factor scale focusing on both situational and personal concerns (pp. 141 - 142). Factors addressed Socio-Economic Problems; Attachment and Fear of Loneliness; Blaming Oneself and Resignation; Impact on Children; Fear of Harm and Worry for the Partner, and Feelings of Confusion.	234 Spanish speaking battered women who had been in an abusive relationship with a male within the previous year and involved in an abusive relationship for more than a year. Study undertaken between July 2005 and May 2008.
Personal Beliefs about Illness Questionnaire - Entrapment	Birchwood, Mason, MacMillan and Healy (1993)	4-item subscale using a 4-point Likert scale, focusing on perception of control over illness. Items include: - My illness frightens me. - I find it difficult to cope with my current symptoms.	85 patients with a clinical diagnosis of schizophrenia or bipolar disorders undergoing long-term maintenance therapy in an urban, inner city psychiatric hospital.

28

- I am powerless to influence or control my illness.

Entrapping events scale	Brown and Harris (1978); Brown et al. (1995, p. 11)	"Entrapping events must arise from an ongoing marked difficulty of at least 6 months duration and serve at the same time to underlines that the situation will persist or even get worse".	Entrapping life events were assessed using a 9-point scale. Further details are unavailable.

Figure 1 - Integrative review process

Defining the scope and conducting the search	Search core terms (i.e., ("entrap*", "leadership AND entrap*", and "leader entrap*") Databases: EBSCOhost, Web of Science, Proquest, and PsychNet Examples of journals searched: Academy of Management (various), Administrative Science Quarterly, Journal of Management, International Business Review, Journal of International Business Studies Items identified: 427,282
	Search related terms (e.g., role AND entrapment, workplace AND entrapment) in same databases and journals. Items identified: 162,638
	Inclusion criteria: Definitions of forms of entrapment; Core principles of forms of entrapment; Pathways to entrapment; Theoretical explanations and models of entrapment; The experience of entrapment; and the measurement of entrapment
	Retention: de-duplication, title and abstract screening, and exclusion of articles referring to Medical-related entrapment (e.g., nerve entrapment); Biological processes (e.g., cell entrapment); Entrapment within nature (entrapment within dams); Health and safety and mechanical issues (e.g., entrapment within equipment); and Legal entrapment (by government agents as part of law enforcement); reviews of entrapment within films and literature. Items retained after screening: 5,340 Items retained after de-duplication and exclusion criteria applied: 192
	Augmentation of search results: Snowballing method – we search for additional articles identified in the reference lists, by topic and by author repeatedly referenced in the literature. Citation tracking – searching for additional articles which reference the 'initial' article. Additional items identified: 302 Total items identified: 494
Categorization of studies	Categorization criteria: Definitions of entrapment and other similar terms; Definitions of associated concepts; Theories explaining entrapment; Psychological consequences; Performance consequences; Measurement of entrapment
Integrated framework	Integrate findings from the literature review into a Leadership Entrapment framework.

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Figure 2 – Integrated framework

Factors	Leadership motivations	Forms of entrapment	The experience of leadership entrapment	Psychological consequences
Personal	Desire to appear competent and successful as a decision-maker	<u>Internal entrapment</u> Entrapment within cognitive patterns	Reduced sense of autonomy	Depression
Protective and vulnerability	Desire to avoid unpleasant situations	Entrapment within decision-making	Unique and personal experience	Anxiety
Relational	Desire to avoid unpleasant thoughts	Entrapment within stated positions and rhetoric	Can change rapidly	Stress
'Other people'	Desire to avoid social isolation	Entrapment by self	Reflected in thinking, feeling, and behaving	Negative mental health
Organisational	Desire to maintain image or status	<u>External entrapment</u> Entrapment within relationships with others	Subjective and objective aspects	**Performance consequences**
Situational		Entrapment within cultural and social expectations		Degradation of sensemaking
Contextual		Entrapment within organisational aspects		Underperforming leaders
				Reduction in decision-making options
				Underperforming businesses

Feedback, lessons learned, experience

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10

Rolling out the Red Carpet: Legitimate Daughter Succession in Family Business

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Rolling out the Red Carpet: Legitimate Daughter Succession in family business

Abstract

This study aims to understand how daughter successors develop legitimacy as successors in family SMEs. Using a qualitative approach, based on data from semi-structured interviews conducted with ethnic Chinese family businesses in Taiwan, the findings shed light on how daughter successors establish legitimacy in this unique cultural context. The results reveal that blood ties with the family, relationships with founders and siblings, and the capabilities of the successor play pivotal roles in the development of successor legitimacy. Additionally, the successor's relationship with her own nuclear family also significantly influences the legitimacy-building process.

Keywords: Family Business, Daughter succession, Legitimacy, Process-perspective

1

Background

Academic interest to women's involvement in family business has, to the latest, largely focused on father-daughter succession (Sharma, 2004; Benavides-Velasco, Quintana-García, & Guzmán-Parra,2013). Derived from the emphasis of this focus, this study aims at contributing to the debate over the significance of gender in family business research (e.g., Xi, Kraus, Filser, & Kellermanns, 2015), especially in the succession. Few notable investigations showed that sons, especially the eldest one, has been favored as the first choice when the family business choosing the successor across several contexts (e.g. Bennedsen, Nielsen, Pérez-González, & Wolfenzon, 2007; Overbeke, Bilimoria, & Perelli, 2013). To investigate the reason for this choice, a review paper by Kubíček & Machek (2019) indicated that Primogeniture in Asia and Europe could be the main cause, making the owner sell their firm under circumstances that they have no male heirs in the family even if there exist female heirs. (Stavrou, 1999)

Although the preference for eldest male heir is established for a long time, social changes are known to exist. The legislation of equal inheritance in many countries (Roy, 2008) and smaller family size allows a more gender-equitable allocation of resources within families (Jejeebhoy, 1993). However, the capabilities of female successors are still underestimated (Wang, 2010) and female successors are believed to face more restrictions than their male counterparts in the succession process (Cao, Cumming, & Wang, 2015). Till nowadays, it seems to become topical that daughter-succession (especially the oldest daughter) increases than Primogeniture (Cruz, Justo, Larraza-Kintana, & Garces-Galdeano, 2019). However, little is known about how does a daughter influence and build up credit in the succession process. To maintain organization survival, the successors not only need to perform their managerial ability, but also develop the legitimacy of being the successor (e.g. Xian, Jiang, & McAdam, 2021).

Our study is hence concerned with the following research question "*How do founders' daughters achieve successor legitimacy in family SMEs*?" We seek to answer this research question by scrutinizing the process of daughter succession in family SMEs while tracing and analyzing the way they achieve the successor legitimacy. First, we review the literature of legitimacy and the approaches to build it up and discuss how does is applicable in building successor legitimacy in family business succession. Based on semiconstructed interviews with daughter successors, who are also the family business leaders, we are able to further elaborate *what* and *how* in the process to make them as the new leader. In the selection of context, we choose ethnic Chinese family businesses in Taiwan with the notion of family in terms of the network of kins and householder (Rothausen, 1999). There are three reasons for the choice of the context. First, familism is the essence of Chinese family business, emphasizing the pattern of parent-incumbents and child-successors (Wong, 1993). Chau (1991) in the seminal work of a comparative study between overseas Chinese firms and Japanese firms in terms of succession model indicated the favor of male heirs over the female ones in Chinese families. "Each legitimate son by birthright is to be entitled to an equal share of the father's property and other economic resources" (Chau, 1991: 163) after the death of father. In fact, the inheritance is not equal in real cases to what it supposed to be. The eldest son will usually get a larger share of the family wealth and has nominal power to gain the legitimacy in making

2

the important decisions for the family. Second, Taiwan has the highest prevalence of SMEs and women successor across different jurisdictions influenced by ethnic Chinese business context such as China, Hong Kong, Singapore, Malaysia, Indonesia, and Thailand (e.g. Ahlstrom, Chen, & Yeh, 2010; Bennedsen, Lu, & Mehrotra, 2022; Chung & Au, 2021). We conclude this study with the discussion of our findings and the thoughts for future research.

The study makes three contributions. First, it addresses a process-perspective in building legitimacy and identifies five items in the process. Second, this study identifies a cross-level approach in process-perspective in building up the legitimacy for the individual and contribute to the organizational legitimacy. Third, this study contributes to the understanding of daughter in family business succession, providing a deeper understanding of the potential approaches family businesses may develop when facing the succession of daughters.

Legitimacy as a property, a process, or a perception

The widespread used definition of legitimacy refers to "generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions" (Suchman, 1995: 574), and it has been studied by multiple disciplines including organization and management (Klein, Dansereau, & Hall, 1994; Suddaby & Greenwood, 2005), political science (Lipset, 1959), Philosophy (Habermas,1975), Psychology (Tyler, 2006), and Sociology (Johnson, Dowd, & Ridgeway, 2006). To understand what legitimacy is, Suddaby, Bitektine, & Haack (2017) classified three categories in their review paper, which are property, process, and perception. From the proper-perspective, legitimacy is an asset or resource owned or controlled by the focal actor, while the process-perspective highlights legitimacy as "the product of a series of interactions in which the actors demonstrate a high degree of agency", and hence is repeatedly created, recreated and conquered (Hallstrom & Bostr¨om¨, 2010: 160). Last but not lease, the perception-perspective sees legitimacy as a socio-cognitive perception or evaluation. Despite the different nature of the three categories, a common notion underlies that there must be three actors involved- the actor who owns or possesses the legitimacy, the change agent, and the evaluator. However, various level of analysis is included in the three perspectives, where property-perspective adopts a firm-level analysis while the others incorporate multi-level ones.

Legitimacy of family business successor

The word "family" comes from the word familia in Latin, originally suggesting "household, including kin and servants of the householder (Levin, 1993; Mish, 1993)" (Rothausen, 1999: 818). Surviving from the Latin root, the concept of family today includes a householder and hierarchy (Rothausen, 1999) with great variety in different context. In North American, a family suggests a monogamous patriarchal system headed by a man, who is the householder (O'Rand & Agree, 1993; Popenoe, 1987) lives with his married wife and living with their children in a household. This model results in the concept of nuclear family, which is largely adopted in organizational studies (e.g. Aldrich & Cliff, 2003).

However, recent social shifts change the realities of family and there is also profound diversity across the contexts (Rothausen, 1999), showing more displays in countries like

3

China (Tsui, 1989) and Sweden (Popenoe, 1987), instead of two-parent-single-earner male-headed households. Single parent, same-gender couple, and grandparenting implies various individuals to be the role of family members. In this study, we use the notion of the network of kinship and the exist of householder as the family definition (Rothausen, 1999) and investigate the interest of phenomenon in the ethnic Chinese context (Hytti, Alsos, Heinonen, & Ljunggren, 2017) to answer the research inquiry. In the ethnic Chinese society, a male heir implies the preservation of family lineage (Hytti et al., 2017; Wolf, 1972), enjoying a born right to get a share of the family wealth after his father's death (Chau, 1991). Business family is no exemption from this. For family businesses, this economic activity not only needs to sustain the family's wealth but also acts as a crucial medium for establishing social connections. How successors inherit and maintain existing networks of relationships while continuing to build their own leadership legitimacy to nurture and better their business represents the significant challenges faced by family business successors.

Besides, the preference of male heirs, especially the eldest male heirs, is not rare in different contexts. Bennedsen et al. (2007) highlight the widespread tradition of male heirs being favored for leadership roles to preserve family continuity. Wang (2010) adds that daughters face additional challenges in gaining legitimacy, as their leadership abilities are often underestimated. Overbeke et al. (2013) note that cultural norms often blind families to the leadership potential of daughters, who are frequently overlooked. Dalpiaz, Tracey, and Phillips (2014) argue that this bias stems from the belief that sons are better suited to sustain both financial and cultural aspects of the business. Kubíček and Machek (2019) discuss the persistence of primogeniture, particularly in Asia and Europe, where the eldest son is prioritized.

The capabilities and achievements successor is also critical in the notion of legitimacy. Barach, Gantisky, Ourson, & Doochin (1988) found that when a successor can demonstrate behaviors that aligns with organizational culture, employees are more likely to perceive the successor as willing and capable of taking over the business. Handler (1994) further argued the relationship between the successor and employees and other stakeholders, as well as whether they are recognized by these stakeholders, is a crucial factor in determining whether the successor can gain legitimacy. Furthermore, financial and technical abilities also influence the legitimacy of succession (Dhaenens, Marler, Vardaman, & Chrisman, 2018; Ferris, Liden, Munyon, Summers, Basik, & Buckley, 2009).

Method

To answer our research inquiry, we employed a qualitative approach, using multiple cases study (Gustafsson, 2017) to analyze the data from real world. Compared to the single case study, a multiple case study provides deeper understanding of the exploring phenomena (Dyer & Wilkins, 1991), delivering reliable and strong result (Baxter & Jack, 2008), and achieve richer comprehensiveness by analyzing the data within each case and make comparison between multiple cases (Yin, 2003). Besides, multiple-case study is suitable for creating more convincing theory than single-case study when the findings are more intensively rooted across empirical evidence (Eisenhardt & Graebner, 2007). With this notion, we intend to develop a new theory based on the analysis of the data from real world, which is a ground theory design

4

(Charmaz, 2015), to better understand the interests of phenomenon. The multiple-case study, not contingent on a specific case count, typically contains 4 to 10 cases effective for robust concern (Eisenhardt, 1989). Five cases were selected, focusing on exploring the experiences of daughters assuming leadership roles in family businesses.

In developing the sample selection, this study adopts purposive sampling, using the criteria of the existence of daughter successor of the founder in family business. In Taiwanese business family, small and medium-sized enterprises (SMEs) dominant the types of family business in terms of the organization size, which accounts for 98.9% in 2022 (Small and Medium Enterprise and Startup Administration, Ministry of Economic Affairs, 2023). Among these, 37.31% of business owners are female, while 62.69% are male. In contrast, large enterprises constitute 1.1% of the total, with female business owners making up 17.97% and male business owners 82.03%. The disparity in the proportion of male to female leaders is more pronounced in large enterprises compared to SMEs (Small and Medium Enterprise and Startup Administration, Ministry of Economic Affairs, 2023). To make sure our sample shows the rich-information characteristic in purposive sampling (Palinkas, Horwitz, Green, Wisdom, Duan, & Hoagwood, 2015), we confirmed from the public and secondary data including media reports and the information from company website to make sure that these daughters have been involved in succession preparation for over 10 years. The experiences can provide a more comprehensive process of the critical events involved in not only the preparation for the succession but the outcomes when they became the new leader.

The data collection process starts from observations and the interview agenda is derived from the review of related literature (Locke, 2000). There are two stages in the data collection process. The first stage was in 2022, the secondary data of each company is collected from January to February, and the interviews are conducted during March 2022 to May 2023, involving three interviews, each lasting over 90 minutes. All interviewees are the current chairman of the company. The purpose of the first stage was to understand how the successors identify themselves and the legitimacy challenges they face in the succession process. Questions in this stage included:

(1) Describe the above three roles from your perspective and express your expectations for each role in two sentences. Among these three roles, which one is most significant in shaping yourself? Why?

(2) When you think of working in the company, what role immediately comes to mind? Why? While working, do you aim to fulfill the expectations of the above roles? Have you ever considered your family roles while working in the company? Can you provide an example?

(3) Have your family roles and business roles ever conflicted? How did you handle these conflicts? Can you reflect on significant decisions you've made since joining the company and their impact on yourself and the company?

(4) When planning the company's development, to what extent do you consider family? Why?

(5) If given the opportunity, would you choose to re-enter the company? Why?

The second stage took place in May 2023 with the same interviewees of the first stage, and each interview lasted for approximately two hours. This stage aimed to compare their backgrounds and interactions with key stakeholders during the early and current stages of

5

succession legitimacy. The questions included:

(1) Please recall the most important roles to you when you first took over and currently. Describe these three roles from your perspective (both when you first took over and currently) and indicate the position of "the company" within these roles. Explain your descriptions and expectations for each role in two sentences. Have there been any changes in these roles during the succession process?

(2) Have you consciously noticed any differences between being a "daughter" and being a "son" in the family or business environment?

(3) At what age did you start participating in the family business? What circumstances or events led you to participate in the family business? What responsibilities were assigned to you? After joining the family business, did you work with other family members? If so, describe your interactions in business and whether there were noticeable differences within the family.

(4) Have you worked with your father in the family business? If so, how did you handle disagreements? How have your interactions been with senior employees after joining the family business? Have you faced specific challenges? Have employees ever questioned your leadership ability and decisions?

(5) How do you balance family and business responsibilities? How do you assess your leadership abilities? If you do not have a positive evaluation of yourself, what do you think the reasons are?

The profile of the companies in our sample is shown in Table 1.

Table 1. Profile of Sample Companies in the Study

Informants (initial name)	Business sector	Sample details
A	Other Electronic Parts and Components Manufacturing	Second-generation, 100% family owned, 2 siblings, 1 younger sister Birth order: eldest daughter. Year founded: 1991 Number of employees: 65. Number of family members employed: 2
B	Other Fabricated Metal Products Manufacturing	Second-generation, 100% family owned, 3 siblings, 2 younger sisters. Birth order: Eldest daughter. Year founded: 1972. Number of employees: 55 Number of family members employed: 4
C	Non-Alcoholic Beverages Manufacturing	Third-generation, 100% family owned, 3 siblings, 1 younger sister and 1 younger brother. Birth order: Eldest daughter. Year founded: 1980. Number of employees: 60 Number of family members employed: 2
D	Medical Goods Manufacturing	Second-generation, 50% family owned, 3 siblings, 2 younger brothers. Birth order: Eldest daughter. Year founded: 1983. Number of employees: 150 Number of family members employed: 3
E	Plastic Products Manufacturing	Second-generation, 100% family owned, 3 siblings, 1 older brother and 1 younger brother. Birth order: Second-born. Year founded: 1980. Number of employees: 130 Number of family members employed: 3

Source of Data: Compiled by this study

DATA ANALYSIS AND PRELIMINARY FINDINGS

All three researchers in our team review the results respectively, and then the feedback is combined to finalize the themes in our findings. The coding generated from the primary findings is continuously compared with the emergent new themes in the overall analysis process. The long-term relationship with the key informants allowed for repeat visits, which were necessary for comparing emerging themes. An overview of the interview records is summarized in Table 2.

6

Table 2 *Overview of On-site Interview Records for This Study (March 2022 to May 2024)*

Data Method	Collection Date	Interview Code	Company Interviewee Title	Number Participants	of Duration (Hours)
Formal Interview	2022/3/31	A	Chairman	1	1.5
	2022/3/25	B	Chairman	1	1.5
	2022/12/1	C	Chairman	1	1.5
	2023/5/18	A	Chairman	1	2
	2023/5/13	B	Chairman	1	2
	2024/2/1	D	Chairman	1	2
	2024/3/5	E	Chairman	1	2
Event Participation	2022/8/25	A	Chairman	1	3
	2022/5/26	B	Chairman	1	3
Secondary Source	Data from official websites, media reports, and audiovisual materials.				22
Total Hours	-	-	-	9	40.5

Source of Data: Compiled by this study

Five companies (referred to as A to E) were observed and discussed for a total of approximately 40.5 hours, aiming to uncover both unique aspects and commonalities. This study adopts the variance theory approach in qualitative research, emphasizing differences between various situations or cases and attempting to explain the reasons behind these differences. Comparative analysis is employed to contrast similarities and differences between different situations or cases, thereby identifying potential patterns or causal relationships (Eisenhardt & Graebner, 2007). Through the subjective descriptions of entrepreneurs' cognition, emotions, and behaviors, as well as their interactions with important stakeholders, the interviews elucidate how individuals perceive the emergence of key components in their succession process, as illustrated in detail in Figure 1.

7
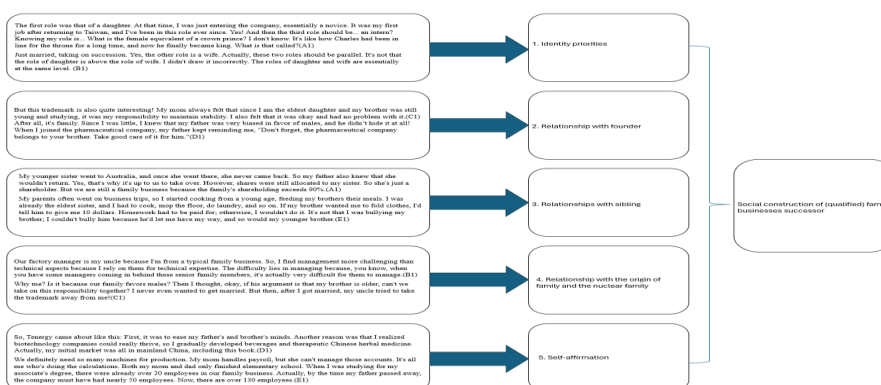
FIGURE 1 Data Structure Behind the Interview Framework for Succession in Family Businesses by Daughters
Source of Data: Compiled by this study

From successor to leader: Daughters in family business

Starting with the left and the middle column in Figure 1, our findings revealed 5 items supported by the direct quotes from the daughters of the founder, and their relation to the legitimacy is elaborated below.

Identity priorities

Daughters have multiple roles in business families. In the family aspect, they are daughters of the founder. In business aspect, they are the successor and the leader. When they get married, they will have their own nuclear family. Several interviewees emphasized their priority in managing multiple roles.

D1: "I have become the most capable member of my family. Since childhood, I have had two younger brothers and three younger sisters, making us a total of six siblings. The youngest two brothers have always been very thin, so I have taken on a role similar to that of a mother. "

E1: "Regardless, there are still boys in the family, and I feel that I have always embraced the 'second child philosophy. "
"In terms of my family, I am the one who manages everything. Yes! When it comes to business, I am the creative thinker with boundless ideas. Regarding the company's operations, I am like a locomotive, always charging ahead recklessly. In reality, I haven't actually done so and do not dare to be reckless."

Relationship with founder

Extant research showed that when the managerial power of a family business is passed from father to daughter, fathers tend to over protect of their daughters (Henry, Erwee, & Kong, 2013). On the one hand, they regard her as a work partner, but on the other hand, they regard her as a family member who needs to be protected, thus virtually limiting the development of their daughter's management talents (e.g. Vera & Dean 2005).In our interviews, many interviewees emphasized their relationship with their father, who is also the founder of the business.

B1: "In the earlier stages, when I first joined, I didn't fully understand everything. Yes, it wasn't that I had no understanding at all, since I had occasionally visited the company during high school and college. At that time, I was not very knowledgeable about the technical aspects, so I frequently asked him for advice. I felt that I was still learning, so I often deferred to his expertise."
C1: "However, this trademark situation is quite interesting. My mother always felt that, as the eldest daughter, I should help maintain stability while my younger brother was still in school. I also thought it was fine and agreed with her. "

8

E1: "My father might have been more affectionate towards the girls, but he also believed that I was more efficient and quicker in getting things done. It's not that he disapproved of the way my brothers did things; he just thought that my execution might be better. He knew that once I set my mind to something, I would work diligently and persistently towards that goal. Perhaps because my father doted on his daughters, he always felt that I was capable of achieving many things. It was his support that enabled me to accomplish these tasks. "

Relationship with siblings

Sibling rivalry is identified as a key factor in family business succession (e.g. Friedman, 1991). Siblings' competition arises due to the desire to become the successor (Jayantilal, Jorge, & Palacios, 2016). When the daughters are about to take to control of family business, their abilities are easily underestimated (Wang, 2010) and subject to more restrictions (Cao, Cumming, & Wang, 2015) compared to their male siblings. The relationships between the daughter and the siblings will determine whether there is rivalry between heirs or not.

E1: "Later on, I realized that the relationship between the three of us is actually quite special. Like with my brother, there are, of course, disagreements, but they usually resolve quickly. We might have minor differences regarding company matters, but eventually, everyone compromises and we develop a strong mutual understanding. "

D1: "They are each two years apart. I have a particularly strong bond with the youngest one, who is now responsible for the pharmaceutical company. My brother feels constrained by me, and the youngest one also feels constrained. Our relationship is very close; he is now the chairman of the pharmaceutical company. Since he was little, I have taken care of him, including arranging for his studies in Japan and his training in traditional Chinese medicine in China. He is very fortunate to have a good father and a sister like me to support him. Now, he only needs to focus on his work."

Relationship with the origin of family and the nuclear family

Female successors in family business have multiple roles in their life. In the origin of business family, they are the daughter of founder spouse and the sister of other siblings. In family business, they are successor and the current leader of the business. After getting married, they are wives and mothers of the new nuclear family. When their spouses work in the family business, figuring out the way to coordinate the conflicts between members from the original family and ones from the nuclear family becomes a new issue for them.

A1: "When we were dating, my father told him that if we planned to get married in the future, he should join the company. This was to prevent any division of efforts, as my father felt that if he worked outside the company while I worked within, it would be very challenging for me, especially with a small team. Instead, my father hoped he would join the company to help build and grow it together, thereby consolidating our efforts. So, at that time, we brought him into the company."

B1: "In contrast, I tend to have more conflicts with my husband. Therefore, I think the focus should shift from being a daughter to being a wife. Working together as a couple inevitably

9

leads to differences in logic and future direction. This dynamic is quite important and can sometimes overlap with the responsibilities of being a business leader. "

B1: "Our factory director is my uncle, as I come from a typical family business background. Therefore, I find management to be more challenging than relying on technical expertise from others. Dealing with family elders and integrating new managers can be particularly difficult. For instance, one of my maternal cousin, who later went to Vietnam, didn't perform well and eventually my husband had to dismiss him after giving him ample time. Managing relationships, especially those intertwined with family dynamics, is perhaps the most challenging aspect of running a family business."

Self-affirmation

Capabilities and preparation of successor are identified as key factors in family business succession (e.g. Venter, Boshoff, & Maas, 2005). Besides, founder's trust in successor's capabilities and intentions are tested to positively contribute to the effective succession (e.g. Dickinson, 2000; Donckels & Lambrecht, 1999, Matthews, Moore, & Fialko, 1999). Our findings revealed that successor's self-affirmation in the capabilities contributing to their perceived legitimacy in taking the control of family business.

B1: "How do you go about reconciling and persuading? It involves using data to convince them. For example, I might need to show him reports and say, 'Here's how things are currently,' and start discussing whether our cash flow is sufficient and what needs to be done. For instance, I discuss ways to raise funds, such as seeking investments or government subsidies, which might temporarily reduce our available capital. It's about engaging in these types of discussions."

C1: "We've been constantly innovating; I feel like I'm just carrying forward the spirit and tradition of my family, but also creating my own enterprise. I think about how to transform an old brand into a new one."

Discussion

Our findings help illuminate the way daughter successor try to develop successor legitimacy in Taiwanese family business. The findings go beyond our current understanding in female successor in business succession. However, this study is not exempt from limitations. For instance, we are not able to explore the difference in organization characteristics such as industry and firm age to see how them make possible effect on the legitimacy building of the daughter successor. Besides, the limited sample size and research context lead to the problem of generalization of our findings. Last but not least, more information from other stakeholders will reduce the possible biased in understanding the legitimacy building process of daughter successor in family business.

10

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11

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12

04. Gender, Diversity and Indigeneity

Capitalising equality: Feminism and firm drivers of Australian women in corporate leadership, 1986 - 2018

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Capitalising equality: Feminism and firm drivers of Australian women in corporate leadership, 1986 - 2018

ABSTRACT

This article uses a longitudinal dataset on board members and executives of Australia's top companies between 1986 and 2018 to understand the firm-level determinants for women in corporate leadership. We find that the number of women leaders has been driven by companies' resource constraints. Extending this 'resource dependency' perspective with the life cycle of social movements, we find that as the social movement institutionalised, the resource needs of companies changed. Some factors, like firm size, were consistently significant. Others, like industry feminisation, were important during certain phases of the social movement. These findings contribute to our understanding of gender diversity and Australian corporate leadership, highlighting the way companies have participated in, and been constrained by, demands for gender equality.

Keywords: Australia; corporate leadership; gender equality; firm drivers; social movements

Overview

The presence of women in executive and board roles of large corporations is crucial for the governance of large companies, and the ongoing project of gender equality. In Australia, women have been appointed to top company leadership roles since at least the 1980s, though progress has been uneven. Research on micro (individual) drivers has found advances in women's education and workplace participation in the second half of the twentieth century contributed to a pipeline of women with appropriate experience and qualifications for board and executive appointments. At the same time, all top companies have been subject to macro factors such as the country's gender pay gap, activist agitation, and gender-based diversity targets. Improving the success of women in corporate leadership thus requires deeper knowledge on the firm-level drivers – or the meso space where macro and micro factors intersect – influencing their appointments. This article responds to this research problem, using longitudinal data on top Australian companies to examine the interaction between the Australian postfeminism, its organisational targets, and the appointment of women to corporate leadership roles.

Current understanding

The last four decades have seen a significant increase in interest in the gender composition of corporate boards (Frijns et al., 2016, Griffin et al., 2019, Kagzi and Guha, 2018, Post and Byron, 2015). In considering the pathways of women to leadership positions, scholarship has focussed on individual (micro) drivers, or the professional, social and demographic characteristics enabling women's

appointment to board roles (Sheridan et al., 2021; Ross Smith and Bridge, 2008). Others have focussed on structural (macro) factors, including legislation, political representation, and the gender pay gap (Terjesen et al., 2015). Global social movements (GSMs) feature, with various waves of the feminist Women's Movement contributing to public and regulatory pressure for women on corporate boards (Wright, 2021; Du Plessis et al., 2014; Seierstad and Opsahl, 2011; Perrault, 2015; Briscoe and Gupta, 2016). Most research has thus attended to the micro and macro factors driving women's appointments, with firm-level drivers covered sparsely. This study contributes to a small number of studies that have examined firm-level drivers (Geiger and Marlin, 2012; Hillman et al., 2007; Ahmed et al., 2018).

Research has identified that executives, or the top management team, are salaried employees responsible for ensuring the business is viable and profitable (Wiersema et al., 2018). The board of directors, on the other hand, ensuring managers act in the best interest of dispersed shareholders, while also providing advice to guide company operations (Bendickson et al., 2016). Although these general principles may apply to all leadership appointments, resource dependence theory incorporates company-specific requirements (Ahmed et al., 2018; Geiger and Marlin, 2012; Hillman et al., 2007). Organisations exist as a coalition of resources that respond to a complex and dynamic set of external environmental demands (Pfeffer and Salancik, 1978). Companies connect with the external environment to obtain resources, with leadership appointments one possible link that reflects organisational dependencies (Hillman et al., 2007). The appointment of women can be motivated by resource dependency, enhancing overall leadership expertise (Pfeffer and Salancik, 1978; Geiger and Marlin, 2012; Hillman et al., 2007; Ahmed et al., 2018). Diversity can also render legitimacy, with companies incentivised to conform with external expectations regarding equality and diversity. Finally, leadership appointments can enhance channels of communication, with female executives and directors enhancing communication with, and commitment from, the external environment (Pfeffer and Salancik, 1978; Geiger and Marlin, 2012).

Although each of these factors will likely influence all firms in some measure, organisational variables can influence the appointment of women leaders. Larger firms (*firm size*) are well known, dedicate more resources to diversity training, and may face increased pressures to conform to equality targets. Larger

leadership teams (*overall size of the board/executive suite*) may have the space to seek out multiple experiences, while also facing greater pressure to include women. Women may be appointed to leadership of companies in 'feminized' industries (*industry feminization*), as they have a more diverse pool of workers to draw from, and a material incentive to demonstrate alignment, communication, and collaboration with female employees. Companies with a *female Chair or CEO* can be more likely to appoint women leaders, as they are often publicly engaged on issues of gender equality.

Over time, social movements may interact with firm level drivers in the appointment of women to leadership roles. Comprising cognitive and structural change, social movements have a life cycle of emergence, coalescence, bureaucratisation, and decline (Meyer and Whittier, 1994). Feminism has been responsible for the "destructuration" of gendered appointment practices in Australian corporations (Sheridan et al., 2021). Second wave feminism fought to address women's legal and social equality, and equal opportunities in work (Du Plessis et al., 2014; Wright, 2021). From the 1980s, 'postfeminism' focussed on women's participation in capitalist structures such as corporate leadership. In Australia, the movement *emerged* from the mid-1980s to the mid-2000s, with discontent fostered through the comparatively 'glacial' progress of Australian women up the corporate ladder. *Coalescence* involved the formalisation and publicity of the agenda, with monitoring and lobbying through various advocacy groups. The movement was *bureaucratised* around 2010, with cognitive and structural change reflected in monitoring via the Australian Federal government, recommendations from the Australian Stock Exchange (ASX) and targets from the Australian Institute of Company Directors (AICD) (Du Plessis et al., 2014; Sheridan et al., 2021). These longitudinal changes, we predict, interacted with firm-level drivers for the appointment of women to corporate leadership roles.

Research question

1. Examine the firm-level drivers for the appointment women to corporate leadership positions; and

2. Analyse the interaction between postfeminist activism and the firm-level drivers for the appointment of women to leadership positions.

Research approach

We examine women board members and executives of Australia's top 100 non-financial firms, and top 25 financial firms, as ranked based on total assets at four benchmark years (1986, 1997, 2007 and 2018). We have compared demographic data to various firm level factors. Firm size is based on total assets (Ahmed et al., 2018). Industry classification was based on the Australian Bureau of Statistics (ABS) Standard Industrial Classification (SIC). Following Hillman et al. (2007), feminisation was based on ABS data on the proportion of women employed in each industry. The size of the board/executive suite is based on simple arithmetic, as was the presence of a female Chair/CEO. T-tests were used to determine the presence of a statistically significant difference between the various firm characteristics and 1 or more, 3 or more, 5 or more and 7 or more women.

Findings

There has been a 40-fold increase in the number of women in corporate leadership in Australia since the 1980s, increasing from 13 (0.6%) in 1986, to 559 (29.62%) in 2018. There was a slightly higher proportion of women in executive roles, with a difference of 2.2% in 2018 (30.78% NEDs, 28.52% executives) (figure 1).

Figure 1: Women in corporate leadership summary
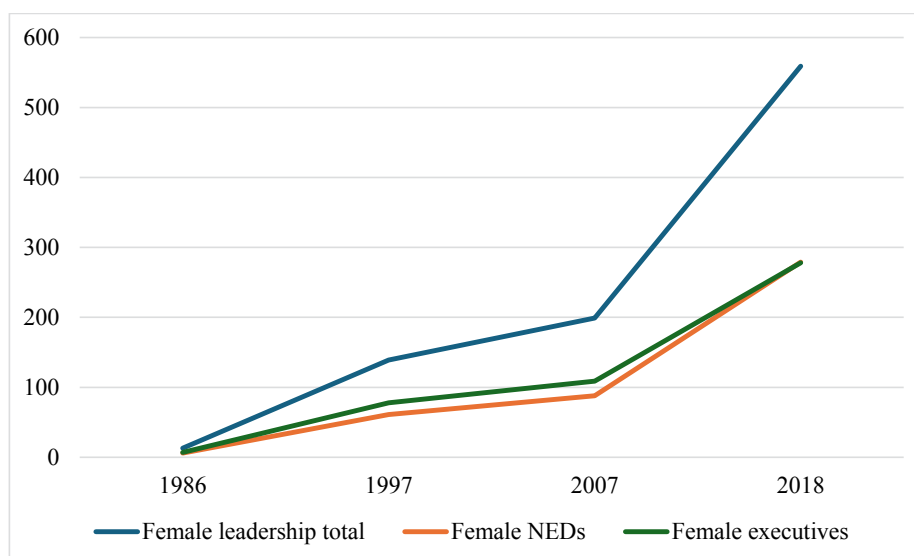
The results suggest that larger companies were more likely to appoint women to their leadership teams. In 1997, companies that included women were, on average, 3.8 times the size of male-led companies. In 2007, the size difference expanded, with companies that appointed women five times larger than male-led companies. In 2018, all companies had at least one woman, with the size disparity for those with a greater number of women. Those with 3 or more women were 7-8 times larger, and those with 5 or more women were 9 times larger (table 1). Company size intersected with the progress of the social movement, with the appointment of one woman adequate to satisfy societal pressure in the emergence phase, and more women required in each subsequent benchmark.

We find a positive relationship between the size of the leadership suite and the number of women leaders. In 1997, women were members of leadership teams with, on average, 19 people, compared to male-only leadership teams that had 13 people (table 2). In 2007, leadership teams with women were slightly larger than those without, with mixed statistical significance. 2018 had resounding results, with leadership teams with 3, 5, and 7 or more women consistently much larger than those without. Although there is a clear relationship between the size of the leadership suite and the *number* of women leaders, women did not gain capacity (*proportion*) in companies with larger leadership teams. This indicates that companies with

larger leadership teams had more space to appoint women, and were expected to include women due to their size. The latter resource constraint – societal expectations – intersects with the life cycle of social movements. As the movement moved into its bureaucratisation phase, pressures to appoint women leaders increased, and companies were able to draw on the now-mature pipeline of women with the necessary experience and qualifications for executive and board roles. The average number of women in leadership increased across the board, with differences between companies now reserved for those who included a greater number of women.

Table 1: Firm size

	1997					2007					2018				
	N	Mean ($m)	t-stat	t-critical	p-value	N	Mean ($m)	t-stat	t-critical	p-value	N	Mean ($m)	t-stat	t-critical	p-value
			2.69	**1.99**	**0.01**			**3.13**	**1.66**	**0.00**					
No female directors or executives	47	3.80				8	6470.63								
1 or more	78	14.44				90	35362.58								
			0.66	2.10	0.52			**1.73**	**1.69**	**0.05**			**3.00**	**1.67**	**0.00**
Less than 3	109	9.74				67	20215.46				5	9234.80			
3 or more	16	15.21				31	60643.90				75	78965.20			
													2.96	**1.674116**	**0.00**
Less than 5											26	11485.5			
5 or more											54	104998.9			
													1.34	1.679427	0.09
Less than 7											52	51612			
7 or more											28	117312			

	1997					2007					2018				
	N	Mean (persons)	t-stat	t-critical	p-value	N	Mean (persons)	t-stat	t-critical	p-value	N	Mean (persons)	t-stat	t-critical	p-value
			5.56	**1.98**	**0.00**			0.46	2.31	0.65					
No female directors or executives	46	12.83				8	14.90								
1 or more	78	19.13				90	15.80								
			1.98	2.10	0.06			**2.23**	**2.00**	**0.03**			**5.59**	**2.10**	**0.00**
Less than 3	108	16.2				67	14.97				15	12.00			
3 or more	16	20.75				31	17.39				90	19.00			
								2.52	2.77	0.07			**5.48**	**1.99**	**0.00**
Less than 5						93	15.43				41	15.2			
5 or more						5	21.4				64	19.9			
													5.48	**1.98**	**0.00**
Less than 7											73	21.1			
7 or more											32	16.7			

Table 2: Size of leadership suite

Table 3: Industry feminisation

	1997					2007					2018				
	N	Mean (%)	t-stat	t-critical	p-value	N	Mean (%)	t-stat	t-critical	p-value	N	Mean (%)	t-stat	t-critical	p-value
			3.57	**1.98**	**0.00**			0.56	2.31	0.59					
No female directors or executives	46	28.22				8	32.05								
1 or more	78	38.19				90	35.64								
			4.50	**2.06**	**0.00**			**2.31**	**2.00**	**0.03**			0.01	2.10	0.99
Less than 3	108	32.60				67	32.79				15	34.20			
3 or more	16	47.24				31	40.88				90	34.40			
								1.20	2.78	0.30			1.39	1.99	0.17
Less than 5						93	34.91				41	31.6			
5 or more						5	43.58				64	36.2			
													3.12	**1.99**	**0.00**
Less than 7											73	31.6			
7 or more											32	40.7			

Table 4: Female Chair/CEO

	1997					2007					2018				
	N	Mean (%)	t-stat	t-critical	p-value	N	Mean (%)	t-stat	t-critical	p-value	N	Mean (%)	t-stat	t-critical	p-value
			3.06	12.71	0.2			1.09	2.57	0.33			**3.25**	**2.1**	**0.004**
Male chair	122	0.06				93	0.13				91	0.28			
Female chair	2	0.27				5	0.17				14	0.37			
								0.77	4.3	0.52			**2.82**	**2.26**	**0.02**
Male CEO	-					95	0.13				96	0.28			
Female CEO	-					3	0.18				9	0.39			

Industry feminisation was important in the emergence stage, with women more likely to progress through management pipelines in feminised industries. Demonstratively, in 1997, companies with women leaders comprised 38% women workers, while those without women had only 28% women workforce (table 3). In 2007, there was a significant difference in the level of feminization of companies with 3 or more women (41% women workers), compared to those with less than 3 women (33%). In 2018, as the movement bureaucratised, regulatory and industry action placed pressure on all companies to appoint women. As a result, industry feminization became less important, with the effect reduced in absolute size, and little difference between those who appointed 1, 3 and 5 women to their leadership teams.

The role of a female Chair and CEO was applicable in the bureaucratisation phase. The dependent variable is endogenous, as an outcome of more women in leadership, while also facilitating the appointment of women to leadership roles. As such, the presence of a women Chair or CEO required the social movement to reach maturity, with women taking time to progress through the normal board and executive hierarchy. In 2018, companies with female Chairs and CEOs had, on average, a significantly higher proportion of women leaders (37%, 39% respectively) than those with male chairs or CEOs (28% each) (table 4).

Contribution and Limitations

This article contributes to international and Australian efforts to understand the firm-level drivers for women in corporate leadership. Data on board members and executives extends the scope of research (which generally includes board members only), examining women's place in both functional and governance roles in the organisation. Longitudinal data – covering four benchmarks from the 1980s to the present – contextualises the appointment of women in leadership relative to the progress of a social movement. Integrating resource dependency theory and theory on the progress of social movements is innovative, and reveals the interaction between postfeminist activism, target companies, and women's leadership appointments in Australia over time.

This study is limited by its scope. Studying Australia's largest companies responds to practical considerations regarding data availability, with longitudinal data on firm characteristics and leadership personnel more voluminous for the 'big end of town'. However, this presents a relatively small number of observations, limiting the generalizability of the analysis and understating women's prominence in Australia's corporate sector as a whole.

Implications

Thes research reveals that companies with affirmative characteristics – in particular size, size of the leadership suite, and industry – were early successful targets for Australian postfeminism. On the other hand, those with unfavourable characteristics struggled to respond to postfeminist action until the issue was legislated. By highlighting the way a specific institutional context – both in Australia and over time – affected the interaction between feminist social movement and company action on women in corporate leadership, these findings can help guide company, industry and government policy to improve corporate diversity. In particular, it suggests that approaches should be tailored for the specific company or industry, with those with unfavourable company characteristics requiring more stringent industry or legislative action.

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Stream 8. Business Processes, Innovation and Supply Chain

Necessary Conditions for Team Creativity: Composition and Competence

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1

Necessary Conditions for Team Creativity: Composition and Competence

ABSTRACT:

This research examines the conditions essential for team creativity in R&D, focusing on team size, team network, and team expertise. While literature suggests these conditions are necessary, it lacks evidence to support this claim. We analyse teams that produced 76 hydrogen energy patents from 2010-2020. Our study fills a gap in the literature by providing empirical evidence and description about necessary factors for team creativity to be possible. We found that a large team size and expertise are necessary for team creativity to occur. Our results offer scholars insights into necessary conditions, which warrants further investigation to understand the dynamics of team creativity more precisely. For practitioners, these findings could guide R&D team composition, collaboration structuring, and leveraging expertise to enhance creativity and drive innovation.

Keywords: Teams, **C**reativity, Necessity, Composition, Collaboration, Competence

OVERVIEW

In this study, we investigate whether team size, team network, and team expertise are essential for high levels of team creativity. We aim to identify the optimal team size, the numbers of members in a team's network, and the necessary level of expertise—potentially across various fields—for fostering creativity in complex contexts like R&D. Understanding these factors is key, as it highlights potential bottlenecks hindering innovation. Demonstrating that team size, network, and expertise are necessary for creativity will suggest that their absence likely impedes it. Theoretically, this research fills a gap in the literature by establishing necessary conditions for team creativity. Practically, R&D teams will gain clarity on the minimum number of members, the reach of their collaborations, and the level of expertise needed.

CURRENT UNDERSTANDING

Research on team creativity has examined key components such as team size (Cummings et al., 2013; Lee et al., 2015) , team expertise (Pollok et al., 2021), and team network (Bertolotti et al., 2015). Lee et al. (2015) found a positive relationship between team size and novelty in scientific research, suggesting larger teams include diverse knowledge domains, which enhance creativity (Cummings et

2

al., 2013). Larger teams may also have more resources, facilitating work dissemination and higher impact (Lee et al., 2015; Li et al., 2020). Pollok et al. (2021) showed that higher team expertise correlates with more novel outputs, suggesting it improves team creativity. Bertolotti et al. (2015) found that a team's network, defined by membership in various teams, correlates with the quality of creative output. Specifically, moderate network levels lead to optimal performance, while very low or high levels may decrease output quality.

All of them apply a correlational logic, and suggest that either team size, team network, or team expertise need to be present in creative team (Byron et al., 2023). Yet, none of them produce enough evidence to confidently say that each of these components are truly necessary. For instance, in the work of Lee et al (2015), it is not obvious that team size will increase team creativity, nor how many team members are necessary for team creativity to exist. This is something the authors raised as part of the limitation on their own research, which we consider as clear call to keep exploring at least what's the minimum number of team members that might be required to reach a minimum level of team creativity. In the same way, Pollok et al (2021) states that higher team expertise operationalised as knowledge diversity leads to higher team creativity but does not engage in defining what level of expertise is truly necessary to achieve team creativity. Similarly, Bertolotti et al (2015) does not expand on what exactly is the network effect into team creativity.

We believe that there is a clear need for our research because none of them mention whether team size is necessary for having a creative team. Or, whether team network is a good-to-have or a must-have for team creativity to occur. Surprisingly, team expertise, which account for competence in team creativity is another element that is not defined as being necessary for team creativity to exist, even if their arguments suggesting that this is the case (Ye & Zhao, 2023).

RESEARCH QUESTION

The work of Lee et al (2015), Pollock et al (2021), and Bertolotti et al (2015) led us to identify four key variables: team creativity (TC) as a dependent variable, and team size (TS), team members' network (TN), and team expertise (TE) as independent variables. Considering our current understanding on the topic, we want to know **what are the necessary conditions for team creativity to be possible?**

3

Importantly, without knowing this, we would miss how the genesis and evolution of innovation, which is shrouded in uncertainty (O'Connor & Rice, 2013) appears. According to Dul (2016), a necessary condition must be present for a specific outcome to manifest. Hence, understanding these conditions can better help scholar and practitioners to distinguish between the prerequisites and the sufficiency factors for team creativity to happen, and ultimately, for innovation to be realised. As a result, we propose the following necessity hypotheses to be tested:

Hypothesis 1. 1. A certain Team Size (i.e., composition) is a necessary condition for a certain level of Team Creativity.

Hypothesis 2. A certain number of members in a Team's Network (i.e., collaboration) is a necessary condition for high levels of Team Creativity.

Hypothesis 3. A high level of Team Expertise (i.e., competence) is a necessary condition for high levels of Team Creativity.

RESEARCH APPROACH

To test our hypotheses, we collected data on the characteristics and creative performance of teams in the global hydrogen energy sector. We chose this sector because hydrogen is a key sustainable fuel to meet global energy demands and mitigate climate change. We identified teams creating innovations in hydrogen energy by searching for relevant patents granted in the US and EP between 2010 and 2020. Using CPC classifications Y02E60/30, Y02E60/32, and Y02E60/34 as suggested by Haščič and Migotto (2015) report, we focused on patents assigned to universities to easily access information on academic scientists' networks. The search was restricted to patents where the assignee was a university. This criterion was placed since it is easier to find information on the professional network of academic scientists, as compared to corporate scientists, through their academic publications. Our initial search led to 93 US patents and 22 EP patents. We excluded patents where information on inventors was incomplete. We then examined the list to ensure that multiple patents from a patent family were not included. The final list comprised 76 patents. For the final list of patents, the

4

details of the assignee and the inventors (name and affiliation) were noted. This provided information on teams engaged in creating innovations in hydrogen energy.

Data required for measuring the dependent and independent variables was collected from SCOPUS. Scopus is Elsevier's abstract and citation database of peer-reviewed literature. This database also hosts over 17.6 million author profiles. Each author's profile includes their unique Scopus Author Identifier number, list of their publications, their co-authors, affiliations, and the subject areas of publication. For each inventor, we collected information on their co-author network and the subject area of their publications. The framework for data collection is presented in **Figure 1**.

Figure 1. Framework for data collection
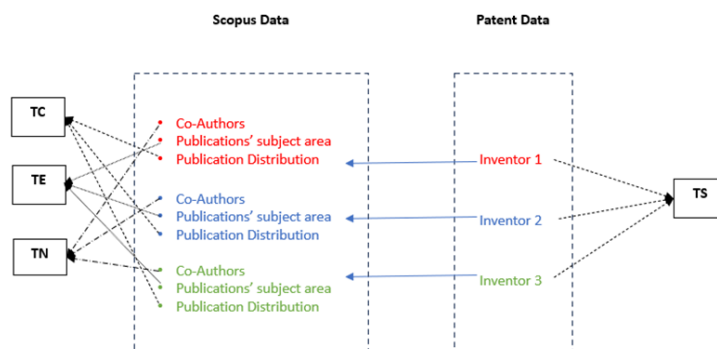
Dependent Variable: Team Creativity.

Research shows that team creativity positively contributes to innovativeness (Park et al., 2021). To determine TC, we first calculated the creativity of each inventor (TCi). Literature shows that the extent to which individuals produce a wide variety of ideas indicates their creativity (Baer, 2014; Boh et al., 2014; Frey et al., 2011). In the scientific field, publications represent the ideas of scientists and therefore publications in diverse subject areas can be thought of as diverse ideas. We therefore use the inventors' knowledge output in different subject areas as a measure of their creativity. To measure TCi we first identified all the subject areas in which the inventor has published their work until the priority

5

date of the relevant green patent. We created a measure for TCi based on the Herfindahl-Hirschman Index.

Thus,

$$TCi = 1 - \sum_{d=1}^{D} \left(\frac{Publications\ in\ subject\ area\ d}{Total\ number\ of\ publications}\right)^2$$

Where **d** represents a unique subject area and **D** represents the total number of subject areas in which the inventor has published their work. The individual-level creativity values were then aggregated to calculate **TC**.

Therefore,

$$TC = \sum_{i=1}^{TS} TCi$$

Independent Variables: Team Size (TS), Team Network (TN), and Team Expertise (TE)

To evaluate *TN,* and *TE*, we first calculated network size and expertise of each inventor. The individual-level data was then aggregated to determine the team-level information. This is a common practice seen in creativity literature (Lua et al., 2023). The following discussion describes how each independent variable was measured.

Team Size. Relation between team size and creativity is undecided in the literature. Some scholars find a positive correlation, while Byron et al. (2022) reported a lack of relationship between the two. Others find that the two variables display an inverted U-shape relationship (Hu et al., 2021; Peltokorpi & Hasu, 2014) For Team Size (TS) the data gathering approach was more straightforward The number of inventors listed in the bibliographic details of the patent document are taken as TS.

Team Network. There is strong evidence in the literature that positively links social network of individuals or organisations to their creative output (del-Corte-Lora et al., 2017; Perry-Smith & Shalley, 2003; Sigala & Chalkiti, 2015). Moreover, scientist's co-author network has commonly been used to represent their social network (Tahmooresnejad & Beaudry, 2018; Yeung et al., 2005). Therefore, we

6

first measured the size of each inventor's network (TNi) by examining the number of co-authors that they had worked with until the priority date of the green patent. This information was drawn through the inventor's Scopus profile. We then calculated TN as follows:

$$TN = \sum_{i=1}^{TS} \frac{TNi}{TS}$$

Team Expertise: The depth of expertise of individuals is seen to help generate influential inventions (Boh et al., 2014). Furthermore, team creative output results from integration of individually held expertise of team members at the team level (Tiwana & Mclean, 2005). Therefore, to determine *TE*, we first identified the disciplinary expertise of each inventor (*TEi*). This was accomplished by examining the number of publications in each subject area. For each inventor, we noted down the subject areas in which the inventor had more than the median number of total publications. These were taken as the expertise areas of the inventor. These were aggregated on a team level to determine *TE*.

FINDINGS

We used Necessary Condition Analysis (NCA) (Dul, 2016) to test our hypotheses. A condition is necessary for an outcome when the absence of the condition causes the absence of the outcome, or when a low level of the condition causes the absence of a high level of the outcome (Dul, 2016). NCA draws a ceiling line on top of the data to separate the area with observations from the area without observations. The lower the ceiling line, the stronger the necessity effect. We used R version 4.4.0 and version 4.0.1 of the NCA R package (Dul, 2024) to estimate the necessity effect sizes.

The NCA results are displayed in figures 2, 3, and 4. We used the C-LP technique to draw the ceiling lines, which offers the most conservative test of our hypotheses (Dul, 2021). The NCA effect sizes are 0.22 ($p < 0.001$) for team size and team creativity, 0.05 ($p = 0.006$) for team network and team creativity, and 0.28 ($p < 0.001$) for team expertise and team creativity. The effect sizes of team size and team expertise are moderate (Dul, 2016), while the effect size of team network is small and, therefore,

7

not meaningful (Dul, 2016). We, therefore, found support for hypothesis 1 and hypothesis 3. A large team size and a high level of team expertise are necessary for a high level of team creativity.

Figure 2. NCA Plot of the Relationship between Team Size and Team Creativity
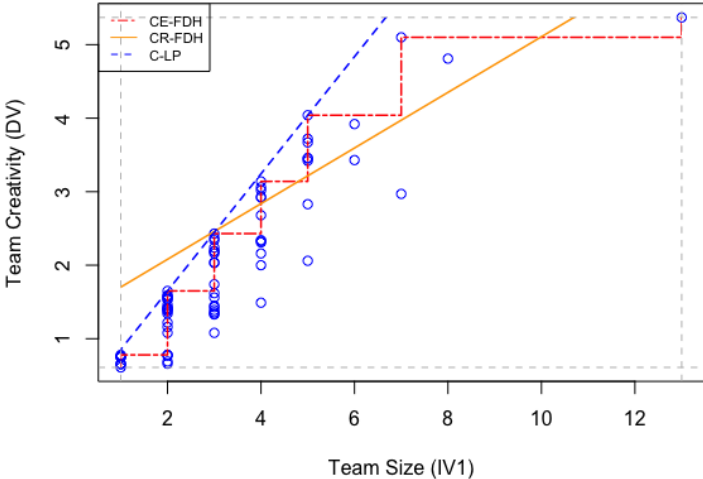
Figure 3. NCA Plot of the Relationship between Team Network and Team Creativity

8
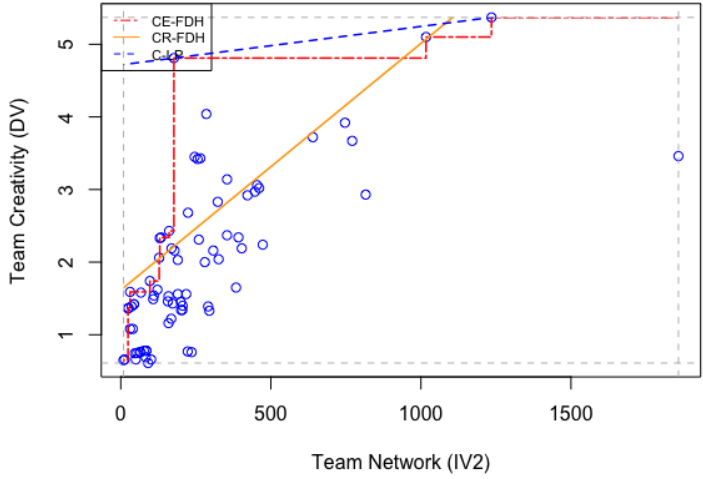
Figure 4. NCA Plot of the Relationship between Team Expertise and Team Creativity
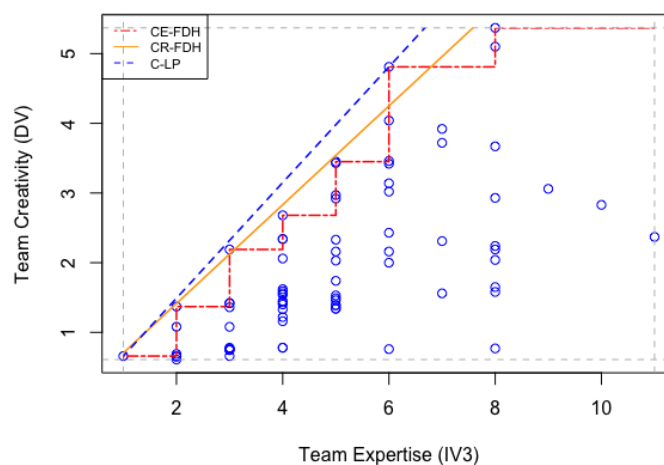
CONTRIBUTION AND LIMITATIONS

By showing that team size and team expertise are necessary conditions for high levels of team creativity, our study contributes to the literature on team creativity. While prior literature has identified a range of factors that can stimulate team creativity, it has not yet made a distinction between the need-to-haves and the nice-to-haves. Our study shows that team size, and expertise are necessary for high levels of team creativity. With this, we are providing evidence that enriches the current literature. A limitation of our research is that it does not account for other potentially necessary variables, such as team diversity (i.e., age, gender, socioeconomic status, etc.). Instead, we focus on the three variables we could confidently extract and analyse using the hydrogen patent data.

IMPLICATIONS

An important theoretical implication of our study is that team size and team expertise can work as a bottleneck, preventing teams from achieving levels of high creativity. Future research on team creativity should, therefore, consider the ceiling effects of these team characteristics in their theoretical frameworks. For practitioners, identifying necessary condition for team creativity to be possible can better allow managers to inform field interventions and settings that would ensure creative outcomes to occur.

9

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10

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11

Stream 2 | Organisational Behaviour

WHAT CAN ALBERT BANDURA'S SOCIAL LEARNING THEORY TEACH US ABOUT ARTIFICIAL INTELLIGENCE?

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Stream 2 | Organisational Behaviour

WHAT CAN ALBERT BANDURA'S SOCIAL LEARNING THEORY TEACH US ABOUT ARTIFICIAL INTELLIGENCE?

"If capital and labour are the major structural features of an industrial society, information and knowledge are those of a post-industrial society."

- Daniel Bell

ABSTRACT:

Management professionals create and leverage techniques and interventions to increase organizational effectiveness. Gaining the adoption of technology tools such as AI requires the movement beyond the conversation of its value to its socialization. Leveraging an approach based on Albert Bandura's Social Learning Theory, the solution is to focus on the all, to shift the attention from the incremental change to the tools that can transform the attitudes and behavior of every employee (Pascale, 1997). An enabler of success when adopting change is creating an organizational culture that models and rewards behavioral change. The aim of this paper is to reinforce the impact of AI and outline a social learning framework practitioners can leverage to guide its adoption and socialization.

Keywords: Social learning, artificial intelligence, organization behavior, organization development

Artificial Intelligence (AI) will become as much a part of everyday life as the Internet or social media did in the past (Haenlein & Kaplan, 2019). Furthermore, AI will impact our personal lives and fundamentally transform how firms make decisions and interact with their stakeholders. In addition, the sophistication of AI has evolved and increased in notoriety over the years. The 2019 Artificial Intelligence Index Report illustrates that the corporate perception of AI has increased substantially. Utilizing data from 3,000 publicly traded companies in the US, the report demonstrated that the share of earning calls where AI received a mention increased significantly, from 1% of total earnings calls in 2010 to 42% in 2018. The gap between AI's potential impact and implementation remains broad and deep. Research conducted by Ransbotham, Kiron, Gerbert, and Reeves (2017) uncovered that 85% of business executives believed AI would provide their companies with a sustainable competitive advantage. However, only 39% had a strategic plan to adopt and implement AI.

Artificial intelligence consists of systems that combine sophisticated hardware and software with elaborate databases and knowledge-based processing models to demonstrate characteristics of effective human decision-making (Shubhendu & Vijay, 2013; Haefner, Wincent, Parida, & Gassman., 2021; Zhang & Lu, 2021). Supporters of AI pontificate the benefits of AI dramatically reducing or eliminating the risk to humans in many applications (Shubhendu & Vijay, 2013; Chui, Manyika, & Miremadi, 2018), elevating the customer experience (Batra, 2019), increases the time medical professionals spend with patients and democratize access to health care (O'Neill, 2017), and aid in inclusive and equitable quality education (All & Perris, 2022). With the increase of AI awareness has also come a vocalized level of uneasiness and anxiety for organizations. Concerns over the expansion of AI include a lack of trust on behalf of its users (Miller, 2019), AI replacing human workers (Haefner et al, 2021), AI's lack of identifying fairness and justice as it relates to racial and ethnic bias, LGBTQIA+ individuals, pregnant women, and older people (Berry & Kotha, 2023), and AI robots becoming a threat to democracy and seeking world domination (Gündoğar & Niauronis, 2023).

AI will directly impact the organizational landscape as organizations embark on this transition. The escalation of AI will usher in new ways of working. AI can impact how we frame and reframe work, the complexity of engaging in that work, how knowledge gets shared, and the interpersonal dynamics of personnel. AI also has the potential to initiate transformational and disruptive change. This change will not happen overnight; it will require strategic organization design, an investment in employee commitment and participation, and the ability to navigate anticipated uncertainty. As organizations work to keep pace with the evolution of AI, strain and stress will occur. Intelligent organizations will consider engaging with Organization Development (OD) practitioners to partner and co-create the AI transformation. OD practitioners bring expertise and skilled practice in well-researched tools to aid in ushering in the new AI era.

The remaining structure of this paper is as follows: First, examine the assumptions of social behavior. Then, explore Albert Bandura's Social Learning framework, which leads to a perspective for

OD action and intervention when guiding and supporting firms in the successful adoption and socialization of AI. The paper will close with a conclusion and support for future research investigating the impact of utilizing social learning theory to advance the adoption of AI.

As a note, this paper will focus on social behavior as it relates to its impact on performance. Psychology, as a discipline, encompasses the study of behavior and all its components; as such, the broader field of psychology will be discussed where necessary.

Assumptions of Social Behavior:

Humans are social beings. Greenberg, Schmader, Arndt, and Landau (2015) state succinctly, "From birth on, human beings cannot survive without extensive relationships with other human beings" (p.40). Psychology is typically defined as the science of human behavior, whereas social psychology is distinctly narrowed as the science focused on human interaction (Gergen, 1973). The field of social psychology advocates that behavior is a joint product of the person and their environment. It operates under four core assumptions (adapted from Greenberg et al., 2015, p. 7 – 9):

Behavior is a Joint Product of the Person and the Situation

Kurt Lewin (1936), long recognized as a critical contributor to modern social psychology, advances the notion that behavior is determined by the combined influences of the individual and their psychological environment. He devised the behavior equation to interpret and explain behavior: $B = f(PE)$. Within the equation, B symbolizes behavior, P signifies the all-encompassing personality of the individual, and E represents their physical, psychological, and social environment. Inferring from Lewin's behavioral equation, the individual or their environment needs changing when striving to change a person's behavior. Lewin's view of behavior was holistic; he evangelized that one can understand behavior only as it relates to all forces acting on a person at a given moment (Weisbord, 2012).

Behavior Depends on a Socially Constructed View of Reality

Social constructionists believe that all human thoughts, feelings, and actions involve and are influenced by other people and are thus social (Greenberg et al., 2015). Social constructionism teaches that behaviors are formed by others in our environment and evolve due to interactions. George Mead (1934), a trained social psychologist, frames social psychology as being interested in the effect that the social group has in the determination of the experience and conduct of the individual member. Berger and Luckmann (1966) propose that all human activity is subject to habitualization. Habitualization consists of actions deemed socially acceptable, repeated regularly, and becoming a behavior pattern. Gergen's later work with Keith Davis (1985), *The Social Construction of the Person,* shares views towards the self and its interaction with their environment, which could be interpreted as a cross-section between behaviorism and constructionism. If the organism is to adapt successfully, it is claimed that its knowledge must adequately represent or reflect that environment (Gergen & Davis, 1985).

Behavior is Strongly Influenced by our Social Cognition

Social cognition situates itself within social behavior to understand how individuals connect with others. It concerns how individuals understand others and how their understanding of others influences their social behavior (Greenberg et al., 2015). Albert Bandura's social cognitive theory positions, "human agency operates within an interdependent causal structure involving triadic reciprocal causation" (Bandura, 1977, p.6). Social cognitive theory subscribes to the individual being influenced by intrapersonal factors, their behaviors, and the environmental forces imposed on them (Bandura, 2018). The below illustration shows the relationship and influence between the three factors (modified from (Bandura, 1977b, p.6; Bandura, 2018, p. 131):

Personal factors
(e.g. cogntiive, affactive, & biological events)

Behaviorial factors

Environmental factors
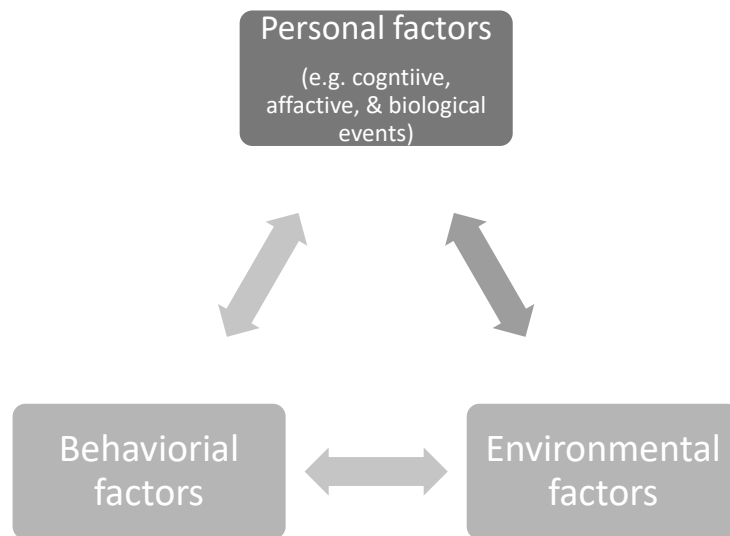
The Best Way to Understand Social Behavior is to Use the Scientific Method

Realist social psychologists attest to the scientific method for studying social behavior. "There is nothing so practical as a good theory" is a declaration attributed to Kurt Lewin. Theories inform causal factors influencing particular behavior (Greenberg et al., 2015). In support of this assumption, Kurt Lewin's first task of science "is to register objectively and describe reliably the material one wishes to study" (Lewin, 1943, p. 199). Inserting AI tools into the everyday flow of work will require the utilization of behavior change methods. More research is needed on utilizing SLT to explore AI adoption. However, AI tools have been explored to facilitate learning (Zhou & Schofield, 2024; Park & Doo, 2024).

Albert Bandura's Social Learning Theory: An Approach to Artificial Intelligence Knowledge Sharing

From an organizational knowledge perspective, knowledge is created by individuals (Nonaka, 1994); therefore, "organizational knowledge should be understood in terms of a process that "organizationally" amplifies the knowledge created by individuals" (Nonaka, 1994, p.17). This paper

offers Albert Bandura's Social Learning Theory, specifically the process of observational learning to organize and amplify AI adoption and socialization. Earlier behavioral theorists suggested learning resulted from associations formed by conditioning, reinforcement, and punishment (Thorndike, 1927; Watson, 1913; BF Skinner, 1963), whereas Albert Bandura accentuates that learning should include a social element.

Albert Bandura developed Social Learning Theory, a theoretical framework to explain and predict how individuals learn. Social learning theory explains learning through observation and modeling. Albert Bandura (1977a) writes, "Most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions, this coded information serves as a guide for action" (p. 22). The effectiveness of social learning theory techniques is researched across a variety of disciplines: healthcare (Horsburgh & Ippolito, 2018), criminology (Akers, 2017), education (Deaton, 2015), and technology (Hill, Song, & West, 2009). Nonaka (1994) offers additional remarks regarding the concept of social learning:

> Although ideas are formed in the minds of individuals, interaction between individuals typically plays a critical role in developing these ideas (Nonaka, 1994, p. 15). That is to say, "communities of interaction" amplify and develop new knowledge.

Social learning does not come to fruition passively. Social learning theory is a tool and guide for knowledge sharing and development. Observational learning occurs through four component processes. The below diagram illustrates the observational learning process modified from (Bandura, 1977a; Bandura & Jeffrey, 1973):

1. **Attention** People cannot learn much by observation unless they attend to, and perceive accurately, the significant features of the modeled behavior.	2. **Retention** To be influenced by modeled behavior, people must remember the behavior. Desired behavior should be replicated often for reinforcement.

Observational Learning Process

3. **Motor Reproduction** One must be capable of replicating the desired behavior. Developmental opportunities may be required to replicate the desired behavior.	4. **Motivation** To adopt modeled behavior, one must be motivated to replicate the desired behavior.

Attention

Several factors impact attention: observer characteristics, environmental conditions, the mechanics of the knowledge activities, and the social interaction between the observer and others involved. In addition, how the observer values the displayed behavior is an essential factor in determining their attention capacity.

Retention

Once observers are exposed to the desired modeled behavior, committing that behavior to memory is the next phase of the observational learning process. Moreover, it is expected that the observer can display the desired behavior when the behavior is no longer modeled. Visual imagery and verbal coding strengthen retention, as do rehearsal and repetition. *Visual images* are especially critical during the early stages of learning. *Verbal coding* is essential to observational learning as it speeds up learning. Bandura's (1977a) social learning theory emphasizes that "most of the cognitive processes that regulate behavior are primarily verbal rather than visual" (p.26).

Motor Reproduction

Replicating the desired behavior is the next step in observational learning, leading to performance. Bandura impeccably connects the relationship between learning and performance. Bandura determined that the ability to describe what was observed was viewed as a measure of learning while engaging in the observed behavior at a later time was viewed as performance (Fryling, Johnston, & Hayes, 2011).

Social learning facilitates the exchange of knowledge. To convert that knowledge into overt action, the observer must possess the skills to do so. Developmental opportunities must be offered if a performance gap exists, notably when the learning includes complex skills.

Motivation

In the last phase of the observational learning process, Bandura (1973, 1977a) outlines the motivational process. Motivation is concerned with the activation and persistence of behavior and is also partly rooted in cognitive activities (Bandura, 1977b). Observers are likelier to adopt modeled behavior if it results in outcomes they value than if it has unrewarding or punishing effects. Bandura (1977a) shares examples of why the observer may fail to model the desired behavior: the right behaviors were not modeled, struggle to retain knowledge, physical incapacity to perform, unsatisfactory incentives, or lack of motivation.

Social Learning in the Organizational Context: Implications for OD Professionals

Organizational development is a systematic process for applying behavioral science principles and practices to increase individual and organizational effectiveness (Lawrence & Lorsch, 1969; Friedlander & Brown, 1974; Beer & Walton, 1987; French & Bell, 1999). Functionally, OD combines the efforts of the organization and the individual to achieve better outcomes. The humanistic, optimistic, and democratic values of OD. (Bennis, 1969 & French & Bell, 1999), empower OD practitioners to lead the efforts in implementing, adopting, and socializing artificial intelligence tools. Leveraging the components

Stream 2 | Organisational Behaviour

of social learning theory, OD practitioners can create a roadmap for human resources leaders, learning and development leaders, and people managers as resources and best practices for organizational intervention and change.

Knowledge creation through attention

People's perceptions are derived from past experience and situational requirements (Bandura, 1977a), governing how they process information and the benefit of the observed experience. As discussed earlier, the contributions of AI are expansive. However, the fear of its reach can be debilitating. Demystifying AI technology is crucial to simulate the curiosity and safety necessary for retaining attention. As a practice, collaborating with employees can impact active participation in learning. Publicizing and celebrating AI use cases within the organization displays the behavior the observer needs to give attention to.

Reinforcement for retention

"The only proof of their being retention is that recall actually takes place" (Weick, 1969, p.207). Observational learning is achieved by organizing and rehearsing the modeled behavior symbolically and then enacting it overtly (Jeffrey, 1976). The aspiration of observational learning is for the observer to learn to imitate the desired behavior ultimately. Careful selection of the model that models the desired behavior is also crucial for retention. Selecting models who "possess engaging qualifications are sought out, while those lacking pleasing characteristics are generally ignored or rejected" (Bandura, 1977a, p.24). Utilizing influential high-level leaders, or leaders with high social capital, as models for the desired behavior fosters observers' awareness, engagement, and participation. As high-ranking leaders in the firm, observers will feel incentivized to mimic their behavior.

Replication for reproduction

"Learning requires overt responding and immediate reinforcement" (Bandura, 1977a, p.35). Consequently, individuals will tend to increase the frequency of behavior that has resulted in positive

consequences and will tend to decrease the frequency of behavior that has resulted in negative consequences (B.F. Skinner, 1963; Manz & Sims, 1981). Recalling and replicating the desired behavior requires both positive and negative reinforcement.

French and Bell (1999) outline the entire field of OD is about empowerment; OD's inventions are deliberately designed to increase involvement and participation by organization leaders and members. In professional practice, OD practitioners design incentive programs to embolden the reinforcement needed to empower learning retention. Fundamentally, a positive reinforcement program is results-oriented rather than process-oriented (Hamner, 1976).

Personal commitment through motivation

According to one of the original management gurus', Douglas McGregor (1960), "acquiring knowledge is straightforward, pending the individual wants the new knowledge" (p.208). The learning experience can be designed in a variety of ways; however, if interest or motivation is lacking, the knowledge transfer could prove difficult. This sentiment remains supported decades later, as "Commitment is one of the most important components for promoting the formation of new knowledge within an organization" (Nonaka, 1994, p.17). Learning and behavioral change require the observer's agreement, commitment, and capacity. They must agree that learning is valuable and commit to doing the work to acquire the knowledge. More support is required if the observer cannot acquire the observed knowledge.

Social learning theory distinguishes acquisition and performance because people do not enact everything they learn (Bandura, 1977a). In this process, converting learning to performance through employee development has historically been the job of the people manager, which presents some challenges. After surveying 500 managers, Kinley and Ben-Hur (2017) found that three-quarters of managers said they had no trouble helping employees identify and understand which behaviors they needed to change to improve performance, and roughly the same percentage said they knew how to

deliver feedback. Still, only about one-third said they knew how to help people change, and less than 10% had confidence that they would make behavior changes stick over time.

Once modeled, the observer is responsible for acquiring and retaining the new learning. Consequently, imitating the desired behavior will require "refinement through self-corrective adjustments based on informative feedback from performance" (Bandura, 1977a, p. 192). Self-efficacy, one's belief in one's capability to perform a task, is also a key element of motivation (Bandura, 1977b). Self-efficacy centers on people motivating and guiding themselves through the creation of action plans, adopting goals, and visualizing the likely outcomes of their actions (Bandura, 2018). Engaging in the social learning process supports and develops self-efficacy.

Final Considerations

Morgan (1989) noted that technology is not a completely independent force; once the basic technology is selected, successful organization [implementation] depends on developing compatible organizational structures, control and coordination systems, and managerial styles. Social learning theory enables a streamlined and efficient learning experience. Behavior is learned symbolically through the central processing of response information before it is performed (Bandura, 1977a). Furthermore, the human capacity to adopt new behaviors, learn, and change is rooted in social systems of interaction (Bandura, 1977b). However, only some people want to grow; the OD consultant should not take it personally when good intentions fall short (Weisbord, 2012).

Organizations change all the time, every day (Burke, 2002), and change needs to be organized. Change can deliver what Bennis (1969) termed an "organizational revitalization," a complex social process that involves a deliberate and self-conscious examination of organizational behavior and a collaborative relationship between managers and scientists to improve performance. Closing the gap between AI ambition and adoption will require an escalation of learning and commitment. Social learning

Stream 2 | Organisational Behaviour

theory is offered as a structured, methodical, and tested approach to generate participation and socialization of AI tools.

Bandura (1977b) explains the role of the OD practitioner in this process quite well; "social structures, which are devised to organize, guide, and regulate human affairs in given domains by authorized rules and sanctions – do not arise by immaculate conception; they are created by human activity" (p.6). OD practitioners have created a selection of interventions and strategies (Beckhard, 1969; Bennis, 1969; Lawrence & Lorsch, 1969) to help organizations and their members address problems and advance organizational effectiveness (French & Bell, 1999). The best practices behind OD interventions and methods guide practitioners and organizations to work through assumptions, tackle problem-solving, and influence outcomes.

In conclusion, to advance the understanding of the impact of observational learning on the adoption and socialization of AI tools, I offer Kurt Lewins's action research model as a basis to study the hypothesis. The action research model is a normative model for learning, or a model for planned change (French & Bell, 1999). In more detail, action research is defined as:

> The process of systematically collecting research data about an ongoing system relative to some objective, goal, or need of that system; feeding these data back into the system; taking actions by altering selected variables within the system based both on the data and on hypotheses; and evaluating the results of actions by collecting more data (French & Bell, 1999, p.130).

Action research embodies an iterative process that permits the researcher to refine the problem and its solution while studying the problem. The researcher collects data, evaluates the data, and acts based on the data all in real time (French & Bell, 1999). Coghlan and Shani (2014) illustrate four factors that ground action research: Context, quality of relationships, quality of the action research process itself, and outcomes. The affinities between action research and the observational learning process are palpable:

KEY SIMILARTIES OF ACTION RESEARCH AND SOCIAL LEARNING THEORY	
Action research quality dimensions	**Observational learning process**
Context: Leaders of change need to be **well-informed** of their organizational external and internal context as the force for change comes from that context.	*Attention*: People cannot learn much by observation unless they attend to, and **perceive accurately**, the significant features of the modeled behavior.
Quality of relationships: Action research espouses research with people, rather than on or for them, so a central role of the action researcher is that of **enabling the formation and enactment of genuine partnership** in addressing the change issues.	*Retention*: **To be influenced by modeled behavior**, people must remember the behavior. Desired behavior should be replicated often for reinforcement.
Quality of the action research process: The action research process is grounded in the intertwining **dual focus on both the action and the inquiry processes.** Evidenced by the iterative cycles of action and reflection enacted in real time that the change is addressed, and the **practical knowledge is co-generated.**	*Motor reproduction*: One must be capable of **replicating the desired behavior**. Developmental opportunities may be required to replicate the desired behavior.
Outcomes: The outcomes of action research are **sustainability (human, social, economic, ecological) of the change** and the development of self-help and competencies out of the action and the **creation of new knowledge** from the inquiry	*Motivation*: To adopt modeled behavior, one must be motivated to **replicate the desired behavior**.

Coghlan and Holian (2021) contribute relevant components of action research by sharing, "action research focuses on real life issues encountered by practitioners and the use of democratic research approaches aimed at integrating theory with practice in order to not only understand but to also change behavior and practices in social settings and organizations" (p.13). With the speed and evolution of technology, the question is less whether AI will play a role in organizational transformation and more on which role it will play and, more importantly, how AI systems and humans can coexist next to each other (Haenlein & Kaplan, 2019).

Stream 2 | Organisational Behaviour

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Stream 5. Entrepreneurship and SMEs

Synergizing Lean Startup and Effectuation Principles for Rural Entrepreneurship

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Synergizing Lean Startup and Effectuation Principles for Rural Entrepreneurship

ABSTRACT: *The study explores the synergistic application of lean startup and effectuation principles to strengthen rural entrepreneurship. Lean Startup is characterized by a build-measure-learn approach emphasizing rapid prototyping, validated learning, and iterative product development, enabling entrepreneurs to mitigate uncertainty and optimize resources. Effectuation focuses on leveraging existing resources and partnerships to create opportunities leading to appropriate decision-making. Through a multi-case study, the analysis demonstrates how entrepreneurs can exploit a combination of these methodologies to foster innovation and new product development by solving unmet needs. The findings present a strategic path for budding and aspiring rural entrepreneurs to create sustainable growth by improving their venture success and promoting economic development in rural areas.*

Keywords: Lean Startup, Effectuation, Rural Entrepreneurship, Innovation, Opportunity

- **Overview:** Building a Startup is a daunting activity as it involves enormous risk and uncertainty associated with new products/services, markets, people, technological advancements, finance, and competition (Bortolini et al., 2021). The criticality of launching a startup becomes even more challenging in rural areas which are often plagued with resource scarcity, poor infrastructure, market access, funding availability, and community norms (Asmit et al., 2024). Lean Startup as proposed by Ries (2011) has prevailed as a robust entrepreneurial methodology to mitigate risk, reduce waste, and optimize resources for building a replicable and scalable business model. Lean startup focuses on hypothesis testing, creating minimum viable prototypes, and iterative customer feedback to guide entrepreneurs for their venture success by employing a practical approach. However, Lean startup is often argued to lack a theoretical underpinning with researchers addressing to complement with other approaches for enhancing its applicability (Blank and Eckhardt, 2023). Thus, Effectuation theory comes into the discussion which propounds a non-predictive control decision-making approach for guiding an entrepreneur to navigate uncertainty (Sarasvathy, 2001).

The effectuation theory is conceptualized in five principles such as bird-in-hand, lemonade, crazy quilt, pilot in the plane, and affordable loss. The Bird-in-Hand principle emphasizes the importance of starting with resources already within the entrepreneur's control, such as their capabilities, knowledge, and network. The Crazy Quilt principle highlights the value of collaborating with

anyone willing to commit to the venture, fostering partnerships through mutual commitment. Meanwhile, the Affordable Loss principle advises that entrepreneurs should only invest resources they can afford to lose, minimizing risk while pursuing their goals. The Lemonade Principle encourages entrepreneurs to turn setbacks into opportunities by reframing negative outcomes into positive possibilities. The Pilot-in-the-Plane principle suggests viewing all stakeholders involved in the venture as co-pilots, working together to shape new outcomes through shared commitment and collaboration. Effectuation theory has been applied in the context of venture performance, market-entry, innovative processes, internalization, and business growth (Racat et al. 2024). But there is limited discussion on how the synergistic approach of lean startup and effectuation theory is translated into reality. Thus, this research focuses on exploring the process of launching a startup in rural areas by studying both these concepts.

- **Current understanding:** Blank and Eckhardt (2023) in their conceptual paper calls for the application of lean startup across different industries and in environments with higher uncertainty. A recent study by Zott and Amit (2024) calls for an integrated study on lean startup methodology and business models for value creation among stakeholders. Jantunen et al. (2022) have applied lean startup methods in 3 Finnish micro-sized enterprises to understand the strategies, enablers, and hindrances. Teppo et al. (2019) have investigated how lean startup practices advance product development, organizational learning, and innovation practices. Bocken and Snihur (2019) argue lean startups can lead to novel business models by achieving both social and commercial goals by citing examples of different cases that include publishing houses and small clothing retailers. Effectuation, on similar lines to Lean Startup, echoes the iterative mechanism of the entrepreneurial methods (Mansoori and Lackéus, 2020). Dew et al. (2018) underpins how effectuation aids entrepreneurs in discovering available means and guiding them to form meaningful networks with committed stakeholders. Lean startup and effectuation support shorter product development cycles, risk in sole business planning, customer development, and validated learnings (Sarasvathy, 2024).

The utility of lean startup and effectuation has been largely seen in larger organizations concerning the commercialization of new development, research, and development, social enterprise, arts, and governance (Sarasvathy and Ramesh, 2019) but leaving a void in rural context. Rural Entrepreneurship is a discrete domain in mainstream entrepreneurship practice and research unfolding its own set of avenues and challenges (Fortunato, 2014). According to Saxena (2012), rural entrepreneurship can be defined as creating and managing business in rural areas by leveraging opportunities and mobilizing human, and financial resources to stimulate local development. Rural entrepreneurship can be manifested in terms of agricultural ventures, handicrafts, eco-local tourism, energy, etc. Streb et al. (2024) claim that rural areas often fall behind their urban counterpart due to innovation and limited exposure to entrepreneurship. Many times, rural areas are factor out from entrepreneurship, and, research and development initiatives in some countries (Habiyaremye et al. 2020). Furthermore, Utete and Zhou (2024) claim that catering to the needs of rural areas is paramount for well-being and stability in developing countries. Promoting an entrepreneurial culture in rural areas not only creates jobs but also slows down urban-rural migration, and helps in ending poverty (Bolosha et al. 2023). Entrepreneurs may find an opportunity to exploit local resources to develop innovation and build ventures that capitalize on local networks and human capital in rural areas (del-Olmo-Garcia et al. 2023). The current discourse on rural entrepreneurship focuses on sustainable growth, antecedents, enablers and barriers, the role of innovation, value chain process and misses out on how opportunities are exploited and the process of setting up a venture.

- **Research question:** The goal is to understand how lean startup and effectuation principles are manifested in real practice in a rural context. Thus, the research question of the paper is "How do the principles of Lean Startup and Effectuation influence the entrepreneurial method of new venture creation?"

- **Research approach:** An exploratory design was employed to address the research question, utilizing purposive sampling through a multi-case study approach. The cases were sourced from

the National Innovation Foundation's database, and a specific set of criteria was used to shortlist entrepreneurs and their startups. To qualify, each startup had to be operational for no more than 10 years, actively competing in the market with a product or service, and generating less than $1 billion in revenue. The author reached out to 25 entrepreneurs for interviews, conducted between September 2023 and March 2024. As part of this ongoing research, four Indian entrepreneurs who have established rural ventures agreed to participate in online interviews. All the four entrepreneurs have acquired English language skills through education; thus, the medium of communication was done in English. The qualitative questions were designed to explore the entrepreneurial strategies used to navigate the challenges of launching a new venture. The selected entrepreneurs had founded startups in sectors such as agriculture, food, energy, and machinery. Semi-structured interviews were conducted with each founder to gain insights into their entrepreneurial motivations, opportunity identification, product development process, innovation, feasibility analysis, enablers and barriers, intellectual property considerations, and overall strategy. Each interview lasted between 60 and 90 minutes and was conducted in English. A brief snapshot of the cases is shown in Table 1.

Table 1 Case Details

Information		Case 1	Case 2	Case 3	Case 4
I.	Sector	Agriculture	Food	Energy	Machinery
II.	Product	Nano-Urea	Coconut leaves Straws	Affordable Light Bulbs	Stone Picker Machine
III.	Location	North-West India	South-West India	North India	South India
IV.	Profile of interviewee	Founder	Founder	Founder	Founder
V.	Background (Education)	PhD (Bio-Technology)	Post-Graduation (English Literature)	High Schooler	Post-Graduation (MBA)

VI. Motivation to start Venture	Making farming a profitable business	Sustainable practices of Agri-waste	Prolonged power outage in rural areas	Reviving interest for agriculture among rural youth

The qualitative data obtained from the interviews were manually coded following the ideals of thematic analysis to generate themes for addressing the research questions. The manual coding process was conducted in two stages: first, constructing the data structure from the transcripts, and then identifying the relationships between the emerging themes derived from the data. The initial phase involved inductively generating first-order codes directly from the transcripts, with a focus on the research objective: How do the principles of Lean Startup and Effectuation influence the entrepreneurial methods in new venture creation? Since the first-order codes were initially abstract, the coding process underwent multiple iterations of adding and removing codes until a point of saturation was reached. Following this, the second phase involved identifying relationships among and between the first-order codes using axial coding. This iterative process of refining and grouping relevant first-order codes led to the formation of second-order codes. Finally, these second-order codes were synthesized into four aggregate themes, aligning with existing literature as shown in Table 2.

Table 2 Data Analysis

1st Order Code	2nd Order Code	Theme
• Making agriculture easy and profitable • Coverting barren lands to agricultural land • Doing masters in plant biotechnology actually drew my interest further • Always interested in small innovations • Larger objective of impacting communities around us	Passion Motivation Triggering Event	*Initial Idea*
• Following trial and error method • We need to do many iterations • Consider all feedbacks from the customer • It took me 10 years to bring product to market and complete the validation	Identifying patterns Design Thinking Validated Learnings	*Hypothesis Generation*
• We validate all the benchmarks of field trials • We can reduce farmers efforts and also increase the productivity • Most of the startups are tech startups, they really don't know what the ground problem	Human-Centric Product Promoting Trust Jobs to be done	*Customer Development*

• Develop exactly a product that the farmer is able to operate • We took farmers for demonstration for new product • Need to convince and educate farmers, products adding value		
• Increasing brand value and generating leads • Eliminate the middle man, try to create more profit • Continuously discussing about the possibility of new products • Through innovations we can create wealth creating opportunities	Value Propositions Scalable Business Model Novelty	*Pivot and Product-Market Fit*

- **Findings:** The study draws inspiration from Sarasvathy's (2024) work and presents the data analysis concerning the interplay of effectuation and lean startup by generating themes like Initial idea, Hypothesis generation, Customer development, Pivots and Product-Market fit. Both effectuation and lean startup do not stress much on the initial idea for creating ventures. The findings demonstrate the emergence of an initial idea from a triggering event/personal motivation/passion toward a recurring problem. The following transcript support the theme "*Even in the urban areas when you travel you see lot of slum areas, little children playing without any facilities. So, I always wanted to do something more with my life, where I could meaningfully touch the lives of people, if you ask me the real motivation. It's not about doing a business, it's about this larger objective of impacting communities around us*".

Hypothesis generation in lean startup can be construed in the form of design thinking. The study presents design thinking as an important approach to solving problems by developing human-centred solutions during the pre-startup stage. Design Thinking has been labelled as a successful methodology for product development (Veflen and Gonera, 2023). The following transcript support the theme *"From the design thinking perspective, as you know instead of trying to do 10 different things simultaneously, focus on one hero product. Do it really, really well so that you become the go to brand for that product globally".*

The study findings suggest that effectuation plays a major role in customer development in rural entrepreneurship underscoring the importance of bird-in hand principle and crazy-quilt principle. The entrepreneurs tried to bring stakeholders whom they could trust and who were willing to take the risk for the entrepreneurial venture. The following transcript support the theme "*So after a week of experimentation, I realized I could make the straws in the chemical free process out of the naturally dried falling leaves. So that's how we started. And then 2 of my students became co-founders in the company again, having a technical background they developed the technology to roll out these straws. And then so the long story short is that we have now started deploying these machines in rural areas*".

Both lean startup and effectuation supported the actualization of product market fit. Leveraging value propositions, and crafting a scalable business model refines product offerings, which further enhances the market viability. Our findings currently demonstrate that pivots generally take place if the preliminary test doesn't yield the desired results, stressing the importance of lean startup's product-market fit. We propose a conceptual model based on our findings cantered on Lean Startup and Effectuation Principles as shown in Figure 1. The conceptual model can be empirically tested on a larger sample of rural entrepreneurs to validate its applications and assess the varying effectiveness of Effectuation and Lean Startup principles in achieving successful outcomes.
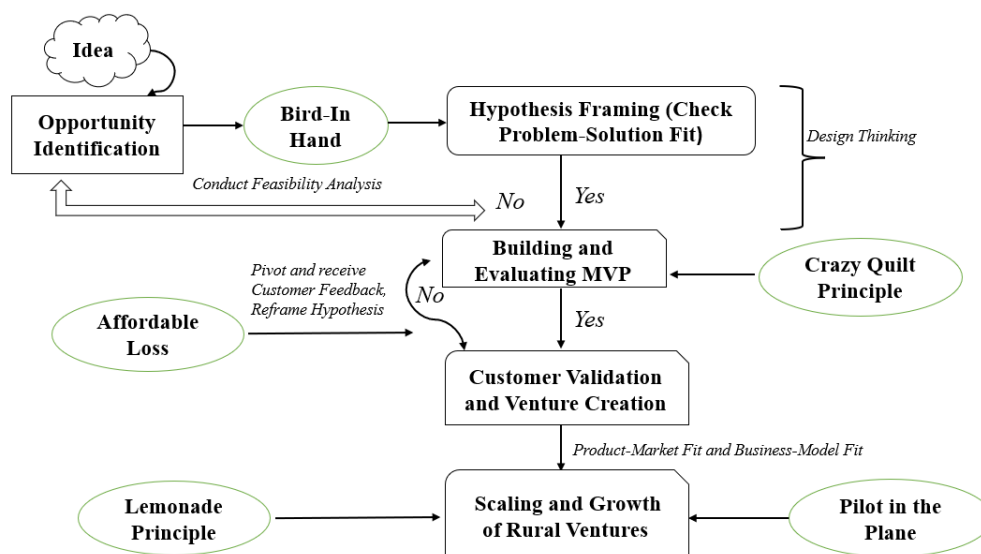
Fig.1. Conceptual Model for Strengthening Rural Entrepreneurship using Effectuation Principles and

Lean Startup

- **Contribution and Limitations**: This study contributes to the current understanding of the relatively underexplored synergistic approach between Lean Startup and Effectuation principles in the context of rural entrepreneurship. It demonstrates how the conceptual foundations of these approaches are applied in practice to exploit opportunities at the grassroots level, facilitating new venture creation. Design Thinking emerges as a core activity in rural entrepreneurship, further enriching the literature on Lean Startup and Effectuation. However, the study has limitations. One limitation is the small number of cases, which restricts broader generalization. Additionally, the shorter time frame limits insight into the long-term implementation of these approaches, suggesting that a longitudinal study could better explore their application in the later stages of a startup's development. Future research could also conduct cross-comparative analyses between startups and larger corporations, urban and rural entrepreneurs, and larger datasets to enhance generalization

- **Implications:** The synergy between Lean Startup and Effectuation principles can assist nascent entrepreneurs in boosting innovation, sustainability, and economic development in rural areas by

addressing their unique challenges. Drawing from Effectuation principles, rural entrepreneurs can leverage local resources and available means to kickstart their ventures and create innovative solutions, thereby tapping into niche markets. The analysis highlights how early prototypes helped entrepreneurs assess market demand. Additionally, Lean Startup enables entrepreneurs to remain agile, adapt their business models based on real-time feedback, and foster growth and scalability. Effectuation principles, in turn, play a key role in building self-efficacy, emphasizing the need for training workshops to support aspiring entrepreneurs. Together, Lean Startup and Effectuation principles foster initiatives for job creation and livelihood improvement, contributing to broader societal goals and prosperity. Future research could empirically test this conceptual model to demonstrate its tangible impact on rural entrepreneurial success.

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Stream 6 - Leadership, Governance and Strategy

Provenance: Looking back to move forward in practice inquiry

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Stream 6 - Leadership, Governance and Strategy

Provenance: Looking back to move forward in practice inquiry

ABSTRACT: *Provenance is a process within practice inquiry in which the inquirer looks back at their history with a practice to determine the incidents and discourses that informed and shaped that practice. It can be an effective tool for researchers to identify and define important areas of applied research. In this paper, we draw on a case of a researcher outlining and reflecting on their own provenance and using this process to begin to frame the inquiry questions pertinent to a practice-based inquiry (research). The case study also demonstrates the illumination of stakeholders to an issue or practice being investigated. This reflection shows how provenance helped identify problems in practice leading to research topics and contributed to the formulation of the research questions and research design. The case study reinforces the description of Provenance as being a preliminary stage in practice-led inquiry and provides practical guidance for beginning a practice investigation.*

Keywords: Provenance, practice-led inquiry, research questions, research design

INTRODUCTION

This paper aims to highlight Provenance as a support tool for practice-led inquiry (research[1]). Practice-led inquiry is an investigative process often associated with the study of professional practice and is distinguished by its initiation within the inquirer's own practice. The professional recognises a state of 'troubling' (Schön, 1992, p. 50) within their own reflection on their professional practice. Provenance involves reflecting on the personal and social events and discourses that might have contributed both to the professional's practice and to their current troubling. In this regard, Provenance helps to illuminate the practice or issue at the heart of an inquiry and thus helps to formulate or articulate relevant inquiry questions.

DISCUSSION

Provenance has existed as an investigative method in many different disciplines. Migrated into organisational practice investigation, the first mention of Provenance in that discourse aligned with action inquiry's 'reconnaissance' as a step leading into action inquiry (Hill, 2014). In later discussions

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[1] Note that, as Hill (2014) explains in his entry on cycles of inquiry for *The Encyclopaedia of Action Research*, several writers have adopted the term inquiry over the term research to draw attention to their allegiance to post positivist paradigms. The term research is often associated with the traditional positivist research paradigm.

Stream 6 - Leadership, Governance and Strategy

it was applied within a particular organisational inquiry as a preliminary step for practice-led inquiry and was described as

> *The general and personal history of a practice [which] illuminates the way in which the practice has evolved for a specific practitioner… [it] is a reflective practice tool that scaffolds a practitioner to recognise the elements and experiences that have contributed to their knowledge and acquisition of a practice. (Hill & Lloyd, 2015, p. 3)*

In practice-led-inquiry, provenance signifies a 'life story', in the form of general literary history as well as the personal history of the inquirer (Hill & Lloyd, 2015). This contrasts with the tradition in a research study in which the issue or practice at the heart of the investigation is surveyed from the perspective of a literature review to illuminate the discourse associated with the issue or practice (Bruce, 1994). Personal history illuminates the way in which a practice has evolved for a specific practitioner. It draws on the experiences in their professional development, including formal learning structures, as well as practical learning and encounters in practice and in private life. An inquirer's Provenance systematically interrogates their practice and identifies the critical incidents in their career that are related to the specific practice that they are investigating. The data of one's own provenance contributes to the understanding and defining of the phenomenon and the problem(s) that have been revealed that have prompted investigation. This iterative process progressively helps to refine the way in which a practitioner is troubled (Schön, 1992) around a practice, and this in turn helps the practitioner as inquirer to begin to frame the specific questions that will underpin their inquiry.

Because Provenance in practice led inquiry is the result of migration, this concept appears in other discourses identifying similar processes of an inquirer reviewing their history to help to explain or illuminate contemporary practices and problems identified therein. The earliest reference in organisational professional practice literature that a practice history might impact on its contemporary out playing is in Carr-Saunder and Wilson's (1964) *The Professions*. In this text the authors provide an historical background on every group that could be considered a profession in England. Abbott (1988, p. 1 & 4) drew attention to this phenomenon in his *The System of Professions: An essay on the division of expert labour*. Other concepts that have emerged since include 'reflexive ethnography' (Finlay, 2002) - although Finlay (2002, p. 536) in the same paper also described this exploring the

Stream 6 - Leadership, Governance and Strategy

history of a practice as 'provenance' - 'self-reconnaissance' (Dillon, 2008), 'course-of-experience' (Hauw, 2009), 'fore-having' (Johns, 2010), 'history of personal experience' (Kemmis, 2011), 'internally reflective account' (Marshall, 2011), and 'pre-understanding' (Alvesson & Sandberg, 2022).

These various terms and their applications have evolved from multiple disciplines and for a variety of purposes. For some researchers the unit of inquiry determined the term used. Some were studying the practitioner. Johns (2010, p. 14) for example, writing within a health discipline, focused on the writer's 'fore-having' to demonstrate how 'their being has been shaped' and Kemmis (2011), discussing professionalism, utilised a 'history of personal experience' to consider a 'practitioner's identity and capacities, and the way she or he performs the practice'. Others were inquiring about the consequences or outcomes of a practice. Hauw (2009, p. 342), for example, writing within a sports discipline, utilised the 'course-of-experience' concept to identify past practice performance of athletes to contribute to the study of future outcomes of the practice. For other practice-led inquirers such as Dillon (2008) and Hill and Jenkins (2018) the research was focussed on the practice itself. All authors were focused on a named practice within which the practitioner participates.. Hill and Jenkins (2018) cited Dillon's (2008) 'self-reconnaissance' in describing 'provenance' as 'backward looking reconnaissance in action inquiry'.

Differing terms were also applied in identifying how an inquirer's past can impact the overall inquiry process. Both Finlay (2002) and Marshall (2011) highlight this when using the terms 'reflexive-ethnography' and 'internally reflective account' respectively. Finlay (2002) notes that researchers could examine motivations, assumptions and interests that might skew the research and Marshall (2011) suggests that locating the practitioner within the research process can open their framings, assumptions, understandings of power and choices to potential scrutiny. This particular aspect of Provenance is particularly beneficial for the inquirer becoming aware of their potential bias or subjectivities ahead of their analysis or reflection on their practice.

Further, a difference in terminology has come about in relation to the identity of the inquirer whether as inquirer as practitioner or practitioner as inquirer. In this respect, in Alvesson and Sandberg (2022)

for example, the inquirer as practitioner is working from assumptions and observations of the practice, whereas the practitioner as inquirer perspective as presented by Hill (2017), is working from their own participation in and experience of the practice. Alvesson and Sandberg (2022) discuss how 'pre-understanding provides an initial grasp of the phenomenon under investigation', whereas Hill (2017) shows how, in a practice-led inquiry, Provenance identifies and demonstrates the phenomenon. This difference is one of the distinguishing features of practice-led inquiry, that the initiative for the investigation lies within the inquirer's practice rather than in the literature about the practice.

The commonality of these conceptions of Provenance is the underpinning assumption that inquirers must apply a practice lens if they are to address practice problems. Scholars have long argued that theoretical research output is often too abstract for practice and does not always help with practical problems. For example, Argyris and Schön (1974) theorised the gap between professionals' lived experiences and what professional schools advocated as practice and problematised it into a theory of learning dubbed Double Loop Learning. Zald (1996) posited the gap as different writing styles between business theorists and practitioners. Weick (2001, p. S72), in his writing about sense-making, challenged the notion of the perceived relevance gap between practice as advocated by business schools and lived experience. In describing it as an unreliable bridge between theory and practice because 'the ideas are too abstract, the research findings arrive too late, the principles are too general, the industry lore is too lean and the takeaways are too obvious', however, Weick's (2001) criticism articulated the very problem voiced by experienced practitioners rather than effectively disputing its existence. Bennis and O'Toole (2005, p. 98) explained the gap by contending that many MBA schools used analysis such as 'abstract financial and economic analysis, statistical multiple regressions, and laboratory psychology' not grounded in actual business practices. These types of analysis were 'less and less relevant to practitioners'.

It is through the interrogation of a practice inquirer's provenance that we are able to focus a practical lens and address research that is more relevant to practitioners and enrich our knowledge development (Alvesson & Sandberg, 2022; Hill & Lloyd, 2015). Deliberately, actively and systematically bringing forward aspects of our Provenance can generate more interesting and impactful research questions and

shape knowledge production throughout the inquiry process (Alvesson & Sandberg, 2022). Alvesson and Sandberg point out, however, that there are few examples on how this might occur. Therefore, the remainder of this paper will provide a specific case that demonstrates how Provenance contributed to the formulation of a project of inquiry and its associated questions. We provide the first author's experience in using Provenance in their research design as the case study.

According to Hill and Lloyd (2015), Provenance begins with the practitioner identifying several critical incidents in their career that are related to the specific practice that they are investigating. In this case, the inquirer is seeking to undertake an inquiry in relation to the practice of 'responsible leadership'. The (abbreviated) provenance of the first author is as follows:

CASE STUDY

I was raised in working class, Western Sydney, by a family who instilled strong values of community and social welfare. I was encouraged to volunteer for community causes when they arose. My family did not value university education, so my professional career began when I went straight from high school into administrative work. I was curious and ambitious, so as my career progressed in engagement roles such as customer service (focusing on supporting external stakeholders) and office management (focusing on supporting internal stakeholders) and my volunteer work moved into leadership roles on not-for-profit Board positions, I pursued a variety of education avenues.

I commenced an undergraduate degree starting with topics in communication and public relations. The events of 9/11 (2001) triggered a deeper interest in global ethical challenges, so my studies took a turn toward philosophy and business ethics where I was introduced to subjects such as 'communication and social control' and 'corporate social responsibility'. I developed a deep interest in business ethics, particularly in relation to why people in the workplace failed to take into consideration the needs of others and behaved unethically in order to progress their individual agenda and so I pursued a post graduate honours program investigating the role of emotions in ethical decision making.

Stream 6 - Leadership, Governance and Strategy

My career progressed into leadership roles, starting with management opportunities such as research management, motel management, event management and project management. A move to a small regional town in North Queensland to manage a small motel, was the start of an interest in sustainability, climate and rural issues and the establishment of my own business in event management gave me insight into the challenges of entrepreneurship and employing and managing a team. I changed path from being an entrepreneur to work in community and economic development, once again aligning with my strong sense of community involvement, working on projects in workforce development, indigenous community engagement, and housing, in industries such as mining, tourism, education and local and state government.

While I enrolled in and studied a number of units in a Master of Business Administration during this time, I was not able to complete my studies and I never completed any specific units on the subject of leadership. Learning about leadership came 'on the job', for example, when I owned my own business and led a small team to plan and deliver successful events for our clients, and when I was working in economic development and was leading initiatives where I brought diverse members of the community together to address economic issues like workforce shortages. I participated in workshops that supported this community development work and advanced my stakeholder engagement and collaboration skills. One was in engagement strategies and practices and the other was in collaboration. Both focused on bringing business leaders and owners together and pursue opportunities for mutual benefit.

It was my later work as a consultant and contractor that took me into leadership positions in large corporations as an engagement specialist in various projects such as community engagement, business engagement and organisational change and transformation. My expertise in stakeholder management, collaboration, communication and governance were all supported by my business values of integrity, responsibility and inclusion. The more I worked in these roles leading engagement, the more strongly I believed, and demonstrated, that successful leadership was the result of effectively engaging, consulting and collaborating with all stakeholders if they were to achieve successful outcomes.

Stream 6 - Leadership, Governance and Strategy

As I progressed in my career, I was introduced to and refined specific processes and tools for managing change and transformation that came from various education sources (both academic and commercial), to help undertake my work effectively. I found however, that there lacked a structured way in applying these to the different projects that were unique to each organisation I ventured into. So, I developed my own method and framework, bringing together many of these tools and processes, to help lead successful initiatives. This framework was designed to sit within any project lifecycle defined by a process of initiation, design, implementation and closure, which was the standard practice in many organisations I worked in and consisted of five key elements that I had observed during my career to produce successful project outcomes – governance, stakeholder management, communication, training and capabilities and handover and sustainability. This framework design was meant to demonstrate to anyone undertaking a project in an organisation how to effectively lead and embed new ways of working to achieve set goals by engaging, consulting and collaborating with stakeholders.

What was challenging for me, however, and what eventually led to the pursuit of a research topic, was my experiences with some organisations where they sought expertise to help lead change and transformation initiatives, claiming commitment to values of inclusion, collaboration, care for employees and external stakeholders and yet failed to demonstrate those values when leading initiatives. In my experiences, during the recruitment process I would make explicit my approach to leadership, demonstrate my process and framework for leading successful initiatives and check alignment of the values of the organisation with my own, only to find once I was employed and worked in alignment with these expectations, there was a disconnect between these espoused values and how leaders of the organisation behaved when driving programs of change. I found that they often went against my advice to take the time to understand and take into consideration the interests, concerns and impacts of their stakeholders, only for this oversight to cost them significantly in costs and delays and even complete failure to achieve their initiatives.

These many instances left me wondering how people in positions of leadership come to know and understand how to practice leadership. That they had usually completed some level of

Stream 6 - Leadership, Governance and Strategy

leadership education through programs such as a Master of Business Administration suggested to me that leadership is a learned skill filtered through formal education institutions, and that the models of leadership being taught in these institutions might be failing to reinforce the importance of leadership practice as behaving ethically and responsibly through addressing the needs and concerns of all stakeholders. As had been typical for me in my career, I embarked on study to try to answer these questions and ultimately apply the outcomes of this pursuit to my ongoing practice.

An introduction to the concept of 'responsible leadership' during the preliminary explorations of a PhD study was the catalyst for me to commence an inquiry. This new theory of leadership is grounded in stakeholder and ethical requirements and fundamentally aligned with how I had been practicing, and how I had been guiding others to practice, leadership. Responsible leadership is said to be a 'multilevel response to deficiencies in existing leadership frameworks and theories; to high-profile scandals on individual, organizational, and systemic levels; and to new and emerging social, ethical, and environmental challenges in an increasingly connected world' (Pless & Maak, 2011, p. 4). It has been described as "a social-relational and ethical phenomenon that occurs in interaction between a leader and a broader group of [stakeholders], inside and outside the organization" (Maak & Pless, 2006).

During my discussions about this area of inquiry with the Professor whom I would eventually adopt as my PhD Principal Supervisor, we discussed my practice in engagement, change management and leadership, how my career is underpinned by my values of stakeholder engagement, ethical behaviour, and collaboration and how this all aligns with the theory of responsible leadership. In this regard, I troubled over how the practice of responsible leadership might be enhanced through collaboration since my practice was fundamentally driven by collaborative work, and it appeared the academic literature on responsible leadership had little to say about collaboration. My supervisor concurred and suggested I undertake an inquiry that could be titled 'responsible leadership as shared practice'. This, of course, led to the preliminary

process of reading the academic literature on the subject to explore these concepts in detail and help frame an area of inquiry.

Interestingly though, I didn't consider the concept from my practice - collaboration - in this preliminary exploration. It wasn't until I began to formulate my research questions and design, that I returned to consider this concept. Instead, as well as reading more deeply on this new concept of responsible leadership, I pursued the concept of 'shared leadership', which exposed me to a discourse on a variety of terms to describe a multi-entity approach to leadership, these included 'distributed leadership' (Bolden, 2011), 'collectivist leadership' (Yammarino, Salas, Serban, Shirreffs, & Shuffler, 2012), 'shared leadership' (Ulhøi & Müller, 2014), 'relational leadership' (Endres & Weibler, 2017), 'collective leadership' (Ospina, Foldy, Fairhurst, & Jackson, 2020) and 'plural leadership' (Denis, Nancy, Boileau, & lizabeth, 2023). It wasn't until I began to frame my inquiry under a practice-led methodology and was reflecting on my provenance that I revealed the concept of collaboration as the practice that contributed to my troubling. By this time, I had formulated a framework under the banner of 'collective leadership' based on the work of Yammarino et al. (2012), Ospina et al. (2020) and Denis et al. (2023), and this framework has contributed to formulating my inquiry questions about responsible leadership as a collaborative practice:

'How can responsible leadership be enhanced through collaboration?'

And

'How might this collaborative approach to responsible leadership improve
ethical leadership outcomes?'

ANALYSIS

This case demonstrates how the evolving nature of the inquirer's provenance led her to identify with the practice of responsible leadership. While this was not a term that the inquirer referred to until recently, it is clear from the narrative that her ongoing professional development and practice were driven by the key aspects of responsible leadership – ethics and stakeholder engagement.

Through the process of identifying and reflecting on the personal and social events and discourses that are her Provenance, we can identify the path that has led to the pursuit of the inquiry and the questions the inquirer seeks to answer. It is her Provenance and the discourses into responsible leadership and collective leadership, that resulted in the inquirer being able to argue that collective leadership could provide a framework for understanding responsible leadership as a collaborative practice and outline the specific questions the inquirer seeks to investigate.

In addition, we can see that the connection to her provenance, her ongoing practice of leadership and her interest in developing that practice further through an applied approach to research, drove the adoption of a practice-led inquiry design. Hill and Lloyd (2015) showed that a practice-led inquiry is conducted over four phases, though not necessarily sequentially, that include naming the practice, narrating the inquirer's Provenance, framing the inquiry and undertaking a cooperative inquiry of interrogating practice. The telling of the inquirer's Provenance helped to design the methodology by recognising the inquirer as knowledgeable about the practice they are investigating and how they might go about collecting and analysing data (Hill & Lloyd, 2015). In this case, the research design will include an auto-ethnographical case study based on their current consulting work and the collection of data through historical documentation and participation in and observation of collaborative responsible leadership practices.

CONCLUSION

In this paper we have brought attention to the concept of Provenance and its value in developing research questions and designing a research project that is more relevant to practitioners and can have applied impacts to professional practice. Through the Provenance of the first author, we have demonstrated how she developed her research questions and framed her research design for a higher degree research project. Our aim was to reinforce the description of Provenance as being a preliminary stage in practice-led inquiry and provide practical guidance for those beginning a practice investigation.

Stream 6 - Leadership, Governance and Strategy

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Stream 3: Sustainability and Social Issues

Leadership Studies in Tourism and Hospitality: Paving the Way for Sustainable Development Goals - A Systematic Literature Review and Future Research Directions

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Stream 3: Sustainability and Social Issues

Leadership Studies in Tourism and Hospitality: Paving the Way for Sustainable Development Goals - A Systematic Literature Review and Future Research Directions

ABSTRACT: *This study conducts a systematic literature review of 202 leadership research articles within the tourism and hospitality sectors, guided by PRISMA guidelines. We analyse the evolution of leadership research, emphasizing methodological diversity and its influences that align with Sustainable Development Goals (SDGs). Key themes include poverty alleviation, community development, well-being, environmental sustainability, and stakeholder partnerships. Our findings highlight the multiple contributions of leadership studies to achieving SDGs in the industry and call for future research on nature-inclusive stakeholder engagement, heterogeneous stakeholder relationships, bridging well-being outcomes, and leadership's role in poverty reduction and food security. Finally, the study underscores the critical need for diverse methodologies and broader publication scopes for other reviews in the future.*
Keywords: leadership, sustainable development goals, tourism and hospitality, systematic review

INTRODUCTION

The tourism and hospitality sectors are among the most dynamic and rapidly growing industries globally, contributing significantly to economic development, employment, and cultural exchange (Hutchings et al., 2020; Rasool et al., 2021; Thommandru et al., 2023). Given their inherent dependence on natural resources, communities, and ecosystems, these industries play a crucial role in achieving the Sustainable Development Goals (SDGs) established by the United Nations (Rasoolimanesh et al., 2023; Siakwah et al., 2020). Leadership is a make-or-break factor which is pivotal in navigating the complexities of environmental sustainability, economic growth, and social responsibility within these sectors (B. Ali, 2024; Hoang, Wilson-Evered, Lockstone-Binney, et al., 2021; Schweiger et al., 2020) .

Despite the recognized importance of leadership, the existing body of research on leadership styles and their impacts within tourism and hospitality remains undertheorized and fragmented, especially when linked with SDGs (Elkhwesky et al., 2022; Gui et al., 2020; McGehee et al., 2015). This gap is particularly significant as effective leadership can drive the adoption of sustainable practices (Ashraf et al., 2024), enhance organizational resilience (Cai et al., 2023), and foster inclusive growth (Bashir et al., 2022), aligning with broader global sustainable development. The intersection of

Stream 3: Sustainability and Social Issues

leadership and sustainability in these naturally dependent industries offers a fertile ground for academic inquiry, with potential implications for policy, practice, and future research.

To address this gap, our study undertakes a systematic literature review guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021). This review aims to synthesize existing empirical research on leadership styles within the tourism and hospitality sectors, providing a comprehensive analysis of methodological trends, thematic focus areas, and alignment with the SDGs at different levels of analysis from employee level to societal level. By doing so, we seek to illuminate the multifaceted role of leadership in promoting sustainable and inclusive development in these industries.

Our review not only identifies key themes and methodological advancements but also highlights significant research gaps and future directions. This work contributes to a deeper understanding of how leadership can enhance the capacity of tourism and hospitality to address global challenges, thereby supporting the achievement of the SDGs. Through this comprehensive analysis, we aim to provide a theoretical framework that guides future research and informs practice, ultimately fostering more resilient and sustainable tourism and hospitality sectors.

METHODOLOGY

A systematic literature review guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021; Rethlefsen et al., 2021) are used to identify, select, retrieve, and synthesize existing empirical research on different leadership styles within the tourism and hospitality sector (See Figure 1). This type of review provides a clear and precise way to analyse literature (Tranfield et al., 2003) and is considered a powerful approach to identifying research gaps and future research directions (Denyer & Tranfield, 2009). Our methodology encompasses a comprehensive search strategy, selection criteria, data extraction, and analysis process, aimed at ensuring replicability and transparency of the review.

Insert Figure 1 about here

Stream 3: Sustainability and Social Issues

Search Strategy

We initiated our search with a comprehensive query across multiple electronic academic databases, including Web of Science, ProQuest, Business Source Ultimate, and Scopus. These platforms were selected for their extensive academic journal coverage, downloadable metadata, and advanced search capabilities (Hendricks & Mwapwele, 2023). The search query was designed to capture a broad spectrum of leadership research within the tourism and hospitality sectors, using the keywords formatted as TI = LEADER* AND (HOSPITALITY OR TOURISM) in the title field. The search, with a cutoff date of December 31st, 2023, did not impose temporal restrictions to ensure comprehensive literature capture. Only peer-reviewed, full-text articles published in English were included to maintain quality and clarity (Mariano & Laker, 2024). The initial search yielded 618 papers.

Screening and Selection Process

Following the initial search, we removed 265 duplicates, leaving 353 articles. We then assessed the journal quality, focusing on those ranked Q1 to Q3 according to the Science Citation Index or included in the ABDC journal list, resulting in the exclusion of 66 articles from lower-tier or non-ranked journals. This process ensured broad generalization while maintaining quality, leaving 287 articles for further evaluation.

For the systematic literature review, we applied three criteria: (1) the article must present original empirical research employing qualitative, quantitative, or mixed methods; (2) the primary focus must be on leadership, as determined by the abstract; and (3) the study must exclusively involve the experienced tourism/hospitality workforce. We excluded non-empirical research, including conceptual papers, review articles, letters, editorials, and studies involving students. This rigorous screening excluded 85 articles, resulting in 202 articles for our review.

Data Extraction and Coding

We downloaded the complete references with abstracts into the Zotero software package and compiled full-text copies of all articles. Following Krippendorff (2019), we performed a content analysis on the

Stream 3: Sustainability and Social Issues

final dataset by systematically coding the relevant information using a detailed protocol established prior to the review process. Our coding protocol is based on the classification scheme from Khizar et al. (2023, 2022)

We organized the article metadata in a Microsoft Excel spreadsheet, including journal name, publication year, title, keywords, authors, abstract, DOI, research methodology, sample country, sampling method, data analysis technique, theories employed, level of analysis, types of leadership, and their impacts on SDG achievement.

FINDINGS

Descriptive analysis

Publication distribution over time

Figure 2 displays the number of articles published on leadership in tourism and hospitality up to December 31st, 2023. Despite no date restrictions, the earliest articles appear in 1989. Early publications were sparse, with only one article in 1989, 1994, and occasionally in the late 1990s. There is a noticeable gap from 1998 to 2008, which could indicate a pause in research or missing data.

Publication numbers remained low from 2009 to 2013. However, the last decade shows a significant increase, indicating heightened academic interest. Between 2014 and 2017, only 22 articles were published, but from 2018 onwards, there was substantial growth. The peak occurred in 2023 with 61 articles, highlighting the maturation and growing engagement in leadership research within the tourism and hospitality industry.

Insert Figure 2 about here

The publications of distribution over journals

The distribution of research papers reveals clear publication preferences in the hospitality and tourism academic community, presented in table 1. Q1 journals, the top 25 percent of SCImago Journal

Stream 3: Sustainability and Social Issues

& Country Ranking (SJR), lead with 113 articles. Q2 journals follow with 75 articles, while Q3 journals contribute 14 articles.

Prominent tourism and hospitality journals, like the 'International Journal of Hospitality Management' and 'International Journal of Contemporary Hospitality Management,' are key publication outlets. Cross-disciplined journals such as 'Sustainability' and 'Humanities & Social Sciences Communications' also support the growth of the field. However, there is a notable gap in leadership and management-focused journals, highlighting an area for future research and publication.

Insert Table 1 about here

Distribution of methodology

Over the past five decades, empirical research on leadership in tourism and hospitality has grown significantly, with diverse methodologies emerging, presented in the table 2. Our analysis shows that contemporary leadership research in these sectors now exhibits greater methodological diversity than in the past.

Qualitative methods, first introduced by Worsfold (1989), are still minimal, with only 31 out of 202 papers using them. Quantitative methods dominate, used in 164 out of 202 articles, reflecting a preference for the perceived rigor of quantitative approaches (Bryman, 2004). Mixed-method approaches were rare until 2018, with only seven instances, but have since become more common.

Structured questionnaires and in-depth interviews are the most popular data collection methods. Recently, document analysis, personal observation, and longitudinal case studies have gained popularity. While statistical modelling and thematic analysis were predominant before 2018, newer methods such as Delphi studies, autoethnography, bootstrap analysis, and fuzzy logic are now being utilized. This shift highlights a growing appreciation for methodological diversity in understanding leadership in tourism and hospitality.

Insert Table 2 about here

Stream 3: Sustainability and Social Issues

Distribution of study locations

Most of the research has been conducted in developing countries, particularly in Asia and Africa. China leads with 43 articles, followed by Pakistan with 21 articles, and Vietnam with 18 articles. This reflects the crucial roles of those nations in the global economy, especially in the matter of attaining sustainable development. In the developed countries category, the USA is the most studied with 14 articles. Additionally, there are 12 papers utilize cross-national samples to examine leadership in tourism and hospitality that emphasize the global nature of tourism and hospitality and highlight the response for the call for diversify the research context to better understand the adaptability and multifaceted perspectives of leadership mechanisms. Table 3 presents the distribution of research locations in the review.

Insert Table 3 about here

Thematic Analysis

Following recent systematic review studies of Khizar et al. (2021, 2023) we conducted thematic content analysis and synthesized extant literature into key themes, as follows: (i) poverty alleviation and community development; (ii) peace, justice, equality, and well-being; (iii) environmental sustainability, climate action and responsible business; (iv) partnerships, governance and innovation. These themes are aligned with SDGs to provide a clear framework for understanding the various impacts and contributions within the domains of leadership in tourism and hospitality sectors to the SDG achievements, shown in Figure 3.

Insert Figure 3 about here

Poverty alleviation and community development

This theme discusses the issues of poverty alleviation and community development that related to SDG 1 (poverty alleviation), SDG 2 (zero hunger), SDG 8 (job creation and economic growth) and SDG 11 (sustainable cities and communities) in the tourism and hospitality sectors.

Stream 3: Sustainability and Social Issues

At micro level of analysis, only (Fatima et al., 2023) discuss the role of servant leadership in promoting employee community citizenship behavior that can link with SDG 11. At macro level, the current research highlights the roles of community leadership in promoting tourism for sustainable rural and community development (McGehee et al., 2015; Miller et al., 2012). (Naderi et al., 2019) also discuss the impacts of transformational leadership on the performance of social enterprises in tourism that can boost the sustainability for the local community.

Peace, justice, equality, and well-being

This theme focusses on the discussions of leadership outcomes that related to SDG 3 (good health and wellbeing), SDG 5 (Gender equality), SDG 10 (Reduce inequality) and SDG 16 (peace, justice and strong institutions). These outcomes are prominently at micro and meso level of analysis.

Previous studies explore the impacts of different styles of leadership such as transformational leadership, responsible leadership, servant leadership on the psychological and emotional aspects of employee experience, addressing factors like employee satisfaction (Khattak et al., 2022; Ohunakin et al., 2019), well-being (Yilmaz & Konaklioglu, 2022), empowerment (Qiu & Dooley, 2019), employee cynicism (Megeirhi et al., 2018), workplace ostracism (M. Ali et al., 2020) and organizational justice and fairness (Raza et al., 2022). The gender gap and the roles of female leadership have also been focal points in prior research (Chen et al., 2021; Denizci Guillet et al., 2019; Figueroa-Domecq et al., 2020). The industry vulnerability to crises such as natural disasters and pandemics has further underscored the role of leadership in fostering innovation and cultivating a corporate culture that supports employee innovation, resilience, adaptability, and productivity during crises (Hahang et al., 2022; Koo et al., 2022), emphasizing the need for effective leadership in enhancing organizational resilience and sustainability.

Environmental Sustainability, Climate Action, and Responsible Business

The third theme is related to responsible business to deal with environmental sustainability and climate action. This is the most common theme in the review, which is covered nearly a half of the

articles. This theme is linked with SDG 6 (Clean water and sanitation), SDG 7 (Affordable and clean energy), SDG 12 (Responsible consumption and production), SDG 13 (Climate action), SDG 14 (Life below water) and SDG 15 (Life on land). Many authors (e.g. Fatoki, 2021; Mughal et al., 2022; Qiu et al., 2019) examine the relationship between leadership and employee pro-environmental attitudes/behaviors, employee citizenship behaviors within different forms of tourism and hospitality such as community-based tourism or ecotourism. They also examine the contributions of leadership to environmental performance at the organizational level (Afridi et al., 2023).

Partnerships, governance and innovation

The final theme discusses the partnership and collaboration activities amongst stakeholders to boost the industry development and competitiveness. It is related to SDG 9 (Industry, innovation and infrastructure) and SDG 17 (Partnerships for the goals). The theme includes papers that explore different roles of leadership that impact creativity and innovation at employee and organisational levels (e.g. Asghar et al., 2023; Hoang et al., 2021). The papers in this group also focus on enhancing organisational resilience in crisis management (e.g. Koo et al., 2022; Y. Wang & Li, 2022) to attain competitive advantages and sustainable development within the industry.

CONTRIBUTIONS, FUTURE RESEACH DIRECTIONS AND LIMITATIONS

Theoretical contributions

Our review highlights the limited yet growing application of diverse leadership theories within the tourism and hospitality sectors. This work extends the findings of previous traditional leadership review of B. Ali (2024); Hoang, Wilson-Evered, Lockstone-Binney, et al. (2021) by exploring their unique impacts and manifestations on the attainment of SDGs. This research is the first systematic review that provide a theoretical framework that links the impacts of different leadership styles with specific SDGs instead of only exploring the fragmented mechanism of one single leadership styles such as transformational leadership (Gui et al., 2020). This alignment demonstrates the multifaceted roles of leadership in enhancing sustainability and competitiveness within various forms of tourism and

Stream 3: Sustainability and Social Issues

hospitality. Given that tourism and hospitality are naturally dependent industries (Khan, 2020), these insights are crucial for developing theories that address the dynamic and often volatile nature of the sectors. Moreover, unlike the review of de Bruyn et al. (2023) and Elkhwesky et al. (2022), this review considers tourism and hospitality together as one instead of discussing them separately that can offer more comprehensive views in terms of strategic management for sustainability.

Future directions for leadership research in tourism and hospitality sector

Research avenue 1: Leadership for nature-inclusive stakeholder engagement

Despite several attempts to examine the impacts on employee and organizational environmental behaviors from a broad perspective of leadership in tourism and hospitality (e.g., pro-environment behaviors (Mughal et al., 2022; Shah et al., 2023), current research has only explored merely transactional relationships between leaders and followers in the achievement of attitudinal or behavioral outcomes at micro and meso level of analysis. It is not sufficient to explain the contributions of leadership in dealing with integrated practical macro environmental issues (Kumar et al., 2019). This oversight is significant given the emerging literature that emphasizes pressing environmental issues such as land use (Li et al., 2020), water management (Porcher, 2019), sanitation services (Loehr et al., 2021) and ocean sustainability (Nyberg & Wright, 2024) that can be directly addressed in leadership research in tourism and hospitality.

Incorporating nature-inclusive stakeholder engagement, where the natural environment is regarded as the primary and primordial stakeholder (Kujala et al., 2019, 2022), and embracing the notion that we are all stakeholders of the Earth (Montiel et al., 2020) is essential. Thus, future research should examine the contributions of different leadership styles in engaging various stakeholders that can address sustainability issues comprehensively. It should also seek to include and recognize nature as a stakeholder, or at least as an influential and noteworthy entity, within different forms of tourism and hospitality activities.

Research avenue 2: Leadership and heterogeneous stakeholder relationship management

Stream 3: Sustainability and Social Issues

While some scholars posit that an organization maintains homogeneous relationships with its various stakeholders (Jones et al., 2018), others argue for the existence of diverse and heterogeneous stakeholder relationships (Bosse & Coughlan, 2016; Bridoux & Stoelhorst, 2016). This distinction is particularly pertinent in the tourism and hospitality industry, where the inclusion of fringe stakeholders can significantly benefit sustainable development. Consequently, there is a need for research focusing on the relationships between leaders and specific stakeholder groups—for instance, indigenous communities (Barbieri et al., 2020), environmental defenders (Scheidel et al., 2020), the media, and non-governmental organizations (Genç & Türkay, 2022) within sectors such as community-based, indigenous or heritage tourism.

Furthermore, it is crucial to acknowledge the importance of amplifying the voices of marginalized or less powerful stakeholders, such as ethnic minorities, employees with disabilities, and elderly people (Camilleri, 2016; Kujala et al., 2022). Incorporating fringe stakeholders should be a fundamental aspect of leadership research, particularly the understanding of stakeholder participation in leaders' decision-making processes (Roxas et al., 2020). This approach not only promotes equality in the industry but also aligns with Sustainable Development Goal 5 (Gender equality) and Sustainable Development Goal 10 (Reduced inequalities).

Research avenue 3: Bridging the Gap Between Hedonic and Eudaimonic Wellbeing Outcomes

The contemporary call to humanize the leadership process aims to enhance human well-being and thereby improve social sustainability (Harrison & Wicks, 2021; Kujala et al., 2022). Previous discussions mentioned that eudaimonic well-being outcomes, which focus on personal growth and fulfillment, are increasingly valued over hedonistic ones, which emphasize pleasure and satisfaction (Inceoglu et al., 2018; Kujala et al., 2022). However, in this review, the analysis indicates that hedonic forms of employee well-being, typically measured as job satisfaction (e.g. Prikshat et al., 2021), are overrepresented, while eudaimonic forms of well-being, such as work engagement (e.g. Book et al., 2019) and thriving, are underrepresented in the tourism and hospitality sector.

Stream 3: Sustainability and Social Issues

Moreover, most studies in our review concentrate on positive forms of well-being (Kara et al., 2013), despite a growing interest in leadership research on negative forms of follower well-being, such as stress (Schwepker & Dimitriou, 2021) or burnout (A. Ali et al., 2022). Future research should address the relative importance of specific leadership styles and behaviors in predicting various forms of well-being. This includes both hedonic and eudaimonic well-being, as well as their connections to specific forms of negative well-being.

Research avenue 4: Leadership, poverty reduction and food security

Although approximately two thirds of the research have been conducted in the developing countries where poverty and hunger are still a crucial matter of concern, there is no study involved directly in poverty alleviation and hunger elimination. Tourism and hospitality have a multiplier effect on economic growth, thus may indirectly alleviate poverty through the trickle-down effect. However, the relationship between the development of this industry and poverty alleviation is complex and is not always a simple positive relationship. Underdeveloped areas may either embark on the road of becoming rich through tourism and hospitality or enter the development trap (F. Wang et al., 2023).

Moreover, Ambelu et al. (2018) highlight the urgent need for assessing tourism-food security relationships. Further research should explore how different leadership styles may contribute to or hinder the potential and limitations of the sector in enhancing food security and poverty reduction, especially in the developing and underdeveloped nations. Studies should be also conducted at multiple levels of analysis to capture diverse contexts like rural, mountainous and agritourism destinations, revealing how leadership can promote sustainable tourism and hospitality for food security and poverty alleviation.

Limitations and directions for future systematic review

This study exhibits several limitations that warrant consideration for future research. Firstly, the exclusion of students and education research from the search parameters has led to a lack of educational themes in the findings. This exclusion likely omits valuable contributions of the research

Stream 3: Sustainability and Social Issues

topic to SDG 4 (quality education). Additionally, the search strategy employed is limited to keywords appearing solely in the titles of research papers. This methodological constraint may have resulted in the exclusion of pertinent studies where the keywords may be only appeared in the abstracts or contents of the articles later.

Moreover, the research was confined to papers published in high-quality indexed journals, thereby excluding other potentially valuable sources of information. Future research should aim to broaden this scope by including other publication types, such as conference papers and grey literature, which encompass reports, theses, and dissertations that often provide innovative and practical insights. Expanding the search parameters to include titles, abstracts, and keywords, and incorporating a wider range of publication types, will enable future studies to capture a more extensive and diverse body of literature, thereby enhancing the robustness and comprehensiveness of the research findings.

Stream 3: Sustainability and Social Issues

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Stream 3: Sustainability and Social Issues

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Stream 3: Sustainability and Social Issues

LIST OF TABLES

Table 1: Lists of journals published leadership articles in tourism and hospitality

Journal quality	Journal title	Count of Article
Q1 journals	International Journal of Hospitality Management	26
	International Journal of Contemporary Hospitality Management	22
	Journal of Hospitality and Tourism Management	12
	Tourism Management	9
	Journal of Sustainable Tourism	7
	Leadership and Organization Development Journal	4
	Journal of Hospitality & Tourism Research; Tourism Review	3
	Asia Pacific Journal of Tourism Research; Euromed Journal of Business	2
	Public Organization Review; Journal of Service Theory and Practice; Heliyon; Humanities & Social Sciences Communications; Information Technology & Tourism; Cornell Hospitality Quarterly; Scandinavian Journal of Hospitality And Tourism; International Journal of Human Resource Management; Journal of Leisure Research; International Journal of Intercultural Relations; Eurasian Business Review; Journal of Travel Research; Personnel Review; Cross Cultural and Strategic Management; PLoS ONE; Annals of Tourism Research; Religions; Journal of Destination Marketing and Management; Service Industries Journal; Current Issues in Tourism; Environmental Science and Pollution Research; International Journal of Sociology and Social Policy; International Journal of Tourism Research	1
	Total	*113*
Q2 journals	Sustainability	19
	Journal of human resources in hospitality and tourism	13

Stream 3: Sustainability and Social Issues

	Journal of hospitality and tourism insights	6
	Frontiers in psychology	5
	Journal of quality assurance in hospitality and tourism	3
	Cogent social sciences; Employee relations; Journal of China tourism research; Sage open; Tourism planning and development; Tourism and hospitality research	2
	Economic Research-Ekonomska Istrazivanja; Kybernetes; Journal of Organizational Effectiveness; Canadian Journal of Administrative Sciences; Business Strategy and Development; Cogent Business & Management; Journal of Management Development; International Journal of Tourism Cities; Administrative Sciences; Kybernetes; Mathematics; Journal of Family Business Management; International Journal of Environmental Research and Public Health; Communication and Society; International Journal of Hospitality and Tourism Administration; International Journal of Environmental Research and Public Health; International Journal of Quality and Service Sciences	1
	Total	*75*
Q3 journals	Geo Journal of Tourism and Geosites	3
	Tourism and Hospitality Management	2
	Employee Responsibilities and Rights Journal; Economic Annals-XXI; Journal of Transnational Management; Problems and Perspectives in Management; Rural Society; International Review on Public and Nonprofit Marketing; Tourism and Management Studies; Tourism and Management Studies; Tourism and Management Studies; Journal of Hospitality Marketing and Management.	1
	Total	*14*
Grand Total		**202**

Table 2: Distribution of methodology

Methodology	Data collection method	Count of Article Title
Mixed method	In-depth interview and survey	6

Stream 3: Sustainability and Social Issues

	Secondary data	1
Mixed-method approach total		7
Qualitative	Interview	28
	Document analysis and personal observation	1
	Longitudinal case study method	1
	focus group	1
Qualitative approach total		31
Quantitative	Multi-waves time lagged survey	163
	Secondary data	1
Quantitative approach total		164
Grand Total		202

Table 3: Distribution of most popular research locations

Country	**Counts of papers**
China	43
Pakistan	21
Vietnam	18

Stream 3: Sustainability and Social Issues

USA	14
India	8
Taiwan	8
Egypt	8
Spain	6
Turkey	6
Australia	5
Greek	4
Indonesia	3
Thailand	3
UK	3
Portugal	3

Stream 3: Sustainability and Social Issues

LIST OF FIGURES

Figure 1: PRISMA diagram
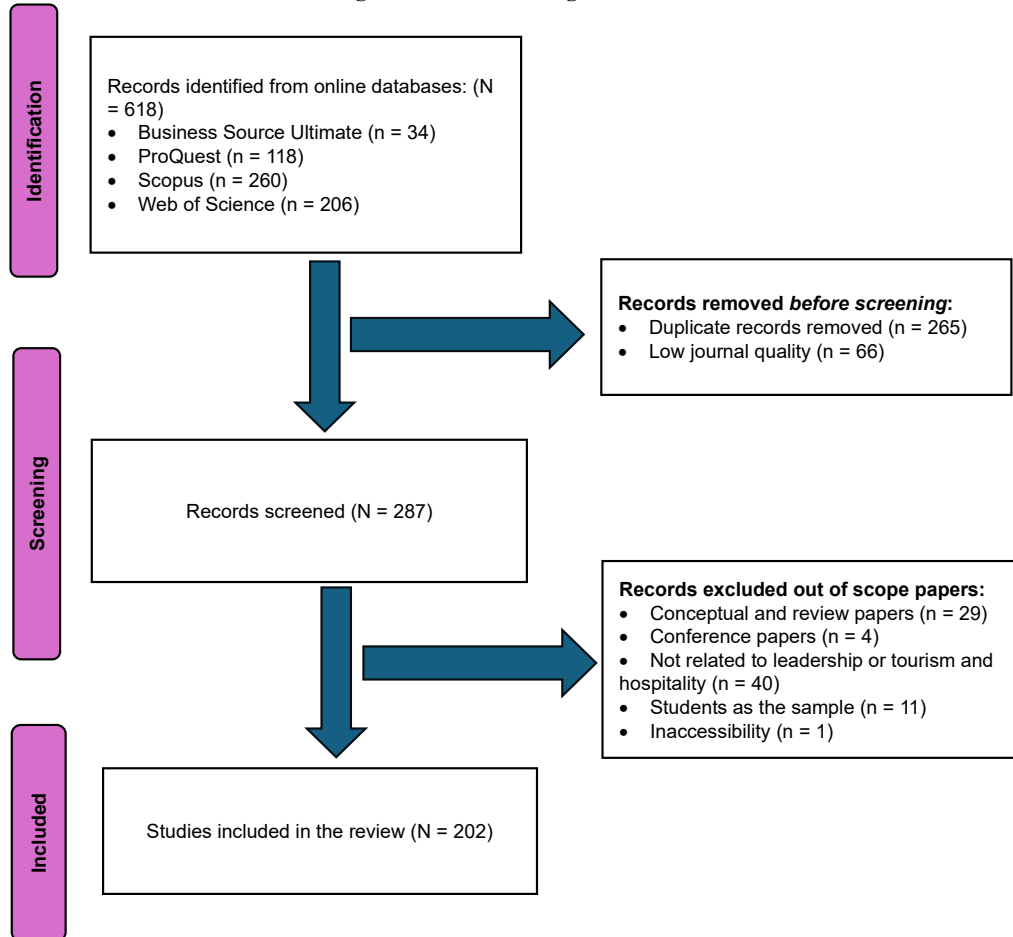
Stream 3: Sustainability and Social Issues

Figure 2: Distribution of publications over time.
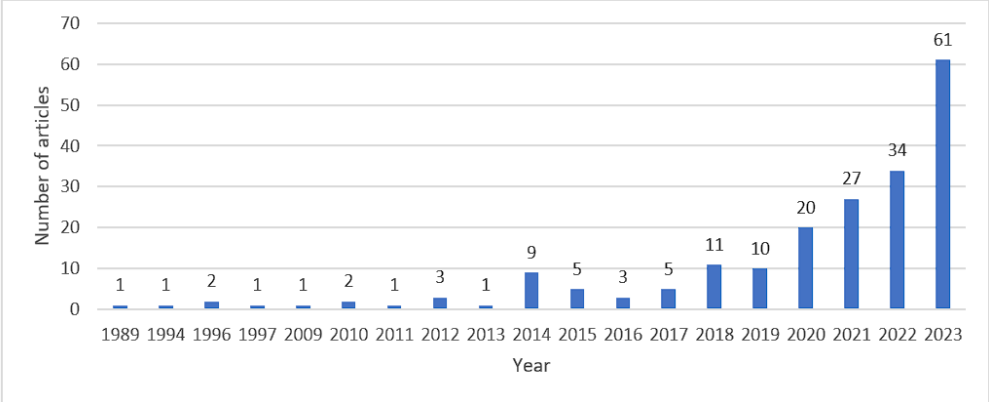
Figure 3: Thematic analysis framework

Stream 3: Sustainability and Social Issues

UNEXPLORED	SDG 1: No poverty	
	SDG 2: Zero hunger	Poverty alleviation and community development
Emphasize the impacts on job creation and the performance of employees and firms.	SDG 8: Decent work and economic growth	
Focus on the community and rural development outcomes	SDG 11: Sustainable cities and communities	
Focus on the psychological and emotional aspects of employee, addressing factors like well-being, resilience, satisfaction, stress, empowerment, and coping with workplace challenges such as incivility, burnout, and ostracism.	SDG 3: Good health and well-being	
Focus on women's career advancement and the roles of women in leadership	SDG 5: Gender equality	Peace, justice, equality, and well-being
Focus on providing supportive and inclusive work environment by promoting open communication, ensuring role clarity, empowering employees in the organisations	SDG10: Reduced inequalities	
Focus on fostering trust, ensuring justice and fairness to maintain a healthy and ethical work environment.	SDG16: Peace, justice and strong institutions	
UNEXPLORED	SDG 6: Clean water and sanitation	
Focus on employee pro-environmental, employee citizenship behavior, organisational environmental performance and promoting sustainable tourism competitiveness	SDG13: Climate action	
UNEXPLORED	SDG14: Life below water	Climate action and environmental sustainability
	SDG15: Life on land	
	SDG7: Affordable and clean energy	
Focus on the environmentally responsible behaviors and performance at employee and organization level.	SDG12: Responsible consumption and production	
Focus on innovation to promote the resilient and sustainable business development at employee and organizational level.	SDG9: Industry, innovation and infrastructure	Innovation, partnerships, and governance
Focus on partnership, and collaboration activities amongst stakeholders and organizations.	SDG17: Partnerships for the goals	

Stream 6. Leadership, Governance and Strategy

TAKING STOCK OF RESPONSIBLE LEADERSHIP RESEARCH: A

SYSTEMATIC LITERATURE REVIEW AND RESEARCH AGENDA

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1

Stream 6. Leadership, Governance and Strategy

TAKING STOCK OF RESPONSIBLE LEADERSHIP RESEARCH: A SYSTEMATIC LITERATURE REVIEW AND RESEARCH AGENDA

ABSTRACT: *Responsible leadership (RL) has yielded a rich field of empirical research, focusing on determinants, boundary conditions, and outcomes across micro-, meso-, and macro-levels of analysis. Despite the wealth of findings, the fragmented and ambiguous nature of the research complicates deriving general implications and identifying key areas for future study. This review consolidates recent empirical evidence, offering a comprehensive synthesis of mechanisms linking RL with its determinants, boundary conditions, and outcomes. We identify five key research gaps: the complex layering of RL, boundary conditions, reconnecting RL with time and space, and its role in the digital world. We propose potential research directions to advance this vital and growing domain.*

Keywords: responsible leadership, systematic review, multi-level analysis

INTRODUCTION

The 21st century has been marked by global crises such as the 2008 Financial Crisis and the 2020 COVID-19 pandemic, exposing flaws in traditional leadership models and highlighting the need for a more responsible approach (Maak et al., 2021; Varma, 2021). Issues like climate change, man-made disasters, and social inequalities have spurred a reevaluation of business principles (Zhao et al., 2023). In response, frameworks like the United Nations Sustainable Development Goals (SDGs) advocate for sustainable development aligning economic goals with social and environmental objectives (Fallah Shayan et al., 2022).

The global context has influenced leadership research, emphasizing ethics, sustainability, and corporate social responsibility. This shift acknowledges that leadership extends beyond financial stewardship to broader societal and environmental responsibilities (Chin et al., 2023). Contemporary research is developing models that integrate ethical considerations and sustainable practices into leadership theory and practice (Maak, 2007; Pless et al., 2022).

In this context, responsible leadership (RL) has gained attention as a critical construct for addressing contemporary challenges (Maak & Pless, 2006). RL prioritizes ethical, social, and environmental consequences of business decisions, emphasizing the well-being of a broad range of stakeholders, including employees, communities, and the ecosystem (Voegtlin, 2016). This paradigm extends beyond compliance with legal standards to proactive stakeholder engagement and commitment to sustainable and equitable growth (Waldman & Balven, 2014).

2

Stream 6. Leadership, Governance and Strategy

RL distinguishes itself from ethical leadership by its broader scope. While ethical leadership focuses on moral conduct and ethical influence on followers (Brown & Treviño, 2006), RL includes ethical decision-making and considers long-term impacts of business actions on societal and environmental health (Doh & Quigley, 2014). RL extends to corporate social responsibility, sustainability, and stakeholder engagement, considering the interdependence between business operations and the wider social and environmental context (Waldman et al., 2018).

Compared to other research interests like CSR or ethical leadership, RL is still in its early stages of development (Maak & Pless, 2006). Existing reviews offer insights into the CSR-leadership scholarship (Piwowar-Sulej & Iqbal, 2023; Zhao et al., 2023). Relevant reviews dedicated to RL include those by Frangieh & Yaacoub (2017), Haque et al. (2021), Foldøy et al. (2021), Marques et al. (2018), and Miska & Mendenhall (2018). These reviews develop a multilevel framework discussing RL's micro-, meso-, and macro-perspectives (Miska & Mendenhall, 2018) or focus on RL's antecedents and outcomes (Foldøy et al., 2021; Haque et al., 2021). However, they show limitations, such as not clearly linking with current scholarship, focusing on a narrower scope (e.g., private sector or employee outcomes), or presenting bibliometric analyses rather than in-depth research reviews.

Building on existing knowledge, we systematically review and consolidate the latest empirical evidence to offer an interdisciplinary and comprehensive examination of the determinants, mechanisms, boundary conditions, and outcomes associated with RL. Based on a sample of 162 articles published between 2005 and 2023, we take stock of this literature and propose a multi-level framework of RL to guide future research.

METHOD

Research design

This study aims to conduct a systematic literature review (SLR) to examine the conceptualization and outcomes of responsible leadership (RL) research across multiple levels of analysis, without any time frame limitations. The SLR approach ensures a scientific, transparent, and replicable procedure for understanding existing literature and developing a stimulating agenda for theory development in this field (Paul et al., 2021). Compared to narrative reviews, meta-analyses, and critical

3

Stream 6. Leadership, Governance and Strategy

reviews, the SLR approach provides higher methodological rigor and robustness by following replicable

protocols, enhancing the credibility and reliability of findings (Kraus et al., 2022).

Given that the RL domain has matured sufficiently for a review and considering the lack of

comprehensive SLRs focusing on multi-level analysis in high-quality journals over the past five years,

this study is expected to significantly contribute to future RL literature (Paul et al., 2021). The paper

follows the six-step SLR process outlined by Sauer & Seuring (2023) and employs the Preferred

Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method (Moher et al., 2009) to

ensure the inclusion of relevant literature for analysis (see Figure 1). Detailed review protocols are

presented in Table 1.

Insert Table 1 and Figure 1 about here.

Data collection and sample

To conduct an evidence-based literature search on responsible leadership, we selected five

major databases: ScienceDirect, Scopus, Web of Science, ProQuest, and EBSCO, chosen for their

extensive coverage of high-ranking business management journals and advanced search capabilities

(Ancillai et al., 2023). Using keywords "responsible leadership" or "responsible leader," we applied

Boolean logic to search titles, abstracts, and keywords for peer-reviewed English language journals in

business management, excluding fields like pedagogy and environmental science.

The initial search yielded 1,652 articles. After removing 838 duplicates, 814 articles remained.

We used the SCImago Journal & Country Rank (SJR) and the Australian Business Deans Council

(ABDC) list to select articles from Q1 to Q3 journals or those on the ABDC list, excluding 53 articles

from Q4 or non-ranked journals, leaving 761 articles. Further screening involved reviewing full-text

papers to exclude out-of-scope studies, such as those with student samples lacking work experience,

broad leadership or CSR studies without a focus on responsible leadership, and theoretical or review

papers. This process resulted in a final sample of 162 articles published between 2005 and 2023.

Analysis

Titles, authors, journals, dates of publication, abstracts, and keywords are consolidated into an

Excel sheet. Full-length articles are screened to manually code in terms of the level of analysis (micro,

4

Stream 6. Leadership, Governance and Strategy

meso, or macro), the methodological choices (qualitative, quantitative, or mixed approach), the geographical distribution, and the angle of analysis (antecedents, mediators, moderators, or outcomes).

The study employs input-moderator–mediator-output model of Mohammed et al. (2010), comprising antecedents (inputs), moderators, mediators, and outcomes (outputs) to explain the mechanism under which RL is operated. The model delineates how antecedents lead to outcomes, with mediators clarifying the causal links and moderators influencing their direction/strength. Due to the variability in research focus, one variable can be set in different groups. For instance, CSR is categorized as an outcome in Wang et al. (2023), but as a mediator in Amir et al. (2022).

FINDINGS

Descriptive Analysis

In evaluating 162 selected papers, four key aspects are analyzed: 1) temporal distribution of publications; 2) journal-specific distribution; 3) methodological approaches; and 4) geographical focus.

Figure 2 presents the annual publication frequency in RL research, highlighting its emergent interest. The first paper appeared in 2005, followed by a slow development (ranging from 1 to 7 publications annually) until 2019. However, from 2019, a notable surge to approximately 15 articles per year reflects a growing recognition of the importance of RL.

Insert Figure 2 about here

Because of its interdisciplinary nature, RL research has found its place in various academic outlets (88). Table 2 illustrates the list of selected journals with the most publications, for instance Journal of Business Ethics (21 articles), Sustainability (11), Frontiers in Psychology (11), Corporate Social Responsibility and Environmental Management (9), and Leadership and Organization Development (9). It is worth noting that, a substantial number of articles on RL still appear in second tier leadership journals which are generally perceived as having lower prestige compared to top-tier journals and in turn plausibly delay the exposure of RL and undermine its importance more broadly.

Insert Tables 2 about here.

5

Moreover, an overwhelming number of empirical RL research followed a quantitative approach (111); meanwhile, around one-third of the studies used qualitative methodology (43), and only 8 papers combined both approaches. Although quantitative research (such as confirmatory factor analysis or multiple level-regression analysis) allows for statistical generalization and enhance the external validity of the outputs, it may not have provided an understanding rich in cultural context, and many leadership topics could benefit from researchers developing such contextualized understandings (Stentz et al., 2012).

Geographical distribution of publications

An analysis of the geographic area of each study conducted was also conducted as shown in Table 3. The dataset analysis reveals that there is a growing interest in Asian countries, including China (38 articles) and Pakistan (24 articles), where CSR and sustainability is becoming a heated topic. Previous reviews showed the US leading in publication volume, followed by European nations such as Switzerland, Austria and Spain (Marques et al., 2018; Frangieh & Yaacoub, 2017). Also, there are 12 papers presenting empirical data that involved cross-national comparisons in RL research.

Insert Tables 3 about here.

The theories used in the RL studies.

Given the multifaceted nature of RL, 62 different theories were identified from 135 articles that adopted a theoretical framework to guide their research. Stakeholder theory is the most used due to its theoretical rationality and empirical applicability (Chi, 2011) in examining the interactions of RL with different multiple stakeholders inside and outside the corporation.

We classify 62 theories into eight clusters based on their focus (Table 4). The first four groups are foundation theories that explore the economic, sociological, ethical and moral perspectives of the complex interactions between RL practices and their broader social and ecological context, extending beyond organizational boundaries. The remaining groups encompass social-psychological theories and organizational theories that elucidate the dynamics of interactions and relationships between leader and individuals in organizations and their influence on both individual and organizational outcomes.

Insert Tables 4 about here.

6

Stream 6. Leadership, Governance and Strategy

Antecedent, boundary conditions, and outcomes of RL

This subsection presents a theme-based analysis of categorized articles, examining determinants, boundary conditions, and outcomes of RL. The studies are clustered into three levels: (1) micro-level, concentrating on individuals and business leaders; (2) meso-level, focusing on organizational contexts and strategies; and (3) macro-level, addressing institutions, culture, and society. Table 5 discusses the highlights of the findings and the represented articles for each theme. Additionally, we also consider cross-level analysis to explore interactions and linkages among these levels.

Insert Tables 5 about here.

Antecedents

The antecedents of RL span multiple levels. At the macro level, social, cultural, and institutional contexts shape leaders' behaviors, with factors like national ethos, power distance, and community pressure playing significant roles (Koh et al., 2018). Leaders in liberal market economies often prioritize shareholder interests, while those in coordinated market economies consider a broader range of stakeholders (Witt & Stahl, 2016). Additionally, laws, regulations, and mass media promote RL and discourage unethical behaviors (Zhang et al., 2022).

At the meso level, organizational culture, ethical climate, and green human resource management drive RL (Pingali, 2016). Organizational strategies also influence RL, with global strategies prioritizing shareholders, local strategies focusing on stakeholders, and transnational strategies balancing both (Miska et al., 2013). Conversely, business goal difficulty and shadow pressures can lead to irresponsible leadership (Ketola, 2012; Veetikazhi et al., 2022).

At the micro level, RL antecedents include individual characteristics such as virtuousness, courage, honesty (Cameron, 2011), perception and orientation (Maak et al., 2016), intelligence (Miska et al., 2013), and motivation (Pless, 2007). Other factors include self-regulation, learning flexibility, and global leadership skills (Pless et al., 2011). Unique studies explore dark-triad personalities (Üzüm & Özkan, 2023) and gender differences in RL traits (Sharr, 2023). However, many leader traits and their interactions remain under-researched.

Outcomes

7

Stream 6. Leadership, Governance and Strategy

The current literature on RL shows limited research on its mechanisms linking RL to multi-level outcomes. Javed et al. (2020) examined RL impacts on social capital, firm performance, and employees' community behaviors, moderated by authenticity. Most studies focus on leaders' influence on individual and organizational outcomes.

At the micro-level, RL is positively associated with employee behaviors like organizational citizenship (Rao et al., 2022), environmental actions (Abbas et al., 2022), engagement (Ali et al., 2023), whistleblowing (Akhtar et al., 2020), reduced turnover (Marques et al., 2023), career success (Li et al., 2022), and sustainable performance (Chin et al., 2023).

At the meso-level, RL improves firm performance metrics, balancing financial and environmental performance (Wang et al., 2023; Doh et al., 2011), and enhances talent management, crisis response (Coldwell et al., 2012), and organizational sustainability (Wang et al., 2023).

Macro-level outcomes of RL are under-researched. Few studies explore RL's role in community engagement (Mehta et al., 2022), industry innovation (Yildiz et al., 2023), and crisis management (Pounder, 2021).

Additionally, RL functions as a mediator or moderator across levels. It mediates relationships between climate change and employee commitment (Mousa et al., 2019), and between culture and knowledge sharing (Rao et al., 2022). RL moderates the effects of CSR on employee behaviors (Bouichou et al., 2022) and stakeholder pressure on environmental ethics (Rui & Lu, 2021).

Mediators and moderators in the RL mechanism

This section explores empirical research on mediators and moderators within the RL mechanism, focusing on two primary relationships: antecedents – RL and RL – outcomes (Mohammed et al., 2010). Research on moderating and mediating factors in the antecedents – RL relationship is sparse, with Veetikazhi et al. (2022) finding that varying focalism reduces socially irresponsible executive behaviors under high business goal difficulty. In contrast, numerous studies investigate mediators and moderators in the RL – outcomes relationship.

At the micro level, characteristics, attitudes, and beliefs of leaders and employees mediate and moderate the relationship between RL and employee outcomes, such as behavior (Abbas et al., 2022),

8

Stream 6. Leadership, Governance and Strategy

attitudes (Ali et al., 2023), and performance (Afshari et al., 2023). Trickle-down effects of RL are moderated by perceived ethics (Tian & Suo, 2021) and leader-follower value congruence (Cheng et al., 2019). Some studies use moderated-mediation models; for instance, Zhu et al. (2021) studied the impacts of conscientiousness (moderator) along with felt obligation and job stress (mediators) on RL-employee cyberloafing.

Beyond micro-level outcomes, these factors also mediate and moderate the RL-firm performance relationship. Knowledge sharing mediates the RL-business sustainable performance relationship (Xuecheng et al., 2022), while CEO founder status moderates it (Wang et al., 2023). Limited research on organizational factors includes studies by Javed, Ali, et al. (2020), Mousa (2019), and Wang et al. (2015). For example, Javed, Ali, et al. (2020) examined the mediating impacts of corporate reputation and innovation, while Wang et al. (2015) explored corporate social performance as a mediator between RL and financial performance.

Nearly a third of studies use moderated-mediation models to investigate conditional indirect effects on RL outcomes. For example, Zhu et al. (2021) examine the moderating impact of conscientiousness on the mediated relationship between RL and employee cyberloafing via job stress and felt obligation.

CONTRIBUTIONS, LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Theoretical contributions

This study aims to review existing empirical literature, synthesizing the determinants, mechanisms, boundary conditions, and outcomes of RL. Our analysis offers a detailed insight into the complex, multi-level input-moderator-mediator-output mechanism governing RL, shown in figure 3. The review also points out that stakeholder theory is popularly combined in the theoretical framework of RL research. However, the macro-level theories such as system theory and institutional theory have not yet been considered.

Insert Figure 3 about here.

We make several important theoretical contributions to RL literature. We confirm that it is the first systematic review that can offer interdisciplinary, comprehensive, and most up-to-date examination

9

Stream 6. Leadership, Governance and Strategy

of the determinants, the mechanisms and boundary conditions, and the outcomes associated with RL at multi levels of analysis. The research also offers different categories distinguishing in each group. For example, at micro-level outcomes, we identify three categories including behavioral outcomes, attitudinal outcomes, and performance outcomes.

The findings significantly contribute to RL research by identifying key mechanisms through which RL exerts its impact. The proposed framework not only categorizes and integrates previous studies but also serves as a foundation for their expansion. It offers a clear direction for future research, outlining specific outcomes that warrant further investigation within each category and level.

Furthermore, we identify several critical research gaps across different levels of analysis remaining in the existing literature to provide a comprehensive picture of RL research. Addressing these gaps will not only deepen our understanding of RL but also enhance its practical application across different organizational contexts and societal levels, contributing significantly to the field of leadership studies.

Finally, unlike the review of Foldøy et al. (2021) which only focus on private business sector, this review offers an interdisciplinary and comprehensive examination with the expansion of various settings including healthcare, business, education, politics. This literature also extend the findings of Haque et al. (2021) by expanding the analysis to the multi-level framework which beyond the focus only on single level outcomes. We now turn to future research avenues.

Moving forward: Future directions for RL research

Research Avenue 1: The Complex Layering of RL

This review highlights the focus of most responsible leadership (RL) studies on the micro and meso levels (Abbas et al., 2022; Haque et al., 2020), with limited exploration across levels. Doh & Quigley (2014) and Miska & Mendenhall (2018) advocate for a cross-level framework integrating various RL perspectives to yield positive outcomes at all levels. Pingali (2016) notes that managing only one level may lead to conflicts, emphasizing the need for a strategic approach from micro to macro environments.

10

Stream 6. Leadership, Governance and Strategy

Future research should explore the interactions of RL across different levels. At the micro level, studies should include broader stakeholder perspectives and sustainable value creation (Miska & Mendenhall, 2018). At the meso level, research should incorporate multi-stakeholder viewpoints and balance economic, social, and environmental outcomes.

Empirical research on macro-level RL outcomes is sparse. Future studies should demonstrate RL's influence on macro-outcomes and advance cross-level studies, both empirically and theoretically, to deepen understanding of RL processes. Voegtlin & Pless (2014) highlights the importance of researching the intersection of responsible business leaders (micro) and the UN Global Compact (macro) to progress the RL field.

Research avenue 2: Exploring Further the Boundary Conditions of RL

This review reveals a limited understanding of the boundary conditions that determine the effectiveness of RL. Current studies have focused on boundary conditions such as employees' self-efficacy (Li et al., 2022), collective job crafting (Luu, 2023), task interdependence (He et al., 2021) and initiative enhancing HRM systems (Liu et al., 2023). Cameron (2011) highlight the importance of traits such as authenticity, virtuousness, and charisma for leaders, underscoring a gap in our understanding of RL, particularly regarding leaders' virtues, values, competencies, and skills.

Additionally, there is a notable lack of research on individual contingent conditions, including subordinates' demographics (gender, age), psychological traits (moral predispositions, personality, locus of control), and social factors (education, occupation, employment status). Further studies are required to investigate the conducive conditions for RL, covering internal factors (organizational culture, justice, politics) and external elements (industry sectors, stakeholder behaviors, national culture)

Furthermore, similar to many prevalent leadership theories, RL research should address its gender-blind spots. A more nuanced understanding of how RL intersects with gender dynamics is crucial, especially since only Sharr (2023) has considered this aspect to date. This gap highlights the need for more comprehensive research to fully grasp the multifaceted nature of RL across different contexts and conditions.

Research avenue 3: Reconnecting RL with Time

11

Stream 6. Leadership, Governance and Strategy

George & Jones (2000) highlight that time can reshape theoretical constructs and their interrelations. Shamir (2011) notes that most responsible leadership (RL) studies overlook time, despite many RL drivers needing time to show outcomes and change over time. RL is a dynamic interaction between leaders and stakeholders, evolving over time (Pless, 2007; Martin et al., 2016).

Current RL research is mostly cross-sectional and assumes static relationships (Shamir, 2011). Longitudinal studies measure RL at specific points but miss the stability and development of RL drivers. Leaders' behaviors might change with experience. Mumford (2006) suggests biographical or historiometric research to understand RL development. Pless (2007) uses biographical analysis to study responsible leader Anita Roddick.

To understand RL processes in real time, researchers should use methods like ethnographic studies, longitudinal case studies, and diaries to track evolving RL relationships. Future RL research should enhance longitudinal studies with frequent measurements and sophisticated analyses, focusing on the dynamic RL process and considering time and contextual variables.

Research avenue 4: Reconnecting RL with Space

RL research has increasingly focused on developing Asian countries like China and Pakistan, as well as Western, Educated, Industrial, Rich, and Democratic (WEIRD) nations. This diverse range of research settings aims to provide a universal understanding of RL. However, Witt & Stahl (2016) note that most studies are confined to specific national contexts, and findings may not be transferable across different institutional environments, particularly between Eastern and Western countries. There is a need for more comparative cross-national analyses and research in varied geographical and national contexts, including developed Asian countries and developing Western nations, to uncover institutional and cultural antecedents of RL.

Given RL's crucial role in connecting stakeholders for sustainable development (Amir et al., 2022), it is essential to understand how RL can support sustainable development goals across different sectors, especially the service sector. For instance, the tourism and hospitality industry, known as the "smokeless industry," generates significant environmental and social impacts, yet there is a scarcity of RL research in this context. Additionally, RL research should explore its impacts on private-public partnerships.

12

Stream 6. Leadership, Governance and Strategy

Research avenue 5: RL in The Digital World

The shift towards digital workplaces is a transformative trend across various sectors and organizational sizes (Cortellazzo et al., 2019). Digitalization, as noted by Hoegl & Muethel (2016), drives both job creation and destruction, altering role requirements and blurring traditional organizational boundaries. Leadership is crucial in harnessing digitalization's advantages, particularly in talent management and enhancing employee engagement and connectivity.

However, this transformation brings new ethical challenges for leaders, necessitating a reevaluation of conventional leadership theories, especially in the context of responsible leadership (RL) (Haddud & McAllen, 2018). Cortellazzo et al. (2019) question whether current leadership theories sufficiently explain digitalization's nuances or if new frameworks are needed to understand how responsible leaders adapt to these changes. Future research should explore how responsible leaders manage increased transparency demands in ICT-mediated relationships, balance followers' autonomy and privacy needs, and build trust in highly virtual environments.

Limitations and directions for future systematic reviews

While this systematic literature review was rigorously conducted, it has potential limitations. The search was confined to peer-reviewed English-language articles from indexed journals, excluding non-indexed journals, book chapters, conference papers, dissertations, and peer-reviewed RL articles in other languages. Given the global interest in RL, empirical studies published in other languages might offer additional insights or challenge some conclusions.

Additionally, the research design has certain constraints. We used a limited set of search terms ("responsible leader" and "responsible leadership") to identify relevant studies. Despite a comprehensive search, we might have overlooked relevant studies due to the overlap between leadership and management (Young & Dulewicz, 2008) and the multidisciplinary nature of RL, which spans management, leadership, and ethics. To address this, we recommend broadening the search terms to include phrases like "responsible manager" and "virtue," and adopting a cross-disciplinary approach to RL research. Forming multidisciplinary research teams could also enhance the analysis and understanding of RL studies.

13

Stream 6. Leadership, Governance and Strategy

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14

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16

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17

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18

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19

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20

Stream 6. Leadership, Governance and Strategy

TABLE 1: REVIEW PROTOCOL

Steps	Criteria	Details
1	Search database	ScienceDirect, Scopus, Web of Science, ProQuest, EBSCO
2	Search strings	TS= ("responsible leader*")
3	Document type	Research articles
4	Research areas	Business management, leadership and ethics only.
5	Journal type	Peer-reviewed English language journal article
6	Journal ranking	Exclude SJR Q4 or non-ranked from ABDC

TABLE 2: DISTRIBUTION OF JOURNALS PUBLISHING RL RESEARCH

Journal	Count
Journal of Business Ethics	21
Sustainability	11
Frontiers in Psychology	11
Corporate Social Responsibility & Environmental Management	9
Leadership & Organization Development Journal	8
Journal of Management Development	4
International Journal of Contemporary Hospitality Management; Social Responsibility Journal	3
Group & Organization Management; Frontiers in Environmental Science; Journal of Business Research; Academy of Management Perspectives; Journal of Student Affairs Research and Practice; Journal of Global Responsibility; Asia Pacific Journal of Management; International Journal of Productivity and Performance Management; International Journal of Manpower; Business and Society Review; International Journal of Hospitality Management; International Journal of Environmental Research and Public Health; Personnel Review	2

TABLE 3: COUNTRY DISTRIBUTION BASED ON THE NUMBER OF PAPERS.

Country	Count
China	38
Pakistan	24
varies	12
USA	10
Egypt	9
India	8
Taiwan; Australia; Portugal; UK	4
South Africa; Spain; Vietnam	3
Finland; Singapore; Malaysia; Germany; Luxembourg; Columbia; Ghana; Indonesia	2

21

Stream 6. Leadership, Governance and Strategy

TABLE 4: FAMILIES OF THEORIES

	FAMILY	THEORIES	EXAMPLES OF ARTICLES
CLASSIC GROUP	**Economic Theories** Focus on the economic aspects of the leaders' decisions, including the management of resources, economic exchanges, and decision-making processes influenced by cost-benefit analyses.	Agency theory Resource-based view theory Game theory Rational choice theory Competition theory Rational Egoism Theory Principal-Agent Theory Stakeholder theory Signalling Theory	(Awan & Khan, 2021; Gopalakrishna-Remani et al., 2022; MacNeil, 2021; Pounder, 2021b; Rizal & Nordin, 2022)
	Sociological Theories Focus on the roles, relationships, and social dynamics go within and outside organizations that influence and are influenced by RL. They highlight the importance of social capital, institutional frameworks, and cultural contexts.	Institutional theory Bourdieu theory Realist Social Theory Social categorization theory Social Embedding Theory Social capital theory Uncertainty reduction theory Social Information Processing Theory Intersubjective Theory of Recognition	(Blakeley & Higgs, 2014; Rui & Lu, 2021; Ur Rehman et al., 2023; Voegtlin, 2011; Y. Zhang et al., 2023; C. Zhao & Liang, 2023)
	Organizational Behavioural Theories Focus on understanding and managing behaviours within organizational settings	Contingency theory JD-R theory Upper-echelon theory Shared leadership theory Conservation of resources theory Resource Dependence Theory System theory Theories of Behavioural Complexity Attribution Theory Trait Activation Theory	(Amir et al., 2022; He et al., 2019; Javed, Akhtar, Husnain, et al., 2020; Lasrado & Zakaria, 2020; Liao & Zhang, 2020; Voegtlin et al., 2020)
	Ethical and Moral Development Theories Provide a framework for understanding the normative dimensions of RL. These theories explore how ethical principles, moral reasoning, and value systems shape leadership practices and their impacts on stakeholders and the broader community.	Moral Development Theory Ecology of Human Development Theory Optimal Development Environments Theory Corporate social responsibility theory Social contract theory Moral identity theory Norm Activation Theory Discourse ethics and deliberative democracy theory. Meaningful Life Theory	(Castañeda García et al., 2023; Castillo et al., 2020; Kempster & Jackson, 2021; Wisler, 2018; Witt & Stahl, 2016)
INTERPERSONAL GROUP	**Motivation and Self-determination Theories** Focus on the internal and external factors that drive individuals to achieve goals, highlighting how RL can foster motivation, determination and engagement within the organization.	Self-determination theory Goal setting theory Maslow's theory of motivation Regulatory focus theory Protection Motivation Theory	(Ahmed et al., 2023; Ansong et al., 2022; Lv et al., 2021; Obuobisa-Darko et al., 2023; Q. Zhou & Zheng, 2023)
	Learning and Cognitive Development Theories Explore how individuals acquire knowledge, skills,	Social learning theory Social cognitive theory Cognitive evaluation theory Experiential learning theory	(Castro-González et al., 2022; Han et al., 2019; Ismail & Hilal, 2023;

22

Stream 6. Leadership, Governance and Strategy

and moral understanding through interaction with their environment, emphasizing the role of leadership in facilitating learning and growth. Moreover, they also emphasize the cognitive process related to RL development.	Construal Level Theory Planned behaviour theory. Affective forecasting theory Personality Theory	Lasrado & Zakaria, 2020; C. Zhao & Liang, 2023)
Interpersonal and Social Exchange Theories Examine the dynamics of interactions and exchanges between individuals, emphasizing how these interactions influence behaviour and relationships	Social exchange theory Leader-member exchange theory Psychological contract theory Psychological ownership theory Interpersonal regulatory fit theory The Theory of Equity Attachment Theory Stewardship Theory	(Afshari et al., 2023; Ali et al., 2023; Huo et al., 2022; Ismail & Hilal, 2023; Mousa et al., 2019; C. Zhao & Liang, 2023; Y. Zhou et al., 2022)
Social Identity and Role Theories Emphasize how different roles, contexts and social positions can influence individual traits, identities, behaviours and perceptions within groups and organizations	Social identity theory Role theory Optimal Distinctiveness Theory Self-Identity Theory	(Akhtar et al., 2020; Dong & Zhong, 2021; Javed, Akhtar, Hussain, et al., 2020; Liu et al., 2023)

The theories above are the original forms of the theories, their extended versions where appropriate are considered the same as the original one. For example, the "resource-based view" includes the "dynamic resource-based view", or "institutional theory" include "neo-institutional theory".

23

TABLE 5. THEMES OF THE LITERATURE REVIEW

Level	Key areas	Details	Highlights of the findings	References
			ANTECEDENTS	
Micro level	Personality characteristics	Virtuousness, courage; care, justice conscientiousness, responsibility; honesty; integrity; trustworthiness; dark-triad personality traits	• Machiavellianism encourages irresponsible behaviours. • Courage and risk taking are important for RL. • Positive personal characteristics are the antecedents of RL. • Disobeying orders could be a responsible leader when facing unachievable tasks	Cameron (2011), Ketola (2012), Maak et al. (2016), Miska et al. (2013), Pingali (2016), Pless (2007), Pless et al. (2011), Sharr (2023), Tirmizi (2023), Üzüm & Özkan (2023), Veetikazhi et al. (2022); Witt & Stahl (2016); Zhang et al. (2022)
	Perception and orientation	Moral identity, perception of moral obligations; perceived social welfare orientation; fiduciary duty	• There are positive relationships between value orientations (e.g. perception of moral obligations; perceived fiduciary duty to shareholders) and RL behaviours.	
	Intelligence	Emotional intelligence; systemic thinking; cultural intelligence, emotional awareness	• Intercultural competence is vital for responsible leaders in the context of globalization.	
	Motivation	Motivational need systems (MNS) and moral motivation.	• Motivational need systems and moral motivational drivers motivate responsible behaviours	
	Self-regulation	Personal self-actualization; self-oriented; goal setting; personal aspirations	• Self-regulation factors are the driver of RL.	
	Knowledge, skills, and abilities	Learning reflexibility, empowerment, innovation, vision	• Learning reflexibility is important for RL development. • Responsible leaders should have vision, engage on ongoing learning process waves of innovation	
	Demographic characteristics	Gender	• There is a gender differences between character traits and challenges of RL in Myanmar between males and females	
Meso-level	Organizational culture	Organizational systems and culture	• Organizational systems and culture should be transparent for RL development.	
	Business strategy and management	Business goal; HRM, organizational strategy, human resource development	• Business goal difficulty encourages irresponsible behaviours. • Good HRM could contribute to the development of RL	
Macro-level	Roles of stakeholders	Mass media, local community pressure	• Mass media, local pressure, policy, and regulations play important roles in forming the proactive and passive RL.	
	Legal system	Policy and regulation		
	National culture	Religion; ethnic culture, national culture ethos of the nation; governance	• Macro context including national culture, governance system, religion that can influence a leader's propensity towards RL	
			OUTCOMES	
	Commitment	Employee commitment; employee psychological contract	• RL positively leads to employee commitment via a direct effect or via a mediating or moderating effects of several individual and organizational	

24

			factors like organizational identification; CSR or employee turnover intentions	(Abbas et al., 2022; Akhtar et al., 2023; Ali et al., 2023; Chin et al., 2023; Coldwell et al., 2012; Doh et al., 2011; Javed, Ali, et al., 2020; Khan et al., 2023; Marques et al., 2023; Rao et al., 2022; Saleem & Malik, 2022; Ur Rehman et al., 2023; Z. Wang et al., 2023)
Micro-level	Attitude	Employee support: work engagement	• RL positively related to work engagement through the mediating effects of knowledge sharing or CSR.	
	Behaviours	Employee organizational citizenship behaviours for the environment; participative behaviours; knowledge sharing behaviours; unethical behaviours	• RL positively influences good employees and negatively influences unethical behaviours. • RL plays a role as the moderator or mediator that contributes to several relationships between organizational factors and employee behaviours	
	Perception and orientation	Duty orientation: employee felt responsibility	• RL positively related to duty orientation with the mediating effect of job satisfaction	
	Emotion, feeling and well-being	Employee well-being; work-life balance; emotional well-being	• RL positively related to emotional wellbeing and affective wellbeing at work	
	Intention	Employee turnover intentions; whistleblowing intentions	• RL negatively associated with employee turnover intentions and positively related to employee whistleblowing intentions	
	Performance	Employee sustainable performance; career success; creativity; task performance	• RL directly influences positive employee performance. • RL moderates the indirect influence of calling on employee creativity via career commitment.	
Meso-level	Organizational performance	Financial performance, sustainable performance; ESG performance; organizational downsizing; firm innovation, safety performance	• RL directly influences the positive firm's financial performance and contributes to sustainable performance and organizational ESG. • RL moderates several relationships between organizational factors and organizational sustainable performance	
	Corporate strategy	CSR activities	• RL is a key driver of CSR activities, fostering strategic agility.	
	Corporate reputation	Firm reputation management	• RL contributes positively to the firm's reputation management during and post-crisis by providing a vision and direction for the future.	
	Organizational climate	Inclusive organizational climate; ethical climate	• RL positively related to an inclusive organizational climate and ethical climate.	
	Organizational social capital	Organizational social capital	• RL generates social capital which contributes to the corporate sustainable (environmental, social, and economic) performance	
	Organization engagement	Organization's engagement in high-involvement multi-stakeholder initiatives	• RL contribute to organizational engagement in high-involvement multi-stakeholder initiatives for sustainable development.	
	Relationship management	Customer relationship performance; stakeholder conflict resolution	• RL is positively associated with enhanced customer relationship performance, plays a key role in resolving stakeholder conflict.	
Macro level	Community engagement	Community engagement		

25

	Social capital	Relational social capital	• RL has the positively impacts on the community engagement and building social capital at the macro level.	
			MEDIATORS	
Micro level	Self-regulation	Self- efficacy; self-concordance; self-esteem	• Leader self-regulation mediate the positive relationship between RL and good employees' behaviours	(Abbas et al., 2022; Afshari et al., 2023; Ali et al., 2023; Z. Wang et al., 2023; Xuecheng et al., 2022; Zhu et al., 2021)
	Emotion, feeling and well-being	Emotional exhaustion; anxiety, depression, and somatic complaints; psychological strain; pride; satisfaction; burnout; well-being, apathy, job stress	• RL reduced bad employee behaviours (e.g. employee cyberloafing) and promoted good employee behaviours through decrease negative employee emotion, feeling and well-being (e.g. job stress)	
	Leader position	Leader position level	• Low-level leader mediates the impact of high-level leader on unethical behaviours.	
	Intention	Turnover intentions	• Employee turnover intentions mediate the relationship between RL and affective commitment.	
	Motivation	Motivation; empowerment	• Motivation mediates the positive influence of RL on employee's engagement and organizational citizenship behaviours.	
	Perception and orientation	Customer-oriented perspective taking; psychological ownership, employees perceived organizational support; CSR perception	• Positive employees' perceptions and orientations play mediating roles in the positive relationship between RL and employees' pro-environmental behaviours. • Positive leader perceptions and orientations mediates the negative relationship between RL and employee unethical behaviours.	
	Recognition	Employee recognition	• RL is associated with employee emotional wellbeing through the mediation effect of recognition for social esteem	
	Attitude	Employee commitment; engagement	• Good employee attitudes mediate the positive association between RL and good employee behaviours and performance	
	Behaviours	Green behaviours; knowledge sharing behaviours; leader-member exchange	• Employee behaviours mediate the interactive effect of CSR, GHRM, and RL on positive employee performance	
Meso-level	Organizational climate	Inclusive diversity climate; general distributive justice climate; focalism	• RL positively influence good employee behaviours and attitudes through the inclusive and diversity organizational climate while negative organizational climate escalates the irresponsible behaviours.	
	Organizational performance	Innovation; performance, reputation	• RL positively influence the triple bottom line performance through the mediating effect of innovation and organizational performance	
	Organizational culture	Corporate ethical culture	• Organizational ethical culture will mediate the relationship between RL and firms' green innovation	
	Corporate image	Corporate image	• Corporate image and ethical climate mediate the relationship between RL and employees' turnover intention.	

26

	Corporate strategy/ policies	CSR practice, job crafting, environmental management strategy, strategic posture	• RL positively influence the organizational sustainable performance and good employee behaviours/ attitudes through the mediating effect of eco-friendly strategies.	
	HRM	Green HRM; employment relationship, socially responsible HRM	• HRM mediates the positive relationship between RL and employee behaviours such as innovative behaviours, employee pro-environmental behaviours.	
	Organizational resilience	Organizational resilience	• Organizational resilience mediates the relationship between RL and enterprise ESG performance.	
MODERATORS				
Micro level	Motivation	Self-enhancement motive	• Self-enhancement motive moderates the relationship between RL and work engagement	(Cheng et al., 2019; Huo et al., 2023; Tian & Suo, 2021; Z. Wang et al., 2023; Zhu et al., 2021)
	Perception and orientation	Leader-employee value congruence; employee goal orientation	• Perceptions and orientations of employees moderate the positive impacts of RL on employee pro-environmental behaviours	
	Relationship and authority	Leader-member exchange; supervisor-subordinate guanxi, managerial discretion, founder status	• High level leader relationship and authority strengthens the impacts of RL on employee and organizational sustainable performance	
	Personality characteristics	Individualism; conscientiousness, authenticity	• Positive personality traits strengthen the relationship between RL and employee perception and employee citizenship behaviours.	
	Chronic regulatory focus	Promotion/prevention focus	• Promotion focus strengthens and prevention focus weakens the relationship between RL and employee pro-environmental behaviours (EPB)	
	Behaviours	Helping initiative behaviours	• Helping initiative behaviours moderates the association between RL and knowledge sharing behaviours	
	Demographic characteristics	Gender	• Gender moderates the relationship between RL and emotional well-being through the mediation effect of recognition for social esteem	
Meso-level	Human resources management	HRM system strength, green HRM	• HRM system strength moderates the link between green HRM practices and RL which moderate the effects of CSR on employee green behaviours and performances	
	Organizational climate	Sustainable organizational climate, relational transparency	• Sustainable organizational climate moderates the relationship between RL and employee motivation, commitment, and behaviours while relational transparency moderates the relationship between RL and ethical climate.	
	Corporate strategy/ policies	Company's strategy; compensation incentive, CSR practice, founder status	• Corporate strategy positively regulates the indirect effect of RL on organizational sustainable performance through organizational resilience.	

27

Stream 6. Leadership, Governance and Strategy

FIGURE 1: PRISMA METHODOLOGY

Step 1: Defining the research question.
D1: Specifying the research gap and related research questions.
D2: Opting for a theoretical approach (Deductive approach)
D3: Defining the core coding scheme.

Step 2: Determining the required characteristics of primary studies.
D4: Specifying inclusion and exclusion criteria.

Step 3: Retrieving a sample of potentially relevant literature.
D5: Defining sources and database: WoS, Scopus, ProQuest, EBSCO
D6: Defining search terms and crafting a search string (mentioned in table 1)

Step 4: Selecting the pertinent literature.
D7: including and excluding literature for detailed analysis and synthesis (mentioned in table 1)

Step 5: Synthesizing the literature.
D8: Selecting data extraction tool: Excel and Vos Viewer.
D9: Coding against (pre-defined) constructs
D10: Conducting a subsequent (statistical) analysis.
D11: Ensuring validity and reliability.

Scopus N = 435
ProQuest N = 371
EBSCO N = 278
WoS N = 568

Total records identified: N = 1652

Duplication removals (n = 838)

Records remain after deleting duplicates. N = 814

Journal quality screening (n = 53)

Records for full paper screened. N = 761

Out of scope (n = 599)

Records included in the review. N=162

28

Stream 6. Leadership, Governance and Strategy

FIGURE 2: DISTRIBUTION OF PUBLICATIONS OVER TIME

29

FIGURE 3: MAIN MODEL OF RL MECHANISM

MODERATORS

Macro-level
(Underexplored)
Meso-level
- Organizational climate
- Corporate strategies/policies
- Human resources management
Micro-level
- Leader/Employee personalities & demographic characteristics
- Leader/Employee perception & orientation
- Leader/Employee chronic regulatory focus
- Leader/Employee behaviours
- Leader relationship & authority
- Leader abilities, skills and behavioural dispositions

MODERATORS

Macro-level
(Underexplored)
Meso-level
(Underexplored)
Micro-level
Individual engaging in self-reflexibility and reflection on relationships

ANTECEDENTS

Macro-level
- Roles of stakeholders
- National culture
- Legal system
- Industry competition
Meso-level
- Organizational culture
- Business strategy and management
Micro-level
- Leader personal characteristics
- Leader perception & orientation
- Leader motivation
- Leader self-regulation
- Leader knowledge, skills & ability
- Leader intelligence
- Leader demographic characteristics

MEDIATORS

Macro-level
(Underexplored)
Meso-level
(Underexplored)
Micro-level
Focalism

RESPONSIBLE LEADERSHIP

Responsible behaviours vs Irresponsible

MEDIATORS

Macro-level
(Underexplored)
Meso-level
- Organizational climate
- Organizational culture
- Organizational performance
- Organizational resilience
- Corporate image
- Corporate strategies/policies
- Human resources management
Micro-level
- Leader/Employee emotion, feeling & well-being
- Leader/Employee perception & orientation
- Leader self-regulation
- Leader position
- Employee recognition
- Employee attitudes
- Employee behaviours

OUTCOMES

Macro-level
- Community engagement
- Social capital
Meso-level
- Organizational performance
- Corporate reputation
- Corporate strategy
- Organizational climate
- Organizational social capital
- Organization engagement
- Relationship management
Micro-level
- Employee behaviours
- Employee performance
- Employee intention
- Employee perception and orientation
- Employee emotion, feeling and well-being
- Employee commitment
- Employee attitudes

CONTROL VARIABLES

Gender, age, educational level, work experience, position, income; experience; industry, firm size, firm age

30

Adding value: Engaging stakeholders in higher education via the course advisory committee

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Adding value: Engaging stakeholders in higher education via the course advisory committee

ABSTRACT:

Stakeholder engagement in higher education is viewed as important for institutional viability amid growing competition and in response to demand for skilled graduates equipped to succeed in today's rapidly changing world. However, limited research explores what motivates external stakeholders to provide their expertise to educational institutions via formal stakeholder structures. This study examines the motivation, engagement, contribution, and benefits of participation in university business course advisory committees from external stakeholders' perspectives. Findings show that stakeholders are motivated by a desire to give back to their profession, the institution or society. They see their engagement in committee discussion as "adding value" to the institution and seek feedback on how their input is used.

Keywords: stakeholder engagement, higher education, advisory board, reciprocity, business school, value creation.

Stakeholder theory places stakeholder relationships at the centre of organisational strategic focus and suggests organisations create value for all stakeholders not just shareholders (Freeman, 1984). Stakeholder engagement (as opposed to stakeholder management) has a focus on value creation via cooperation, collaboration, participation, and reciprocity (Kujala, Sachs, Leinonen, Heikkinen & Laude, 2022). In the higher education sector, stakeholder engagement with industry, alumni, students, and academics has two main purposes. Firstly, it facilitates institutional sustainability in the face of decreased public funding, increasing competition and internationalisation. It does this by enabling universities to expand their mission beyond teaching and research to pursue commercial activities and access new revenue sources via partnerships with external organisations, communities, and other relevant groups (Alves, Mainardes & Raposo 2010; Jongbloed, Enders & Salerno 2008; Broucker, De Wit & Verhoeven 2018). Secondly, stakeholder engagement is viewed as a way to assure and maintain quality educational standards whilst simultaneously aligning curriculum to government and societal expectations to provide a skilled workforce (Felsen & Nastanski, 2016, Jackson, 2020). This latter shift has seen growing demand from standards and accreditation authorities for the involvement of stakeholders in institutional quality assurance and governance processes (Miller, McAdam &

1

McAdam, 2014). Consequently, stakeholders are increasingly invited to advise on national policy and to serve on university boards and advisory committees (Beerkens & Udam, 2017) in an effort to align education with industry needs (Wheelahan, Moodie & Doughney, 2022). For example, in Australia, the Higher Education Standards Framework (HESF) (2021) requires institutions to 'take account of emerging developments in the field' when monitoring, reviewing, and improving accredited courses (Australian Government, 2021, HESF, Section 5.3.2) with the result that most Australian university course accreditation policy mandates some form of stakeholder engagement in the course re-accreditation process[1]. Stakeholder engagement in the review of business curriculum design, development, and delivery is also strongly recommended by international accrediting bodies such as AACSB International and often mandated by discipline-based professional accreditation bodes (e.g., the Australian Human Resource Institute) as a way to help bridge the theory/practice gap and ensure courses are aligned to current and future industry needs (Attree and Neher, 2023).

One useful mechanism to facilitate stakeholder engagement in curriculum quality assurance is the course[2] advisory committee, sometimes referred to as an advisory board or advisory council. Stakeholder members of advisory committees are essentially skilled volunteers who generously give their time and expertise to the university, offer valuable insight into industry trends, identify requisite graduate skills and capabilities, guide development of future curriculum, and provide advice and assistance for accreditation (Andrus & Martin, 2001, Baker, Karcher & Tyson, 2007, Ellingson, Elbert & Moser, 2010, Neal, 2015). Despite their seeming widespread use in higher education, literature on stakeholder engagement in advisory committees in general (i.e. including disciplines such as IT, engineering and social work), and business disciplines specifically, appears to be an under researched area. Of the business focussed studies that do exist, most are US based and either provide a case description of their own institutional experiences establishing and operating a committee (e.g. Andrus & Martin, 2001, Felsen & Nastanski, 2016, Penrose, 2002), provide opinion and advice (e.g. Flynn, 2019) or report survey results on factors such as size, frequency of meeting, membership selection,

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[1] Based on a desk audit undertaken by the first author.
[2] The term course is used throughout this paper to refer to a program of study in a particular discipline area leading to an award such as a bachelor's degree.

2

purpose, bylaws, and membership terms (e.g. Baker et al., 2007, Ellingson, et al., 2010, Kaupins & Coco, 2002). Many conclude with guidelines and suggestions for the establishment, function, purpose, and operation of the committees (see for example Mello, 2019, Rose & Stiefer, 2013). Although this research captures the establishment, purpose, structure, and operational aspects of business discipline advisory committees, it provides limited understanding of the motivations that drive stakeholders to take on and continue in a committee role. This is important to advance management education that aligns with government and industry needs whilst also meeting accreditation requirements. Further, no business focused studies could be found examining the Australian context.

Arguably, understanding what motivates stakeholders to agree to become members of an advisory committee, how they contribute, what sustains their engagement and being aware of the benefits members derive from participation, can assist institutions in developing strategies to engage members more effectively and drive collaboration and reciprocity in the stakeholder relationship. However, only three studies were found to investigate these aspects from the perspective of the stakeholders engaged in business based advisory committees. Within the two US based studies committee members expressed strong motivations "to give back", "to make a difference" (Nagai & Nehls, 2014, p.10) or because the work aligned with their "personal core values", "beliefs about service to the profession" and "personal fulfillment" in bringing their "real-world experiences" to the curriculum (Hinton & Williams van Rooj, 2021, p287). In the UK context, Hardcastle and Associates (2020) identified similar external stakeholder motivations i.e. to give back, make a difference, share their expertise and "equip the leaders of tomorrow" (p. 43). Advisory committee participants in all three studies indicated knowledge gains from committee discussions and building their industry networks as benefits of involvement. Factors that facilitated ongoing participation included effective leadership, clear guidelines, and agendas that promoted collaborative discussion.

This article extends and expands this scant prior literature examining the motivations and experiences of external stakeholders involved in business course advisory committees from the perspective of the stakeholders themselves. In addition to exploring the motivations for joining and ongoing participation it also examines how stakeholders view their contributions, what sustains their engagement in the committees and how they derive reciprocity from the stakeholder relationship.

3

Stream 7. Teaching and Learning

Further, given the lack of studies addressing this issue from an Australian perspective, examining the motivations for participation and facilitators of continued engagement of Australian stakeholders in course advisory committees would provide a useful comparison with overseas studies and allow Australian higher education institutions to tap into any local nuances.

In summary, stakeholder engagement in higher education is viewed as important to facilitate the "third mission" of universities to engage with industry and community partners (Jongbloed et al., 2003, p.303) and to enhance the quality and industry relevance of the curriculum. Studies examining external engagement of stakeholders in the quality assurance of curriculum (i.e. via a course advisory committee) are predominantly US based, favour case description or survey methods and, in the majority, report the viewpoint of internal stakeholders i.e. business deans and committee chairs.

RESEARCH QUESTION AND METHOD

Determining the motives of stakeholders for engagement in advisory committees can be beneficial for universities in developing strategies and practices to better engage and retain members on these committees to effect knowledge transfer, aid reciprocity, and aim to create value for all stakeholders (Freeman, 1984). This study therefore addresses the gap in the literature outlined above by exploring stakeholder motivations for and engagement in course advisory committees within the Australian context. Research questions were as follows:

1. What motivates stakeholders to become and remain engaged in a university-based course advisory committee?

2. What does stakeholder engagement look like? How do stakeholders contribute, collaborate, and create value?

3. What benefits/value/reciprocity do members derive from participation?

4. How can business schools improve the operation of their advisory committees to ensure stakeholders are engaged and contributing?

The research used a constructivist grounded theory methodology based on the work of Charmaz (2006, 2008). Grounded theory is a qualitative research strategy that seeks to develop or generate an explanation (a theory) about a process, action, or social interaction, shaped by the views

4

of multiple participants. The theory arises from, i.e., is grounded in, data that has been systematically gathered and analysed (Creswell & Poth, 2016, Myers, 2019). Myers (2019) states that grounded theory is "useful in developing context-based, process-oriented descriptions and explanation of organizational phenomena" (p.127). This strategy of inquiry is therefore appropriate to investigate a context-based social process such as the operation of a course advisory committees and to examine the experience of multiple members who engage and interact in this process.

Data collection for this study proceeded in two stages. Stage 1 (complete) collected data via 23 semi-structured qualitative interviews using a convenience sampling approach targeting members of two business based advisory committees at a single university. Membership of these committees consisted of students, alumni, industry/government sector managers, external and internal academic staff. In some cases, one member may have fulfilled many roles i.e., as an alumnus, an industry professional, and a sessional academic. In total, 28 current or former members were invited to participate in the research. Only five members did not respond (resulting in an 82% response rate). This paper presents the findings of external stakeholders only i.e. 17 of the 23 research participants.

Following interview, anonymised transcripts were imported into NVivo for analysis and coding. The coding approach followed the grounded theory methods advocated by Charmaz (2006) i.e., beginning with segment-by-segment coding and then moving to focussed (or selective) coding where the most significant initial codes are sorted, synthesised, and integrated. Comparisons and contrasts were made with other respondents to identify patterns and similarities in the data. Memoing was used to capture potential biases, note down personal experiences and perspectives and to explore potential subjectivities inherent in the data collection and data analysis process. Stage 2 of the data (ongoing) seeks theoretical saturation on concepts and categories arising from the data.

FINDINGS AND DISCUSSION

Stakeholder motivations

Similar to findings in US and UK qualitative studies (Hardcastle & Associates, 2020; Nagai & Nehls, 2014, Hinton & Williams van Rooj, 2021), preliminary analysis from Stage 1 of the data suggests participants were motivated to join and remain as members on course advisory committees

5

through a desire to "give back" and to serve their profession. For example, members discussed giving back to the profession "that I have been involved with for 30 years" (P3 Industry expert), alumni expressed a desire to "give back" to the institution that they "had an affiliation and affection for" (P8 Alumnus/Industry expert), while others wished to "contribute to society" (P5 Industry expert). An interesting nuance in our data however was a desire by participants to exert influence and have a strategic impact on the industry, the curriculum, and future learning. For example, P4 (Industry expert) described being motivated to "in a small way influence the future learning of students coming to a profession that I love dearly". Alumni/current students mentioned wanting to "keep things in the course that I … found valuable" (P11 PG Student/Industry expert), and "adding value to the MBA" (P14 Alumnus/Industry expert), as well as influencing the focus of the course by bringing in the "practitioner perspective… to help graduates prepare for the workforce" (P15 PG Student/Industry expert) and make a "real world difference" (P12 Alumnus/Industry expert).

Although pride (and loyalty) to their alma mater have been suggested in the literature as motivators for engagement with advisory committees (Penrose, 2002) another interesting discovery emerging from this study was that several participants expressed *personal* feelings of flattery, pride, recognition, and reward as being significant motivators for them to accept the initial invitation to join the committee e.g.

> *it was to me quite exciting to be asked. And I felt it was, I suppose, internally, a*
> *little bit of a reward to me for all of the years of study and the hard work I'd done.*
> *And I thought wow to be asked to be on something like this was a real honour.*
> *(P13 PG Student/Industry expert)*

While these feelings that their "efforts had been flagged and … recognised by the university" (P16 UG Student) were common among alumni and students, similar feelings of recognition, flattery, feeling "a degree of pride" (P4 Industry expert) and "an element of recognition of your experience" (P3 Industry expert) were also identified by non-alumni industry members as motivators for them to accept the invitation.

Career related motivators to accept the invitation were also identified by participants in this study. Both students and industry representatives acknowledged that membership of the committee "looks good on a resume" (P16 UG Student) and on LinkedIn profiles. Industry participants saw

6

Stream 7. Teaching and Learning

membership as providing them with additional "reputational" aspects (P3 Industry expert) and an "element of credibility, authority which is useful for engaging with clients" (P8 Alumnus/Industry expert) or for demonstrating to future managers their "motivation to continually learn and build skills" (P13 PG Student/Industry expert).

Stakeholder engagement and contributions

Whereas prior research has discussed the contribution of stakeholders from the perspective of university chairs and deans (e.g. Andrus & Martin, 2001, Baker et al., 2007, Ellingson et al., 2010), contribution from the perspective of the external stakeholders has not been previously explored. In line with the research question "what does stakeholder engagement look like?" participants were asked what they brought to the committee and how they had contributed: Members viewed their contributions as unique, stemming from their industry, sectoral or discipline knowledge, their life experience, and personal attributes. Figure 1 below summarises their contributions:

Figure 1: Stakeholder contributions to advisory committee

Source: Author

7
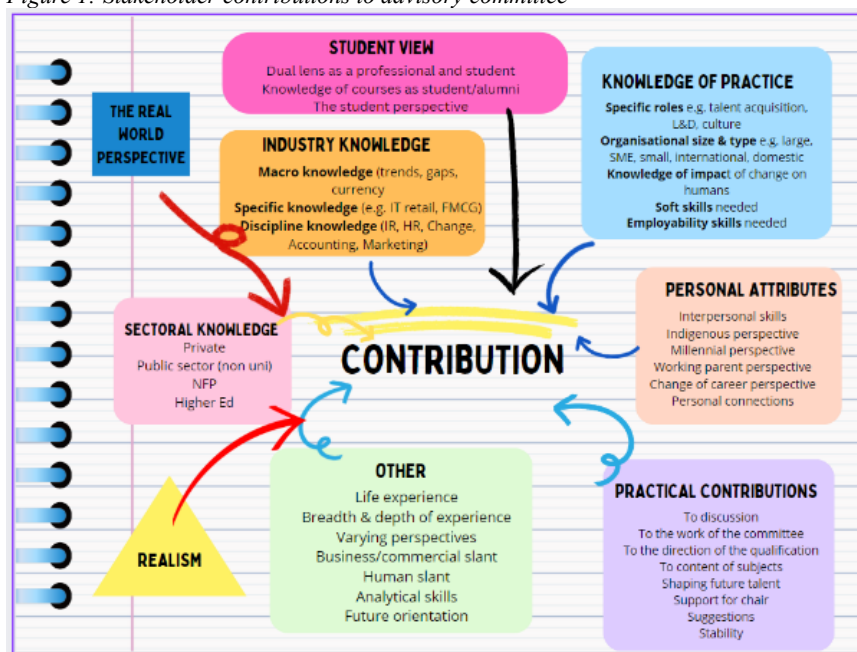
Reciprocity/Benefits

Benefits stakeholders derived from involvement in the committee included prestige, and career and professional credibility (as mentioned above). Similar to findings by Nagai and Nehls (2014), and Hardcastle and Associates (2020) participants cited the opportunity to gain industry knowledge as a benefit of participation. They described rich learning and professional development advantages via exposure to diverse perspectives, insights into other sectors or industries, and the ability to keep up with trends e.g. "some things that come out in meetings are just so, well you think, wow, I hadn't really thought of that before or heard it put that way" (P7 Alumnus/Industry expert). Others mentioned how "listening to others triggers my thought processes" and being "stimulated and attracted" by "topics that are interesting, evolving and constantly changing" (P15 PG Student/Industry expert). Participation enabled exposure beyond their own sector(s) to "encounter the experiences of other people in multinationals and corporates" (P8 Alumnus/Industry expert) or insight into how "people from non-profits or an educational setting, or from other services … handle issues". Other benefits included opportunities to network and connect with others, gain new experiences, gain knowledge of the university sector and, for a couple of participants, support a move into academia.

There was significant overlap between respondents' answers to questions on their motivations for joining the committee, the contributions they made, and the benefits they derived as can be seen in Figure 2 below. Stakeholder literature views value creation as a major component of the stakeholder engagement process (Kujala et al., 2022). The concept of *adding value* emerged as a major category in the research and a significant motivator for engagement. Participants view their contributions as important to the university and wish to see how they are making an impact on curriculum. They were motivated to influence the future profession or the future of the qualification. Accordingly, participants were keen to receive feedback on how their advice was being utilised. If their contribution wasn't being utilised, if they were "talking in a vacuum" (P4 Industry expert) couldn't see any progress or their "advice was not taken seriously" and the experience was just a "waste of my time" (P12 Alumni/Industry expert) then they would seriously question ongoing involvement. Value was therefore a reciprocal concept given that participants also gain value via the benefits listed above.

8

Figure 2: Intersection of motivations, contribution, and benefits
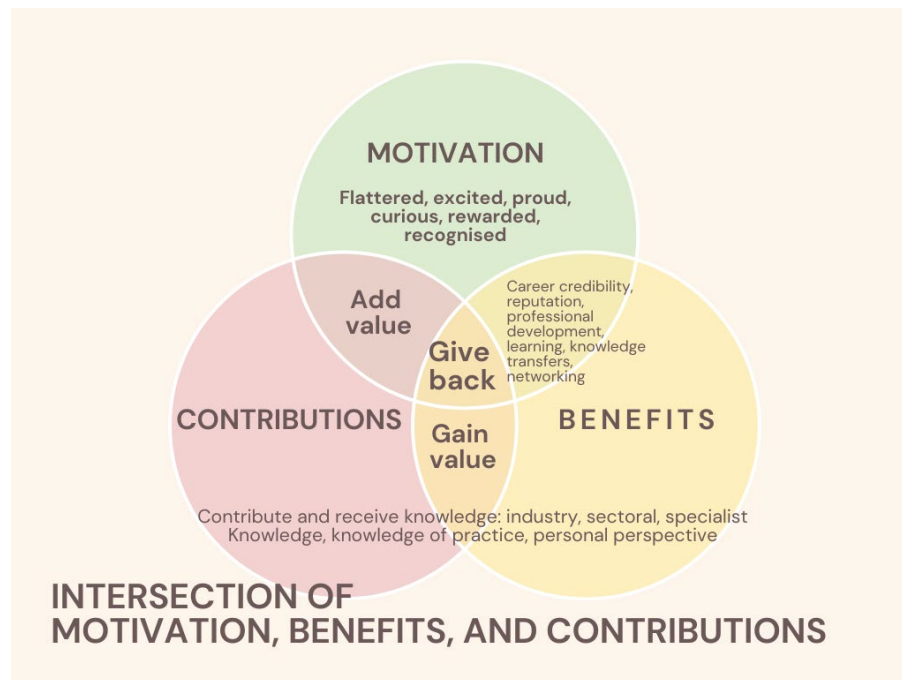
Source: author.

Operational improvements

In order to understand how business schools can improve the operation of their advisory committees to ensure stakeholders are engaged, contributing, and adding value, participants in the study were asked what factors facilitated their continued engagement and what might prevent future participation. Administrative facilitators of engagement included a time commitment that is" not too burdensome" (P8 Alumnus/Industry expert), a straightforward process, well organised meetings, clear agenda, adequate notice, advanced scheduling, and participation via Zoom teleconferencing. This corresponds with the reported view in the literature from internal stakeholders such as chairs and deans, that efficient administrative processes can support the effective operation of the committees (Baker et al., 2007, Flynn, 2019).

A collegial atmosphere and positive relations with the chair were also noted as facilitators of engagement. Disincentives to ongoing participation included poor relational aspects (if the group was dysfunctional, not collegial), or operational aspects (if workload became more onerous or poorly

9

administered). A strong personal disincentive centred around not being able to add value, or not having their input valued or utilised (as noted in the section above). Recommendations for improved operation included clarity of purpose, and more focused "discussions that are a little bit future oriented, what do we see coming, how do adapt the program and the content to those things ... that's where I think the highest value is" (P3 Industry expert) and communication/feedback from the university on where and how their expertise was used. Given the central importance to external stakeholders of this concept of "adding value" and their contributions being used, this is an area which will be explored further in the next round of data collection.

IMPLICATIONS, LIMITATIONS AND CONCLUSIONS

This study adds to the extant literature on stakeholder engagement in higher education by examining the motivations and perceptions of external stakeholders who were members of a course advisory committee. The study also provides a rare insight into the Australian context. The findings reveal that feelings of flattery, recognition and reward can motivate external stakeholders to accept an invitation to join as a member of a university course advisory committees. Participants also cite a desire to give back to their profession, the university and/or society as a driver for engaging in the committee. Implications of this for universities is that both alumni and non-alumni have similar driving motivations for engagement. These external stakeholders view their contribution as *adding value* to institutions through provision of industry and sectoral knowledge, knowledge of practice and a real-world lens. This suggests that engagement of stakeholders in course advisory committees can assist Australian higher education institutions in responding to quality assurance and governance requirements to keep up to date with emerging trends in industry and develop graduate knowledge, skills, and capabilities accordingly. As such this finding verifies arguments put forward in the literature by US scholars including Andrus and Martin (2001), Baker et al (2007), Ellingson et al (2010) that advisory committees are a useful mechanism for the provision of expert advice on the content, relevance, and future direction of their educational offerings.

Sachs and Kujala (forthcoming) outline 3 key aspects to stakeholder engagement i.e. 1) stakeholder engagement is purposeful in that it has "certain explicit or implicit aims", 2) it should

10

involve stakeholders in "a positive manner in organisational activities" and 3) stakeholder engagement is viewed to favourably impact an organisations financial and social performance and create value for stakeholders. The findings from this study showed external stakeholders wished to be engaged purposefully and to "add value" to Australian higher education. Stakeholders were keen to share their knowledge and guide/influence the direction of the curriculum, seeking opportunities for focused discussions. Furthermore, the participants wanted explicit feedback on how they had added value and contributed to organisational outcomes – further emphasising the need for a purposeful focus. A collegial atmosphere and positive relations with the chair were viewed as facilitators to engagement. Mutual value creation and reciprocity as advocated by Freeman (1984, 2017) appears to be occurring in the stakeholder relationship with course advisory committee members identifying a number of benefits of committee participation including networking opportunities, reputational and career benefits, and knowledge transfers/learning opportunities. These reputational and career benefits also suggest a purposeful or strategic focus to their engagement.

Implications of this research for higher education institutions lies largely in the information from participants on the facilitators of and barriers to ongoing engagement. Figure 3 categorises these into three broad areas i.e. relational aspects, strategic or outcomes focused aspects, and operational aspects. While efficient administration of the operational aspects of the committee such as scheduling, timing, agenda distribution was viewed positively, primarily stakeholders expressed a strong desire to be actively engaged in the work of the committee (i.e. discussion and knowledge transfers) and to influence the direction of the profession and curriculum. To maximise contributions and engagement institutions therefore need to build into the agenda opportunities for discussion and could also potentially explore asynchronous opportunities for input. Participants also sought to understand where and how their input was being utilised indicating that if their feedback wasn't being used then they would "walk away" (P1 industry expert). Institutions therefore must ensure that communication and feedback are incorporated into committee agenda and activities. Interestingly while trust is an important concept in the stakeholder engagement literature feedback and communication to stakeholders are under-researched areas.

11

Stream 7. Teaching and Learning

Figure 3: Facilitators and barriers to adding and gaining value
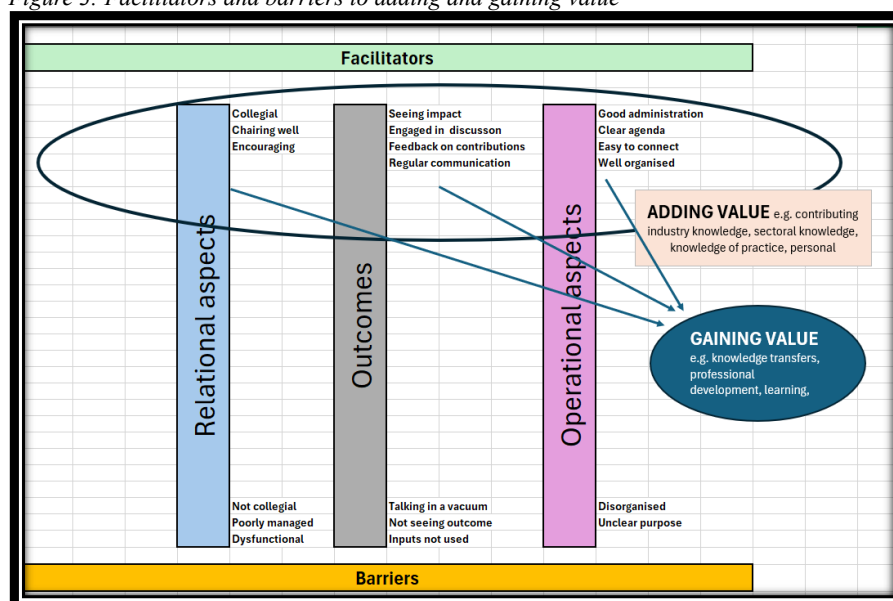
Source: author.

Through the process of "adding value" participants also "gained value" via knowledge transfers, networking, professional development, and reputational associations. Institutions could also seek to publish their committee members on their website, provide testimonials via LinkedIn or investigate other ways to make explicit the relationship and the value add provided via this stakeholder engagement. Collegiality and constructive relational aspects enabled and supported such engagement and value creation. These findings therefore align with the strategic focus of stakeholder theory (Freeman, 1984) and highlight the role of cooperation, collaboration, participation, and reciprocity for value creation in stakeholder engagement (Kujala et al., 2022).

Finally, the authors acknowledge certain limitations with this study. Firstly, given the grounded theory nature of this study findings may not be generalisable to other settings. Further this paper reports on the first stage of data which focuses on the experiences of members of an advisory committee at a single Australian institution. Stage 2 of data collection will seek to extend the theoretical sampling and further develop the emerging theory related to the concept of adding value.

12

Stream 7. Teaching and Learning

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13

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14

Stream Number 6 - **Renewing Algedonic Signal Warnings**

Integrated Risk and Resilience for Complex System Governance— Renewing the Value of Algedonic Signal Warnings

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Stream Number 6 - **Renewing Algedonic Signal Warnings**

ABSTRACT:

This paper explores how governance of complex system risk can be enhanced by improving the identification, formalisation, and possible automation of urgent signalling from operational units to those governing. Given the increasing availability, scale, hazards, and complexity of modern systems, more leaders face greater accountability for governance outcomes. We conceptualise a renewed focus on governance practices using the viable system model, a systems approach, for identifying strategic vulnerabilities. We then define future uncertain risk events to enable an assessment of systemic resilience by linking their risk bowties. The case scenario shared uncovers strategic fragilities and reveals subsequent weak signalling sources. These early warning sources can alert those governing to divert resources towards absorbing shock and surprise, improving net adaptive capacity, and supporting a healthier sense of chronic unease to complex system collapse.

Keywords: Complex System Governance, Algedonic Signals, System Pathologies, Weak Signal Risk

Stream Number 6 - **Renewing Algedonic Signal Warnings**

INTRODUCTION

At the time of writing this paper, two competing organisational demands ring out in our post-pandemic environment. Firstly, we must transform our organisations' by leveraging advanced technologies such as artificial intelligence, alternative energy systems, or scaled chemical processes; and secondly, we must cut costs and simplify organisations through automation to remain competitive (Bhattacharjee et al., 2023). Leading and governing in such complexity therefore requires a strong will and intellect to think and act differently about competing priorities (Gupta et al., 2006). Communities will also expect more from these leaders, and in return may continue to provide a social license to operate (Ison, 2023).

The core premise of this paper is to improve how those governing complex systems are alerted to the need to think and act differently. In doing so, they can foster a 'healthier' sense of chronic unease towards undesirable outcomes. Chronic unease has been defined as "…a state of psychological strain in which an individual experiences discomfort and concern about the control of risks" (Fruhen et al., 2014, p. 974). This concept, when supported by Beer's (1985) Viable Systems Model (VSM), allows us to identify and diagnose systemic pathologies within a strategic meta-system.

In the conceptual use case presented, pathologies in a dairy company strategy are diagnosed not unlike a cancer in our human body. Organisational pathologies threaten net adaptive capacity, ill-consume resources, and create vulnerabilities capable of causing brittle system collapse (Woods, 2018). Methods from Logan et al. (2021, 2022) are then applied to the pathologies to define uncertain future risk events and assess system resilience through linking event risk bowties. This conceptual approach allowed us to formalise weak signal sources into algedonic signals within the meta-system—urgent warning to top leadership that might otherwise go unheard amid the noise of routine operations.

Following this introduction, a literature review and brief methodology are presented before discussing the reported conceptual use case. The findings conclude how identifying weak signalling sources through diagnosed pathologies can improve the means of formalising algedonic signals. Those governing complex systems then have a better chance to reallocate resource early and stave off brittle collapse, all while enhancing a healthier sense of chronic unease to grave outcomes in complex times.

LITERATURE REVIEW

This section reviews literature on algedonic signals (AS) related to complex systems governance. The usefulness of the Viable Systems Model (VSM) is then explored, followed by methods to better describe uncertain future risk events and how resilience can be assessed by linking future event risk bowties together. By exploring the intersection of these areas, we establish a foundation for understanding how weak signal sources may show up. We then show how these sources might be formalised, and potential automated into algedonic signals (AS). AS can then provide crucial early warning to those governing complex systems.

Algedonic Signals in Complex System Governance

Complex systems are made up of many interconnected subsystems working together to achieve goals that no one part can achieve alone (Levins, 2017). Governance of complex systems then involves designing, implementing, and evolving a meta-system framing that becomes essential for strategic guidance, communication, coordination, resource bargaining, and decision-making over time (C. Keating et al., 2022). Amongst the many and varied communications within a complex system, AS are urgent signals coming from operational units to the nominal leadership of the system. AS therefore provide crucial alerting that conditions at the operational level of a system require immediate attention to maintain viability (Chesterman et al., 2022).

AS can arise informally, however they are likely to perform their function better if they undergo formalisation and where possible subsequent automation. If left entirely to informal outcomes, there is a risk these messages may be lost in the roar of a busy organisational tempo (Beer, 1985, p. 133). Therefore, regarding complex system governance, AS serve several crucial functions. They act as immediate alert mechanisms bringing leaders' attention to systemic threats. They bypass typical, potentially bureaucratic, communication channels, and they help avoid communication delays that could further complicate a threatening failure scenario (Sisti, 2022).

When considering extreme threats scenarios that might lead to brittle system collapse, it would be better to automate AS and potentially the resulting system response. Complex systems are prone to 'Normal Accidents' (Le Coze, 2021) and do not always stop collapsing to wait for human agency. Hence, if leaders are able to confidently automate the signal and its associated feedback

Stream Number 6 - **Renewing Algedonic Signal Warnings**

mechanisms, they can better weather uncertain shock and surprise, which tests their systems to extremes.

One cannot rest here though. Leaders must also continually improve their practices to enable better decision-making and to individually level up their vigilance, pessimism, requisite imagination, flexible thinking, and propensity to worry, being the six characteristics of chronic unease (Fruhen et al., 2014). To do so is to ensure leadership can maintain a desired net adaptive capacity across its many system units. This capacity allows the system to chase desired goals, but also manoeuvre against shock and surprise from its environment (Woods, 2018).

AS therefore remain essential for complex system governance, providing immediate alerts to critical issues and enabling swift action to protect system integrity through the redistribution of crucial resource. Their ability to bypass routine communications, enhance responsiveness, and contribute to risk management demonstrates a value for renewing their use and value.

VSM Framing for Meta-system Pathology Diagnosis

We use Beer's (1985) VSM as the conceptualisation of a meta-system requiring governance. Using a meta-system lens in this process provides a holistic means of viewing a complex systems design for diagnosis by considering its pathologies (Paine & Foote, 2024). Through decades of VSM literature, a coherent view of the meta-system systems (S1 – S5), its essential communication channels (C1 – C6), its many identifiable pathologies, and its subsequent practical application have been codified (Vahidi et al., 2019).

Figure 1. below illustrates S1 – S5, C1 to C6, and a representative AS pathway (in red). This VSM architecture can repeat in a fractal manner at different levels of system enquiry, demonstrating how requisite variety is achieved at each level of sub-system recursion. This ability of the VSM allows the overall (holistic) meta-system viability to be determined. Holistic viability, rather than reductionist efficiencies, allows the crucial intra-system structures and relationships to be diagnosed, which is

essential for sustaining the whole while also giving attention to the many environmental disturbances the system faces (Espinosa, 2015; Hildbrand & Bodhanya, 2015).

Diagnosing Pathologies Impeding Strategy Implementation

A significant aspect of the VSM's utility here is identifying pathologies through mapping the system units and the communication channels between them. This allows for detailed scrutiny for structural (p, 142) or functional (p, 146) pathologies with a systems design or its operation respectively. The proposed organisational strategy can then be overlaid on the meta-system for diagnosis. Diagnosis is achieved in four steps (p, 65). First, check the organisation's identity and purpose (S5) ensuring the system is defined clearly for its 'purpose' and 'goals'. Second, analyse how it manages environmental complexity by breaking down both the environment and the organisation into smaller units, reducing complexity for each sub-unit. Third, we examine the vertical levels in greater detail, as established in step 2, to analyse their various components. This ensures criteria for requisite viability is met. Finally, we assess the coherence and linkage among the different systems and sub-systems at the various levels, ensuring alignment can be achieved against overall identity and purpose (Pérez Ríos, 2012).

For the purposes of this conceptual study only, we assessed the strategy against the identified VSM organisational pathologies taken from organisational studies, as summarised by Boardman & Ponomariov (2016, pp. 3–4). The results are reported in Table 2 below. If a comprehensive VSM diagnosis is deployed effectively inside an organisation with a knowledgeable cross functional group of stakeholders, it can better expose detailed strategic vulnerabilities allowing for viability and vulnerability to be understood, thereby informing necessary net adaptive capacity to be generated to achieve the strategic goals against future shock and surprise.

Assessing Future Risk Uncertainty and Mapping Resilience

While understanding a VSM pathology might help determine if we may face it. By then describing the nature of uncertain future events allows us to better enquire into system risk and resilience (Aven, 2015). To achieve this, the study draws on recent work by Logan et al., (2021, 2022). Their concepts provided a way of better describing uncertain future risk events and then assessing system resilience by connecting bowtie diagrams for the risk events in a predicted failure sequence.

Stream Number 6 - **Renewing Algedonic Signal Warnings**

Describing Risk – Assessing Uncertain Future States

Fragility of a scenario, given uncertain future events (A), can be mapped using (C', Q, K) as graphically shown in Figure 2. C' denotes consequences, Q denotes a measure of uncertainties, and K represents the knowledge supporting the assessment of C' and Q. The authors account for an activity monitoring time interval and impact horizon as $\alpha\tau$, η, respectively, leading to a final notation of (C', Q, K) $\alpha\tau$, η. Logan et al. emphasise the importance of defining temporal factors to ensure understanding about assumptions in assessing uncertain detail. To demonstrate how (C', Q, K) $\alpha\tau$, η might show up, the well-known Fukushima nuclear disaster has been described below in Table 1.

The (C', Q, K) $\alpha\tau$, η schema provides a structured way to holistically describe risk by including consequences of events and associated uncertainties. The result can allow those assessing events to step back from chasing spot treatments and identify what might become importantly wrong to facilitate better intervention management. But understanding the events is not enough to determine a level of resilience to shock and surprise. The next section provides insight into how the above risk event representations can then be used to inform complex system resilience enquiry.

Resilience - Mapping Interrelated Risk Pathways of Top Events

Logan et al., (2022) advocates for an integrated approach to managing risk and resilience by chaining together threat-control-consequence bowties (refer Figure 3.). Linking control systems in this way highlights how changes in one risk system influence the wider system's resilience to sequences of top events. This interconnecting approach allows resilience assessment to reduce overall uncertainty and prevent system-of-systems maladaptation that could result from merely analysing risks as a single top event in isolation, as is the typical organisational practice.

Using Logan et al., we constructed an interconnected risk bowtie diagrams to analyse how an event of 'declining milk volumes' can then lead to an 'energy and gas supply crisis' (Figure 4.). By highlighting system characteristics that enhance resilience enquiry can further minimise final event pathway consequences. This structured approach helps to visualise and understand the cascading effects of risk events and inform strategies and intervention capabilities required to mitigate consequences—improving strategic planning and risk management.

It is therefore proposed, by utilising this conceptual approach an interconnected view of systemic pathology, risk events, and linked system resilience is obtainable. Further, our enquiry into

Stream Number 6 - **Renewing Algedonic Signal Warnings**

an uncertain future offered a more holistic ability to identify weak AS sources based on resilience initiatives as will be discussed. Such sources emerge from critical enquiry into credible threats, preventive or minimising control system suitability/maturity, and individual system characteristics that produce inherent or desired resilience.

Summary

We conceptualise that using the VSM meta-system to identify meta-system pathologies is then complemented by assessing uncertain future events and interlinking threat-risk-control bowties. With improved understanding of complex risk and resilience, leaders can think and act differently. This allows for adaptive management strategies and interventions to be developed aligned with holistic (strategic) intent about minimising what might go importantly wrong. We now briefly discuss the study methodology.

METHODOLOGY

This study uses a multidisciplinary approach to assess future risk uncertainty and system resilience, focusing on identifying weak signal sources to formalize algedonic signals (AS) for improved early warnings in complex systems governance.

Publicly available data was gathered from Fonterra's strategy (2021) and supported with the prior year's annual report (Fonterra, 2020). These documents provided real-world detail, historic baseline data sources, and insights into the future environmental pressures on the dairy industry and Fonterra. The information was essential for identifying pathologies and codifying 'sources' and 'quality of knowledge' (Q and K) for future risk events.

The VSM is used to diagnose organisational pathologies based on extensive work by Pérez Ríos, (2012), and simplified is this study using Boardman & Ponomariov, (2016). Methods from Logan et al., (2021, 2022) are then applied to describe future uncertain risks using the (C', Q, K) $\alpha\tau$, η schema. Two credible future events are joined to form a holistic resilience case to demonstrate how linking risk bowties then allow for inherent resilience properties and possible improvement interventions to be identified (see Figure 4). We then identify four (4) systemic resilience initiatives that might provide good weak signal sources for system fragility, being insights for those governing systems that would benefit from formalising AS.

Stream Number 6 - **Renewing Algedonic Signal Warnings**

Theoretical insights and interconnected top event bowtie scenarios provided for practical enquiry into inherent risk and resilience and what might be required to improve viability. Tables below map from identified pathologies through to the proposed AS. The study demonstrates that renewing a focus on AS identification and formalisation can aid leaders governing complex systems.

CONCEPTUAL CASE REPORTED

This section reports the conceptual use of the proposed methodology. The case below will summarise outcomes of the VSM pathology assessment of the company's strategy (Table 2.). Identified pathologies (Table 2.) are then described as uncertain future risk events using the (C', Q, K) ατ, η schema (Table 3.). Two credible events, being 'declining milk volumes' leading to an 'energy and gas supply crisis' are then linked with their risk bowtie models (Figure 4.). The case uses resilience assessment to inform where sources of weak AS may lay and offers the proposed formalisation and automation of four AS (Table 4.).

Identified Pathologies

Table 2. below lists the identified pathologies drawn out of the source material. The table shows each pathology with associated reference to system and communication channel impacts (S1 – S5 and C1 – C6), its failure type, and proposed consequence. Key pathologies were: leader-member exchange, ineffective leadership, excessive formalisation, poor decision-making, misalignment of worker expectations, resource misallocation, and mismanagement of non-core functions—deemed significant due to: input milk supply pressures, cost volatility, market facing uncertainties, and internal pandemic pressures.

Uncertain Risk Events ((C', Q, K) ατ, η)

Table 3. outlines the relationship between the identified pathology and uncertain future risk as events annotated in the form of (C', Q, K) ατ, η. These events demonstrate how ineffective leadership, poor decision-making, and misalignment of expectations have repeating ability to impact various aspects of the company operations including: supply chain management, regulatory compliance, financial stability, and workplace safety.

The resulting threat scenarios and knowledge basis provide two insights. Firstly, they highlight potential system disruptions and cascading effects with materiality to increase costs, operational inefficiencies, and future compliance challenges. Secondly, the table emphasises the

Stream Number 6 - **Renewing Algedonic Signal Warnings**

importance of the potential advantage of probabilistic models, historical data, and benchmarking for gauging a base level of uncertainty to impact on strategic decisions—albethey marginally useful for defining future events in isolation.

Additionally, the definition of observation time and consequence horizon (ατ, η) appears crucial. The varied lengths of these periods create a temporal dynamic for risk management and its impacts. These insights reinforced the need for decision-makers to assess strategic scenarios for both short- and long-term risk to define necessary net adaptive capacities to be sufficient at absorbing future shock and surprise.

Chained Bowtie Resilience Example

To demonstrate how assessment of resilience by linking risk event systems can be achieved, we combine the scenario of 'declining milk volumes' leading to an 'energy and gas supply crisis'. Milk volumes are a crucial input for this company allowing it to balance input and output resources, a desirable competitive strength in the meta-system is therefore a strong coordination capability via S2. The bowties in Figure 4. illustrate a holistic understanding of how these two linked risk events create a system-of-systems from the risk sources (threats) through to material outcomes (consequences).

This visualisation shows where 'resilience enhancing capabilities' are potentially inherent in both systems. For example, how the milk supply system's resilience supports the energy and gas supply crisis system and vice versa. Both systems properties support the prevention of financial strain on decision-making in each system. Resilience is therefore generated between risk systems, and not necessarily because of an individual risk event or topic.

The process of generating Figure 4. also identified 'adaptive and transformative resilience interventions' promoting net strategic adaptive capacity. These interventions show up like potential core competencies for Fonterra, and are aligned with functional capabilities that would help minimise many pathologies identified by Pérez Ríos, (2012). The approach demonstrates promise in helping leaders of complex systems to better define their strategy and purpose based on future uncertainty, pinpointing where interventions, and potential key capabilities, can focus resource to correct for both structural and functional pathologies, but also provide means to then generating net adaptive capacity.

Stream Number 6 - **Renewing Algedonic Signal Warnings**

Resilience Enhancing Interventions A – H (Figure 4.)

Identified interventions B (focused workforce competency development) and D (focused inventory management) are considered inherent to all the listed interventions and thus underpin an overall resilience strategy. We then grouped the remaining interventions into four summary statements to demonstrate how resilience can be described as meta-system characteristics:

1. **Capacity Optimisation and Resource Allocation (Intervention A)**: Ensures consistent production and reduced downtime, enhancing the system's ability to handle demand and supply fluctuations.

2. **Diversified Supply-Chain Management (Intervention C)**: Reduces supplier limitation risks, mitigating supply disruptions and enhancing product availability.

3. **Cost Optimisation and Financial Management (Interventions E and F)**: Identifies and eliminates inefficiencies, lowers operational costs, ensures financial stability, and enhances economic resilience.

4. **Product and Market Diversification and Innovation (Interventions G and H)**: Captures larger market shares and reduces market reliance, strengthening market resilience and competitiveness.

The intervention themes above provide leaders with pathways to defining core strategic capabilities to focus meta-system performance on resource flexibility, efficiency, stability, and competitiveness. The result is more likely to be a resilient, efficient, and competitive organisation with improved net adaptive capacity and sufficient ability to outmanoeuvre constraints as the system approaches a risk of saturation from shock or surprise (Woods, 2018).

Potential Sources of Weak Algedonic Signals

The transformative interventions in Figure 4., were determined to play a pivotal role in this process by identifying sources of weak signalling for AS. We explored these interventions for potential weak signal sources to formalise, and potentially automate, into alerting AS. The four identified signals are desirable for monitoring ongoing, real-time urgent signalling. While the descriptions in Table 4. show a level of automation for signalling, it was then determined too difficult to define automatic feedback loops without sufficient insider knowledge as to how the company might achieve this while retaining viability.

Stream Number 6 - **Renewing Algedonic Signal Warnings**

Table 4. below summarises our concluded AS outcomes, against what was publicly available and learned throughout these studies conceptual processes. The example AS would provide those governing the strategy with crucial signalling for when resources might need to be re-distributed to course correct the system early to avoid materiality of unwanted threats (shock and surprise) to the strategy and purpose of the organisation.

DISCUSSION

The identification, formalisation, and automation of weak algedonic signals can perform a crucial task of alerting governance to then respond to systemic threats by reallocating resources to absorb unwanted shock and surprise. In the case presented, identifying and using the resulting adaptive and transformative resilience interventions (Figure 4.) played a pivotal role in this process of then identifying weak signal sources for defining potential AS.

These resilience interventions not only address immediate operational issues but are also potential core organisational capabilities that build long-term net adaptive capacity to emerging system risks. Despite the proposed benefits of implementing AS, several challenges must be noted. Integrating these signals into normal organisational routines may require substantial change to current practices. A process of change can also be seen as resource intensive, or error inducing, and may encounter resistance from key stakeholders who are unwilling to think and act differently given their overconfidence on positive past experiences.

There is also a risk of AS overreliance, which could lead to too many signals being generated, or complacency in then maintaining other less urgent key performance indicators. It remains important to then strategically formalise and automate where possible the desired AS. Automation of the signal was easy to define in this case, but further work would need to be undertaken with insider knowledge as to how active feedback to the signal would also be automated. It may be the case where automatic feedback has unintended secondary impacts, so this process would need significant levels of inquiry.

Recent literature (Epstein et al., 2020; Kim, 2020; Partelow et al., 2020; Stupak et al., 2021) also points to a need for more study into the improvement of complex system governance. The issues in complex systems are many, and the proposed solutions are even more. However, in the noise of our organisations incrementally improving, but maybe brushing up against catastrophic collapse, should

Stream Number 6 - **Renewing Algedonic Signal Warnings**

focus leaders to apply further study into the use of AS to support early system alerting in our uncertain future times.

Possible thoughts on additional future research, to advance this conceptual method and integration techniques will rely on moving past desktop reviews of publicly available strategy. To enhance the effectiveness of this approach, quality insider knowledge by a cross-functional group of domain experts is recommended to test the study approach further. Further empirical study of AS in use, and their effect on reducing complexity and facilitating early warning is suggested.

Further improvement is also possible in codifying a means of more formally deriving AS for sustainable competitive advantage where accuracy and reliability of AS can be achieved—their role as a 'trusted' signal for those governing. Their role in mass crisis alerting may also be different when taking on a VSM (S4) perspective of multiple environments of uncertainty. In exploring new domains and potential applications, we challenge those in the fields of theory and practice to build on this conceptual study and do so quickly. The future is here (i.e, cybersecurity, artificial intelligence, and dynamic financial systems governance), and the strong identification and formalisation of AS in practice is not.

CONCLUSION

In conclusion, complex system governance can be enhanced through a renewal of processes to identify, formalise, and potentially automate AS from weak signals sources. This study showed a conceptual approach to improving the identification of AS sources through diagnosing VSM pathologies of organisational strategy, assessing uncertain future risk events, and linking top events together using bowtie diagrams to search out systemic resilience and in turn pre-emptive fragilities.

The case showed how assessment of desirable adaptive and transformative resilience interventions (i.e., capacity optimisation, diversified supply-chain management, cost optimisation, and product and market diversification) can offer up sources for where emerging issues can benefit from algedonic signal use. There is more research potential here, and the authors challenge the academic and practice community to build on this conceptualisation and help foster a healthier sense of chronic unease for leaders who must navigate the inherent uncertainty of complex systems governance now.

Stream Number 6 - **Renewing Algedonic Signal Warnings**

FIGURES
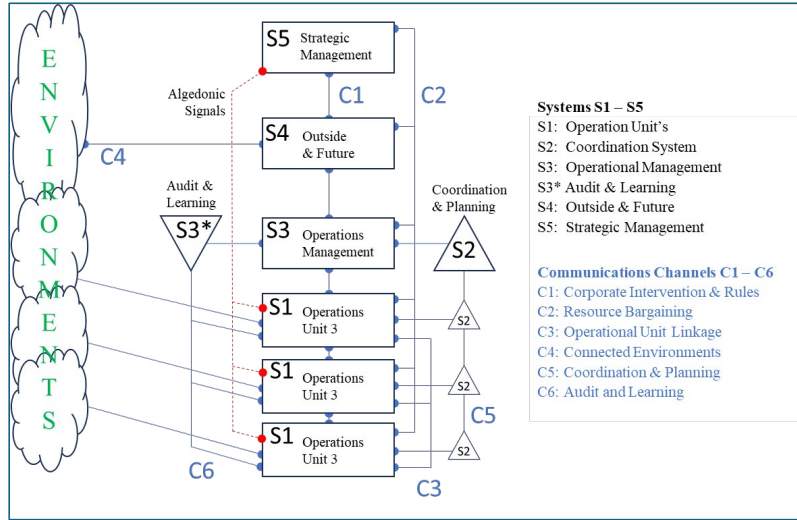
Figure 1. Generalised VSM Showing S1 - S5, C1 - C6, and Algedonic Signalling (Red)
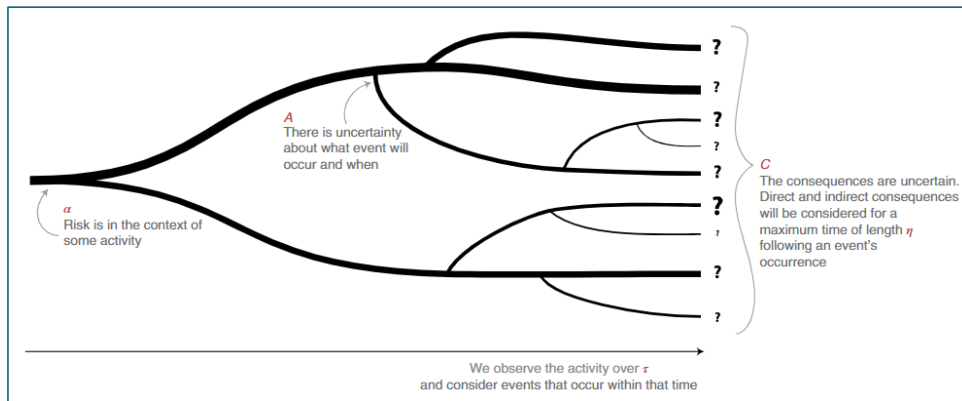
Figure 2. Illustration of the Concept of Assessing Uncertain Future States (C', Q, K) ατ, η, (Source: Logan, et al., 2022).
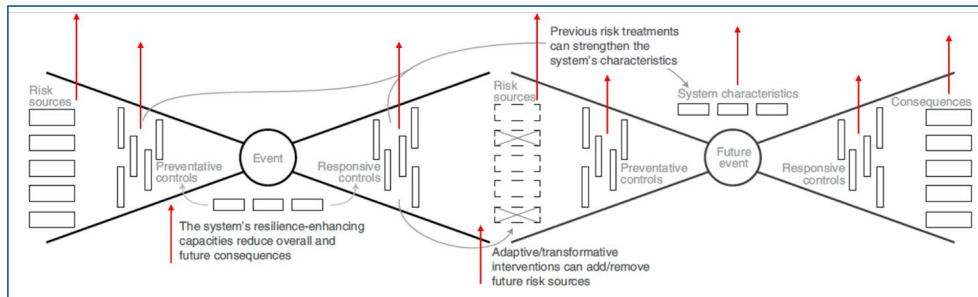
Figure 3. Chained Risk Scenarios Showing Potential Sources of Algedonic Signals (Red). (Source: Logan et, al., 2022)
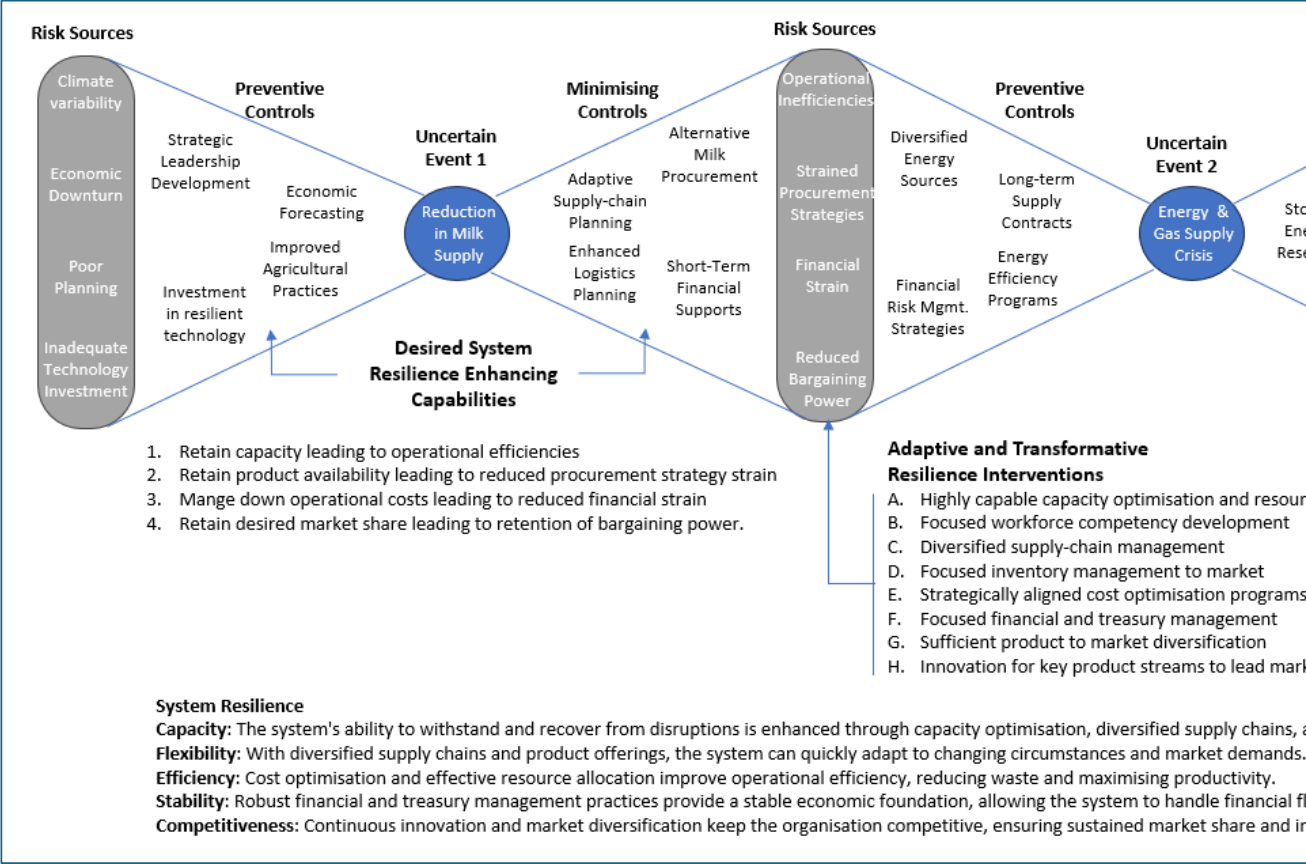
Figure 4. Chained Bowties for Linked Uncertain Top Strategic Events with Identified Resilience Characteristics

Stream Number 6 - **Renewing Algedonic Signal Warnings**

TABLES

Table 1. Demonstration of (C, Q, K) ατ, η as a Structured Representation of Future State Risk of the Fukushima Disaster.

C' – Specific consequences	Q – Measure of uncertainty	K – Knowledge
• Immediate fatalities and injuries • Long-term health impacts (e.g., cancer rates). • Environmental contamination. • Economic losses (e.g., decommissioning costs, loss of energy production). • Social and psychological impacts on the affected population.	• Probability of a severe earthquake and tsunami (e.g., 1% probability per year). • Probability distribution of potential radiation leaks and their spread.	• Historical data on earthquake and tsunami frequency and magnitude. • Geological and seismological studies. • Nuclear safety reports. • Expert opinions on event likelihood and resilience of safety measures. • Assumptions on mitigation measure effectiveness, evacuation plans, and emergency response.
ατ:	Continuous monitoring and management of nuclear power plant safety. Observed over 10 years.	
η:	Consequences considered over a period of 5 years following the event.	

Table 2. VSM Identified Pathology Detail for Source Strategy Reviewed.

Pathology Identified	VSM Systems Impacted	Comms Channel Impacted	Failure Type	Impact Description
Leader-Member Exchanges	S1, S2	C1, C2, C5	Communication Breakdown	Lack of trust and cooperation, poor information flow
Ineffective Leadership	S3, S4	C2, C4	Decision-Making Failure	Inadequate guidance, micromanagement, strategic misalignment
Excessive Formalisation	S2, S5	C1, C2, C6	Procedural Failure	Red tape, excessive bureaucracy
Poor Decision-Making	S3, S4	C2, C3	Strategic Failure	Slow, uninformed, or misaligned decisions
Misalignment of Expectations	S1, S5	C1, C2, C5	Operational Failure	Divergence in goals and expectations, low morale
Resource Misallocation	S3, S5	C3, C4, C6	Resource Allocation Failure	Ineffective use of resources, operational inefficiencies
Cultural Pathologies	S2, S3	C1, C5, C6	Cultural Failure	Negative organisational culture, resistance to change
Non-Core Function Mismanagement	S4, S5	C3, C6	Functional Misalignment	Inefficiencies in non-core activities, distraction from core functions

Table 3. Uncertainty Future Risk Events Derived from Pathologies Framed Using (C', Q, K) ατ, η.

VSM Pathology	Uncertainty Threat	Activity (α)	Event (A)	Consequences (C')	Uncertainty (Q)	Knowledge Basis (K)	(ατ)	(η)
Ineffective Leadership	Declining Milk Volumes	Milk supply chain management over the fiscal year	Reduction in milk supply due to climatic or economic factors	Limited capacity, product availability	Probability based on climatic models and economic conditions	Climatic data, economic forecasts, historical supply data	10 years	4 years
Ineffective Leadership, and Misalignment of Expectations	Regulatory Changes due to Resource Management Act Reform	Strategic investment planning	Increased compliance costs	Increased compliance costs	Probability based on regulatory developments	Regulatory data, policy forecasts	10 years	3 years
Poor Decision-Making	Supply-Chain Disruptions	Strategic resilience investments	Delays and increased costs	Delays and increased costs	Probability based on supply chain analysis	Logistics data, supply chain forecasts	10 years	3 years
Resource Misallocation	Energy and Gas Supply Crisis	Energy procurement planning	Supply disruptions	Increased energy costs, production halts	Probability based on energy market analysis	Energy market data, supplier reliability assessments	10 years	2 years
Poor Decision-Making	Foreign Exchange Volatility	Financial risk management	Currency fluctuations	Increased cost of imports, revenue fluctuations	Probability based on economic forecasts	Forex market data, economic indicators	10 years	2 years
Excessive Formalisation	Carbon Emissions and Compliance	Environmental compliance management	Regulatory non-compliance	Fines, reputational damage	Probability based on regulatory developments	Environmental regulations, compliance records	10 years	5 years
Misalignment of Expectations	Imported Lactose Costs	Procurement management	Cost increases	Increased production costs	Probability based on market analysis	Market data, supplier cost trends	10 years	2 years
Leader-Member Exchanges	Health and Safety Risks	Workplace safety management	Workplace accidents	Injury, legal action, downtime	Probability based on safety records	Safety data, industry benchmarks	10 years	3 years

Stream Number 6 - **Renewing Algedonic Signal Warnings**

Table 1. Four Algedonic Signals with Formalisation and Means of Signal Automation

	Supplier Delivery Times	**Variations in Product Yield**	**Increased Minor Maintenance**	**Gradual Rise in Raw Material ($)**
Signal Source	Small, incremental delays in delivery times from key suppliers	Slight deviations in milk yield per cow	Gradual rise in minor corrective maintenance	Incremental cost increases in raw materials
Detection Method	Traceable technology (blockchain linked RFIDs)	IoT sensors and data analytics	Thresholds in Maintenance Management System	Monitoring direct procurement cost data
Tracking System	Formalised in S2 for the relevant S1 Unit. Assured using S3* audit processes.			
Example Threshold	5% delay over a month	3% deviation over two weeks	5% increase over a quarter	2% cost increase over two quarters
AS Purpose	Detect potential material shortages impacting production	Flag potential product wheel inefficiencies or revenue loss	Prevent significant downtime and repair costs	Alert to possible financial strain and competitiveness risks.

Stream Number 6 - **Renewing Algedonic Signal Warnings**

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1. Human Resource Management

A systematic literature review on neurodiversity in human resource management research

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A systematic literature review on neurodiversity in human resource management research

ABSTRACT

Whereas organizational diversity based on, for example, gender and ethnicity has been addressed extensively in contemporary organization and management research, neurological diversity has received less interest. Nevertheless, in recent years, neurodivergent individuals—that is individuals with, for example, autism or ADHD—has begun to receive some scholarly attention. Human resource management (HRM) plays a key role in recruiting, as well as realizing the potential of, divergent individuals. In this study, we present a systematic literature review of 85 articles on HRM and neurodiversity. Based on an identification of theories used in the studies, the HR practices that have been examined, and the types of neurodivergences that have been addressed, we identify key areas for future HRM research on neurodiversity.

Keywords: Neurodiversity, Human resource management, Autism, ADHD, Inclusion

Overview

Neurodiversity is an overarching concept that includes deviations in neurocognitive abilities such as, among others, autism spectrum disorder (ASD), attention deficit and hyperactivity disorder (ADHD), dyslexia, and Tourette's syndrome. In recent years, diagnoses related to various types of neurodiversity have increased significantly, and it is estimated that as much as 15% of the world's population has some form of diversity (Doyle, 2020). Research on other types of diversity within organizations has demonstrated the positive effects of gender diversity (Zhang, 2020), ethnic/cultural diversity (Corritore et al., 2020), and age diversity (Richard & Shelor, 2002). It is thus clear that a diversity of skills, perspectives, and experiences is a prerequisite for, or at least has a significant positive impact on, change and innovation in companies. Research on human resource management has begun to show some interest on questions related to neurodiversity but despite some increased interest for neurodiversity, the field is still fragmented and there are no systematic overviews of neurodiversity in HRM.

Current understanding

Research on neurodiversity on managers and entrepreneurs has highlighted various negative as well as positive effects of neurodiversity. For example, by showing that business leaders with ADHD may be

less effective at coordinating resources (Lerner et al., 2018) and focusing on completing and following up on long-term projects (Garbuio et al., 2011), while simultaneously being more creative and innovative (Wiklund et al., 2017). However, research on neurodiversity at the employee level has primarily focused on problems and challenges. For example, by highlighting that neurodivergent individuals are sometimes perceived negatively by colleagues (Deacon et al., 2022) or that employees with neurodiversity often exhibit poorer work-related well-being (Patton, 2019). Nevertheless, in recent years there has been an increased interest for neurodiversity issues in HRM research and more studies have examined how to realize the potential of a neurodivergent workforce. For example, in a conceptual paper, Szulc et al. (2021) addressed how neurodivergent individuals can be beneficial form firms' human capital and Hennekam and Follmer (2024) presented a practice-oriented research agenda on HRM and neurodiversity by highlighting some companies that have been successful in their efforts to recruit, and to realize the potential of, neurodivergent individuals. Other studies have examined specific types of neurodiversity by, for example, examining how to 'create workplaces that sustainably enhance the employment experiences of autistic individuals' (Ezerins et al., 2024, p. 1130). The increased interest for neurodiversity in management and HRM research is also illustrated by some recent (Krzeminska et al., 2019) and forthcoming (Hennekam et al., 2023) special issues on the subject. Thus, research on HRM and neurodiversity is still in its infancy but there are a growing number of studies.

Research question

The overall purpose of this study is to review how neurodiversity has been considered in HRM research, addressing both what we currently know and the certainty of that knowledge, as well as what we need to know and how to conduct research to generate such knowledge. Specifically, the literature review will (tentatively) answer the following questions:

- What are the theories and methods used in HRM research on neurodiversity?

- What types of neurodiversity have been addressed in HRM research?

- Based on previous HRM research, how can future research contribute to our understanding of how HRM can be used to promote neurodiversity in organizations?

Research approach

The literature review is delimited to peer-reviewed journal articles. Our definition of HRM is based on the definition of HRM used by the journal Human Resource Management (Human Resource Management, 2024) and encompasses 'the full spectrum and any aspect of HRM or the management of human capital'. We used several 22 words related to HRM (for example, human resource management, HR-practice*, HR-system*, high commitment work practice*) and 15 different terms to search for neurodiversity (for example, neurodiverse*, autism, ADHD). We used various sources to identify studies, and these can be grouped into four overall categories. First, we conducted searches in general databases in terms of Web of Science and Scopus. Second, we searched in specific the specific HRM-journals rated as 2 or higher (i.e. 2, 3, 4 and 4*) as listed by Academic Journal Guide (AJG) 2021 published by Chartered Association of Business School. Third, we conducted searches in an additional 20 top-journals renowned for publishing HRM-research. Fourth, additional articles were identified by snowball searches based on reference lists of key articles and by examining the publications of the most cited authors in the field.

Findings

This submission is a work in progress, and, at this stage, our findings are tentative and will be developed in a forthcoming full paper. Thus, in this section we will describe some potential findings of the literature review. The literature review resulted in approximately 85 articles and there has been a significant increase of HRM studies on neurodiversity in recent years. For example, 80% of the studies were published after 2016.

The review highlights that the field of neurodiversity and HRM is highly fragmented, and a wide range of different theories has been used to study this phenomenon. Most studies are conceptual or qualitative oriented. Several propositions on how to achieve neurodiverse workplaces or the potential

benefits of neurodiversity have been developed. However, few studies have actually tested such propositions empirically and most empirical studies are based on anecdotal evidence of a limited number of cases. Concerning how different types of neurodiversity have been addressed, about 70% of the studies examined overall neurodiversity and did not focus on a specific type of neurodiversity. Studies examining specific types of neurodiversity mostly addressed ASD, followed by ADHD, whereas other types of neurodiversity were rarely examined.

Contribution and Limitations

Based on our systematic review we propose some specific recommendations on important areas for future research. As previously described this paper is a work in progress and the implications are tentative at this stage. Besides conducting more research to empirically validate the benefits, and the conditions necessary for neurodiversity to be beneficial, for organizations, we identify two key recommendations for future research.

First, the field would benefit from more theoretical coherence. Although different theoretical approaches are useful and important to fully grasp the complexity of neurodiversity in a HRM context, to accumulate new knowledge, it is also important to conduct studies based on similar theories. For example, when examining unit-level outcomes of neurodiversity from a HRM perspective, the resource-based oriented (Barney, 1991; Peteraf, 1993; Wernerfelt, 1984) strategic human capital literature (Andersén, 2021; Campbell et al., 2012) could provide a useful theoretical approach. Some studies in our review examined human capital (Priscott & Allen, 2021; Szulc et al., 2021) and the field would, most likely benefit from building on such studies to examine cost-benefit issues related to neurodiversity and how neurodiverse human capital can constitute a competitive advantage. Moreover, whereas several studies addressed the potential benefits of a neurodivergent workforce, few studies addressed why HR-practitioners choose to address questions related to neurodiversity. Theories based on the behavioral view of organizations (Cyert & March, 1963; Simon, 1947), such as the attention-based view (Ocasio, 1997, 2011), could here be used to examine why some HR-practitioners choose to attend to neurodiversity in their HR-practices while other put their attention on other issues.

Second, many studies in our review focused on a specific type of neurodiversity or examined neurodivergence at a highly aggregated level. However, neurodivergent individuals are not a homogenous group. On the contrary, some HR-practices and policies developed to include individuals with, for example, ASD can worsen the situation for some individuals with ADHD (Doyle, 2020; Szulc et al., 2021). This makes neurodiversity stand out from other types of diversity issues. One way to overcome some of the challenges of the heterogenic nature of a neurodiverse workforce is to develop parallel and/or flexible HR-practices and this raises several questions. Should, for example, all new recruitments consider neurodiversity (as for other types of diversity), or would organizations benefit more from designing specific job types for neurodivergent individuals? and what are the ethical considerations with such an approach? Examining how such challenges can be managed is likely to be one of the most important areas for future research on HRM and neurodiversity

A limitation with our review is that it is delimited to journal articles and therefore risks overlooking some relevant research published in books, book sections, or conference proceedings. To overcome this, our review focus on detailing the main trends, theories, and approaches in HRM research on neurodiversity and not on specific publications. Journal articles are likely to provide an accurate representation of the research field.

Implications

Conducting a systematic literature review on human resource management (HRM) practices concerning neurodiversity has the potential to generate future research with significant individual and organizational implications. By identifying gaps and synthesizing existing studies, this review can guide new research that offers practical insights for both neurodiverse individuals and organizations.

For individuals, future research inspired by this review can explore the development of effective recruitment and selection strategies tailored to neurodiverse candidates. Such studies can help create fairer hiring processes, providing neurodiverse individuals with better access to employment opportunities. Additionally, research can focus on workplace accommodations and support systems,

investigating the impact of flexible work arrangements, assistive technologies, and sensory-friendly environments on the well-being and productivity of neurodiverse employees.

For organizations, research can highlight the benefits of inclusive hiring practices, such as attracting a broader talent pool and fostering a diverse workforce. Studies can also delve into the importance of training and awareness programs, providing insights into how educating managers and staff about neurodiversity can reduce stigma, promote collaboration, and create a supportive workplace culture. Moreover, future research can inform the development of personalized performance management systems that emphasize individual strengths and contributions. This can help organizations better recognize and leverage the unique abilities of neurodiverse employees, enhancing overall performance and innovation.

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Stream 10. Public Sector, NGOs and Not-for-Profit

Ready, Set, Reform? Exploring not-for-profit practitioner perceptions of readiness

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1

Stream 10. Public Sector, NGOs and Not-for-Profit

Ready, Set, Reform? Exploring not-for-profit practitioner perceptions of readiness

ABSTRACT: *Not-for-profit organisations must navigate organisational change to continue delivering services in the face of legislative reforms. Within this context, understanding employee perceptions towards change is crucial but an area of limited research. This paper presents an exploratory qualitative case study within a large-scale university and not-for-profit research partnership. It focuses on employee perceptions of readiness regarding implementing recommendations from the Australian Family Law Inquiry. Findings show that while practitioners were concerned about reduced service flexibility, they were also able to highlight existing practices that could be leveraged for effective implementation and provide a nuanced understanding of resourcing needs. The paper offers insights to better inform planning, resource allocation, and training; and demonstrates the potential impact of collaborative cross-sector management research.*

Keywords: *not-for-profit, management, change readiness, employee perceptions, qualitative, case study*

2

Stream 10. Public Sector, NGOs and Not-for-Profit

Not-for-profits organisations provide critical services to vulnerable individuals and groups. To remain viable, not-for-profit managers must navigate legislative changes and corresponding impacts on their organisation's capacity to deliver services (Akingbola, Rogers, & Baluch, 2019; Hummel et al., 2023; Jorgensen, Siette, Georgiou, & Westbrook, 2020). Within this context, fundamental underlying factors for successful implementation of change include attitudes, perceptions, and intentions of organisational members about the necessity of changes, and the organisation's ability to effectively implement changes (Armenakis, Harris, & Mossholder, 1993; Gfrerer, Hutter, Fuller, & Strohle, 2021; Jones, Jimmieson, & Griffiths, 2005). Gaining insight into these perceptions therefore equips key decision-makers to tailor change initiatives, anticipate potential resourcing needs, and in turn, increase the likelihood of successful implementation (Eby, Adams, Russell, & Gaby, 2000; Gigliotti, Vardaman, Marshall, Gonzalez, 2019; Kotter, 1996).

There is currently limited research on how not-for-profits, in response to relevant legislative changes, examine and engage with employee perceptions of change readiness. To address this gap in not-for-profit research, this paper draws upon insights from a single exploratory case study that was a part of a large-scale research collaboration between a university and a regional social services provider, Faith Assist (*deidentified for confidentiality*). The study focusses on practitioners' perceptions of adopting recommendations arising from external legislative changes, specifically the inquiry into Australian Family Law. With over 650,000 separated families and their 1.3 million children in Australia and an extensive suite of subsidised post-separation services that are delivered in not-for-profit settings, the inquiry has far-reaching effects (Smyth et al., 2020). The inquiry found that the family law system is slow, expensive, overly complex with limited accountability (Australian Law Reform Commission, 2019b; Parliament of Australia, 2021). Further, the inquiry and review resulted in more than 60 recommendations to improve the Family Law system, including the important recommendation that existing family support services adapt their structures and services to meet requirements.

The readiness focus of the case study was initiated to help key decision-makers in Faith Assist gain insight into employee perceptions of changes required to implement selected recommendations

3

from the inquiry, and in turn, prepare the organisation to shift its ways of operating. Two research questions were asked to achieve this aim: *"What barriers do Australian family support practitioners anticipate encountering when implementing key Family Law Enquiry recommendations?* and *"What would facilitate, in the view of Australian family support practitioners, the implementation of key Family Law Enquiry recommendations?".* Additionally, the resourcing demands on not-for-profits particularly when implementing change initiatives were considered. This involved drawing on the lens of resource-based views (e.g., Barney, Ketchen, Jr, & Wright, 2011; Lee, Park, & Kim, 2023; Wernerfelt, 1984) and specifically, Brown et al.'s (2016) dimensions of capacity. . Therefore, a subsidiary research question that we addressed was, *"What might be the resourcing impact of implementing changes derived from the recommendations?".*

Our findings show that while practitioners were apprehensive about increased formalisation of practices that could limit service flexibility and responsiveness to client and family needs, they were also able to identify existing practices and proficiencies that would serve as enablers for implementing recommendations and provide a foundation for future change. For example, potential governance changes can draw upon already robust governance systems. Comments specific to resourcing needs provided a nuanced understanding of implications across human, physical, financial, and social capital.

From a theoretical perspective, our paper responds to calls for more research that is positioned at the intersection of employee perceptions and readiness for change in general (e.g., Cinite et al., 2009; Eby et al., 2000; Elias, 2009; Shah, 2011; Gigliotti et al., 2019) and more recently, in not-for-profits in particular (Hummel et al., 2023; Jorgensen et al., 2020; Monro et al., 2023; Rosenbaum & More, 2022). We also expanded the literature on readiness for change by linking it with organisational capacity. This approach enabled us to proactively provide nuanced insights into resourcing implications for not-for-profits that often operate in an environment of scarce resourcing. From a practical perspective, we shed light on potential barriers and highlights existing enablers, that could be leveraged by key decision-makers. Whereas top managers can be isolated from daily operations (e.g., Gfrerer, Hutter, Fuller, & Strohle, 2021), perceptions of colleagues delivering front-line services hold

4

Stream 10. Public Sector, NGOs and Not-for-Profit

important knowledge and expertise that is informed by their involvement in day-to-day activities, contemporary challenges, and opportunities. Their insights can inform better planning and allocation of resources, assist with managing expectations, and develop appropriate training and support as part of the implementation processes. More broadly, given that this readiness study was initiated to help key decision-makers in a real-life organisation, Faith Assist, to best prepare the organisation to shift their ways of working, our paper also provides a steppingstone towards highlighting the potential real-life impacts of collaborative management research.

The paper is structured as follows: first, the literature on readiness and practitioner perceptions is discussed. Second, the research setting and method, including an overview of collaborative efforts (as part of the research partnership) are described. Third, the findings are presented and discussed. Finally, we conclude with theoretical and practical implications.

LITERATURE REVIEW AND THEORETICAL FRAMING: READINESS, REFORMS AND RESOURCES

Previous studies on readiness for change in organisational representatives have established its centrality to the successful implementation of organisational changes. Readiness, as explained by Armenakis et al. (1993), pertains to the beliefs, attitudes, and intentions of individuals in an organisation about the need for change. That is, readiness reflects the level of preparedness to execute a desired action or achieve the intended outcome, change, or state. Collectively, readiness reflects the extent to which individuals are cognitively and emotionally inclined to accept and adopt a particular plan to purposefully alter the status quo and move forward. In a similar vein, Armenakis and Harris (2002) explicate three phases of organisational change: readiness, adoption, and institutionalisation. It should be noted that the phases of change may overlap and the whole process is continuous as institutionalised changes themselves become the focus of future change efforts. Many scholars suggest that readiness stage not only mitigates resistance to change but is also a pivotal determinant of likelihood of successful change initiatives (Armenakis & Harris, 2002; Eby et al., 2000; Vakola, 2014). Cole et al. (2006, p. 1) particularly notes, "organizational change begins with the individual, as resistance or support are ultimately individual decisions and behaviors". Individual readiness for

5

change and consideration of employees' perceptions of the same are therefore an important element for implementing organisational change successfully (Elias, 2009; Jansen, 2000). Activities to gain insight into existing views, akin to the unfreezing step' of change (Lewin, 1951), can serve as warm-up or defrosting measures and serve as steps to gain buy-in and build momentum to the change efforts (Armenakis et al., 1993; Choi & Ruona, 2011; Kotter, 1996). That is, there is a need to create readiness by 'unfreezing' existing mind-sets and creating motivation for change. From an everyday functioning perspective, individuals' readiness to implement reforms is critical as it acts as a precursor to an intended behaviour. From a managerial perspective, insight into perceptions of readiness can help uncover underlying views and inform decision-making for planning, resourcing, and training to guide the organisation and its employees through the transformational journey (Kaplan & Norton, 2004).

There is an emerging interest in establishing readiness for change, particularly owing to external legislative and policy reforms in various public sector and not-for profit contexts, including schools (e.g. Avidov-Ungar & Arviv-Elyashiv, 2019; Wang, Olivier, & Chen, 2020), maternity services (Adelson, Yates, Fleet, & McKellar, 2021), aged care organisations (e.g., Jorgensen et al., 2020; Monroe et al., 2023) and the National Disability Insurance Scheme (NDIS; e.g., Hummel et al., 2023; Rosenbaum & More, 2022) that is driven by the imperative to continue delivering services to vulnerable individuals and communities and maintain judicious use of limited resources. While such emerging research highlights the importance of understanding staff beliefs and perceptions on change readiness, there is limited evidence of the role of these factors in responding to legislative changes in family law contexts.

Our study draws on the theoretical framing of resource-based theory (RBT; e.g., Barney et al., 2011; Lee et al., 2023; Wernerfelt, 1984) and uses Brown et al.'s (2016) dimensions of not-for-profit capacity as an organising framework. According to RBT, organisations must develop and identify current resources that can be used to strategically position and outperform competing organisations (Prahalad & Hamel, 1990; Zhang et al., 2021). Comprising human capital, physical capital, financial capital, and social capital, Brown et al.'s (2016)'s framework offers "an intuitive approach to capacity

6

development that is readily interpretable" (p. 2908). Human capital is the labour output by paid staff and volunteers. Physical capital are assets that are tangible, such as plant and equipment. Financial capital refers to sources of funding. Social capital covers external and internal organisational relationships. All components are important considerations for assessing how to best prepare and implement change.

RESEARCH SETTING AND METHOD

The current case study is part of a large-scale multi-year research partnership between a university and a regional social services provider, Faith Assist. Faith Assist is the social services arm of a religious organisation and offers a range of services for individuals and families that contribute to community wellbeing (Faith Assist Southern Queensland, 2021a). With over 200 staff and volunteers, Faith Assist provides services for people who reside in the regions of Southwest Queensland Services offered include family support services, refugee and migrant services, First Nation People services, and mental health services.

The broader research program sought to examine the connection between family support services, community benefit from family support services, and national family law reforms. The pilot case study focusses on practitioners' perceptions of the organisational changes required to adopt the recommendations arising from the inquiry and review. It was prompted by the management's desire to gain insight into the employee perceptions of changes that would be required to implement recommendations and thus best prepare the organisation to shift their ways of working. This pilot case study adopted a qualitative approach with a combination of interviews from practitioners and a review of key archival data. Data was collected and analysed between March and July 2022. The research was conducted in the following three phases:

Phase 1: Identifying relevant reforms and recommendations: We began the process by identifying a selected set of recommendations (presented in Table 1) in consultation with organisational executives from Faith Assist and a careful review of the overall family law inquiry report to identify aspects that were of immediate concern to the organisation's priorities and strategic

7

focus. Specifically, the recommendations were selected because they were pertinent to Faith Assist and their operations for potentially fast-tracking community benefits from the upcoming reforms.

Insert Table 1 about here

Phase 2: Readiness for change: Data regarding readiness for the selected recommendations was collected from three distinct sources. First, we engaged with key executive team members through one-on-one interviews. Second, we conducted two focus groups with participants from various departments within Faith Assist. Conversations within focus groups were prefaced by a discussion about the need for the reforms and the term 'readiness' that could serve as a reflective tool as members considered the implementation of proposed reforms. The focus group prompts adopted a semi-structured approach where the aim was to unpack the barriers and enablers specific to the already identified recommendations as well as tap into latent considerations of resource implications rather than through direct questions (El-Den et al., 2020). Third, we reviewed selected organisational documents (e.g., annual reports and strategic plans) and broader material (e.g., organisation's website) to gather further insights into how the reforms and associated recommendations were being presented and considered within the organisational landscape. Table 2 presents a summary of the participants and documentation.

Insert Table 2 about here

Phase 3: Data analysis: We then engaged in an iterative thematic analysis where we read through the transcripts and read through session notes to identify phrases associated with our two research questions. We for our analytical approach, were informed by a combination of general methodological guidance about inductively coding qualitative data (Corbin & Strauss, 2008) and building theory from case studies (Eisenhardt, 1989). We then drew on thematic coding that was completed over three stages where the first and second author, in discussion with the third author, initially engaged in manual coding. First, coding was inductive to capture explicit and latent patterns of meaning. This resulted in 17 codes. Second, patterns of meaning were further refined in light of RBT and organisational capacity. After which, the patterns of meaning were analysed through links to

8

the research questions. The team then came together to synthesise key findings, linking them to the broader literature.

FINDINGS

This section is organised according to the key themes emerging from our research questions. We begin with *"What barriers do Australian family support practitioners anticipate encountering when implementing key Family Law Enquiry recommendations?"* and *"What would facilitate, in the view of Australian family support practitioners, the implementation of key Family Law Enquiry recommendations?"*. We then draw on Brown et al.'s (2016) dimensions of capacity as the organising framework for, *"What might be the resourcing impact of implementing changes (derived from the recommendations)?"*.

Barriers to implementing key reform recommendations

From a readiness perspective, we found that family support practitioners' perceptions of barriers highlighted an increased sense of restriction and risk. Higher demands on resourcing were also noted and we discuss these in-depth as part of our third Research Question.

Increased sense of restriction

Practitioner perceptions' highlighted concerns around the introduction of formalised practices (associated with the recommendations) and linked it to an increased sense of restriction that could impact services. For example, case management was considered in the context of appointing case managers who will assess, plan, coordinate, and support intra- and inter-agency services for clients (Lohmeyer & McGregor, 2022). One practitioner highlighted the importance of remaining flexible to family needs, "*So rather than deliver exactly the same service for everybody, we have the same suite of options that we can offer. And what we try to do is tailor what we have to the individual family, individuals and families to try and get this result*". This sentiment echoed in other accounts where practitioners felt that the practicalities of balancing formalised practices associated with the recommendations, alongside remaining responsive to unique client contexts would be challenging, "*finding it quite difficult because one of the problems I guess we're having with the whole idea of the*

9

model is actually is working that way anyway and that becomes much more problematic. Because it looks simple on paper. But it's not as simple as that".

Elevated level of risks

Practitioner perceptions also indicated concerns around an elevated level of risks tied to the pressures and ambiguities introduced by new operational practices. One practitioner noted, *"and then we get shocked by something that we haven't anticipated, our ability to implement that in an effective way will definitely be impaired."* This quote suggests that unexpected challenges introduced by these new approaches might negatively affect the implementation quality. Furthermore, another practitioner hinted at the potential risks linked to proposed changes in managing client information across different programmes, especially in cases involving sensitive matters like child safety. They stated, *"It raises some interesting questions as to how we would manage the information across those two programmes, particularly if something like, say, child safety or Something has to be involved, then you know, what does that mean if certificates have been issued or they haven't been issued?".*

Enablers for implementing key reform recommendations

From a readiness perspective, our findings suggest that practitioners perceived the proficiency embedded in existing skills and systems, and the robustness of established governance practices, as enabling factors that could potentially facilitate the implementation of reforms.

Existing skills and systems

Practitioner perceptions highlighted the advantage of leveraging existing skills and systems within their organisations in the face of reform. For example, one practitioner discussed the introduction of case management, *"We are at a huge advantage. I think when we had the huge families funding to be able to leverage off the existing skills of the [de-identified] team and the community. Absolutely."* This perspective emphasises the extant skills within the organisation, which can serve as a solid foundation for implementing reforms. Furthermore, another practitioner identified the internal communication and referral systems as a key existing asset that could be leveraged. For example, one practitioner when discussing the effectiveness and cost-efficiency of their existing

10

internal system of *"having everything under one roof"*, implied its potential usefulness in the context of implementing new reforms, *"we provide that so that legal assistance will then be able to do a consent order and post it into court. Because that then becomes your parenting order. They're going through the court process. Very expensive. And it almost speaks to that that internal referral as well"*.

Robustness of established governance

Practitioner perceptions clearly recognised the strength of established governance mechanisms. For example, one participant, when discussing service provision acknowledged the existing policies and processes as strong enablers that could potentially streamline the adaptation process, stated, *"I don't know that it's not a massive jump in some ways because all the policies and the processes are kind of there. So for me, it's not kind of like too far"*. Another practitioner, contemplating the introduction of new services shared, *"I think that would be a space we could easily move into"* stated, *"again, we do have policies and procedures for that. That's basically just a different form of counselling"*.

Resourcing impact of implementing changes

Given the imperative of informing key decision makers to forward plan and in line with using the resource portfolio framework proposed by Brown et al. (2016) as an organising framework, our case study, also delved into the impact of implementing the proposed reforms across four fundamental resource attributes (Figure 2). Key insights are presented below.

Human Capital

Practitioner perceptions noted hiring, training, and leveraging existing skills and knowledge were the most prominent implications for human capital. This included hiring of additional staff and ensuring the existing staff had adequate time. Further, upskilling and training especially in case management and financial counselling roles were noted, *"from a human services perspective, there are people who do a diploma in case management, but not necessarily a tertiary bachelor's, so it's a specialised skill and they can do the job"*. Practitioners also highlighted leveraging internal opportunities to maximise efficient resourcing, *"something along the lines of a buddy system or*

11

internal mentoring or something like that" that they can "*leverage off the existing skills of the TRAMS team*" to help reduce resource implications.

Physical Capital

From a physical resource perspective, practitioner perceptions noted data management and storage, and motor vehicles for travelling large distances as key implications. For example, when considering service delivery in a larger geographical, one participant noted "*there's a huge cost in the car. But the driving out is someone being paid to sit in the car to drive eight hours. That's a whole day just driving to get to a location*". The above comment also highlights the increased time demands; a resourcing implication captured under human capital. Consistent with these comments, Faith Assist's documents note the already identified need to service vast geographical distances and the development of a services resourcing plan (Faith Assist Social Services Southern Queensland, n.d.).

Financial Capital

Practitioner perceptions also demonstrate an increased need for financial capital**.** This was clearly reflected in participant comments where the need for more funding was observed, "*I think the biggest issue will be in terms of that space, it's actually that funding*". Similarly, because case managers would need to be hired and trained, and this would require additional resourcing, participants questioned where this funding would stem from, "*I suppose my question in the first instance is that any discussions we have about it would be based on the assumption we're going to get more funding*".

Social Capital

From a social capital perspective, practitioner perceptions included building on current reputation and awareness in the community. This is exemplified in the following quote from a participant outlining their preference for when people separate, "*in an ideal world, if someone in the family has recently separated, their first thought is I will go to the FRC. That's their first call*". However, this is not happening because "*at the moment, there's still a lot of people who separate and say I'm calling a lawyer*". Faith Assist's approach in pursuing partnerships with local law firms that

12

provide legally assisted dispute resolution at a reduced or no fee for clients has contributed to this 'ideal world', as the number of memorandums of understanding with local law firms increased almost 20% from 2020 to 2022. This finding highlights the value and importance the organisation places on social capital to improve accessibility and awareness within the community.

DISCUSSION AND CONTRIBUTIONS

Our case study provides insights into practitioner perceptions of the complex process of implementing reform recommendations. Although the findings are restricted to one not-for-profit's response to legislative reforms and by a small sample, this case study also provides preliminary yet crucial insights that can inform future research and practice into employee perceptions and readiness for change. Theoretically, the study enhances our understanding of the barriers and enablers in implementing legislative reforms including nuanced insights into resourcing implications. Practically, it provides actionable insights for organisations and stakeholders involved in implementing reform-related change processes. By discussing potential real-life impacts, our findings offer specific insights into the impact of management research, particularly through the value of small yet industry-focused collaborative research that can help not-for-profits maximise their impact for vulnerable individuals and communities.

The study identified several barriers to implementing reform recommendations, including resistance to change, limited resources, and inadequate training. From a practical perspective, organisations contending with the 'readiness' imperative can use the insights to proactively manage the identified barriers. Developing and delivering appropriate training for practitioners can help clarify expectations related to the formalisation of practices and higher levels of risk, thereby enabling them to better respond to the adoption of recommendations. The study also highlighted key enablers such as leveraging existing skills, systems, and robust governance practices. Leveraging enablers such as existing skills and robust governance can smooth the implementation process and improve the services delivered to families. These findings illustrate that despite the challenges, organisations can navigate reforms by capitalising on their inherent strengths. Additionally, stakeholders like policymakers, legal

13

Stream 10. Public Sector, NGOs and Not-for-Profit

entities, and funding bodies can use these insights to forward plan and foster an environment conducive to change.

The study also highlights the resource implications associated with policy reforms. Not-for-profit organisations can benefit from understanding the impact on resource attributes (human, physical, financial, and social capital) and incorporating these insights into future planning initiatives, ensuring that more individuals can receive help. By examining the impacts on human, physical, financial, and social capital, the study presents a comprehensive picture of the demands related to such changes. For instance, the discussion around human capital highlights the need for additional hiring, training, and leveraging existing skills, suggesting that internal opportunities can be maximised for efficient resourcing. Financially, the need for increased funding, especially for hiring and training case managers, is emphasised. Social capital implications point to the importance of building community reputation and awareness, indicating that improving service accessibility and raising awareness could lead to increased utilisation of services.

In conclusion, this exploratory case study offers preliminary yet crucial insights into the complexities of implementing reform recommendations. It highlights the perceptions of change readiness and resource implications of a not-for-profit organisation to a more nuanced understanding of reform implementation. While the findings are specific to one provider and restricted by a small sample, they provide a foundational understanding that can inform future research and practice. The findings provide insight into the value of a small yet industry-focused collaborative research partnership that can help not-for-profits maximise their impact for vulnerable individuals and communities.

14

Stream 10. Public Sector, NGOs and Not-for-Profit

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16

Stream 10. Public Sector, NGOs and Not-for-Profit

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Stream 10. Public Sector, NGOs and Not-for-Profit

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Stream 10. Public Sector, NGOs and Not-for-Profit

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Table 1 Selected Recommendations for Reforming Australia's Family Law System

Topic Area	Recommendation	Number from Report
Case management services	Family Relationship Centres should be expanded to provide case management to clients with complex needs. Amend the *Family Law Act 1975 (Cth)* to provide an appointed Family Consultant has the power to seek that the courts place the matter in a contravention list or to recommend that the court make additional orders directing a party to attend a post-separation parenting program. The Australian Government implement case management services within either the FASS or Family Relationship Centres (FRCs).	59: ALRC 2019 Report 39: ALRC 2019 Report 26: JSC
Legally assisted dispute resolution services	To include the proposed provisions: "The object of this section is to ensure that, as far as possible, each prospective party to a case in the Federal Circuit and Family Court of Australia must take genuine steps to resolve disputes before starting a case". The *Family Law Act 1975 (Cth)* should include an overarching purpose of family law practice and procedure to facilitate the just resolution of disputes according to law, as quickly, inexpensively, and efficiently as possible, and with the least acrimony. Expand Legally Assisted Family Dispute Resolution.	5: ALRC 2019 Report 30: ALRC 2019 Report 27: JSC
Secondary interventions	The Australian Government should work with Family Relationship Centres to develop services, including legally assisted dispute resolution services; Children's Contact Services; financial counselling; and having services such as parenting support programs.	60: ALRC 2019 Report
Additional training for family law professional	The committee recommends that all family law professionals undertake regular professional training	15: JSC

Stream 10. Public Sector, NGOs and Not-for-Profit

Table 2 Data Sources

Data Source	Details
Interviews	Senior executive ($n = 3$)
Focus group one	Service leaders ($n = 2$)
	Service delivery and administration ($n = 2$)
Focus group two	Senior executive ($n = 3$)
	Service delivery and administration ($n = 3$)
Organisation documents	Annual report 2020-2021
	Annual report 2021-2022
	Organisation information pack for clients
	Strategic plan 2020-2023

20

8. Business Processes, Innovation and Supply Chain

Use of Business Intelligence (BI) during Business Process Improvement Initiatives (BPIIs)

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Use of Business Intelligence (BI) during Business Process Improvement Initiatives (BPIIs)

ABSTRACT:

Adopting business intelligence (BI) during business process improvement initiatives (BPIIs) has become a trend. Studies on how the amalgamation of BI during BPIIs influence the process improvement and its performance is scarce. This study aims to answer the question "how adoption of BI during the BPIIs influence the lifecycle stages of the BPIIs and the performance of the improved processes?". 12 semi-structured interviews were conducted in two supermarket chains in Sri Lanka to collect data and were analysed using NVivo Software. Data revealed that BI supports during all lifecycle stages of BPIIs and performance of BPIIs improve (high employee engagement, interlinked business systems, operational cost reductions, increments in efficiency rate and overall profitability). The study opens new avenues for research and contributes to literature on BI adoption in BPIIs contexts.

Keywords:

Business Intelligence, Business Process Management, Business Process Improvement Initiative, Retail Industry

Overview

Technology has changed the ways of conducting business activities (Marikyan & Papagiannidis, 2021) and the contemporary retail outlets are moving away from manual practices (Gauri *et al.,* 2021). The use of technologically advanced tools such as business intelligence (BI) has given retail store operations a competitive edge (Gauri *et al.,* 2021). BI is a set of applications, technologies, and processes that are deployed by companies to support their decision-making process and improve business performance (Boonsiritomachai, 2016). Organizations use BI systems for business process management (BPM) (Elbashir et al., 2008) which is a discipline where a variety of methods are used to identify (Dumas *et al.,*2018), model, analyze, measure, and transform processes, improve efficiencies, optimize, automate, and even eliminate manual processes (Jeston & Nelis*, 2008). In BPM, BI is being applied as a tool to strengthen the prime objective of business process improvement initiatives (BPIIs) – i.e. maintaining competitiveness and sustaining the peak performance of the improved process (Custodio et al., 2022). Business Process Improvement is evolving to deliver business agility, customer experience, and digital automation (Kalmijn, 2019) and advancements in the latest technologies such as BI influence the design and business process execution and improvement in organizations (Mendling et al., 2018).

1

However, regardless of benefits and the large financial investments done on BI-related applications, such investments do not guarantee successful deployment and often bring low returns to organizations due to failures at different stages of execution (Alabaddi *et al.,* 2020; Marikyan & Papagiannidis, 2021). In addition, the scholars have not focused much on how this amalgamation of BI during BPIIs could influence the performance of the improved process (Bach *et al.*, 2019) or on how BI would influence the lifecycle of the process improvement initiative (Zuhaira & Ahmad, 2021). Furthermore, scholarly investigations on the use of BI and BPIIs/BPM in developing countries in Southeast Asia is also scarce (Boonsiritomachai, 2014; Ranasinghe & Madushanka, 2021).

In addition, research on BI and BPIIs in retail industries is limited (Chui & Francisco, 2017; Garbuio & Lin, 2019). Majority of the related studies are focused on developed countries, especially Europe, the United States, and Australia (Ranasinghe & Madushanka, 2021) and are focused on industries such as education (Custodio *et al.,* 2022); healthcare (Muchairi., 2022); or IT industry (Gonzales et al., 2019). To address these gaps, this study explored "how adoption of BI during the BPIIs influence the lifecycle stages of the BPIIs and the performance of the improved processes?", in two supermarket chains in the retail industry in Sri Lanka.

Current Understanding

BI and BPIIs

Through BI, data is turned into powerful and more useful information that can identify potential business opportunities and predict customer demands and make informed decisions (Ranasinghe & Madushanka, 2021). Business process management (BPM) comprises of process alignment, business process orientation (BPO), and business process improvement initiatives (BPIIs) (Lee & Dale, 1998; Zairi, 1997) and these BPIIs attempt in "*continuously improving one or all processes in terms of cost, time, and quality*" (Davenport, 1993). Thus, a business process improvement initiative (BPII) is a component within BPM (Anand *et al.,* 2009).

Dumas et al., (2018) discussed three main stages of BPM that can be applied to BPIIs: (1) Process planning, (2) implementation and control, and (3) monitoring stage which includes substages within them. This is used in discussing how the BI is influencing the BPIIs in this study.

2

BI and process of BPII and performance of BPII

BI facilitates the BPIIs (Vugec *et al.,* 2020). Considerable amount of research is done separately on BI and BPII (Ahmad & Looy, 2020; Kasemsap, 2018; Ranasinghe & Manushanka, 2021) as well as BI and performance of the BPIIs (Alzghoul et al., 2022; Maseya, 2017; Saab *et al.,* 2018). They have focused on areas such as the use of BI to improve the decision-making process in competitive and changing businesses (Ranasinghe & Manushanka, 2021); and mastering BPM and BI in global businesses (Kasemsap, 2018). BPM can benefit from using BI, arguing that BI can aid in executing the operational process. Furthermore, the phrase "process-centric business intelligence" has been coined to describe the ability of BI to turn business-relevant data into analytic data with the aim of producing new knowledge and driving appropriate process modifications (Bucher *et al.,* 2009).

Scholars have not yet focused much on how this amalgamation of BI during BPII could influence process and the process performance (Bach et al.,2019), which is the focus of this study.

BI and Retailers

'Retail' is the activity of selling goods or services directly to consumers (end-users). Consumer interests are rapidly shifting with changes in technology, culture, and other demands. To survive, retailers must be able to react to consumer interests while adapting to other changes and demands (Illanganthilake & Wickramarachchi, 2021). The retail sector in Sri Lanka is one of the fastest-growing industries and accounts for 34% of the GDP and 14% of employment (Premathilaka *et al.*, 2019).

Worldwide retailers are moving towards the adoption of BI as a strategy to be competitive and improve performance (Vugec *et al.,* 2020) and it is similar in the Sri Lankan context. However, it is also identified that BPM and BI systems are applied in large enterprises (Bandara & Opsahl, 2017) and BI and BPM practices in small and medium scale enterprises are low (Bach et al., 2019).

Research Questions

The study will focus on the problem 'how adoption of BI during the BPIIs influence the lifecycle stages of the BPIIs and the performance of the improved processes?' and answers two research questions:

1. How has BI been adopted during the process of conducting BPIIs?

3

2. How does the adoption of BI during the process of BPIIs influence the performance of the improved process?

Research Approach

Taking an interpretivist stance, the research followed a qualitative approach with multiple case studies from Sri Lanka. In selecting case organizations (supermarket chains), researcher contacted all 6 supermarket chains that used BI during their BPIIs in Sri Lanka. However, only 2 chains agreed to provide data. These two supermarket chains are at the forefront of technology adoption for business processes in the Sri Lankan retail sector and thus are data-rich cases and suitable for the study. 12 interviews with managerial level employees (using a semi-structured interview guide) were conducted in the two supermarket chains. The interviews were audio recorded and transcribed verbatim. Data analysis was done as a thematic analysis, using the NVivo software.

Findings

As per the data analysis, BI supports the BPIIs during all its lifecycle stages, i.e., planning, implementation, monitoring, and controlling.

BI is used during the planning stage for: (1) Preliminary screening by top management, (2) Process Customization, and (3) Process compatibility check.

Preliminary screening by top management – is a significant element that contributes to successful implementation of change initiatives. Implementation of a change or introduction of a new system within any organization require organization-wide commitment from the top to bottom in all levels of the management hierarchy. Top management in both case organizations use BI generated information to identify change requirements, and system and performance-related issues; and take actions/rectifies them immediately. The process requirements gathered at the ground level through the authorized channels are scanned using BI systems such as interlinked feedback systems by the top management to gather suggestions and requirements from all the management levels including lower and middle levels. Such gathered requirements are accepted and considered for future process planning and in implementing BPIIs.

4

Process Customization – is designing the BI implementation initiatives as per the organizational requirements. One of the most prominently used ERP systems in the retail industry, and specifically in the considered organizations is SAP. At the process improvement planning stage, customization of the systems as per the process requirements is conducted in collaboration with ERP consultants, IT department, research and development department, and top management of each organization. At the point of implementing SAP, the attributes are customized as per the organizational requirements and a tailor-made system is implemented. In addition, the current systems are analyzed and drawbacks/weaknesses are identified. Then, these are addressed, and further developments are incorporated into the new process improvement. It was stated that these efforts are highly supported by the BI applications within the considered business process.

Process compatibility checks – ensure the smooth functioning of the process once implemented throughout the entire organizational network. BI has largely supported in checking the process compatibility in the study context in concern. Prior to implementing a process improvement supported by BI to the organizational network, the top management has taken the lead to implement the developed process improvement to a few selected outlets and run the program as a trial. Pilot tests in a realistic organization help in understanding the suitability and compatibility of the BPII to the current process and procedures of the organization. Corrective actions are taken to overcome/mitigate any deviations. If the trial-run becomes successful, the system will be implemented in all outlets in the business network. If it does not match the expected outcome level of the process improvement, it will be stopped/rejected from further proceedings. This stage will also complement further customization of the process improvements as per the requirements and errors occurring in the pilot test. BI supports all these activities as per the data.

BI is used during the implementation stage for: (1) Troubleshooting and (2) Smooth functioning of the BPII.

Troubleshooting - many systems related issues had occurred during process implementation stage. Mainly, related to synchronising which is a result of technical issues such as system blockings due to capturing bulk data. One main solution had been making changes to the BI systems as per the identified

5

requirements. In addition, during these troubleshooting efforts the employees had been able to grasp the details of the BPII well and it had supported solving several other issues (such as lack of awareness and education about the system, fear of the new system, lack of technical literacy, etc.).

Smooth functioning of the BPII - When the BPII was implemented in all outlets and networked to the head office, the complexity and sophistication of the system had increased. BI had supported in managing it smoothly to ensure the continuation of the improvement initiative.

Finally, the data revealed that, BI is used during the monitoring and controlling stage of the BPM lifecycle for: (1) Automated process monitoring, (2) Automated CRM (Customer Relationship Management) Systems, and (3) Interlinked feedback systems.

Automated process monitoring – with the use of BI, problems are identified automatically, and alerts/error notifications are sent to relevant personnel for prompt rectification. This allows taking corrective actions in the absence of physically engaged staff and reduced the time spent on observation and control of processes. A drop had been visible in fraudulent activities and data manipulations in both organizations with the use of BI.

Automated Customer Relationship Management - Customers were allowed to share their experiences online (related to the BPIIs and the other aspects of the outlet they visit) and these were received from the specific outlet and the head-office through the interlinked system. Use of BI in analysing this data allows obtaining descriptive analytics about customer requirements and choices. Results are used to understand the outlet performance, changes expected by the customers and make necessary changes to the implemented BPIIs.

Interlinked feedback systems – Apart from customers feedback system, employee feedback is also gathered to understand their experience on the BPIIs. With the use of BI, all the systems are interlinked, and the top management receives the grievances, improvement requirements required, etc. at outlet level regardless of the location. This allows the top management to make the monitoring and controlling process of the BPIIs more efficient and effective.

6

Apart from the above-mentioned support during all stages of the BPIIs' lifecycle stages, use of BI had improved the process performance as per the data analysis. The adoption of BI at all lifecycle stages of the BPII has enhanced the process performance of the improved processes mainly through increased employee engagement, interlinked business systems, reduction of operational costs, increment in efficiency rates, and increase in the overall profitability. The formalized process through BI has allowed employees to create a sense of belongingness within the organization which has resulted in enhanced engagement and commitment during BPIIs. Interlinked business systems created through the implementation of BI have allowed retail organizations to gain a competitive edge in satisfying the dynamic customer requirements compared to other giant players in the retail industry. Process performance has increased due to the implementation of BI in BPII with the reduction in operational costs through process automation and enhanced efficiency levels.

Contributions and Limitations

Being one of the early studies in exploring the impact of adopting BI on performance of a BPII and the lifecycle stages of a BPII, it explains how BI can be used during the lifecycle stages of the BPIIs and what benefits can be gained during the process. Further, it unveils how and in what areas the performance can be improved by using BI during the BPIIs.

The study is focused only on two case organizations. The respondents stated the risk associated with the organization revealing strategic information to third parties and was reluctant in providing details that cannot be made public. Thus, there can be some additional insights that are not revealed during the interviews.

Implications

The study contributes to bridging the gap in literature related to a study combining the three phenomena and extends the literature on similar topics in developing country contexts. The findings also provide a solid base for future research budding within the same boundaries. Further studies can focus on adding more cases and using other data collection methods such as focus group interviews to strengthen the findings.

7

Findings are beneficial to the managerial and non-managerial level employees in the retail sector. The adoption of BI for BPIIs is an emerging concept in the world and identification of the implications of BI for BPIIs under each stage of the lifecycle will ensure awareness and prerequisites to be satisfied for the successful implementations.

☰ INDEX

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10

A REVIEW OF INDIGENOUS INCLUSION
IN MANAGEMENT EDUCATION

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ABSTRACT

This review examines how western business schools have included and excluded Indigenous people and knowledge in management education through a decolonisation lens. A growing but disparate body of scholarly work reveals how business schools have largely ignored colonisation. Our systematic literature review of 57 articles published from 1996-2023 centred on Indigenous wisdom and communities in management education identifies gaps and explores opportunities. We conclude that management educators need to build upon concepts of self-determination; truth-telling and trust-building; appreciation and transformative reconciliation. We argue a relational ontology based on shared, critically reflective and co-created practices is critical to decolonising management education.

Keywords: Decolonisation, Indigenous Wisdom, Indigenous Peoples, Management Education, Pedagogy

INTRODUCTION

In this paper we argue that there is clear need to question the fundamental assumptions of traditional management education, and that a decolonisation lens can foster students with this kind of epistemic humility. We specifically suggest that one way of achieving this is by acknowledging the importance and the insights that Indigenous wisdom, knowledges, and communities contribute to management education. In a comprehensive review of management literature relating to Indigenous knowledge and peoples, Salmon, Chavez, and Murphy, (2023), summarise 776 articles and highlight three themes of research: (1) *Indigenous ways of being*, (2) *Indigenous organising*, and (3) *Indigenous relating*. Although they provide an excellent aggregation and synthesis of literature on how Indigenous contexts are influencing management literature in general, there are limited perspectives on how management education can include Indigenous people and their knowledge to educate students as future business leaders in appreciating Indigenous wisdom and building cultural competence (e.g., Woods, Dell & Carroll, 2022). This is critical to understand because traditional modes of western business knowledge and ways of organising that we teach in management education are mechanistic and based on rationalisation. However, to engage with the societal challenges facing organisations relating to climate change, nature loss, and inequality et al., we need to prepare students who can question the assumptions of traditional management. Management education has the potential to enhance students' awareness of Indigenous knowledge, and critically reflect on appreciating Indigenous knowledge as an alternative or additional

application in management practice (Young-Ferris & Voola, 2023). Although the literature at the intersection of management education and Indigenous knowledge and peoples has seen increasing scholarly examination, there has been no effort to summarise, aggregate and make sense of it, perhaps acting as a barrier for research to engage and build on this literature as part of a scholarly education endeavour. Specifically, we attempt to understand and contribute by aggregating and synthesising this knowledge, guided by these two research questions: Two research questions guide of systematic literature review.

RQ1. How have Indigenous knowledge and Indigenous people been included and excluded in management education?

RQ2. What are the key concepts, frameworks and approaches that management educators need to build upon to decolonise management education to have a positive shared impact on Indigenous people and communities?

DEFINING DECOLONISING AND INDIGENISING IN MANAGEMENT EDUCATION

The article acknowledges the need for a clearer definition of decolonisation adopted within management education that reflects the decolonial turn (Maldonado-Torres & Cavooris, 2017). Decolonisation in this article is defined as a process of questioning fundamental assumptions in traditional management education and incorporating Indigenous wisdom and perspectives in management education. We emphasise the importance of self-determination, truth-telling, trust-building, and transformative reconciliation in this process. Based on this review of literature and our model presented below, our position leans towards indigenisation a complementary process of decolonisation, focusing on authentically embedding Indigenous knowledge and ways of knowing into management curricula led either by Indigenous people of in tandem with indigenous people (Grafton and Melançon 2020). Tynan and Bishop (2023) advocate for a relational approach to decolonising literature reviews, emphasising the need to centre Indigenous knowledge and challenge dominant western epistemologies. Their framework encourages researchers to critically analyse power dynamics and the representation of Indigenous voices in academic discourse. The traditional approach to conducting a literature review in western academia focusses on "identifying gaps" in existing knowledge and establishing the researcher's

expertise in a field. The emphasis is often on comprehensiveness, objectivity, and critical analysis of published academic sources – usually from high ranked journals which may exclude indigenous voices. In contrast, Indigenous and relational approaches to literature reviews start from a fundamentally different paradigm. Rather than seeking to identify gaps, this approach views the literature review as an act of respect, relationship-building, and extending knowledge lineages (Wilson, 2020). In this approach non-academic and oral sources of knowledge are often valued equally to written academic works (Blair, 2015).

There is an inherent tension between the two approaches. While the gap-filling approach aims for a systematic survey to position new research, the relational approach is more selective. Importantly, it focuses on deepening connections to key Indigenous thinkers and knowledge systems values of collective knowledge and accountability to relations. As such it expands what "counts" as literature beyond academic publications. As authors (3 nonindigenous people and 2 indigenous people) we are conscious of the traditional literature review approach that we have adopted but also highlight we connect this literature to our own analysis and propositions for transforming management education. Our approach is to be inclusive of the relational ontologies of management education with indigenous people.

THE LITERATURE REVIEW

The literature review examined a diverse range of communities, featuring Indigenous communities across various regions, from the Arctic (e.g. Berge, 2020), American Indian (e.g. Stewart & Pepper, 2011), Canadian (e.g. Douchette et al., 2021), Australian Aboriginal (e.g. Kennedy et al., 2022), African and Egyptian (e.g. Ogunyemi & Ogunyemi, 2022) to the Mamanwa ethnic minority in the Philippines (Rabasso & Rabasso, 2014). Studies also included insights from specific educational settings such as Māori knowledge systems (Ruth, 2020), highlighting different cultural contexts within the scope of management education research. Specifically, one Māori study examines the conflict between Indigenous perspectives and key elements of modernity such as capitalism, colonisation, and technological advances, arguing for an underlying values clash (Ruth, 2020). In the Australian context, the involvement of the Indigenous business sector in Australia has been notably documented by Gainsford and Evans (2021). In the North American context, multiple studies explored various aspects of Native American communities,

shedding light on their cultural heritage and societal dynamics. Lucero and Roubideaux (2022) examined the experiences of American Indian and Alaska Native populations. In the Canadian context, Jolly et al., (2011) focussed on the James Bay Cree communities.

Only 14 papers include authors who explicitly identify as Indigenous and certain scholars (see *Table 1*), notably Verbos, has made significant contributions to the body of knowledge of Indigenous business scholarship (based on four articles retrieved in this study). Indigenous scholars' work is vital in this context as it provides an authentic voice, often underrepresented in academic discourse and this gap is highlighted in this study with 75% of authors in the retrieved studies not identifying as Indigenous.

TABLE 1: Scholarly work that includes an Indigenous author and regions.

Author* (*Bolded author identifies as Indigenous)	Title	Regional Context	Number of studies
Ganiyu, RA	Redesigning the management curricula for Africa	Africa: Many African countries face challenges related to colonialism's legacy, economic development, and preserving indigenous knowledge systems while adapting to globalisation.	1
Bodle, KA; Malin, M; Wynhoven, A	Students' experience toward ePortfolios as a reflective assessment tool in a dual mode Indigenous business course	Australia: Indigenous Australians face systemic disadvantages in education and employment. There are efforts to increase Indigenous participation in higher education and business while preserving cultural identity.	3
Bodle, K; Malin, M; Wynhoven, A	Students' perception of e-portfolios as a reflective assessment tool in a dual mode Indigenous business course		
Kennedy, J.; Almeida, S.; Gibbons, B.;	A business faculty, Jindaola and a path to embedding Aboriginal knowledges		

Clarke, R.; Bicego, V.; Phelan, A.			
Jolly, F; Whiteman, G; Atkinson, M; Radu, I	Managing and Educating Outside: A Cree Hunter's Perspective on Management Education	Canada: Indigenous peoples in Canada face challenges related to land rights, economic marginalisation, and preserving traditional knowledge. There are efforts to incorporate Indigenous perspectives into management education.	1
Li, L; van Baalen, P	Indigenization of management education in China	China: Aims to develop management education that incorporates Chinese cultural values and business practices while engaging with global management theories.	1
Woods, C	Reflections on Pedagogy: A Journey of Collaboration	New Zealand: Māori people face challenges in education and employment. There are efforts to incorporate Māori knowledge and values into management education and practices.	1
Verbos, AK; Humphries, M	A Native American Relational Ethic: An Indigenous Perspective on Teaching Human Responsibility	USA: Native Americans face historical trauma, economic challenges, and efforts to preserve cultural identity. There are initiatives to incorporate Indigenous perspectives into management education and practices.	4
Verbos, AK; Kennedy, DM; Gladstone, JS	"Coyote was walking ": Management education in Indian Time		
Roy, L	Infusing Knowledge of Indigenous Lifeways Into Graduate Collection Management Education		
Verbos, AK; Humphries, M	Amplifying a relational ethic: A contribution to PRME praxis		

Doucette, MB; Gladstone, JS; Carter, T	Indigenous conversational approach to history and business education	USA, Canada: Both countries struggle with historical injustices towards Indigenous peoples and are seeking ways to incorporate Indigenous knowledge into education and business practices.	1
Verbos AK; Humphries MT	Indigenous wisdom and the PRME: Inclusion or illusion?		2
Verbos, AK; Humphries, MT	Decoupling equality, diversity, and inclusion from liberal projects Hailing indigenous contributions to institutional change		
		Total	**14**

RESEARCH APPROACH:

The purpose of this study was to identify and synthesise Indigenous research within business school and management education, and therefore, a SLR was appropriate. We followed the three-stage (9 phase) process explained by Tranfield, Denyer, & Smart (2003), which is the accepted practice within the field of management (Salmon et al., 2023). The review commenced with *planning stage* (3 phases): the identification of a review need, followed by the preparation of a review proposal and the formulation of a review protocol. The *execution stage* (5 phases) involved the objective identification and quality assessment of existing studies (see *Figure 1*). Subsequently, data were extracted and synthesised from these studies, utilising a subjective and inductive coding and analysis approach to elucidate prevailing themes and trends. The *concluding stage* (third stage with 2 phases) encompassed the presentation of findings and developing the model.

Figure 1. PRIMS Flow Diagram
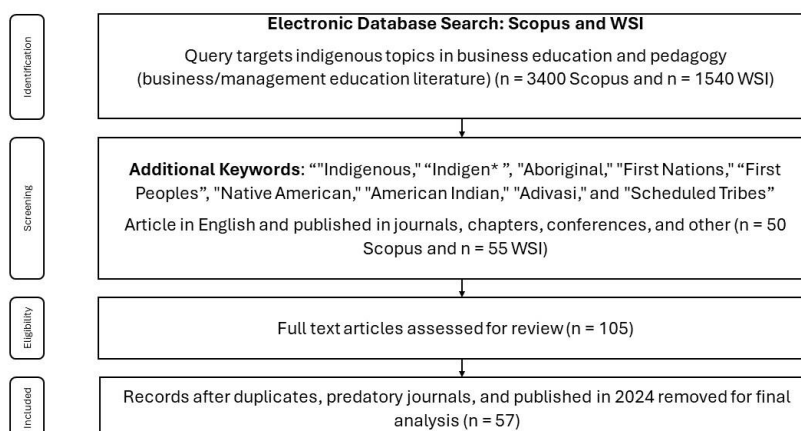
Specifically, we conducted a comprehensive search strategy aimed at collating scholarly articles pertaining to Indigenous perspectives in business and management education. Keywords such as "Indigenous," "Indigen*", "Aboriginal," "First Nations," "First Peoples", "Native American," "American Indian," "Adivasi," and "Scheduled Tribes" were paired with terms related to business education, such as "management education," "business school," "learning," "pedagogy," and "curriculum" to filter the relevant literature[1]. The search was limited to materials published in English to ensure the feasibility of the analysis and to cater to the primary audience of the review. The selection of keywords for the search strings was refined through an iterative process involving discussions with the co-authors as expert academics in the field, consultation with the editors, and evaluation of initial search outcomes, grounded in existing literature on Indigenous research. This collaborative approach ensured a comprehensive and relevant set of terms capable of capturing the breadth of pertinent literature.

In addition to the traditional approach to literature reviews and address the need for a more relational Indigenous scholarship, the work of Allen & Girei's (2023) on decolonial reflexivity provides a crucial framework for our approach. They emphasise the importance of critically examining one's own

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[1] A full list of footnotes has not been provided because of limitations of word count.

positionality and the power dynamics inherent in knowledge production. Using this reflexive stance we have sought to centre Indigenous voices and perspectives in the conceptual model for decolonising management education. For instance, we drew upon the work of Indigenous scholars from the review who articulate Indigenous ways of knowing, being, and doing, and explored relational ethics in management education. This approach to the literature review not only enriches our understanding of Indigenous scholarly development in management education but also challenges us to critically reflect on the assumptions and biases embedded in traditional management education frameworks.

Findings:

Our systematic literature review revealed limited explicit discussions of Indigenous pedagogical approaches in the context of management education. While some studies touched on aspects of Indigenous ways of knowing and learning, such as the concept of "Indian time" mentioned by Verbos et al. (2011) and the relational approach emphasised by Verbos and Humphries (2014, 2015a), a comprehensive exploration of Indigenous teaching methods was not prominent in the literature we reviewed. This gap in the literature suggests an important area for future research.

Based on our review and thematic analysis, Figure 2 provides our Conceptual Model for this article based on our systematic and inductive analysis as outlined in Section 2. Part of the literature encompassed how Indigenous wisdom is being included in management education (Bodle & Blue, 2020) - depicted by the large, curved arrow on the right labelled "Ways of Decolonising" Here distinctive themes emerged about how Indigenous wisdom impacts management education in terms of: "Relational and interconnected ontology", "Authentic inclusion", "Cultural competence and critical self-reflection" and "Specific inclusive and reflective pedagogy" and the learnings from embracing Indigenous ways of knowing and being (Martin & Mirraboopa, 2003). We came to understand these as ways of decolonising management education - depicted by the four straight arrows feeding into the large, curved arrow on the right-hand side of our Conceptual Model. These themes can be considered as a way of operationalising decolonisation as part of an authentic embedding of Indigenous wisdom into management education, where there is critical and reflective listening between expert Indigenous and non-Indigenous scholars in the co-design of curriculum.

Another area that was surprisingly absent in the review was that of IP and indigenous knowledge. Intellectual property (IP) concerns are important in integrating Indigenous knowledge into management education. Traditional Western IP frameworks often inadequately protect Indigenous knowledge leading to failure to attribute or use without consent. Furthermore, the commodification of Indigenous cultural expressions raises ethical issues regarding respect for Indigenous values in management education.

However, and not unsurprisingly, equally a segment of literature emphasises how management education has devastating impacts on Indigenous communities - as depicted by the large, curved arrow on the left that we label "Colonising Ways". Here, again distinctive themes emerged for how western management education impacts the Indigenous communities themselves in terms of the: "Dominant model as unquestioned and transactional", "Ignored histories of intergenerational trauma", "Limited opportunities for Indigenous staff and students" but also some possible "Opportunities from Management Education" in providing Indigenous communities with technical skills and alternative ways of organising. These four themes are depicted by the four straight arrows feeding into the large, curved arrow on the left-hand side of the model. These themes can be considered the colonising ways within western Management Education that scholars need to awaken to, to reduce negative impacts on and restore relationships with Indigenous communities. We define and analyse both sides of our model below, commencing with "Colonising Ways".

Finally, and drawing all of this together, in our Conceptual Model what emerges is a set of discussion themes and opportunities for future research that advocate for a movement "Towards Decolonisation"- depicted in the central square of our model at *Figure 2* Themes here centre on "Self-determination", "Truth-telling and Trust-building", and the need for the "Appreciating, Valuing and Co-creating" and "Transformative Reconciliation" of Indigenous wisdom and Indigenous communities within management education.

FIGURE 2: CONCEPTUAL FRAMEWORK.

Indigenous Communities ⟷ **Indigenous Wisdom**

Colonizing ways

Ways of Decolonizing

Dominant model as unquestioned and transactional

Ignored histories of intergenerational trauma

Limited opportunities for Indigenous staff and students

Opportunities from Western Management Education

Towards Decolonization
(Discussion and Future Research)

Self-determination

Truth-telling and trust-building

Appreciating, valuing and co-creating

Transformative reconciliation

Relational and interconnected ontology

Authentic inclusion

Cultural competence and critical self-reflection

Specific inclusive and reflective pedagogy

Western Management Education

CONTRIBUTION AND LIMITATIONS:

The review highlighted the growing scholarly interest in embedding Indigenous perspectives into business education, as evidenced by the increasing number of publications. However, the review also reveals that only a small proportion of the studies (14 out of 57) include authors who identify as Indigenous, suggesting a need for greater representation of Indigenous voices in the co-design process. We conclude there is much work to be done if management education is to play an authentic role towards decolonisation. For example, it's important to acknowledge that intergenerational trauma and the impact of colonisation on Indigenous communities is also are embedded in traditional western business school models.

The review was used to develop a framework that questions the fundamental assumptions of traditional management education and incorporates an Indigenous self-determined and decolonisation lens for matters that impact Indigenous communities. At the same time, the review has highlighted that critical ways that Indigenous wisdom must be understood in terms of its relational ontology, and in the spirit of critical reflection if it is to be embedded into management education in an inclusive and authentic way. The two mutually reinforcing sides of our Conceptual Model (see *Figure 3*) produced opportunities for discussion and future research in terms of self-determination; truth-telling and trust-building;

appreciating, valuing, and co-creating; and transformative reconciliation as ways of addressing colonisation towards decolonising the education of our future business leaders.

This model underpins our call for a relational ontology based on shared, critically reflective, and co-created practices that are needed in management education Integrating Indigenous knowledge into management education often assumes an equal reciprocal relationship between Western and Indigenous systems. However, this assumption is problematic and requires critical examination. Western educational systems have historically been extractive, appropriating Indigenous wisdom without adequate recognition or compensation. This unequal power dynamic places an unfair burden on Indigenous communities to share their knowledge while potentially receiving little in return. To address this issue educators not only need to incorporate Indigenous perspectives but also transforming the underlying structures of management education to ensure equitable exchange and mutual benefit. Importantly, the responsibility for decolonisation should not fall solely on Indigenous communities but should be a shared commitment led by Western institutions. Four key elements of the model are described below in term of implications for management education.

Business schools should prioritise Indigenous self-determination in curriculum development and delivery. This means actively involving Indigenous communities and scholars in decision-making processes, course design, and teaching. Management education should seek to empower Indigenous students and respect Indigenous knowledge systems as valid and valuable sources of business insight. To enact this business schools may create platforms for Indigenous voices to shape management theory and practice at the institutional level, moving beyond tokenistic inclusion to genuine co-creation of knowledge.

Decolonising management education necessitates a commitment to historical truth-telling and trust-building. As part of this business schools need to acknowledge the colonial roots of many management theories and institutional practices as well as their ongoing impacts on Indigenous communities. By fostering honest conversations management education can seek to build trust with Indigenous communities and develop a foundation for meaningful collaboration.

Authentically embedding Indigenous wisdom maens management education must move beyond superficial acknowledgments to deeply appreciating and valuing Indigenous knowledge systems. This

requires a fundamental shift in how business concepts are taught, incorporating Indigenous perspectives on leadership, sustainability, and organisational structures.

The goal of decolonising management education should be transformative reconciliation going beyond superficial changes towards fundamentally reshaping the field. This involves reimagining business education in ways that honour Indigenous worldviews, promote social justice and prepare students to be ethical, culturally competent leaders. Business schools need to foster a learning environment that encourages critical reflection on personal and systemic biases, challenges Eurocentric business paradigms,

One limitation of this review is that there are no doubt important Indigenous works that have not been identified by our specific western (colonising) SLR methodology. Another potential limitation is our focus is solely on works in the management education field, at the exclusion of relevant works in management and organisation theory (and other fields). This was a deliberate choice because others had already done this broader type of review (e.g. Salmon et al., 2023) and whilst we have included some key contributions as part of our overall narrative argument (e.g. Banerjee & Arjaliès, 2021), a closer investigation of the alignment between management and organisation theory *and* management education in terms of the insights for decolonisation is an avenue for future research, and may yield important insights that complement the present work. In addition, important topics noted in Higher Education literature such as "Sovereignty", "Language and Representation" and "Institutional and Structural Reforms" are noticeably absent from the management education literature and warrant further investigation.

CONCLUSION FROM INDIGENOUS PERSPECTIVES

Indigenous scholars in the review of literature offer valuable insights for decolonising management education. Important conclusions include adopting a relational approach that emphasises interconnectedness and holistic thinking. Also important is incorporating Indigenous concepts of time that are more cyclical and flexible, and integrating place-based learning that draws on local knowledge. Additionally, scholars suggest using culturally appropriate assessment methods like ePortfolios,

employing conversational pedagogy that emphasises storytelling and dialogue, and reconstructing classrooms to enhance cultural competence.

These recommendations collectively call for a fundamental shift in the conceptualisation and delivery of management education. By emphasising relational thinking, cultural context, and Indigenous ways of knowing and being, these approaches can lead to more inclusive, culturally responsive, and decolonising management education practices. Implementing these changes need not burden Indigenous people if such changes are undertaken with concepts of equality and genuine reciprocity in mind and practice.

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STYLE GUIDE – STRUCTURED FORMAT

The key format and style guide details for ANZAM 2024 Structured Submissions are summarised in this document. For further details related to referencing, please refer to the Publication Manual of the American Psychological Association, 6th Ed.

Stream 1. Human Resource Management

Using resilience-enhancing HRM to lessen the negative effects of techno-stress on customer-oriented prosocial behaviors

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Stream 1. Human Resource Management

Using resilience-enhancing HRM to lessen the negative effects of techno-stress on customer-oriented prosocial behaviors

ABSTRACT: *The utilization of frontline service technologies has revolutionized the interactions between frontline employees and customers, offering a realm of possibilities as well as challenges. These technologies pledge enhanced service efficiency and improved customer experiences, yet they also carry the potential for technostress, which can significantly impact employees' well-being and job performance. This research will delve into the correlation between technostress and frontline employees' customer service behaviors, with feelings of helplessness serving as a mediating factor. Drawing from the Transactional Model of Stress and Coping, we posit that frontline employees contending with technostress may experience feelings of helplessness, consequently diminishing their engagement in both in-role and extra-role customer service behaviors. Additionally, we inquire into the potential of resilience-enhancing HR practices to alleviate the detrimental effects of technostress on frontline employees. The outcomes seek to enrich our understanding of how organizations can provide support to frontline employees in managing technostress and upholding superior levels of customer service.*

Keywords: Technostress, in-role customer service, extra-role customer service, helplessness, resilience-enhancing HR practices, Transactional Model of Stress and Coping

Overview

The emergence of frontline service technologies has brought about a significant shift in the nature of interactions between frontline employees and customers. These advancements offer various opportunities, such as streamlining service delivery and enhancing overall customer experiences. However, they also present challenges, particularly in the form of technostress, a phenomenon that arises from the constant use of and adaptation to new technologies. Technostress is defined as "a modern disease caused by an inability to cope with new computer technologies in a healthy manner" (Brod 1984, p. 16; Califf, Sarker, & Sarker, 2020). Technostress can have detrimental effects on the well-being and job performance of frontline employees, necessitating a balanced approach to the adoption and management of these technologies in the workplace.

Current understanding

To date, research has demonstrated that these technostress creators provoke negative psychological and behavioral strains among employees (Tarafdar, Tu, & Ragu-Nathan, 2010; La Torre, De Leonardis, & Chiappetta, 2020). Among the widely studied psychological strains are negative emotional reactions to the techno-stressors, such as anxiety, anger, frustration, depression, negative self-evaluation, job dissatisfaction, decreased organizational commitment, and continual commitment (La Tore et al., 2020; Tarafdar et al., 2010). These findings highlight the significant adverse impact that technostress can have on employees' well-being. However, in spite of these insights, research on technostress continues to focus primarily on its direct impact on employees, with little attention paid to how it can potentially influence interactions with third parties such as customers.

Research question

To bridge this gap, we utilize the transactional theory of stress and coping (TTSC; Lazarus and Folkman, 1984) to construct a model explaining how frontline employees' experience with technostress influence their customer-directed behaviors. Moreover, our understanding of how resilience-enhancing HR practices mitigate frontline employees' experience of technostress is still lacking. This system of HR practices is crucial in establishing a supportive work environment that empowers frontline employees with the mental resilience necessary to effectively navigate stressful situations (Bardoel, Pettit, De Cieri, & McMillan, 2014; Samo, Shaikh, Ibrahim, & Ali, 2021; Kim, Cho, & Yang, 2024). Based on this premise, we delve into the moderating impact of resilience-enhancing HR practices on the relationships between technostress and feelings of helplessness, as well as between helplessness and customer-oriented prosocial behaviors.

Research approach

In order to test our hypotheses, we have planned two field studies in Ghana. The first study, Study 1, will focus on examining the main and mediation effects in a sample of 300 hotel employees working in the eastern region of Ghana. We aim to recruit participants from various hotels in this region to ensure a diverse and representative sample for our study. The second study, Study 2, will not only replicate the findings obtained in Study 1 but also explore the moderating role of Resilience-enhancing HRM with

another sample of 300 hotel and restaurant employees in the greater Accra region of Ghana. This additional study will allow us to validate and build upon the results from the first study, making our empirical examination more comprehensive and robust.

In our analyses using Mplus, we will be employing the latent moderated structural equation (LMS) approach put forth by Cheung and Lau (2017). When examining moderated mediation, the most prevalent method is the regression approach. However, it's important to note that the regression approach, relying on observed variables, fails to consider measurement errors, which can introduce bias into the findings. Consequently, the resulting confidence intervals derived from this approach may also be affected by this bias. Furthermore, an inherent limitation of the regression approach is its need to multiply an independent variable by a moderator to calculate moderating effects, as highlighted by Preacher, Rucker, & Hayes, (2007). In contrast, the LMS approach, leveraging latent variables within Mplus, addresses measurement errors and circumvents the requirement to multiply an independent variable by a moderator to assess moderating effects. This refinement underscores the advantages of the LMS approach in mitigating potential biases and enhancing the accuracy of our analyses.

Findings

This is work in-progress. Data collection is currently underway for Study 1.

Contribution and Limitations

In our research, we delve into the transactional theory of stress and coping to propose that helplessness can act as a coping response to technostress. We emphasize that while feeling helpless may serve as a mechanism for coping with technostress in the workplace, it can lead to the depletion of employees' limited cognitive and emotional resources, ultimately impacting their ability to assist customers. Furthermore, we aim to advance technostress research by advocating for the integration of resilience-enhancing HR practices into the discourse. While existing studies have shown that well-managed situational factors can effectively mitigate technostress (Ragu-Nathan, Tarafdar, Ragu-Nathan, & Tu, 2008; Tarafdar, Maier, Laumer, & Weitzel, 2020; La Tore et al, 2020), we believe that the role of human resource work systems has been largely overlooked. This is despite the urgent calls for action from

management and human resource managers to address employee technostress (Ayyagari, Grover, & Purvis, 2011; Subramony, van Jaarsveld, Nguyen, Groth, & Solnet, 2023). Our research seeks to address these gaps and bring attention to the potential impact of HR practices on alleviating technostress.

In terms of limitations, the research samples will be selected from Ghana, an emerging economy in West Africa. Ghana's unique characteristics distinguish it from other emerging and developed economies. Therefore, it is imperative for future studies to undertake a comprehensive comparative analysis among various emerging economies with divergent work settings, cultural influences, and institutional contexts. Again, it is evident that while helplessness may play a role in translating technostress into customer service behaviors, it is crucial to acknowledge the presence of additional potential mediators. Considering the intimate, interpersonal nature of service encounters within high-contact service contexts, there is a considerable need for future research to delve into other significant employee-related variables. By doing so, researchers can shed light on the intricate mechanisms that mediate the relationship between technostress and customer service behaviors, both at the organizational level and on an individual basis.

Implications

Our proposed field study indicates that in order to mitigate technostress and its detrimental effects on customer service behaviors, it is essential to utilize HR practices that focus on enhancing employee resilience. This implies that when introducing digital technologies, it is crucial for managers to proactively build resilience among employees. Furthermore, it is important for managers to ensure that all technological prerequisites, such as a reliable IS infrastructure, are fully met to support the implementation of new technologies. Failing to meet these technological requirements may exacerbate technostress, as employees often lack clear guidance on how to address issues related to unreliable hardware or interruptions in wireless internet connectivity.

The managerial implications of our study will also underscore the importance of addressing technostress in the workplace. Technostress can significantly impact customer service behaviors, leading to potential negative outcomes. It is essential for managers to actively counteract technostress due to its potential health-impairment effects on employees, including strain, burnout, and high turnover rates. By effectively

managing the job demands of service employees, organizations can positively influence customer-related outcomes, emphasizing the interconnectedness of employee well-being and customer satisfaction.

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Victorian Treaty through an Indigenous Lens: Incorporating Collective Leadership, Voice, and Identity

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Abstract:

First Peoples of Australia were denied Treaty, when it was declared by the British to be Terra Nullius (nobody's land). The British colonisation of Australian lead to a brutal history that was inflicted on First Peoples. Since the British invasion First Peoples through Elders and activists have fought for equal footing in matching the wider non-Indigenous community. In 2016 a new chapter in Victoria and Australia commenced through the development of the Victorian Treaty framework. In this paper we explore some of the complexities within the Treaty processes, looking through an Indigenous Lens how the multilayered voice and identity of First Peoples are incorporated into the Treaty. Collective leadership was demonstrated through different leadership groups which displayed inclusiveness, highlighting the value of the importance surrounding place and the different needs of First Peoples living in Victoria.

Introduction

Australia is one of the only Commonwealth Country which does not have a Treaty with its First Peoples. In 2016, the Victorian State government was the first Australian State to commence Treaty negotiations with its First Peoples residing within its colonial boundaries. The Treaty for Victoria process recognises that First Peoples Sovereignty has never been ceded. Treaty is a key step to self-determination for First Peoples, Treaties offering an opportunity for voice in decision making, they can also include tribunals that revisit and address past wrong doings. Importantly, as (Mika & Scheyvens, 2022) argue in the context of Aotearoa New Zealand, honouring Treaties means enacting a decolonising agenda. In Australia, Treaty also raises awareness for non-Indigenous Australians to acknowledge First Peoples diverse cultures and Governments to recast Australia's national identity (Mansell, 2016, Victorian Treaty Advancement Commission, 2019). However, the brutality of some 250 years of colonisation including policies of genocide and assimilation have created significant challenges. One of

these challenges is how does a process which is largely based on Western democratic principles and practices fit with First Peoples ways of knowing, being and doing?

Keywords: First Peoples, Treaty for Victoria

In 2019, as part of the Treaty Process the First Peoples Assembly was established in Victoria made up of 22 elected and 10 reserved seats. The election of the members of the Assembly was an important step towards Treaty but was not without its critics from the First Peoples of Victoria community .(First Peoples' Assembly of Victoria, 2019, Atkinson et al., 2017, Fryer, 2019) This paper surfaces the complexity and challenges of capturing First Peoples voice heard in the process. We apply an Indigenous lens and perspective on the Treaty for Victoria process and study the complexities that make up First Peoples voices and identities.

Current Understanding

There is an international literature focusing on the development and implementation of Treaties in colonised countries. Much of this literature focuses on Aotearoa (New Zealand) and Turtle Island (Canada and the United States) (Hobbs & Williams, 2019, Graham & Petrie, 2018, First Peoples' State Relations, 2020). As part of this literature there is often a focus on truth and reconciliation processes (Maddison et al., 2023, Czyzewski, 2011, Williams, 2007).   In Australia most of the Treaty literature focuses on the potential benefits of Treaty (Brennan et al., 2005, Hobbs & Williams, 2019) for First Peoples and the legal challenges and implications (Hobbs & Williams, 2019, Graham & Petrie, 2018, Petrie & Graham, 2018). This paper focuses on the Treaty for Victoria process and draws on empirical evidence from key players. It also applies literature from the management discipline namely Employee Voice perspectives (Cullinane & Donaghey, 2020, Syed, 2020, Wilkinson et al., 2020, Barry & Wilkinson, 2021, Wang & Yen, 2021) to cast light on the institutional framework in which First Peoples voice is captured Social Identity Theory (Hogg, 2021, Hogg, 2023, Davis et al., 2019, Brown &

Pehrson, 2019) helps to give insight into the dynamics between the many Mobs in the First Peoples community and Collective Leadership (Mchugh et al., 2016, Arkedis et al., 2023, Gram-Hanssen, 2021, Ospina et al., 2020, De Santibañes et al., 2023) to help understand the underlying dynamics and challenges in the quest for self-determination.

Research Question

The aim of this research project was to explore the Treaty for Victoria process through an Indigenous Lens (IL) and examine how First Peoples and Traditional Owners (TOs) voice is integrated in the Treaty process.

We ask three research questions. First, *what are the challenges in the complexity of the relationship between the Victorian State Government and Victoria's TOs in the Treaty process in leading to First Peoples self-determination through Voice?* Second, *what is the connection between First Peoples voice and identity, and how is voice and identity connected to Treaty?* Third, *what is the role of First Peoples leadership in navigating the complexities in the Treaty Process?*

Research Approach

The paper is written through an IL using literature for a theoretical underpinning of Indigenous Standpoint Theory and applies empirical practice using Indigenous research methods recognising the value of Lived Experience. We also value the research participants as Jarrmip meaning owners of knowledge in the Gurindji language of the first author. The research draws on 24 yarns with Jarrmip over a five year period. They included Traditional Owners in the colonial state of Victoria, some of whom were also members of the First Peoples Assembly and/or key participants in the process leading to the establishment of the Assembly. We also draw on interviews from government members and other officials, and members of the Pan Aboriginal community in Victoria. Pan Aboriginals are First Peoples whose Country is

elsewhere in Australia. Some of our interviewees where interviewed a number of times through the Treaty process to capture any changing views. We draw on secondary data in the form of government and Assembly reports and media reports from 2016. We also carried out participatory observation as over a five year period two members of the research team attended Assembly Meetings in person and on line, took part in Assembly workshops and surveys and attended Assembly community events such as the Big Days Out.

In this paper we utilise the term First Peoples. Three authors of this paper are First Peoples and self-identify as Gurindji, Yawuru. The other two authors self-identify as Anglo Celtic and Chinese

Findings

We identify four key findings. The first key finding is that there are clear tensions between Institutional Voice, that is government legislation, policy and structures, and Community Voice. Much of this is based around power relationships and power imbalances at the negotiating table. In the early stages of the process a number of the Jarrmips were suspicious of the Victorian State government and did not trust the colonial processes. They felt that some members of the First Peoples Community were too close to government and were not representative of the wider community. They pointed to the low turnout for the elections of the First Assembly and argued that the community was not engaged. Others argued that this was a process and trust had to be earned both by activists and by government and that power imbalances and different expectations are manifestations of the long-term impacts of colonization that needed to be worked through not abandoned.

From the perspective of the Victorian State government, while there was a commitment to self-determination this appeared to be their boundary. The importance of sovereignty to First Peoples was absent from all government documentation. It appeared that for the Victorian

State government - Sovereignty was a step too far. A key issue here is that despite these differences, complexities and power imbalances the commitment to the process continued. The results of the election of the second Assembly in 2023 saw many more First Peoples voting and clearly much better engagement.

Another aspect of the complexities of institutional voice was the role of Elders. The consultation with Elders across the State of Victoria identified the crucial role in which Elders play. The consultations invited any First Peoples Elders to events for inclusivity. It was decided that all Traditional Owner groups should be represented including Stolen Generation and Elders from other Countries. There was a preference that Elders be independent and not connected to the particular Clans or be nominated by specific Clans (First Peoples' Assembly of Victoria, 2023). It could be argued the thought behind these decisions was to have a collective leadership model that could emulate the Assembly, eliminating the larger more established Clans having more numbers in decision-making. However, this could be seen as a direct conflict with Clans that have established Elders groups that could feed into the Elders group.

The second key finding is in relation to voice and silence. For Elders and for Pan-Aboriginal First Peoples their voice had been silenced by design in that although they could vote in the elections and had an indirect voice they could not have a direct voice in decision making. However, many members of the Pan Aboriginal community were silent by choice. Many Pan-Aboriginals chose not to engage in the Treaty process. While they were fully supportive of a Treaty, they had their internal struggles with cultural protocols of living on the Countries of other Traditional Owners. They felt that the State of Victoria was not their Country and from a cultural perspective they should not have a voice. Furthermore, some Mobs did not take up their Voice. For example, the Yorta Yorta Nation Aboriginal Corp oration Governance (YYNACG) refused to be a part of the Treaty with the Victorian Government, stating it was

farcical (Fryer, 2019). Nevertheless, a number of Yorta Yorta TOs are in favour of Treaty, with eight Yorta Yorta TOs opting to be elected representatives on the First Peoples Assembly of Victoria. A statement from the YYNACG declared that they will not stop anyone nominating or becoming involved in the Treaty process but any Yorta Yorta person doing so would be standing "as a Victorian Aboriginal" representative and not a representative of the Yorta Yorta (Fryer, 2019).

The third key finding is the essential relationship between Mob Identity and Voice in particular the importance of Country and Place. In identifying the relationships between Victorian TO First Peoples and the Victorian Government we need to look through the lens of identity. First Peoples identities can be defined in terms of relationships between their distinct societies, communities and cultures that are informed by one's worldviews and values. In the Treaty process Traditional Owners can negotiate for their own distinct Mob or Clan, through their own Self-Determination and authority of Country and their culture. However, the institutional framework had also created complexities for Mob and Clan identity. Separately to the Treaty process the Victorian government had created in 2010 the Traditional Owner Settlement Act (TOSA) to replace the Native Title Act, however, the TOSA has many stipulations attached to it, making it inaccessible for some Traditional Owners who are not able to be recognised by government. The Treaty structure has rewarded these Mobs and Clans who are recognized by the government by granting them a Reserve Seat on the Assembly. The rest of Victorian Traditional Owners not eligible for a TOSA, needed to apply as candidates and run for election which was determined by the candidates place of residency. The Treaty balloting was divided into five designated regions across Victoria and the candidates can only nominate in the region which connects to their place of residency, in representing First Peoples in that region. This can lead to conflict between Mobs and challenges in relation to identity.

The fourth key finding is the ability of First Peoples Collective Leadership in the path to self-determination. Examining the evidence from 2016 to 2024, it is clear that First Peoples leaders have understood and captured the different needs of the different Mobs, and the different power relationships between different mobs. By focusing on the benefits of sharing knowledge and culture and the importance of collective decision making they were able to make positive changes in awareness and engagement of the First Peoples community. At different points in time when conflict emerged the leaders were able to listen, engage and find a way forward. Moreover, despite the challenges of unequal power relationships and the fragility of the political process, First Peoples leaders have sought ways to sustain and embed progress. For example, through the establishment of a Self-Determination Fund under Trust legislation that is safe from future less supportive governments.

Contribution and Limitations

The contribution of this research is threefold. First, is the theoretical contribution. No one has applied management theories such as Employee Voice, Social Identity Theory and Collective Leadership to the phenomena of a First Peoples Treaty process in the context of Victoria, Australia. Through this action the research can contribute to the further development of each theory and allow them to be used in innovative contexts. Moreover, by marrying these theories and viewing the process through an IL and utilising Indigenous research methods each of the theories can be extended. Furthermore, the longitudinal participatory observation aspects of this research can contribute not only to Indigenous research methods but also to qualitative methodology. Future research could focus on the experience of similar processes across the other States in Australia.

Implications

There are many learnings from this research for governments and for First Peoples organisations across Australia and internationally. Much of this learning will focus on the how and the why of this process. In particular how governments can build trust with their First Peoples communities and the benefits of First Peoples voice in decision-making.

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Exploring the Effect of Boardroom Gender Diversity on Financial Constraints of Firms: An International Evidence

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Exploring the Effect of Boardroom Gender Diversity on Financial Constraints of Firms: An International Evidence

Abstract:

In this paper, we investigate the intricate relationship between boardroom gender diversity and financial constraints. Analysing a large sample of firms from 49 countries, our findings show a significant negative effect of gender diversity on the financial constraints of firms. We also find that both firm age and firm size have strong negative effects on financial constraints. However, only the former appears to have complementary moderation effect between gender diversity and financial constraints nexus. Furthermore, cross-cultural and country-level institutional quality characteristics, such as the rule of law and regulatory quality, have an important bearing on the relationship between gender diversity and financial constraints. For high-income countries, gender diversity and financial constraints are negatively related, whereas this is not the case for low- and middle-income countries. Our baseline findings are also robust with an alternative measure of financial constraints and sub-sample analyses. Overall, our research offers valuable insights for overcoming financial constraints by embracing diversity in corporate boards.

1.   Introduction

This study investigates the potential effect of board gender diversity (BGD) exerted on a firm's financial constraints (FFC). BGD refers to the membership of females on a firm's board of directors (Carter et al., 2003), while FFC is characterised as "an inelastic supply of external finance, implying a constraint on firm decisions whenever internal financing is insufficient" (Cherchye et al., 2018, p. 4). Extant literature discusses the influence of financial constraints on a firm's financial performance, risk-taking, investments, growth, and corporate social responsibility (CSR) activities (Charles et al., 2018; Marquez-Cardenas et al., 2022). However, the results remain mixed and inconclusive (Provasi & Harasheh, 2021).

In this paper, drawing upon an international sample of firm-level data from 46 countries for the period of 2004-2022, we test whether BGD can reduce FFC. The thrust of our investigation is guided by a combination of theories and existing evidence. The upper echelons theory suggests that strategic decision-making and subsequent financial performance of a firm are influenced by the cognitive abilities of the board members (Hambrick & Mason, 1984). There exists convincing evidence which claims women's representation on the boards helps to progress ethical and balanced decision-making within firms (Campbell & Mínguez-Vera, 2008; Duppati et al., 2020; Guizani & Abdalkrim, 2022). The ethical argument focuses on the moral grounds of maintaining an equitable proportion of gender diversity on boards (Fine et al., 2020). According to Cumming et al. (2015), male board of directors are more likely than female counterparts to engage in unethical behaviour. Pareek et al. (2023) find that BGD played a significant role in the decisions related to the CSR performance of the companies. Similar support can be found in other studies (Benaguid et al., 2023; Gaio & Gonçalves, 2022; Zahid et al., 2023). However, the literature to date remains sparse in the investigation of impact exerted by board gender diversity on financial constraints. In this paper, we seek to fill the identified gaps in the literature.

Our findings contribute to three aspects of the literature at the nexus between BGD and FFC. First, this is one of the few longitudinal and multi-country comprehensive studies that thoroughly investigates the relationship between gender diversity and financial constraints at the firm level. Prior studies examined the indirect effects of gender on bank credit access (Campanella & Serino, 2019; Muravyev et al., 2009), return on assets, return on equity (Alabede, 2016), and market value (Naeem et al., 2022). This study specifically investigates the direct effect of BGD on FFC. Second, unlike prior literature that documents the direct effects of firm age and firm size on financial constraints, this study explores interactive and/or moderating effect of these variables in investigating the relationship between gender diversity and financial constraints. Such investigation is unique is critical from practical and theory building perspectives, as existing literature is under researched in the exploration of the role played by firm age and firm size in gender-diverse firms in reducing the financial constraints issue. Third, while prior comparable studies have investigated the effect of gender on financial performance and credit access in a single-country context (Chapple & Humphrey, 2014; Muravyev et al., 2009), the findings of these

2

prior studies cannot be generalised due to varying country-specific characteristics. Our study provides international evidence by taking cross-cultural and country-level institutional quality perspectives and drawing upon similarities and/or differences of country contexts categorised on the basis of income levels as high and low.

The remainder of this paper is organised as follows - Section 2 below presents the literature review and hypotheses development. Then, Section 3 presents data characteristics and methodology, followed by Section 4, which discusses the empirical results. Lastly, Section 5 provides concluding remarks alongside the study's limitations and outlines further research avenues.

2. Hypothesis development

Adams and Ferreira (2009) argue that female directors have a significant impact on board inputs and firms' outcomes. Gender composition positively affects board effectiveness. Female directors have a substantial and value-relevant impact on board structure. Gender potentially exerts a negative impact on small businesses access to finance. For example, Campanella and Serino (2019) argue that gender discrimination exists towards women-led small and medium-sized enterprises (SME) in the bank credit market where women are at a disadvantage in securing credit compared to men. The authors also suggest that the personal characteristics of lenders affect the acquisition of bank loans. Muravyev, Talavera, and Schäfer (2009) examine whether financial institutions are gender-biased in granting loans to SMEs in a cross-country study. They find that women-managed businesses are less likely to obtain bank loans and receive higher interest rates if loan applications are approved.

The theoretical underpinnings and mixed empirical findings presented above calls for urgent investigation of the potential association between board gender diversity and financial constraints as a key motivation for this study in light of the envisaged firms' economic, social and societal contributions. Prior empirical studies focus either on a small number of firms in a single country context or only on bank credit or the financial performance of firms and therefore present two key methodological limitations such as representation and generalisability thus leading to the formulation of our first hypothesis as:

H1: Firms' boardroom gender diversity is negatively associated with financial constraints.

Next, we look at moderating/interactive roles of the firm's specific factors that may potentially influence the relationship between BGD and FFC. Hadlock and Pierce (2010) argue that the size and age of firms can be more significant determinants of financial constraints. Scholars find that the financial constraints of small and young firms reduce sharply as they grow and become large. Later empirical studies examining the effect of board gender diversity on financial constraints have documented the importance of firm size and age in predicting financial constraints. For example, Mertzanis et al (2024) find a positive relationship between female ownership and management of firms and access to external finance. However, the relationship varies by firm size and industry sector. Similarly, Hansen and Rand (2014) find that gender differences and firm size are significant determinants of credit access. Also, Isidro and Sobral (2015) suggest that a higher percentage of women on boards in larger firms within the European Union can increase firm value indirectly. Another string of literature suggests that not only the size of a firm but also firm age matters in determining investments and financing. For example, Zhu et al (2023) argue that women's representation in corporate boards promotes innovation in smaller, younger, and financially less constrained firms. The opposite is true for larger, old, and financially constrained firms. As such, firm size and age remain two decisive factors that can influence financial constraints. We formulate the hypotheses capturing firm age and size as below:

H2a: Firm age (i.e. mature firms) has a moderating/interactive effect on the relationship between boardroom gender diversity and financial constraints.

H2b: Firm size (i.e. large firms) has a moderating/interactive effect on the relationship between boardroom gender diversity and financial constraints.

3

Finally, while gender equality/parity is an important policy agenda worldwide that ensures equitable access to resources and enables economic growth[2], a recent report by the World Economic Forum (WEF, 2023) indicates slow or no progress in gender parity and highlights the persistent large gaps. The gap is prevalent across the world both in developed and developing countries. Therefore, board gender-based studies may not be generalisable due to idiosyncratic nature and institutional characteristics in different countries (Campbell & Mínguez-Vera, 2008), and board gender diversity can vary in different corporate settings across countries. Asiedu et al (2013) find that the gender gap and financial constraints vary by economic region, and the gender gap effect on financial constraints in emerging economies is non-existent. Similarly, Mertzanis et al (2024) argue that the effect of gender diversity on accessing external finance varies by level of country development, institutional quality, and governance. The authors find that female top management and female ownership are important determinants of accessing finance in larger firms in developed countries. Muravyev et al (2009) find some evidence that the effect of gender on access to finance disappears with the level of financial development. Wellalage et al (2019) analyse the effect of bribery in accessing credit by male-managed and female-managed SMEs in South Asian countries. Authors find that bribe-paying female entrepreneurs are likely to gain access to credit. It is likely that bribe-paying avoids ideological discrimination between male and female SMEs. In addition, Wasiuzzaman and Subramaniam (2023) examine the effect of board gender diversity on ESG disclosure in the developed and developing world. They find that women directors influence the disclosure quality favourably only in developed countries.

Overall, cross-cultural and country-level institutional quality characteristics can influence board diversity and financial constraints. Board gender diversity and its effect on firm performance, value, and financial constraints can vary by country due to differences in economic development, institutional quality, and governance structures in place. Campanella and Serino (2019) recommend subsampling multi-country studies to capture the effect of cultural backgrounds. We, therefore, formulate the third hypothesis as below:

H3: Cross-cultural and country-specific institutional quality characteristics have a significant effect on financial constraints.

3. Methodology and Data

3.1 Data

This study covers firm-level data from 49 countries representing both developed and emerging country contexts. We exclude firms originating from offshore financial centres such as Panama, the Cayman Islands, Bermuda, Virgin Islands. Our sample includes 5,660 firms and 45,483 firm-year observations spanning from 2004 to 2022. Table 1 presents the distribution of the data across sample countries, with dominance of the United States (12,791 observations, 28.12%), Japan (4,861 observations, 10.69%) and the United Kingdom (3,487 observations, 7.67%).[3] In our analysis, we primarily use firm-specific fundamental data from Refinitiv Eikon. In addition, country characteristics such as Regulatory Quality, Rule of Law and classification of high, low- and middle-income countries are obtained from the World Bank.

[Table 1 around here]

3.2. Financial constraints measure

In this study, we denote financial constraints as obstacles firms face in obtaining external finance. Financial constraint is measured using Whited and Wu (2006), commonly known as WW Index. Following Whited and Wu (2006), the equation to estimate WW Index is as follows:

$$FFC_{i,t} = -0.091CF_{i,t} - 0.062DIVPOS_{i,t} + 0.021TLTD_{i,t} - 0.044LNTA_{i,t}$$
$$+0.102ISG_{i,t} - 0.035G_{i,t} \tag{1}$$

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[2] https://www.springernature.com/gp/researchers/sdg-programme/sdg5
[3] We test the effect of dominance in the sample for the USA Japan and the UK in subsample analysis under robustness check.

Where *FFC* is the financial constraint measure of firm i in year t. *CF* is the ratio of cash flow to total assets. *DIVPOS* is a dummy variable that takes the value of 1 for a firm paying cash dividends and zero otherwise. *TLTD* represents the ratio of long-term debt to total assets and *LNTA* is the natural log of total assets. The industry and the firm's sales growth are represented by *ISG* and *SG*, respectively. By construction, the lower the value of *FFC*, the lower the financial constraints faced by a firm.

In addition, we also use the dividend payout ratio (Cleary, 2006) as an alternative measure of financial constraint for the robustness test. This relates to whether firms are paying adequate dividends or not, as conventionally financially constrained firms are low dividend-paying firms to use internal funds for investment and avoid raising external funds (Cleary, 2006).

3.3. Empirical methodology

To test the stated hypotheses, we use *BGD* as the key explanatory variable in Equation 2. In addition, several control variables are used in the panel regression and control for industry, firms and country fixed effects to control unobserved heterogeneity. The general form of the equation can be written as follows:

$$FFC_{i,t} = \alpha + \beta_1 BGD_{i,t-1} + \sum \gamma' \, Controls_{i,t} + \varepsilon_{i,t} \qquad (2)$$

Where $FFC_{i,t}$ is the financial constraint measure of firm i in year t. $BGD_{i,t-1}$ represents board gender diversity of firm i in time t. One considers one period lag of BGD in the regression equations. Our control variables include firm-size, firm-age, leverage, market-to-book value ratio, R&D and return on assets. Our country-level institutional quality control variables include regulatory quality, rule of law and high- and low-income dummy variables. Appendix 1 provides definition of all variables used in the study.

4. Empirical results

4.1 Summary statistics

Table 2 summarizes the variables used in the study for baseline regression analyses. The main variables of interest are WW Index and gender diversity. The mean (standard deviation) value of WW Index is -0.5 (0.6) with minimum and maximum value of -50.3 and 26.2, respectively. For gender diversity measure, the mean (standard deviation) value is 0.2 (0.1) with minimum 0.0 and maximum 0.9, suggesting relatively low diversity, on average, in sample countries. The average value (standard deviation) of firm age and size are 3.53 (0.73) and 10.7 (2.7), respectively.

[Table 2 around here]

4.2. Baseline results

In this section, we present the results of Equation 2 in Table 3 where we test our first hypothesis (H1). Table 3 Model (1) shows the result of the regression, excluding firm-level control variables, but including industry, year and country fixed effects to control unobserved heteroscedasticity. The finding indicates that BGD is significantly negatively associated with financial constraints, suggesting that firms with higher gender diversity are more likely to experience lower financial constraints. Next, we test the effect of firm characteristics on our baseline results, and Table 3 Model (2) exhibits the results including the firm-level control variables. The results show no change in the negative relationship between GBD and FFC. Most of the control variables, except R&D, indicate an expected significant relationship with financial constraints. Again, Table 3 Model (3) adds the age variable in controls, which reveals the baseline finding remains the same while age appears to be inversely related to financial constraints, as per expectation.[4] These results generally confirm our first hypothesis.

[Table 3 around here]

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[4]The construction of WW Index (Equation 1) implies that the effect of general firm size has already been captured. We, therefore, exclude general firm size as additional control. However, further analysis of different types of firm size is presented in the next sections.

5

4.2.1 Effect of firm age and size

In Table 4, we explore the potential effect of the firm's age and size by splitting the sample into mature and large firms (see measurement of these variables underneath of Table 4). The results reported in Table 4 Model (1) and Model (2) show that both mature firms and large firms are significantly negatively related to financial constraints while keeping the inverse relationship between BDG and FFC unchanged. These findings suggest that gender-diverse boards of large and mature firms are more likely to be less financially constrained. The co-efficient value association with Mature Firms is -0.020 as compared to Large Firms -0.066 on FFC. However, the value of BGD remains similar in both equations (-0.108 and -0.905).

[Table 4 around here]

4.2.2 Treatment effect of gender diversity on financial constraints

In conjunction with the previous section, we supplement the analysis here with the sample treatment effect of gender diversity on financial constraints. With reference to our sample, about 75.95% of them have some level of gender diversity, while the remaining 24.05% don't have any form of gender diversity (i.e. gender diversity = 0). Based on this information, we explore whether firms having gender diversity (i.e. gender diversity > 0) have different effects on financial constraints compared to firms having no gender diversity. The sample firms having some forms of gender diversity is considered *treated*, i.e. *treat = 1*, 0 otherwise. The results are reported in Table 5. Both Model (1) and Model (2) demonstrate a significantly negative impact of *treated* firms with gender diversity on financial constraints that reaffirm our first hypothesis. Similarly, both mature and large firms exhibit an inverse effect on financial constraints, as documented in Table 4. These findings support our baseline results reported earlier.

[Table 5 around here]

Following on, we investigate the potential moderating effect of mature firms (i.e. age) and larger firms (i.e. size) on the gender diversity and financial constraints nexus, i.e. whether the treatment effect of gender diversity in mature and large firms strengthens the negative association between gender diversity and financial constraints. For this moderating effect test, we use the following regression:

$$FC_{i,t} = \alpha + \beta_1 Treat_{i,t} + \beta_2 Treat_{i,t} * MatureFirm_{i,t} + \beta_3 Treat_{i,t} * LargeFirm_{i,t} + \sum \gamma' Controls_{i,t} + \varepsilon_{i,t} \quad (3)$$

Where $\beta_2 Treat_{i,t} * MatureFirm_{i,t}$, is the interaction variable of gender diversity and mature firms. Similarly, $\beta_3 Treat_{i,t} * LargeFirm_{i,t}$, represent the interaction between gender diversity and large firms.

Table 6 presents the regression results of Equation 3 with and without control variables. In both Model (1) and Model (2), *treat* variable is significantly and negatively related to financial constraints. In the same vein, large firms are likely to have lower financial constraints, which is consistent with prior studies (Hadlock & Pierce, 2010), while mature firms show no link with financial constraints. However, the main variables of interest in Table 6 Model (1) and Model (2) are the interaction variables between mature firms representing age and *treat* variables representing gender diversity (Treat*Mature Firms), and large firms representing size and *treat* variables representing gender diversity (Treat*Large Firms). The findings in both Model (1) and Model (2) reveal a significantly negative association between (Treat*Mature Firms) and financial constraints. This suggests strengthening the inverse nexus between gender diversity and financial constraints in mature-age firms. In other words, mature firms with gender diversity can reduce financial constraints significantly. Such complementary effect of the interaction variable (Treat*Mature Firms) supports our hypothesis H2a. In contrast, the interaction variable (Treat*Large Firms) appears to have no significant effect on financial constraints, signifying substitutive effects of large firms and gender diversity in affecting financial constraints. In other words, large firms with gender diversity might not strengthen the inverse association between gender diversity and financial constraints. As such, our hypothesis H2b is not supported or remains inconclusive. The reason could be that the *treat* firms with some form of gender diversity can sufficiently mitigate financial constraint issues irrespective of their size in terms of net assets.

6

[Table 6 around here]

4.3 The role of cross-cultural and institutional quality characteristics

In the previous sections, we have provided evidence of the significant negative effect of gender diversity on financial constraints through pooled OLS and treatment effects. However, the observed effects of gender diversity on financial constraints may vary across countries due to institutional quality. To test this prediction and H3, we re-estimate Model (3) in Table 3 for "High" and "Low" institutional characteristics as measured by Regulatory Quality and Rule of Law. The results reported in Table 7 show significant negative impacts of gender diversity on financial constraints in "High" institutional quality countries. There is no significant effect of gender diversity on financial constraints in countries with "Low" institutional quality. Institutional quality, therefore, reinforces the effects of gender diversity on financial constraints.

[Table 7 around here]

4.4. The role of country-level economic development (high income versus low income)

It can be argued that the level of income can potentially influence the relationship between gender diversity and financial constraints. For example, firms within the European Union are required to comply with respective gender/women quotas on corporate boards (Campanella & Serino, 2019). In contrast, emerging countries have varying degrees of women participation in boards and the appointment of women directors is mostly voluntary. Consequently, our results may not be generalised due to these differences in income per capita. To examine the effect of this aspect of economic development on the relationship between gender and financial constraints, we divide our sample into high-income and low to medium-income level countries. The regression results are reported in Table 8, demonstrating that gender diversity and financial constraints are significantly negatively related in high-income countries, but no significant effect is observed in "low and medium" income countries. This finding emanating from the differences in macroeconomic conditions calls for additional policies of gender diversity in corporate boards in emerging economies compared to advanced economies.

[Table 8 around here]

4.5 Robustness check

4.5.1 Sub-sample analysis for the USA, Japan and the UK

As mentioned before, we test the effect of dominance of the USA, UK and Japan and in subsample analysis as part of robustness check. Table 9 illustrates the findings of subsample analysis for the respective countries. Consistent with our baseline results, gender diversity appears to have a significant negative impact on financial constraints in the USA, Japan and the UK sample firms. Therefore, our H1 remains valid, as per expectation, suggesting a deterrent role of gender diversity in mitigating financial constraints.

[Table 9 around here]

4.5.2 Alternative measures of financial constraints

As an alternative to the index-based measures of financial constraints, Cleary (2006) proposes dividend payout of firms as an alternative measure of financial constraints. Financially constrained firms normally choose lower dividend payout ratios in order to reduce the probability of being forced to raise external funds. Firms with dividend payout ratios of above the sample median payout ratio are considered high dividend-paying firms while others are considered low dividend-paying firms (Cleary, 2006). Therefore, index measures of financial constraints should be negatively (inversely) correlated with the dividend payout ratio. In accordance with (Cleary, 2006), a negative correlation is observed between the WW Index and dividend payout ratio for our sample firms (correlation coefficient of -0.0427 with p-value 0.000).

Table 10 presents the results on the effect of gender diversity of firms on their financial constraints as measured by the inverse of the dividend payout ratio (INSDIVP) being the dependent variable. The coefficients associated with gender diversity is negative at 1% significance level, which strongly

7

supports our previously reported findings. Model (1) in Table 10 presents regression results without age and size effects, Model (2) with the age variable, Model (3) with the size variable and Model (4) by including both age and size variables. The findings in Model (2) to Model (3) are mostly similar to the respective models in Table 3. In all models in Table 10, the findings indicate a significant negative effect of gender diversity on financial constraints while most of the control variables indicate an expected significant relationship with financial constraints, except leverage. With regard to the age variable in Model (2) and the size variable in Model (3), both reveal an inverse relationship with financial constraints without off-setting the effect of gender diversity. Finally, in Model (4), when both age and size and age variables are included together, they still appear to have inverse relation with financial constraints and without offsetting the effect of gender diversity. In such a case, our alternative measures of financial constraints (dividend payout ratio) remain as a valid proxy for financial constraints as argued by Cleary (2006).

[Table 10 around here]

5. Conclusion

This study examines the potential relationship between board gender diversity and financial constraints. We use established financial constraint measures, gender diversity scores, and firm-level fundamentals for this study. Our sample includes 6,426 firms representing 49 countries spanned 2004-2022. We report several key results. First, board gender diversity and financial constraints are negatively related. This result supports our first hypothesis (H1). Second, firm age and firm size have strong negative effects on financial constraints which is consistent with the findings of prior studies. However, firm age only shows a complementary moderating effect on the relationship between gender diversity and financial constraints, not firm size. This result supports our hypothesis H2a but not hypothesis H2b. Third, the negative relationship between gender diversity and financial constraints is more prominent in large firms, meaning larger firms with gender-diverse boards can reduce financial constraints significantly. Fourth, cross-cultural and country-level institutional quality characteristics, as measured by the rule of law and regulatory quality, significantly influence financial constraints, which supports our third hypothesis (H3). Fifth, gender diversity and financial constraints are significantly and negatively related for high-income countries, which also supports the third hypothesis (H3). Overall, the findings reported in this paper provide important insights for firms to develop a deeper understanding of the importance of gender diversity, which will help formulate effective strategies to improve firms' overall financial performance. The findings reported in this paper are also expected to provide meaningful practice and policy-related insights.

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8

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Table 1: Number of Observations by Country

Country Name	Frequency	Weight	Country Name	Frequency	Weight
Argentina	191	0.34	Malaysia	785	1.73
Australia	2,292	5.24	Mexico	365	0.8
Bosnia & Herzegovina	6	0.01	Namibia	50	0.11
Brazil	809	1.81	Netherlands	590	1.3
Bulgaria	382	0.88	New Zealand	334	0.73
Chile	276	0.63	Oman	12	0.03
China	2,543	5.71	Pakistan	13	0.03
Congo, Dem. Rep.	1,049	2.17	Panama	37	0.08
Curacao	19	0.04	Peru	133	0.29
Cyprus	13	0.03	Philippines	211	0.46
Czechia	15	0.04	Portugal	113	0.25
Denmark	422	0.96	Qatar	53	0.12
France	1,440	3.35	Saudi Arabia	955	2.1
Germany	1,484	3.21	Serbia	325	0.71
Greece	169	0.37	Singapore	429	0.94
Honduras	44	0.10	Slovenia	117	0.26
Hong Kong SAR, China	531	1.27	Spain	603	1.33
Iceland	141	0.30	Sudan	1,229	2.7
India	1,471	2.43	Switzerland	2,731	6
Indonesia	346	0.74	Thailand	527	1.16
Iran, Islamic Rep.	415	0.94	Uganda	4	0.01
Italy	553	1.19	United Arab Em.	78	0.17
Japan	4,861	11.33	United Kingdom	3,487	7.67
Kazakhstan	4	0.01	United States	12,791	28.12
Kuwait	35	0.08	**Total**	**45,483**	**100**

Table 2: Summary Statistics

Variable	N	Min	p25	p50	Mean	p75	Max	SD
WW Index	45483	-50.27	-0.56	-0.47	-0.46	-0.39	22.75	0.58
BGD	45153	0.00	0.08	0.17	0.17	0.27	0.87	0.14
Size	43523	0.42	8.88	10.34	10.70	12.24	20.89	2.70

10

Market-to-Book	44549	-61.03	1.15	1.98	3.38	3.62	135.64	8.48
Leverage	45483	0.00	0.07	0.19	0.22	0.32	2.65	0.18
Research & Dev.	45483	0.00	1.00	1.00	0.97	1.00	1.00	0.16
Return-on-Asset	45462	-0.83	0.03	0.05	0.06	0.09	0.92	0.11
Age	42123	0.00	3.05	3.47	3.53	4.13	5.33	0.74

Table 3: Gender diversity and financial constraints nexus- baseline results

VARIABLES	WWIndex (1)	WWIndex (2)	WWIndex (3)
L. BGD	-0.147***	-0.111***	-0.100**
Market-to-Book		-0.010***	-0.011***
Leverage		-0.067***	-0.069***
R&D		0.007	0.010
Return-on-Asset		-0.220***	-0.210***
Age			-0.017***
Constant	-0.446***	-0.398***	-0.343***
Observations	37,858	37,145	34,491
R-squared	0.045	0.070	0.070
Industry Fixed Effect	Yes	Yes	Yes
Country Fixed Effect	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes

Notes: Standard errors are robust to heteroskedasticity and clustering at the firm level. *** p<0.01, ** p<0.05, * p<0.1.

Table 4: Firm age and size effects on gender diversity and financial constraints nexus

VARIABLES	WWIndex (1)	WWIndex (2)
L. BGD	-0.108***	-0.095**
Mature Firms^	-0.020***	
Large Firms^^		-0.066***
Market-to-Book	-0.011***	-0.011***
Leverage	-0.069***	-0.053**
R&D	0.008	0.008
Return-on-Asset	-0.220***	-0.211***
Constant	-0.390***	-0.373***
Observations	37,146	37,146
R-squared	0.071	0.072
Industry Fixed Effect	Yes	Yes
Country Fixed Effect	Yes	Yes
Year Fixed Effect	Yes	Yes

Notes: Standard errors are robust to heteroskedasticity and clustering at the firm level. *** p<0.01, ** p<0.05, * p<0.1.

Table 5: Treatment effect of firms with gender diversity on financial constraints

VARIABLES	WWIndex (1)	WWIndex (2)
Treat	-0.042***	-0.029***
Mature Firms		-0.019***
Large Firms		-0.070***
Market-to-Book		-0.010***
Leverage		-0.072***
R&D		0.012
Return-on-Asset		-0.199***
Constant	-0.429***	-0.353***
Observations	45,489	44,539
R-squared	0.046	0.068
Industry Fixed Effect	Yes	Yes
Country Fixed Effect	Yes	Yes

11

Year Fixed Effect	Yes	Yes

Notes: Standard errors are robust to heteroskedasticity and clustering at the firm level. *** p<0.01, ** p<0.05, * p<0.1.

Table 6: Moderating effect of age and size

VARIABLES	WWIndex (1)	WWIndex (2)
Treat	-0.035***	-0.027***
Mature Firms	0.006	0.000
Treat * Mature Firms	-0.123***	-0.101***
Large Firms	-0.051***	-0.078***
Treat * Large Firms	0.047	0.043
Market-to-Book		-0.010***
Leverage		-0.071***
R&D		0.010
Return-on-Asset		-0.199***
Constant	-0.408***	-0.353***
Observations	45,159	44,228
R-squared	0.047	0.068
Industry Fixed Effect	Yes	Yes
Country Fixed Effect	Yes	Yes
Year Fixed Effect	Yes	Yes

Notes: Standard errors are robust to heteroskedasticity and clustering at the firm level. *** p<0.01, ** p<0.05, * p<0.1.

Table 7: The role of cross-cultural and country-level institutional quality characteristics

	Regulatory Quality		Rule of Law	
	High	Low	High	Low
VARIABLES	WWIndex	WWIndex	WWIndex	WWIndex
	(1)	(2)	(3)	(4)
L. BGD	-0.106*	-0.066	-0.105*	-0.067
Market-to-Book	-0.012***	-0.005	-0.012***	-0.005
Leverage	-0.062**	-0.093***	-0.062**	-0.092***
R&D	0.015	0.002	0.014	0.002
Return-on-Asset	-0.244***	-0.155	-0.248***	-0.150
Age	-0.014**	-0.021***	-0.014**	-0.020***
Constant	-0.341***	-0.375***	-0.341***	-0.376***
Observations	25,546	8,945	25,432	9,058
R-squared	0.072	0.072	0.073	0.072
Industry Fixed Effect	Yes	Yes	Yes	Yes
Country Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes

Notes: Standard errors are robust to heteroskedasticity and clustering at the firm level. *** p<0.01, ** p<0.05, * p<0.1.

Table 8: The role of economic development (high vs low income)

VARIABLES	High Income	Low and Middle Income
	(1)	(2)
L. BGD	-0.106*	-0.066
Market-to-Book	-0.012***	-0.005
Leverage	-0.063**	-0.088***
R&D	0.014	0.002
Return-on-Asset	-0.251***	-0.142
Age	-0.015**	-0.019***
Constant	-0.336***	-0.388***
Observations	25,367	9,124
R-squared	0.072	0.075
Industry Fixed Effect	Yes	Yes
Country Fixed Effect	Yes	Yes

12

Year Fixed Effect   Yes   Yes

Notes: Standard errors are robust to heteroskedasticity and clustering at the firm level. *** p<0.01, ** p<0.05, * p<0.1.

Table 9: Country-specific analysis on gender diversity and financial constraints nexus

VARIABLES	USA WWIndex	Japan WWIndex	UK WWIndex
L. BGD	-0.145***	-0.081***	-0.134***
Market-to-Book	-0.016***	0.002	-0.011***
Leverage	0.000	-0.210***	-0.048
R&D	0.006	0.003	-0.062
Return-on-Asset	-0.196***	-0.287***	0.097
Age	-0.024***	-0.006	-0.012
Constant	-0.243***	-0.607***	-0.212***
Observations	10,498	4,215	2,998
R-squared	0.189	0.169	0.084
Industry Fixed Effect	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes

Notes: Standard errors are robust to heteroskedasticity and clustering at the firm level. *** p<0.01, ** p<0.05, * p<0.1.

Table 10: Alternative measure of financial constraints

VARIABLES	INSDIVP (1)	INSDIVP (2)	INSDIVP (3)	INSDIVP (4)
L. BGD	-0.093***	-0.074***	-0.082***	-0.065***
Market-to-Book	-0.001***	-0.001***	-0.001***	-0.001***
Leverage	0.036***	0.050***	0.027**	0.041***
R&D	-0.012	-0.010	-0.010	-0.009
Return-on-Asset	-0.328***	-0.302***	-0.327***	-0.304***
Age		-0.009***		-0.009***
Size			-0.014***	-0.013***
Constant	-0.131***	-0.037**	-0.083***	0.002
Observations	36,548	35,012	33,953	32,463
R-squared	0.162	0.170	0.167	0.175
Industry Fixed Effect	Yes	Yes	Yes	Yes
Country Fixed Effect	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes

Notes: Standard errors are robust to heteroskedasticity and clustering at the firm level. *** p<0.01, ** p<0.05, * p<0.1.

Appendix 1: Variable Definitions

Variable	Definition	Data Source
Size	Natural logarithm of Net Asset, deflated by CPI (2010=100).	Refinitiv
Age	Natural logarithm of firm age	Refinitiv
Leverage	Debt to Total Asset	Refinitiv
Market to book value	The price/book value ratio close	Refinitiv
R&D	A dummy variable representing (R&D=1) if a firm has investment in Research and development, "0" otherwise.	Refinitiv
Return on assets	EBITA/Sales	Refinitiv
Dividends Payout Ratio	Dividends/EBITA	Refinitiv
WW Index	Whited and Wu (2006) measure of financial constraint	Refinitiv
Regulatory quality	Regulatory Quality	World Bank
Rule of Law	Rule of Law	World Bank
High Income	Countries classify as "High Income"	World Bank
Low and Middle Income	Countries classify as "Low and Middle Income"	World Bank

13

1

Relationship between Psychological contract and use of technology at work: a scoping review

Conference Stream – OB

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Abstract

This scoping review explores the impact of technology use on employees' psychological contracts in the workplace. By examining existing research, we identify the implications of various technologies, such as AI, smartphones, and social robots, on the formation, development, and potential breach of psychological contracts. The review highlights the need for organisations to consider the influence of technology on employee expectations, perceptions, and behaviours. Key findings suggest that technology can alter the dynamics of employee-employer relationships, create new expectations, and potentially lead to psychological contract breaches. The review also reveals significant research gaps, emphasising the several areas for the future research.

Keywords: psychological contract; technology; employee-employer relationship; organisational behaviour

1

Introduction

This article explores the relationship between employees' psychological contract and the use of technology at work, particularly focusing on the evolving trends in workplace practices in existing research. The new workplace trend involves leveraging technology not only to enhance performance but also to communicate and accommodate various forms of work arrangements, such as flexible work schedules, hybrid work models, and platform work. All of these new ways of working involve the use of different types of technology whether that be automation, AI or new software and applications.

Despite the significant increase in the use of technology at work, existing research has not sufficiently considered its impact on employees' psychological contract which represents the unwritten set of expectations and obligations between employees and employers. This oversight is critical as technology profoundly influences various facets of the employment relationship, including communication, task management, performance, and work-life balance. Understanding how technology affects the psychological contract is essential for organisations aiming to cultivate positive work environments and maintain employee satisfaction and commitment.

The integration of technology into the workplace presents both opportunities and challenges. On one hand, technology can enhance job satisfaction by providing employees with greater autonomy, flexibility, and efficiency in completing tasks. It can enable better collaboration through virtual meetings and instant communication tools, and support work-life balance by allowing employees to work from different locations. These aspects can have a positive impact on employees' psychological contract and strengthen the relationship between employee and employer. This strong relation can result in behavioural responses i.e. organisational commitment, loyalty, and improved performance. On the other hand, technology can blur the boundaries between work and personal life harming the employee-employer relationship. This can potentially lead to PC breaches and PC violations resulting in increased stress, burnout, and turnover.

This scoping review aims to assess the extent of existing research on the impact of technology on the employee-employer relationship and identify any gaps in the current literature. By systematically examining the studies conducted in this context, the review seeks to highlight areas that have been underexplored or overlooked. Based on these findings, the article proposes a future research agenda to provide a deeper understanding of the dynamic interplay between technology and the psychological aspects of the employment relationship in modern workplaces. This agenda will offer valuable insights for scholars and practitioners, guiding them towards more nuanced and comprehensive investigations into how technological advancements influence workplace dynamics, employee well-being, and organisational outcomes.

Key Concepts and Research Question

Rousseau (1990) defines the psychological contract as "the individual's beliefs about mutual obligations in the employer-employee relationship" (p. 391), highlighting the employee's perspective. Rousseau (1995) further explains it as the employee's beliefs about the terms of the exchange with the organisation, shaped by explicit and implicit promises. These beliefs cover both organisational and employee obligations, reflecting perceived mutual duties (van der Smissen, Schalk, & Freese, 2013). Discrepancies can arise between employees' perceptions and the organisation's understanding of these obligations, underscoring the contract's subjective nature and the importance of individual interpretation (Rousseau & Tijoriwala, 1998; van der Smissen et al., 2013).

Shore et al. (2004) explain that psychological contracts are shaped by their context, which includes the environment and conditions surrounding the employer-employee relationship. This context, both explicit and implicit, is multifaceted and influences the dynamics between employees and organisations. It encompasses job roles, workgroup dynamics, departmental structures, organisational culture, organisational changes, the broader occupational landscape, labour market conditions, and influences from family and national culture (Rousseau & Tijoriwala, 1998; van der Smissen et al., 2013).

3

Given the profound impact of context on the relationship between employees and the organisation, it stands to reason that any changes within the organisational or work context would inevitably influence the exchange relationships between employees and their employers. Contextual factors such as organisational culture, job roles, and the broader occupational landscape shape employees' perceptions and expectations, which are central to the psychological contract (Shore et al., 2004). One significant contextual change is the increasing use of technology in the workplace. The integration of technology for communication, task management, and other work-related activities can profoundly alter the dynamics of the employer-employee relationship. For instance, technology facilitates constant connectivity, which can blur the boundaries between work and personal life, potentially leading to an "always-on" culture (Mazmanian, Orlikowski, & Yates, 2013). This can increase stress and contribute to burnout, impacting the psychological contract by creating perceived imbalances in the obligations between the employee and the organisation. Furthermore, technology changes how tasks are managed and completed, influencing employees' roles and expectations as well as social dynamics within workgroups. The automation of routine tasks, for example, can shift employees' focus towards more complex and creative activities, altering their job descriptions and the skills required. While these technologies can enhance collaboration and efficiency, they can also lead to misunderstandings and a sense of isolation, especially in remote or hybrid work environments. These can affect employees' perceptions of job security and career development opportunities, which are critical elements of the psychological contract.

The rise of remote work, accelerated by the COVID-19 pandemic, has increased the use of technology for virtual collaboration, making tools like video conferencing and project management software essential (Anakpo, Nqwayibana, & Mishi, 2023). Technology personalises employee experiences by recommending tailored training and monitoring engagement and well-being, enabling proactive HR interventions (Pillai, Ghanghorkar, Sivathanu, Algharabat, & Rana, 2024). This technological trend is revolutionising the workplace by enhancing productivity and efficiency, automating routine tasks, and aiding decision-making through data analysis, thus reducing costs and increasing accuracy (Erik & Andrew, 2017). Emerging technologies like augmented reality (AR), virtual reality (VR), and artificial

4

intelligence (AI) are expected to further transform work, particularly in training, design, and remote collaboration, creating new opportunities and challenges (Kaplan & Haenlein, 2020). By relying on a broad definition of technology, defined as *various digital tools, platforms, and advanced systems that are increasingly being integrated into the modern workplace to facilitate communication, collaboration, task management, and job performance*, and based on the aforementioned theoretical premises, this scoping review aims to answer the following research question:

RQ: How does the use of technology at work impact or influence employees' psychological contract?

Review of literature

Method – protocol and search strategy

To ensure a systematic and transparent review process, we adapted the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology (Page et al., 2021). This approach involves a structured four-phase flow diagram: identification, screening, eligibility, and inclusion. The PRISMA methodology helps minimise bias and enhances the reproducibility of the literature review (Hoyos Muñoz & Cardona Valencia, 2023). To answer our research question based on the previous studies, a review of the literature was conducted. The following scholarly search engines were used: EBSCO, ProQuest, PsycINFO, Web of Science and Scopus, and the discipline or databases were set to business and management (or the closest choice), where this option was available. During the identification phase, all potential studies were gathered through the mentioned databases. These search engines were adjusted to execute the search strategy by only looking for the key terms in the titles and abstracts of the publications. The search strategy consisted of keywords and terms such as "technology", "psychological contract*" and "employer-employee relationship*" that were combined using Boolean operators (i.e., AND, OR). Since the majority of academic publications are in English (Stockemer & Wigginton, 2019), the search engines were also adjusted to produce the results based on the publications that were in the English language. These steps resulted in a total of 620 journal articles in Jan 2024.

5

Screening process

In the screening phase, duplicates are removed, and titles and abstracts are reviewed to exclude irrelevant studies. For this purpose, the references were imported into a citation management software package (EndNote 20) and deduplicated, which removed 198 journal articles from the pool, resulting in 422 journal articles. The inclusion criteria were set to capture journal articles that examined or discussed studies that examined the relationship between technology use and psychological contracts and employee-employer relationships in the workplace. On the other hand, studies that did not specifically address the connection between technology and psychological contracts, those that focus on technology workers or IT companies without discussing psychological contracts and also articles that examine other types of technology in the workplace, such as blockchain, without relating them to psychological contracts were set for exclusion. The process continued with the initial screening, which entailed examining the titles, abstracts, and keywords of the publications against the inclusion criteria. This step led to the identification of 30 publications.

The eligibility phase involved a thorough assessment of the full texts to determine their relevance to our research question. This was followed by the inclusion phase, in which studies meeting all the criteria were selected for review. Consequently, both authors read the full texts of the publications separately and, based on the inclusion criteria, assigned each journal article to either the included or excluded list. Examples of excluded publications include those focused on technology workers or IT companies without discussing the relationship between psychological contracts and technology, or those examining other types of technology in the workplace, such as blockchain. After comparing the results of the full-text screening, it was determined that the suitability of three papers for inclusion required further attention. After examining the differences between the inclusion lists, an agreement was reached about two of these papers among the authors, which resulted in seven papers being included in the review. The calculation of inter-rater reliability using Cohen's Kappa coefficient to measure the degree of agreement between independent coders, indicated a substantial level of agreement (0.66) (Landis & Koch, 1977). This measure is commonly used to assess the validity of the

selection process and reduce researcher bias (McHugh, 2012). Figure 1 provides an overview of the literature review process based on the PRISMA methodology (Page et al., 2021).

[insert figure 1 here]

Figure 1 Summary of the review process

Characteristics of the studies

Table 1 presents an overview of the key characteristics of the studies included in the review. The studies span from 1998 to 2023, indicating a growing interest in the relationship between technology and psychological contracts over time. The research employs various methodologies, including conceptual, qualitative, and quantitative approaches, with sample sizes ranging from 12 to 1,199 respondents. The studies cover different geographical contexts, such as the UK, France, and China, highlighting the global relevance of the topic.

Table 1 Summary of the studies

[insert table 1 here]

Findings/Discussion

The findings of this scoping review indicate that there has been minimal research conducted to investigate the correlation between employees' psychological contract and the use of technology in the workplace. The oldest research was done in 1998 by Korac-Kakabadse, Korac-Kakabadse, and Kouzmin (1998), and they conclude that there is a growing recognition that individuals must take full responsibility for their own development, moving away from relying on corporate HR and managers. This shift requires new attitudes toward career development and psychological contracts, emphasising shared vision and mutual benefits over job security and loyalty. Organisational competitiveness in the global economy depends on effectively utilising talent, which enhances synergy and provides a competitive edge. Traditional hierarchical management models are being replaced by smaller, flexible organisations. New employment trends, such as fixed-term contracts, increase the demand for continuous professional development and IT qualifications, raising concerns about training quality and

accreditation. The state can support these changes by promoting integrative employment practices, balancing justice and efficiency, setting an example as a major employer, and offering guidance and voluntary educational services to employers and employees.

Parvari, Mansor, Jafarpoor, and Salehi (2014) developed a framework based on the Technology Acceptance Model (TAM) which includes ease of use, perceived usefulness, and attitude toward using the system. It suggests that attitude toward using the system can influence work-related outcomes such as psychological contract, turnover intention, and organisational commitment.

Obushenkova, Plester, and Haworth (2018) highlight several key implications for psychological contract theory regarding smartphones. Smartphones create new expectations and alter the psychological climate between managers and employees, emphasising flexibility, reachability, and connectivity. They may replace traditional cues, contributing to psychological contract breach by making communication more impersonal and ambiguous, which can decrease mutuality and increase discrepancies between perceived obligations and expectations. This can result in job dissatisfaction, intent to quit, and reduced organisational behaviour. Additionally, user-device attachment alters connectivity expectations within psychological contract. Therefore, organisations providing smartphones must consider their impact on psychological contract formation, development, and the potential for psychological contract breach.

The thought experiment done by Bankins and Formosa (2020) reveals two key implications for reciprocity in human-social bot relationships and psychological contract. Firstly, reciprocity tends to be systemically imbalanced in favour of the human. Secondly, drawing on Braverman (1974) upskilling/deskilling thesis, this imbalance may affect human-human relationships and other workplace psychological contract. Despite both the human and the social bot fulfilling their contract obligations, the human's contribution is unequal, providing only moderate value and reducing uncertainty infrequently. This imbalance contrasts with the human-human contract, where unequal reciprocity often leads to degraded relationships and reduced value exchange on both sides.

8

In 2020, Rogozińska-Pawełczyk (2020) explores the potential for establishing psychological contract between employees and social robots, a new kind of relationship expanding traditional theories of human interaction. As advanced AI technologies like social robots become common in workplaces, they alter worker relationships and introduce novel dynamics. Social robots, designed to assist with professional duties, are changing human environments and creating new challenges. Japanese companies are developing humanoid robots to work alongside humans, believing these machines can replace human communication partners. The creation of psychological contract with robots hinges on their anthropomorphisation. Such contract could transform team dynamics, prompting employers to consider robots as either individual partners or team colleagues. Understanding these employee-robot interactions is essential for future workforce management.

In 2021, Shanahan and Smith (2021) adopted a critical approach to Psychological Contract (PC) theory by examining how platform workers adjust their expectations and behaviour following PC violation. The first author, working as a food delivery courier, used introspection to uncover cognitive tensions and new research avenues, while the second author maintained objectivity. The study expands the PC framework to include indirect employment relationships using technology and suggests modifying qualitative measures of a worker's PC, with further refinement needed for internet- and app-mediated labour exchanges.

The latest and most pertinent research is by Zhao, Hu, Han, Jiang, and Shan (2023), which investigates how STARA (smart technology, artificial intelligence, robotics, and algorithms) awareness affects organisational deviance among service employees. The study explores this impact through the lens of psychological contract breach, with the relationship moderated by the industrial relations climate. As STARA becomes more prevalent in the service sector, it's crucial to address how employees handle the resulting workplace uncertainty. This study identified STARA as a significant workplace stressor and used the cognitive appraisal theory of stress to examine its impact on organisational deviance. The findings showed that awareness of STARA is positively linked to organisational deviance, primarily due to an increased sense of psychological contract breach. However, a positive perception of the industrial relations climate can mitigate this effect.

9

In conclusion, the evolution of technology within the workplace has significantly influenced the dynamics of psychological contract between employees and organisations. From the early integration of technology acceptance models to the recent exploration of the impact of STARA in the service industry, research has highlighted the intricate relationship between technology and psychological contract. Smartphones, social robots, and advanced AI technologies have all played pivotal roles in reshaping employee expectations, altering workplace norms, and introducing novel dynamics. These studies underscore the importance of considering technological advancements when examining psychological contract and emphasise the need for organisations to adapt their policies and practices to ensure positive employee experiences amidst evolving workplace landscapes. As technology continues to advance, further research will be essential in understanding and navigating the complexities of psychological contract in the digital age.

Research Gap and Future Research

Table 2 presents a summary of the research gap and future research agenda. Existing research often overlooks the importance of examining various types of psychological contract within technology adoption contexts. These contracts, including relational, transactional, and balanced, influence employee attitudes and behaviours differently (Rousseau & Tijoriwala, 1998; van der Smissen et al., 2013). Researchers should investigate these contract' connection to technology adoption and organisational practices, considering how they interact in technology-mediated work environments. Understanding these dynamics is crucial for managing employee expectations, fostering trust, and optimising technology usage for organisational performance. Additionally, research should explore how technology use at work affects psychological contract breach and violation, offering insights into managing technological change and promoting positive employee experiences in the digital era.

Table 2 Summary of the gaps in studies and future research agenda

[insert table 2 here]

The literature acknowledges psychological contract breach in technology-mediated work relationships but lacks an understanding of the underlying mechanisms and effective repair strategies. To fill this gap, researchers should thoroughly explore breach and repair mechanisms across different types of psychological contract in technology-mediated work settings. This involves identifying triggers and processes of breach and effective repair strategies. By examining breach and repair mechanisms across various psychological contract types—relational, transactional, and balanced—researchers can understand the challenges and opportunities in technology-mediated work environments. This understanding is crucial for developing targeted interventions to prevent breach, rebuild trust, and foster positive employee-organisation relationships in the digital age. Furthermore, investigating these mechanisms can offer organisations actionable insights to proactively manage and mitigate the negative effects of breach, enhancing employee well-being, engagement, and organisational performance.

The literature highlights various technologies' impacts on psychological contract but lacks specificity, particularly regarding AI, IoT, and VR (Bankins & Formosa, 2020; Rogozińska-Pawełczyk, 2020; Shanahan & Smith, 2021). Future research should examine how these technologies shape employee expectations and behaviours, considering factors like fairness, transparency, and engagement. Additionally, emerging technologies such as blockchain and AR warrant exploration for their potential to transform psychological contract and organisational processes.

Furthermore, research on psychological contract within gig economy platforms is limited despite their increasing prevalence. In-depth studies focusing on psychological contract in these contexts are essential, considering the influence of platform algorithms and feedback mechanisms. Understanding these dynamics is crucial for fostering equitable and sustainable work relationships and ensuring the well-being of gig workers.

Existing research has focused on managerial perspectives or organisational outcomes regarding technology-influenced psychological contract, but there's a notable lack of attention to the employee

perspective and their well-being. To address this gap, it's crucial to prioritise understanding the employee viewpoint regarding psychological contract in the digital age. This involves exploring employees' experiences, perceptions, and coping strategies in response to evolving technological landscapes and their impact on work arrangements. Researchers should look into how technological advancements affect employee well-being, mental health, and work-life balance within the context of shifting psychological contract. Understanding these dynamics is vital for organisations aiming to foster supportive work environments and promote employee satisfaction and engagement. By prioritising the employee perspective in research on psychological contract, scholars can offer valuable insights that inform organisational policies and practices aimed at enhancing employee welfare in the digital age.

As technology integrates further into the workplace, the importance of emotional intelligence, interpersonal skills, and soft skills in managing psychological contract becomes crucial (Lazarova, Caligiuri, Collings, & De Cieri, 2023; Singh, Jha, Srivastava, & Somarajan, 2022). However, there's a gap in understanding how these competencies interact with technological advancements. Researchers should explore how emotional intelligence and interpersonal skills influence perceptions of trust and fairness in technology-mediated work environments. By doing so, they can inform strategies for fostering supportive work cultures that prioritise these skills in employee-employer relationships.

Existing studies on psychological contract often lack longitudinal research, essential for understanding their evolution over time, especially with advancing technology. Longitudinal studies track changes in psychological contract as technology integrates further into the workplace, offering insights into their long-term effects on employee expectations and behaviours. Moreover, longitudinal research investigates the sustainability and adaptability of psychological contract amidst rapid technological change, crucial for organisational strategies. Innovative research methodologies such as mixed methods approaches, experimental designs, and advanced data analytics techniques are needed to capture the complexity of psychological contract in the digital age.

The current literature on technology and psychological contracts is limited in its cultural scope, with most studies focusing on a single country or region. However, cultural differences can significantly

12

influence how employees perceive and respond to technology in the workplace, as well as their expectations and obligations in the employment relationship (van Zoonen, Sivunen, & Blomqvist, 2023). Future research should prioritise cross-cultural studies to investigate how cultural factors, such as power distance, individualism-collectivism, and uncertainty avoidance, interact with technology and shape psychological contracts. By conducting comparative studies across different cultural contexts, researchers can develop a more nuanced understanding of the global implications of technology on employee-employer relationships and inform culturally sensitive strategies for managing psychological contracts in the digital age.

Existing research on technology and psychological contracts often treats employees as a homogeneous group, overlooking the potential influence of individual differences on how they experience and respond to technology in the workplace (Gohoungodji, N'Dri, & Matos, 2023). Future studies should investigate how factors such as age, gender, personality traits, and technology readiness impact employees' perceptions and adaptability to technological changes and their psychological contracts. For example, younger employees who are more comfortable with technology may have different expectations and coping mechanisms compared to older employees who may face greater challenges in adapting to new technologies. By examining the role of individual differences, researchers can provide insights into tailoring organisational interventions and support systems to meet the diverse needs of employees in technology-mediated work environments.

Finally, while the current literature highlights the challenges and risks associated with technology and psychological contracts, there is a need for future research to explore the potential of technology in facilitating psychological contract fulfilment. Advanced technologies, such as AI and machine learning, can enable organisations to better understand and respond to employee needs, preferences, and expectations (Pereira, Hadjielias, Christofi, & Vrontis, 2023). For example, AI-powered employee experience platforms can personalise learning and development opportunities, provide real-time feedback and support, and proactively address potential sources of psychological contract breach. By investigating how technology can be leveraged to strengthen the employee-employer relationship and promote mutual understanding and fulfilment of obligations, researchers can contribute to the

13

development of innovative strategies for fostering positive psychological contracts in the digital

workplace.

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15

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Identification of studies via databases and registers

| Identification | Records identified from:
• EBSCO-Business Source Ultimate (n = 83)
• OVID- PsycINFo (n = 78)
• WoS-Core collection (n =78)
• SCOPUS (n = 173)
• ProQuest- (n = 208)
• Total = 620 | → | Records removed before screening:
Duplicate records removed (n = 198) |

Records screened (n = 422) → Records excluded (n = 392)

Reports sought for retrieval (n =30) → Reports not retrieved (n = 0)

Reports assessed for eligibility (n =30) → Reports excluded:
Wrong type of publication (n =8)
Unrelated to the topic (n = 15)

Studies included in review (n = 7)

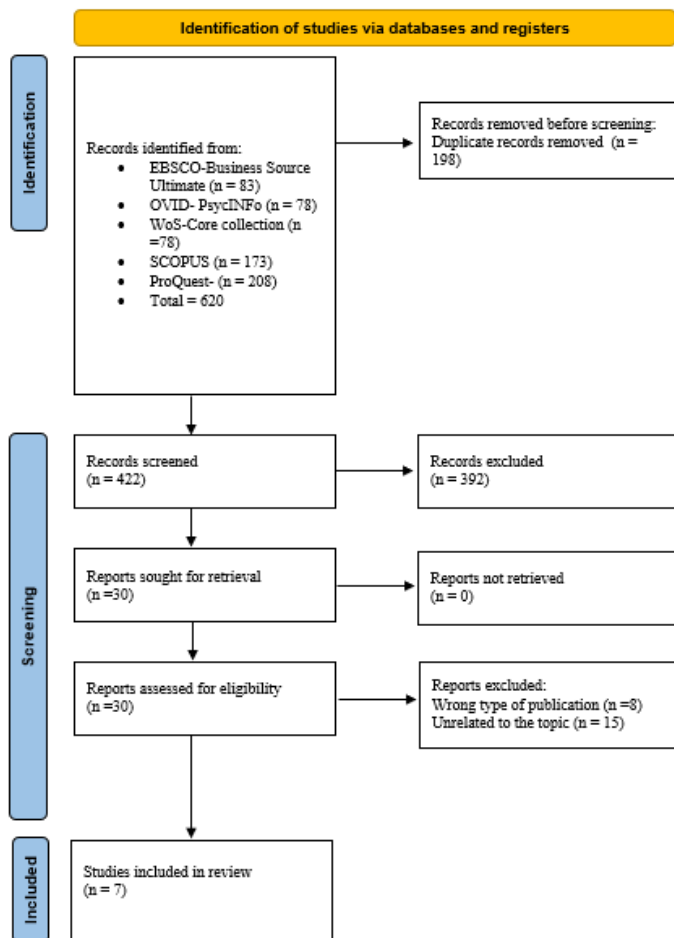Figure 1 Summary of the review process

17

Table 1 Summary of the studies

Author(s)	Title	Journal	Theoretical ground	Method	Respondents	Country/ies studied	Key findings
Rogozińska-Pawełczyk (2020)	Towards Discovering Employee-Robot Interaction: Aspects of Concluding the Psychological Contract	Education of economists and managers	Social Exchange Theory, the norm of reciprocity	Conceptual	N/A	N/A	-Explores the evolution of the psychological contract concept in the context of social robots in the workplace -Highlights the potential for employees to form psychological contracts with these technological entities
Obushenkova et al. (2018)	Manager-employee psychological contracts: enter the smartphone	Employee Relations	Psychological Contract Theory	Qualitative	20 employees & 8 managers	N/A	-Discusses how providing smartphones to employees becomes integrated into the manager-employee psychological contract and signals creating perceived expectations of constant connectivity to work
Bankins and Formosa (2020)	When AI meets PC: exploring the implications of workplace social robots and a human-robot psychological contract	European Journal of Work and Organisational Psychology	Social Exchange Theory and Reciprocity theories, Actor-Network Theory	Conceptual-Mental model reasoning (thought experiment)	N/A	N/A	-Synthesises research on human-robot interaction to show how this exchange is experienced by humans and highlight the feelings of attachment humans can form within it -Develops a framework for a human-robot psychological contract
Shanahan and Smith (2021)	Fair's fair: psychological contracts and power in platform work	The International Journal of Human Resource Management	Psychological Contract Theory, Theory of Power	Qualitative (Critical Grounded Theory, Interviews)	12	UK & France	-Reveals how platform firms use decision-making, nondecision-making, and

18

							ideological power to shape perceptions of fairness -Concludes by highlighting the critical potential of psychological contract theory when combined with power theory, offering insights into the fairness of worker-platform firm exchanges
Zhao et al. (2023)	That honey, my arsenic: The influence of advanced technologies on service employees' organisational deviance	Journal of Retailing and Consumer Services	Cognitive appraisal theory of stress	Quantitative	Wave 1: 447 Wave 2: 393 Wave 3: 359	China	-It finds that STARA awareness can lead to a psychological contract breach, which in turn may trigger organisational deviance. -Suggests a positive industrial relations climate can mitigate the negative association between STARA awareness and psychological contract breach, reducing organisational deviance.
Korac-Kakabadse et al. (1998)	The Role of IT in Changing Psycho-social Contracts: A Multi-Stakeholder's Perspective		Knowledge and Process Management	Conceptual			-Discusses the impact of (IT) on the changing nature of psycho-social contracts in the workplace -Suggests that the psychological effects of these changes need monitoring to assess the 'costs and benefits' for both employers and employees.

19

Parvari et al. (2014)	The Study of Consequences of Acceptance Technology When It Is Mandatory: A Conceptual Framework	Review of European Studies	Technology Acceptance Model (TAM), Social Exchange Theory,	Conceptual	N/A	N/A	-Provides a conceptual framework linking technology acceptance to turnover intention, mediated by psychological contract and organisational commitment.

Table 2 Summary of the gaps in studies and future research agenda

Research Gap	Future Research Agenda
Limited examination of various types of psychological contracts (relational, transactional, balanced) within technology adoption contexts	- Investigate the connection between different types of psychological contracts and technology adoption and organisational practices - Consider how these contracts interact in technology-mediated work environments - Explore how technology use at work affects psychological contract breach and violation
Lack of understanding of the underlying mechanisms and effective repair strategies for psychological contract breach in technology-mediated work relationships	- Thoroughly explore breach and repair mechanisms across different types of psychological contracts in technology-mediated work settings - Identify triggers and processes of breach and effective repair strategies - Develop targeted interventions to prevent breach, rebuild trust, and foster positive employee-organisation relationships
Insufficient specificity regarding the impacts of AI, IoT, VR, and other emerging technologies on psychological contracts	- Examine how AI, IoT, VR, and other emerging technologies shape employee expectations and behaviours, considering factors like fairness, transparency, and engagement - Explore the potential of blockchain and AR to transform psychological contracts and organisational processes
Limited research on psychological contracts within gig economy platforms	- Conduct in-depth studies focusing on psychological contracts in gig economy contexts, considering the influence of platform algorithms and feedback mechanisms - Investigate dynamics crucial for fostering equitable and sustainable work relationships and ensuring the well-being of gig workers
Lack of attention to the employee perspective and well-being in research on technology-influenced psychological contracts	- Prioritise understanding the employee viewpoint regarding psychological contracts in the digital age - Explore employees' experiences, perceptions, and coping strategies in response to evolving technological landscapes and their impact on work arrangements - Investigate how technological advancements affect employee well-being, mental health, and work-life balance
Gap in understanding how emotional intelligence, interpersonal skills, and soft skills interact with technological advancements in managing psychological contracts	- Explore how emotional intelligence and interpersonal skills influence perceptions of trust and fairness in technology-mediated work environments - Inform strategies for fostering supportive work cultures that prioritise these skills in employee-employer relationships
Limited longitudinal research on the evolution of psychological contracts over time, especially with advancing technology	- Conduct longitudinal studies to track changes in psychological contracts as technology integrates further into the workplace - Investigate the sustainability and adaptability of psychological contracts amidst rapid technological change
Limited cultural scope in existing research on technology and psychological contracts	- Prioritise cross-cultural studies to investigate how cultural factors interact with technology and shape psychological contracts - Develop a nuanced understanding of the global implications of technology on employee-employer relationships - Inform culturally sensitive strategies for managing psychological contracts in the digital age
Overlooking the potential influence of individual differences on employees' experiences and responses to technology in the workplace	- Investigate how factors such as age, gender, personality traits, and technology readiness impact employees' perceptions and adaptability to technological changes and their psychological contracts - Provide insights into tailoring organisational interventions and support systems to meet the diverse needs of employees in technology-mediated work environments
Insufficient exploration of the potential of technology in facilitating psychological contract fulfilment	- Explore how advanced technologies, such as AI and machine learning, can enable organisations to better understand and respond to employee needs, preferences, and expectations - Investigate how technology can be leveraged to strengthen the employee-employer relationship and promote mutual understanding and fulfilment of obligations - Contribute to the development of innovative strategies for fostering positive psychological contracts in the digital workplace

Stream Number: 1 Human Resource Management
Unveiling The Unseen: Documenting Pacific And
Māori Women Academics' Experiences Of Glass
Ceilings And Mentorship In Australian Universities

UNVEILING THE UNSEEN:

DOCUMENTING PACIFIC AND MAORI WOMEN ACADEMICS' EXPERIENCES OF GLASS CEILINGS AND MENTORSHIP IN AUSTRALIAN UNIVERSITIES

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1

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**DOCUMENTING PACIFIC AND MAORI WOMEN ACADEMICS' EXPERIENCES OF
GLASS CEILINGS AND MENTORSHIP IN AUSTRALIAN UNIVERSITIES**

ABSTRACT: *The phenomenon known as the glass ceiling is not a new area of research yet there is limited understanding of how to navigate the challenges that lead to women experiencing the glass ceiling, especially for minority groups of women. My research investigates Pacific and Māori women (PMW) academics' challenges using an intersectionality lens to better understand the discrimination she faces based on the complex axis of her gender, race, ethnicity, and culture as she attempts to advance through the rungs of leadership in Australian universities. My paper conceptualises the challenges faced by PMW academics in Australia and sets a future research agenda that aims to further inform and understand barriers and enablers[1].*

Keywords: Cultural heritage (identity), Discrimination, Glass ceilings, Intersectionality theory, Mentorship, Pacific and Māori academics.

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2

Despite women comprising nearly half of the world's workforce (Bierema, 2016) and making significant strides in education, business, and a men-dominated labour force, they continue to encounter disparities in both leadership roles (Babic & Hansez, 2021; Bates & Holt, 2023; DeSimone, 2020; O'Brien, Hanlon, & Apostolopoulos, 2023) and pay (Smith & Sinkford, 2022; Workplace Gender Equality Agency, 2023). These disparities are shown to be skewed to inform mostly the dominant groups' experiences in various organisations (Baird, Hamilton, & Constantin, 2021; Baruah & Biskupski-Mujanovic, 2021; Navarro-Astor, Román-Onsalo, & Infante-Perea, 2017; Whiteside & Hardin, 2011). My research intends to bridge this gap and shed light on the minority group of Pacific and Māori women (PMW) in an academic setting in Australia, as their disparities are more complex and pertain to not only their gender but also their race, ethnicity, and cultural identity. PMW academics experience of disparities is even more pronounced because she needs to not only align her Pacific/Māori identity with the Western culture (*that is foreign to her*), but also compete against both white women academics (*dominant group*) and men academics (*dominant over both groups of women*) (McAllister, Kokaua, Naepi, Kidman, & Theodore, 2020). These added layers make it even harder for her to break through the academic glass ceiling in Australian universities.

Glass ceilings are formidable barriers that influence women's ability to climb to higher echelons of leadership (Baxter & Wright, 2000; Carli & Eagly, 2016; Cotter, Hermsen, Ovadia, & Vanneman, 2001; Grangeiro, Silva, & Esnard, 2022). There are many factors that contribute to the glass ceiling; however, my paper investigates the organisational factors of the old boys' club and personal factors of family responsibilities. These factors are captured through the experiences of academic PMW in terms of being a space invader and the need to protect white fragility (organisational factors), and cultural expectation/ responsibilities (personal factors) impacting her climb into leadership in Australian universities. Furthermore, literature suggests that a means to break the academic glass ceiling is through mentorship initiatives offered through the equity, diversity, and inclusion programs. Mentorship is viewed as an important strategy in retaining and developing potential leaders and as an avenue for career success (Harris, 2022; Helms, Arfken, & Bellar, 2016). My research looks at whether and how the mentorship programs afforded to these minority group of women assists in breaking academic glass ceilings in Australian universities.

Therefore, to investigate these multiple discriminatory layers, my research uses an intersectionality lens to understand the disparities PMW academics encounter and the role of mentorship in addressing inequalities. In doing so, my research answers the scholarly appeals of Ryan (2023), Grangeiro et al. (2022) and Williams (2013), who advocated for greater exploration of intersectionality when investigating the glass ceiling effect. My research will contribute to the body of literature and underpin the way PMW academics identities intersect to understand the discrimination they encounter in universities and ways to address these issues. The next section provides a brief background of PMW and

3

academia and intersectionality theory. This is followed by the literature review and propositions, and discussions, implications, and conclusions.

Pacific and Māori woman (PMW) and academia

In the Pacific, although women make up roughly half the population, men hold most of the leadership roles in villages, communities, and even nationally (Dickson-Waiko, 2003; Peterson & Bernklau, 2013). This can be seen in Pacific parliaments having close to 6.9 % of women in leadership positions and men holding majority of paid work and earning at least 20 to 50% more than women (Australian Government, 2024b). Similarly, in New Zealand the Māori women (wahine) hold 14.8 % of government roles on various boards and committee and the pay gap between Māori women and all men in general is 14.3% (New Zealand Government, 2024). Although these low numbers of leadership are present in workspaces, in some Pacific islands such as Fiji, Samoa (McLeod, 2007) and in New Zealand, Māori women also hold chiefly titles/status in their villages/communities (Johnston, 2022; Leckie, 2005; Lilomaiava-Doktor, 2020; Ralston, 1993).

Additionally, the entrance of PMW into workspaces however did not change the fact that they still needed to perform their household caregiver responsibilities. These responsibilities included being a wife, mother and daughter, and these traditionally positioned her into a helper role rather than one assigned or selected to be a leader (Dickson-Waiko, 2003; Howard, 2019; Paletua, 2023). As for Māori women during pre-colonial times, their tribes had equal positions as men and responsibilities were shared (Jahnke, 2002; Johnston, 2022). However, post-colonialism brought about sexist ideas resulting in powerful women roles being discontinued with women assigned more gendered roles and seen as mothers and wives rather than leaders (Johnston, 2022). This has resulted in PMW who were in leadership roles not being taken seriously due to conflicting cultural values and norms in the workplace (Howard, 2019; Lokot, 2014; McAllister et al., 2020), and this can be seen in their own home and is replicated when they live in foreign countries (Ofe-Grant, 2018).

Generally, Pacific people who are either born in the Pacific Islands or in foreign countries have also had to navigate being discriminated against and socially excluded in various educational and recreation spaces, churches and workplaces (Enari & Taula, 2022; Vasta, 2004). This is because, irrespective of whether someone is born in the Pacific islands or a foreign country, their cultural heritage (identity) impacts their way of life. For example, in New Zealand workspaces, Ofe-Grant (2018) research findings noted that Samoan women participants experienced racial discrimination and stereotype bias when trying to secure leadership positions. Similarly, McAllister et al. (2020) study of the glass ceiling in New Zealand universities noted that systematic racism and discrimination hindered opportunities for promotion. These findings are echoed in other research conducted in New Zealand universities (see e.g.(Naepi, 2018, 2019, 2020, 2021)). Māori and Pacific academics in New Zealand universities continue to be marginalised in university practices, especially in higher order level decision-making

4

(McAllister et al., 2020). As this may also be present in Australian universities, my research will examine whether, and the extent to which, these inequalities exist.

Moreover, Enari and Taula (2022) assert that Australians have exhibited a tendency to underestimate Pacific people's academic abilities and have preconceived ideas pertaining to Pacific Islanders' ethnicity. For PMW in these foreign workspaces, this racism continues and the stereotypical notion of Pacific people not being suitable leaders is still prevalent (Monolagi, 2022; Ofe-Grant, 2018). Therefore, the cultural heritage (identity) and racism experienced by a PMW in the workplace poses a challenge in pursuing leadership positions, compared to a dominate white Australian women in an academic setting. These challenges can be more closely reviewed using intersectionality theory to examine discriminatory attitudes towards minority women.

Intersectionality theory

Intersectionality theory highlights the need to examine various aspects of people's identities including, among others, *race, class and gender* (Cho, Crenshaw, & McCall, 2013; Crenshaw, 1991). Intersectionality theory argues that multiple axes exist and must be acknowledged to fully address forms of oppression (Ruiz et al., 2021). This allows intersectionality scholars to not only critically rationalise race, ethnicity, class, ability, and age, but also sexuality and body (LGBTIQA+) and gender disparities (Crenshaw, 1991; Dill & Zambrana, 2009; Parra & Hastings, 2018). Understanding that many people have multiple identities allows the researcher to move from an additive approach to one that considers multiple identities that impact a worker in today's workspaces and that people's experiences are shaped by these intersecting identities e.g., Asian womanhood and not by being a woman and Asian (Nichols & Stahl, 2019). Moreover, intersectionality theory challenges the perception that it is not adequate to articulate a liberal white woman's experience of discrimination and differences from that of a Black woman or women of colour (WOC) (Ressia, 2014). Intersectionality has foundational roots in Black feminism. In the 1960s and 1970s, where social movements grew in response to structural inequalities faced by racial minority groups (Collective, 2014). Early groups such as 'Combahee River Collective' in the USA marked a historical movement for Black women and captured the importance of critically analysing not just racism but also class exploitation and sexism (Collective, 2014).

Intersectionality in social science research unpacks the complexities people experience in workspaces related to hiring, promotion, leadership, and career progression (Collins, 2015). In this regard, Black women are prone to being oppressed through racism, discrimination, and marginalization (Bell, 1990; Dickens & Chavez, 2018). Intersectionality provides a nuanced lens for exploring the impacts of systematic power relations in organisations (Ressia, 2014), to better understand how these intersect to marginalise Black women (Dickens & Chavez, 2018) and other people that experience discrimination.

In my research intersectionality theory provides a framework to understand how PMW academics complex axis of their gender, race, ethnicity, and cultural identity hinders their advancement into

5

leadership positions in Australian universities. Intersectionality lens acknowledges that discrimination is not experienced in isolation but also through various overlapping identities. Therefore, the application of this theoretical lens provides a comprehensive analysis of how their complex identities intersect and impact them and the best strategies universities can implement to mitigate these issues.

LITERATURE REVIEW AND PROPOSITIONS

Australian women academics

The low representation of women in leadership positions in Australian universities is not a new topic of research (Dobele, Rundle-Thiele, & Kopanidis, 2014; Khan & Siriwardhane, 2021; Pyke, 2013; Strachan, 2016). There have been multiple calls for equal gender representation of leaders in academia; that is, firstly, reflective of the entire organisational population and being inclusive and diverse, and secondly, have equal employment opportunities (Dobele, Ferguson, Hartman, & Schuster, 2022). However, irrespective of their efforts and achievements, women are not being promoted as quickly and equally as men academics (Dobele et al., 2014; Treviño, Gomez-Mejia, Balkin, & Mixon Jr, 2018), especially in senior leadership and management roles (Butler-Henderson et al., 2022; Dobele et al., 2022; Strachan, 2016). This was highlighted in research in 19 Australian universities, where academic women cited the lack of opportunities for leadership roles was due to limited access to research funds and not receiving overall career support (Strachan, 2016).

Moreover, women academics are primarily allocated to teaching, learning, and administration roles in contrast to men academics who have more capacity for research (Butler-Henderson et al., 2022; Power, 2020). These roles for women are often referred to as 'academic housework' and regardless of the level of seniority, women are assigned these roles (Gilbert, Denson, & Weidemann, 2020; Harford, 2018; Strachan, 2016; White, Carvalho, & Riordan, 2011). This academic housework was reflected in studies conducted in Australian universities by Strachan (2016) and Gilbert et al. (2020) in which women academics indicated that they spent a substantial amount of time teaching, and conducting administrative duties resulting in work overload, and had lower satisfaction with their academic work, coupled with the need to balance work and life roles.

Research also documents that women's career progression is slower than men's because of family responsibilities (Marchant & Wallace, 2013; Pyke, 2013). In a recent study of academic women in Australian universities, Gilbert et al. (2020) findings suggest that women experience obstacles in work-life balance due to motherhood, family (caring responsibilities) and having to navigate through various institutional barriers in order to advance in academia. These barriers in terms of lack of opportunities, overall career support, less funding and the prevalence of academic housework roles (organisational factors) as well as work-life balance of family responsibilities (personal factors), consequently contribute to women academics being trapped in a vicious cycle of disproportionate promotional opportunities and lower research productivity. This leads to even fewer promotional opportunities and

6

slower progression through the ranks from lecturer to professorship (Cardel et al., 2020). These studies have however, captured the dominant women's perspective, with little to no account of the minority women, and in my case, PMW academics, a gap my research intends to address.

Personal factors outside academia – broader family responsibilities

In academia, gender equality is mostly framed with the end result of women having equal pay/salary and leadership positions as men, and having a work environment free from harassment (Mason & Goulden, 2004; Täuber, Loyens, Oertelt-Prigione, & Kubbe, 2022). However, this equality does not take into account the conflating pressures of life for women outside academia (Bailyn, 2003). Women's non-linear career patterns are impacted by family and work-life demands (Bailyn, 2003; Cabrera, 2007; Gilbert et al., 2020; Sümer & Eslen-Ziya, 2023).

Women have personal responsibilities such as domestic chores and family, and childcare responsibilities which impacts a woman academic's career trajectory (Acker & Armenti, 2004; Allen et al., 2021; Barrett & Barrett, 2011; Pyke, 2013; Sümer & Eslen-Ziya, 2023). Gendered expectations that women have responsibility for the majority of this work limits women's availability and flexibility as they need to balance their personal and work life (Burkinshaw & White, 2017). The gendered role of a woman in terms of caring for children, elderly parents (or other family members), or relocating due to a spouse's job impacts her personally (Cabrera, 2007) and her career decisions (Powell & Mainiero, 1992). For women with childcare responsibilities, Wolf-Wendel and Ward (2006) strongly argued that negotiating between both roles requires sufficient time, support, and resources and labelled both motherhood and academic work ' greedy institutions'. Research has found that women in academia experience persistent work-family conflict and women with caregiving responsibilities report having a guilty consciousness or a sense of discord whenever they are not able to meet both family and work responsibilities (Gatta & Roos, 2004; Toffoletti & Starr, 2016; Ward & Wolf-Wendel, 2012). Work-family conflict can be described as a situation where the pressure from work and family life are in conflict and it seems quite impossible to balance (Handelzalts, Kalfon-Hakhmigari, & Garthus-Niegel, 2024; Obrenovic, Jianguo, Khudaykulov, & Khan, 2020).

In Australia, studies have also shown that academic women have found it challenging to manage the expectations of paid work and unpaid caring responsibilities (Francis & Stulz, 2020; Probert, 2005; Pyke, 2013; Thomas, Thomas, & Smith, 2019). Thomas et al.'s (2019) study of academic women in regional universities noted that juggling work and life required sacrifices. Furthermore, participants noted that various caregiving responsibilities impacted their ability to work, either making sacrifices to meet demands such as traveling overnight to attend conferences or not being able to because they were not in the phase of life to compromise family responsibilities, with one participant arguing that in the last five years, she did not attend any conferences. However, for academic PMW, these personal responsibilities also reflect their cultural identity and expectations (Howard, 2019; Naepi, 2020).

7

Pacific and Māori women's personal responsibilities

Many pacific culture affirms a woman's role as one who is nurturing, motherly, and a homemaker (Dickson-Waiko, 2003; Howard, 2019), with only a handful accepting women in leadership positions. Albeit these narratives are slowly changing, where Pacific women have been seen as government leaders such as the Honourable Prime Minister of Samoa, Afioga Fiame Naomi Mata'afa (Government of Samoa, 2024), and in foreign workspaces such as Professor Katerina Teaiwa at the Australian National University (Australian National University, 2024).

In the Pacific and Māori communities, social characteristics such as birth order, level of education, age, religion and customary status determine one's social position (Johnston, 2022; McLeod, 2007; Singh-Peterson, 2019). Some Pacific Island cultures establish that men hold leadership positions and women are placed in subordinate roles (Baker & Corbett, 2023). The cultural beliefs may unintentionally develop a priority for PMW to focus on their communal and family responsibilities, rather than on their health, work or leadership roles (Akbar, 2018; Dickson-Waiko, 2003; Howard, 2019; Tupou, 2011). Moreover, Māori girls and women, have had equal responsibilities and values within their tribes and communities until colonist brought about sexism and patriarchy worldviews (Gemmell, 2013; Johnston, 2022). These views have transcended into workspaces, where, PMW have to juggle their responsibilities as a mother/caregiver that is influenced by Pacific cultural values that focus on family first over workplace demands (Howard, 2019). For Pacific people, family units hold significant cultural values (Enari & Faleolo, 2020; Faleolo, 2020), and within communities, Pacific people's identities are reflected by broader collective groups (Ravulo, 2015). It is common for Pacific families to include extended family members and even for them to adopt other people including friends (Fa'aea & Enari, 2021), especially those moving across the Pacific to seek greener pastures (Faleolo, 2020).

Pacific people who migrate to Australia are assisted by other Pacific families and extend the Pacific way in helping others establish themselves (Enari & Taula, 2022; Faleolo, 2020). Faleolo (2019) stated that most Pacific families in Brisbane, Queensland secured/bought homes that could accommodate their nuclear and extended families. Similarly, for Māori families who are New-Zealand citizens, they are able to enter and work and live in Australia indefinitely (Australian Government, 2024a). Pacific and Māori people are quite communal, spiritual, and family oriented (Ravulo, 2015) and this could result in academic PMW, having to balance her cultural roles and expectations to care for all family members (nuclear and extended), whilst simultaneously managing workplace responsibilities.

Nonetheless, family support has been integral for those living in a foreign country (Enari & Taula, 2022). In a recent article by Fainga'a-Manu Sione, Stanley, and Enari (2023) the findings show that Pacific scholars relied heavily on family support to successfully navigate their career prospects in Australia. Similarly in a report by Ravulo (2015) family support is an important aspect for social cohesiveness for Pacific families living in Australia. Compared to a white woman, these cultural/ family responsibilities

8

may create either a *supportive* or *additional barrier* that can have her questioning her ability at work, or even prevent aspiring academic PMW from pursuing leadership roles altogether. Thus, this leads to: *Research Proposition 1: Pacific and Māori women academics' cultural expectations and family responsibilities may impact her advancement positively or negatively into leadership positions.*

Organisational factors – old boys club

The '***old boys club***' or network is mostly associated with high status white men, and being a member can potentially increase one's chances/opportunities in organisations (Oakley, 2000), which also means that the dominate boys' club impacts leadership culture (White, 2003). This club, according to Kanter (1977), can be seen as a 'shadow structure' whereby men leaders prefer to engage with men employees who have similar social identities and preferences. This assertion indicates that men leaders legitimise power dynamics and ensure that they remain in the hands of the dominant men elites within the organisation (Ibarra, 1992; McDonald, 2011).

The old boys' club has been prevalent in Australian universities. According to a study conducted by Redmond, Gutke, Galligan, Howard, and Newman (2017) of women in a regional Australian university, women attributed gender discrimination to the impermeable boys' club and mentioned that women can only reach middle management. Furthermore, although almost all participants mentioned experiencing the glass ceiling, a participant suggested the brick wall of the boy's club was more noticeable than the glass ceiling. This implies that the boys' club was promoting their own and, as Ryan and Haslam (2005) argue, this can likely result in the 'glass escalator', where men are more likely to achieve leadership positions over their women counterparts.

Similarly, in another study conducted by Chesterman and Ross-Smith (2006), in five Australian universities, women are not part of the informal men's network, which prevents them from being able to network, collaborate and be visible. Scholars argue that these missed opportunities for informal collaboration due to old boys' clubs not only hinders women from networking with high-status colleagues who are able to help mentor and advance their careers (Lyness & Thompson, 2000; Oakley, 2000), but also result in disparity in the allocation of research funding awarded to women. This leads to a consequential reduction in the quality of research output generated (Faltholm & Abrahamsson, 2010; Oliveira, Ma, Woodruff, & Uzzi, 2019; Pohlhaus, Jiang, Wagner, & Schaffer, 2011), which is a prerequisite for a senior leadership role (White, 2015). Consequently, women in academia encounter challenges when they try to 'fit in' a very inhospitable work culture (Aiston & Fo, 2021; Burkinshaw, 2015; White, 2001). This may account for the limited representation of women in senior leadership roles, thereby reducing the availability of role models/mentors for younger academics (Howe-Walsh & Turnbull, 2016). Finally, this all-men culture has contributed to lack of career development and ultimately these barriers create a 'glass ceiling' that affects the equal career progression of women (Dobele et al., 2014; Henley, 2015), especially WOC, who may also encounter racial discrimination. WOC face a 'double jeopardy', meaning that they need to not only overcome gender issues of being a

9

woman but also related discrimination of one's race in the workforce (Berdahl & Moore, 2006; Davis & Maldonado, 2015). This may also result in them feeling like an 'outsider' in being part of a *minority* group which results in them being disadvantaged (Coleman, 2012) in securing leadership positions.

Pacific and Māori women academia - space invaders and white fragility

For academic PMW academics, this feeling of being 'outsiders' can be associated with a term Puwar (2004a) refers to as, 'space invaders'. Space invaders are women invading political, economic or social spaces that they historically are not part of and where "their very presences is a disruption as well as a continual negotiation" (Puwar, 2004b, p. 65). Pawar's (2004b) article titled "Thinking about making a difference" highlights three distinct aspects of the space invader concept that describes women's experiences in disrupting these established norms today. Firstly, the author notes that a sense of disorientation occurs, and people do a double take when an outsider (women or person of colour (minority)) enters a room that is only meant for men. "This disorientation occurs because authority is sedimented and naturalised in white, usually male bodies" (Puwar, 2004b, p. 71). The second is infantilisation, where people of colour are not expected to hold or be capable of holding such positions or levels of authority, because "people are reluctant to bestow authority on specific types of racialized and gendered bodies" (Puwar, 2004b, p. 73). The third is super/hyper-surveillance, where they are being constantly monitored and any mistake made is easily recognised (Puwar, 2001). The space invader ideology limits the opportunity and advancement of minority women and underpins the challenges and stereotypical bias one needs to overcome to sit in various spaces that are historically male dominated, such as universities.

Pacific people have known to be excluded from university spaces and evidently, the concept of 'space invader' was noted in a recent study by Naepi (2020), where PMW academics in a New Zealand university encountered some form of Pawar's space invaders concept. The study concluded that these spaces had an unwelcoming environment and participants noted the consistent need to battle a system that excluded them. Similarly, another study conducted in a New Zealand university argued that universities need to admit that current systems enforces 'space invaders' (exclusion) concept and must work towards providing, creating, and maintaining Māori and Pacific academics (Naepi et al., 2019).

In addition to being a space invader, PMW academics encounter yet another barrier in the form of excessive *labour*. Here, excessive labour is in the sense that they perform the usual academic and community duties but also spend time on ensuring that they do not offend their white colleagues' fragility (Naepi, 2020). White fragility is defined as "a state in which even a minimum amount of racial stress becomes intolerable, triggering a range of defensive moves. These moves include the outward display of emotions such as anger, fear and guilt, and behaviour such as argumentation, silence, and leaving the stress-inducing situation. These behaviours, in turn, function to reinstate white racial equilibrium" (DiAngelo, 2016, p. 247). A study of 27 academic PMW in a New Zealand university noted that protecting white fragility was a reoccurring issue, with one participant stating that it was

10

exhaustive to put on a number of filters just to ensure that their white fragility was not threatened (Naepi, 2020).

In these university settings even social spaces may have a culture of exclusion (Puwar, 2004a) that reinforces discrimination and creates walls that impede racialized people from progressing in their academic journey (Ahmed, 2012). For academic PMW this occurs at the intersection of race, gender (Naepi, 2021), ethnicity and cultural background (Monolagi, 2022). These intersecting identities mean that "women of color as outsiders within the academy have not had the same experiences as white men, white women, and even men of color" (Balderrama, Texeira, & Valdez, 2004, p. 151), and this impacts universities' ability in recruiting and retaining these women (Antonio, 2002). Therefore, these collective negative undertones of systematic racial discrimination and preconceived ideology, places PMW academics at a disadvantage in requiring her to navigate and align her Pacific identity with that of a racist Western society.

My research uses an intersectional lens to examine societal power variances, and highlight the multiple disadvantages especially for people of difference (Ressia, 2014), namely, PMW academics in Australian universities. The adoption of an intersectional lens facilitates an in-depth examination of how the complex axis of gender, race, ethnicity, and culture intersects for academic PMW with relation to barriers for promotion to leadership positions. Thus, this leads to: *Research Proposition 2*: *The challenges Pacific and Māori women academics encounter are distinctively different from the dominate group of women in Australian universities.*

Diversity management initiatives in universities - mentorship

To some extent, these challenges (for all women) have been mitigated by universities through equity, diversity, and inclusion initiatives. Today, many organisations have adopted diversity management (DM) programs to manage the increase in labour mobility and differences among people in terms of race, ethnicity, nationality, culture, age, gender, education, skills, motivation, and work experience (Yadav & Lenka, 2020). DM creates opportunities for inclusive work spaces that prevent discrimination, whereby DM programs/initiatives are defined by anti-discrimination and equal employment opportunity (EEO) laws (Köllen, 2021) and are designed to recruit, train, develop, compensate, and manage accountability policies (Ng, 2008; Williams, Kilanski, & Muller, 2014).

For universities, in particular, DM is paramount given the increased labour mobility of academics and the globalisation of economies (Bauder, 2015; Universities Australia, 2019). The recruitment, retention, and management of diverse academics are coordinated to meet the demands of a diverse cohort of domestic and international students (Bilecen & Van Mol, 2017; Shen, Xu, & Wang, 2022). Foreign diverse academics assist with traditional teaching and research components, and more importantly, in reflecting differences in global organisations and preparing students to engage in a diverse global

11

workforce (Oishi, 2017). Under this DM banner many universities have taken the initiative to implement mentorship.

Mentorship in universities

Mentorship is viewed as an important strategy in retaining and developing potential leaders and as an avenue for career success (Harris, 2022; Helms et al., 2016). In universities, mentorship allows for career building from early academic stages (Cleary, Jackson, Sayers, & Lopez, 2017) to establishing an academic identity and long-term success (Gregoric & Wilson, 2015). For women in academia this is important as mentors are able to assist in the development of various skills from an early stage and also build their confidence to engage in networking opportunities in terms of "exposure and visibility" (Scandura & Viator, 1994). This can advance their careers (Dashper, 2019; Thompson-Burdine et al., 2019), and eventually allow them to confidently take up leadership positions.

Formal and informal mentorship programs

Mentoring programs, whether formal or informal, are integrated into human resource (HR) programs, such as professional development training, and through appraisal rewards and recognition (Aryee, Chay, & Chew, 1996; Hegstad, 1999; McCauley & Van Velsor, 2004; Tillman, 2001). HR departments play a key role in implementing programs because mentoring is part of individuals' professional and personal development (Grima, Paillé, Mejia, & Prud'Homme, 2014). Indeed, although approaches differ among universities, their overall objectives and structure are similar (van der Weijden, Belder, Van Arensbergen, & Van Den Besselaar, 2015). For example, formal mentorship is institutionally driven, with defined role expectations of mentors who can either be assigned purposefully or randomly placed with a mentee for a fixed period (van der Weijden et al., 2015; Wilson, Valentine, & Pereira, 2002). These formalised structures include scheduled meetings and clearly stated expectations (Jackevicius et al., 2014; Law et al., 2014). While informal mentoring does not have a formal entity attached, and relationships are formed through mutual understanding (Etzkorn & Braddock, 2020; Wilson, 2012). Mentees can choose their mentors, and most of the time, select those with similar identities and interests in research (Steele, Fisman, & Davidson, 2013; Wilson, 2012).

Mentoring groups in academia have been established across multiple professions. For example, for formal mentoring there is the WATTLE group (Women attaining Leadership, 2024) and for informal mentoring, networking and international collaborators in management, organisational behaviour and HRM academics there is CYGNA (CYGNA, 2024). For computing there is a formal mentoring program called ASCILITE (Australasian Society for Computers in Learning in Tertiary Education, 2024). While women in science, technology, engineering and mathematics (STEM) can seek resources and opportunities in terms of mentorship from a program called STEM Women (STEM Women, 2024).These programs are important to connect and empower women to succeed.

12

Additionally, an important aspect of mentorship relations is whether having a mentor of the same gender or a different gender impacts the outcome of the programs. There have been mixed results globally regarding whether women prefer women or men mentors. Men tend to mentor those that resemble them in some sense, which may result in women and minorities not advancing in their careers (Bova, 2000). Additionally, women who had men mentors face 'negative gossip', with concerns that the mentoring occurs because of the increased non-work activities that may occur outside workplace settings (Blake-Beard, 2001; Kalbfleisch, 2000). Women who had women mentors preferred women over men however some reported that they often exhibit the queen bee syndrome, whereby women leaders in men-dominated organisations may hinder rather than provide support to aspiring women (Cibibin & Leo, 2022; Derks, Van Laar, & Ellemers, 2016). According to Derks et al. (2016) this is because initially the women leaders were not afforded the same help and they were distancing themselves from junior women and presenting a more men-like leadership style that reinforces gender hierarchy in organisations. Thus, it is important to understand if a similar situation occurs in Australian university settings, especially given the already low numbers of women sitting in these leadership positions.

Low number of women leaders in Australian universities

However, in Australian universities, the number of women in leadership is alarming low, which consequently limits their capacity to serve as mentors. For example, as of 2021, only 28 % of vice chancellors have been women (Butler-Henderson, Percy, & Kelder, 2021). Moreover, data by Universities Australia (2020) noted that in 2015, 26.1% of professors were women, in 2016, 27.3%, in 2017, 28.3%, in 2018, 29.3% in 2019, 30.3%. The scarcity of women mentors coupled with ageing professors may result in challenges related to mentor availability and time constraints (Cho, Ramanan, & Feldman, 2011; Sawatzky & Enns, 2009; Wasburn, 2007). Although the guidance of a PMW academic mentor would be of significant value for PMW academics, there may be few PMW academics available to mentor others.

Moreover, my research seeks to highlight mentorship as a mechanism to shatter the barriers delineated by Singh and Kaur (2022) who contend that diverse foreign academics in Australia are able to adapt to two mentors, one from an Australian background and the other from a similar background. Singh and Kaur (2022, p. 149) articulated that "these mentors are able to provide differing but complementary views, connections and local knowledge in navigating the academics' career trajectory at the leadership level". Crutcher (2014) also stated that having this form of cross-cultural mentorship between persons of different races, genders, ethnicities, nationalities, cultural, socioeconomic backgrounds build relationships and awareness of the unique circumstances women encounter. These studies highlight the importance of having diverse mentors to support women in achieving long-term career goals and encouraging diversity, equality, and the inclusion of underrepresented women (Montgomery & Page, 2018). Therefore, although literature depicts that mentorship is a vehicle to advance minority women's personal and professional development (Deanna et al., 2022), my research will also investigate whether

13

there is enough support offered to them in Australian universities and whether academic PMW prefer formal or informal mentorship initiatives and with mentors who are of similar backgrounds. Thus, this leads to: *Research Proposition 3: With appropriate mentorship Pacific and Māori women academics can advance into leadership positions in Australian universities.*

DISCUSSIONS, IMPLICATIONS AND CONCLUSION

Although Australian universities have acknowledged the gender disparities women in academic face and have implemented various diversity policies, programs, and committees to combat gender inequality, these collective initiatives have not necessarily taken into account the minority women's viewpoint. My research agenda focuses on documenting the disparities faced by PMW academics and bringing to light various complex and overlapping barriers that can be cultural and systematic in nature that hinder her leadership journey. Moreover, the initiative of mentorship will be investigated as a means to mitigate these challenges and break the academics glass ceiling in Australian universities.

Thus, firstly, my research will provide nuance into identifying the specific challenges PMW encounter based on her gender, race, ethnicity, and cultural background. Especially how her cultural roles and expectations may be in conflict with the Western leadership ideologies. Additionally, with the use of the intersectionality lens, my research will be able to provide a holistic representation of their experiences by examining both spectrums of sexism and racism and identify *how* and *to what extent* are systematic barriers in universities impacting her ability to attain leadership positions.

Secondly, my research findings can identify whether mentorship programs are culturally supportive and sensitive to this diverse group of women. Whereby universities can foster inclusive environments by firstly understanding the impacts these disparities have on PMW academics and advocating for change in policies that are inclusive and diverse. This can result in universities providing appropriate mentorship programs and leadership trainings specific to these women.

Thirdly, these barriers and enablers specific to these groups of women can inform universities of effective strategies for other minority groups such as Asian women academics. Insights from my research can pave the way for initiatives and mentorship networks for women of diverse backgrounds. This holistic approach will not only demonstrate the universities willingness to foster an inclusive environment by designing broader policies and practices but also enhance the opportunity for minority women to be recognised as leaders in their workplaces.

In conclusion, my proposed research will unveil the unseen issues that are unique to PMW academics experiences in Australian universities as they attempt to advance in leadership ranks. This knowledge can undoubtedly not only assist universities objectives of having a diverse and inclusive work environment and designing diversity programs well-suited for retention and management of PMW academics (*and in foresight other minority groups of women*), but also cater for the demands of domestic

14

and international student cohorts, whilst also accomplishing the universities overarching goals in teaching, research, and innovation.

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18

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20

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21

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22

Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

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Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

ABSTRACT: *In a call for more exploration of innovative technologies to improve workplace quality of life, this field intervention study examines the potential restorative benefits of 360-degree virtual reality (369-VR). The intervention involved immersing 30 board game hosts in Edinburgh in 360-VR environments (nature, geometric shapes, or urban settings) for 10 minutes after 2 hours of real-life work. Cross-sectional data were collected remotely to evaluate their affective states and attentional cognitive states. Results indicate that the 360-VR nature environment significantly restored affective states and attention, while the urban environment also had positive effects. Conversely, geometric environments worsened both. This study supports the use of 360-VR and offers insights into selecting the appropriate content to enhance employees' workplace well-being and job performance.*

Keywords: Attention Restoration; 360-degree Virtual Reality; 360-VR Nature; Workplace Well-being; Stress Reduction; Restorative Effects

INTRODUCTION AND THEORY

Restoration refers to the recovery of diminished daily functions and capabilities, which largely occurs during leisure time (Han, 2018). Over the past decades, empirical evidence has increasingly demonstrated that being surrounded by nature has restorative effects on cognition, emotion, and physiology (e.g., Bailey, Allen, Herndon, & Demastus, 2018; Berman, Jonides, & Kaplan, 2008; Laumann, Gärling, & Stormark, 2003; Valtchanov, 2010). Healthcare professionals advocate using natural (green/blue) environments to promote psychological well-being and reduce pain and stress (Diette, Lechtzin, Haponik, Devrotes, & Rubin, 2003; Tanja-Dijkstra et al., 2018). The presence of greenery has been shown to improve mood and productivity in workplaces (Clauss et al., 2017). Equally important are blue elements such as the sky and water, which have also been found to promote psychological restoration in students (Amirbeiki & Khaki Ghasr, 2020) and in workplaces (de Bloom, Kinnunen, & Korpela, 2015). However, the rapid pace of urbanization and the diminishing green space pose a threat not only to biodiversity but also to human well-being. Additionally, direct access to nature might not always be possible due to various reasons, including COVID-19 restrictions. Therefore, researchers are investigating novel ways to use emerging technologies such as virtual reality (VR) to enhance the quality of life in workplaces (Villani & Riva, 2008; Valtchanov, 2010). In response to this need, this field intervention study examines the potential restorative benefits of 360-degree virtual reality (360-VR).

The Adoption of 360-VR

02. Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

VR approaches differ in the types of environmental content they offer, including: a) pre-recorded 360° videos of real environments (360-VR) and b) computer-generated simulations of real or imagined environments (CG-VR) (Yeo et al., 2020). While CG-VR environments require substantial computer memory and high configurations, 360-VR videos are easier to create, consume less RAM, and can be used in various field settings (Yeo et al., 2020). However, most studies investigating VR effects still focus on CG-VR and are laboratory-based, with few addressing practical implications or adopting 360-VR. Among the few studies utilizing 360-VR, Yu, Lee, and Luo (2018) found that 360-degree nature videos offer greater restorative benefits and mood uplifts than urban settings, increasing vigor and reducing negative emotions. Nevertheless, their study had limitations, including ineffective stress induction and a lack of controlled comparison groups. Similarly, Anderson, Fellows, Cowan, and Buckey (2017) reported restorative benefits from 360-degree nature videos but faced limitations due to a lack of ecological validity, with stressors that did not accurately reflect real-life conditions.

To address these gaps, this study aims to conduct a constructive replication of the seminal work by Valtchanov (2010) to explore the real-world implications of 360-VR for workplace restoration, using stress induction methods that more accurately reflect real-life work demands. Valtchanov's original research investigated the restorative effects of CG-VR nature, urban, and geometric environments, with participants randomly assigned to a 10-minute virtual reality session in one of these settings. Results suggest that the CG-VR nature environment significantly improved affect and reduced stress levels compared to the CG-VR urban and geometric environments. This study extends Valtchanov's work by incorporating 360-VR environments in a real-world workplace setting. The objective is to ascertain whether Valtchanov's findings hold true in practical settings and to provide further evidence for the efficacy of 360-VR environments in enhancing workplace well-being. By doing so, this research seeks to contribute valuable insights into the benefits of 360-VR for employee restoration and stress reduction.

Restorative Effects of Nature, Urban, and Geometric Settings

Attention Restoration Theory (ART), developed by Kaplan (1995), explains the restorative effects of certain environments on cognitive performance. Kaplan distinguishes between two modes of attention: directed and effortless. Directed attention involves the intentional and voluntary allocation

02. Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

of cognitive resources, such as focusing on a task, while effortless attention does not require significant cognitive effort. Over time, sustaining directed attention leads to mental fatigue and impaired cognitive performance. Restoring directed attention requires the involvement of effortless attention, which can temporarily reduce the cognitive load on directed attention.

The concept of effortless attention suggests that individuals are instinctively attracted to visual stimuli that capture their interest without significant cognitive effort. Kaplan (1995) refers to such stimuli as 'fascinating' and suggests that they can attract individuals and alleviate boredom. Fascination is further elaborated on a continuum ranging from soft to hard. Soft fascination refers to stimuli with sufficient aesthetic content to promote contemplation, while hard fascination denotes highly captivating stimuli that leave less room for contemplation (e.g., sports). Natural environments are thus restorative because they contain a variety of 'soft fascinating stimuli' (e.g., flowers) that modestly attract attention but can be easily dismissed, allowing effortless attention to shift from one stimulus to another. When effortless attention is active, the internal mechanisms responsible for directed attention can recover. Therefore, based on the application of 360-VR environments and prior research, we hypothesize:

Hypothesis 1: The 360-VR nature environment has a restorative effect on attention and affect.

In contrast, urban environments are generally considered to lack inherently fascinating stimuli but contain dramatic elements such as vehicle noises, construction sounds, and fast-moving cars (Berman et al., 2008). These stimuli require directed attention mechanisms to disengage, inhibit distractions, and remain attentive, which can reduce restoration and even induce stress (Kaplan, 1995). Therefore, based on the application of 360-VR environments and prior research, we hypothesize:

Hypothesis 2: The 360-VR urban environment worsens participants' attention and affect.

Furthermore, according to Attention Restoration Theory, the mere presence of simple geometric shapes is not restorative. Although they lack elements that necessitate 'directed attention,' such as noises and fast-moving objects, they also do not possess any fascinating elements. Kaplan argues that when environmental stimuli fail to engage an individual's interest, directed attention is still required to remain attentive. Consequently, cognitive effort is still necessary in such situations. Further studies suggest that the utilization of geometric figures as a neutral stimulus can be observed under

02. Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

certain circumstances. When combined with other fascinating stimuli, such as the immersive experience of viewing them in VR, geometric figures demonstrate an effect of neutrality, which is neither restorative nor stressful, as reported by Valtchanov (2010). Accordingly, we hypothesize:

Hypothesis 3: The 360-VR geometric environment has no restorative effect on attention or affect and has no significant impact on all measured changes.

METHODS

Participants

The snowball sampling method was used. Participants were ensured to be able to read and speak English and Chinese fluently (so as to understand instructions), do not suffer from seizure, vertigo, heart disease, or motion sickness prior to the study, and are not visually or hearing challenged (Valtchanov, 2010). This study recruited a sample of thirty undergraduate and postgraduate students (18 female and 12 male), ages 18-25 (M = 20.4, SD = 2.0), who have part-time jobs at the same workplace (a Chinese Board Game Community in Edinburgh) to participate. The study was approved by ethics review at the author's institution.

Research Design

Gorilla Experiment Builder was utilized to implement and monitor the entire study procedure, ensuring that all data was consolidated into one sequenced platform. Utilizing an independent measures design, each participant (3 groups of 10 participants each) participated in one session of 360-degree virtual reality immersion comprised of a single environment condition. The participants were provided with a VR headset containing the assigned video on the day of their participation. Consistent procedures and measures were employed across all three conditions.

Equipment

To simulate environments, we adopted Yu et al.'s method (2018) of using an immersive VR system with a VR Headset, which provides users with a sense of being immersed in the 360-VR videos. This study used the VR headset The Oculus Quest (see Figure 1), developed by Oculus, a subsidiary of Meta Platforms Inc. to play 360-degree videos that had been recorded by the researcher. By turning their heads to look around, participants were able to enjoy all aspects of the video (see Figure 2).

02. Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

Videos

A Vuse+ 360 camera was used to record both the virtual nature environment and the virtual urban environment. This camera captures stereoscopic 3D videos and directional audio in high-quality, high-resolution virtual reality. The geometric virtual environment was constructed using Nomad software. The total viewing time for each video is approximately 10 minutes.

The Meadows in Edinburgh, Scotland, was filmed for the nature environment. The selection of this scenery was based on the criteria of a "partly closed green space," as defined by Gao et al. (2019), requiring 30%-70% coverage by trees and shrubs. South Bridge in Edinburgh, Scotland, was recorded for the urban environment. The video features limited green and blue spaces, focusing instead on buildings, roads, traffic, signs, and pedestrians. Urban sounds such as footsteps and traffic were included. The neutral control condition was a geometric environment (Valtchanov, 2010). This setting included spheres, cones, cylinders, and square boxes. The 3D shapes and background were predominantly colored in natural hues of green, blue, and brown to minimize the potential impact of color on the participants' affective state (Valtchanov, 2010). This video did not include any audio. Figure 3 presents screen captures of the three environment settings.

Measures

In the present study, restoration effects of affective and cognitive states were assessed by evaluating online self-report questionnaires and online behavioural tasks via the online platform of Gorilla Experiment Builder.

Affective states

Zuckerman's Inventory of Personal Reactions (ZIPERS) (Zuckerman, 1977) was used as the self-reported questionnaire to measure affective states in the study, which has previously been used to investigate the restorative effects of nature both in the real world and in virtual reality and has proven to be a valid and reliable method to measure restoration (Ulrich, 1981; Valtchanov, 2010). The ZIPERS consists of 13 items on a Likert scale of 5 points (from 1 'not at all' to 5 'very much'). Specifically, there are six items included in the ZIPERS which assesses positive affect of attentiveness, happiness, friendliness, playfulness, concentration, and affection. The other seven items assess negative affect of stress, nervousness, fear, anger, sadness, hostility, and avoidance. For data analysis,

each participant's final positive/negative affect score for each round is the mean of their positive/negative points.

Attentional cognitive states

Participants' cognitive states in selective attention were assessed using the Stroop Effect task. The Stroop Effect task is a valid and reliable measure of selective attention often used in restorative research experiments (Gao, Zhang, Zhu, Gao, & Qiu, 2019). A total of sixteen images were used as stimuli for the Stroop Effect test. Four of these images consisted of a single English character (red, yellow, green, or blue) with the meaning matching its font color, such as a green-colored character spelling "green." The remaining twelve images consisted of English characters whose meanings conflicted with their displayed colors, such as a green-colored character spelling "red" (Sun et al., 2020).

Procedure

Prior to their participation, each participant was provided with a unique participant ID and a login link to the Gorilla Experiment Tool accessed via their mobile device. On the day of participation, each participant received a VR headset containing the assigned video. Participants were then asked to open the provided link and follow the instructions. The Figure 4 flowchart describes an example depicts the exact steps required for each participant.

Upon accessing the provided hyperlink, participants were presented with the Participant Information Sheet, which outlined the purpose and parameters of the research study. Participants were then directed to complete the Participant Consent Form by acknowledging and selecting consent checkboxes and providing their signature and date. Following this preliminary procedure, participants were guided through the primary experimental protocol, involving five stages.

Stage 1: Participants filled out the ZIPERS to establish a baseline for their self-reported affective state. Subsequently, they completed 23 trials of the Stroop Effect Task to establish a baseline cognitive state. Instructions displayed on the screen directed participants to press the key corresponding to the color of the word (R for red, Y for yellow, B for blue, G for green) and to press 'Space' to begin practice rounds. After pressing 'Space', a black fixation cross appeared for 500 milliseconds. Participants then responded to the stimuli by pressing the correct key for the text color.

02. Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

The first 3 trials were practice trials, with feedback ('right' or 'wrong') displayed for 300 milliseconds to ensure understanding. Following the practice trials, a score page displayed the number of correct answers, and participants were reminded to answer the text color correctly. Reaction time and accuracy were recorded for the remaining 20 trials.

Stage 2: After completing baseline data collection, participants were directed to a delay page where they were instructed to leave the link open and continue their daily work for two hours. Participants input their email addresses to receive reminders to re-engage with the experiment. The page automatically froze for two hours. Participants then entered the work-related stress induction stage, which involved hosting a board game in a Chinese Board Game Community in Edinburgh. Tasks included memorizing a game script of approximately 300 Chinese characters, reciting it on stage, and demonstrating and monitoring the board game procedures, considered stressful and fatiguing.

Stage 3: After the two-hour work session, participants received an email reminder to re-engage with the experiment. They were redirected to a link to record their post-stress affective and cognitive states, replicating the ZIPERS and Stroop Effect Task from Stage 1.

Stage 4: Participants then experienced a 360-VR immersive environment. Upon completing the Stroop Effect Tasks in Stage 3, participants received text and photo instructions on how to don the VR headset and initiate the video. They were instructed to remove the headset at the end of the video or if they experienced discomfort.

Stage 5: Assessments were conducted on the affective and cognitive states of participants immediately following their immersion in Stage 4, using the same procedures as Stage 1.

Analysis

A total number of 1800 trials of the Stroop Task, 1170 items of ZIPERS (540 on positive affect, 630 on negative affect) were collected from 30 participants in 3 rounds. One trial of the Stroop Task in the post-stress stage was identified as an outlier since it had an abnormal response time compared with the individual's other measures. This single response was replaced with the Mean value of that individual's other responding time in the post-stress stage. Table 1 shows the descriptive

analysis of all data collected for the study. Through the entire data interpretation, a p-value less than 0.05 was considered statistically significant.

RESULTS

Stress Manipulation Check

To verify the effectiveness of the stress induction, a Wilcoxon Signed-Rank Test was conducted to compare baseline and post-stress induction scores on the ZIPERS. Participants reported significantly increased negative affect following the stress induction (M = 2.2, SD = 0.58) compared to baseline (M = 1.2, SD = 0.19), Z = -4.789, p < 0.001. Additionally, there was a significant decrease in reported positive affect post-stress induction (M = 2.0, SD = 0.36) compared to baseline (M = 3.5, SD = 0.49), Z = -4.789, p < 0.001. To confirm that attentional fatigue was induced, another Wilcoxon Signed-Rank Test compared baseline and post-stress induction correct-response scores and response times on the Stroop Task. Correct responses decreased significantly post-stress induction (M = 0.90, SD = 0.05) compared to baseline (M = 0.94, SD = 0.07), Z = -3.061, p = 0.002. However, response times also decreased significantly post-stress induction (M = 1148.82, SD = 121.04) compared to baseline (M = 1819.19, SD = 206.40), Z = -4.741, p < 0.001.

Analysis of ZIPERS Scores on Negative and Positive Affect

ZIPERS scores at the post-immersion stage were compared to scores at the post-stress stage using mixed model repeated measures ANOVA. The stages (post-stress, post-immersion) served as the within-subjects variables, and the groups (immersion conditions of nature, neutral, urban environments) served as the between-subjects factor. A statistically significant interaction was found between stages and groups on negative affect, as outlined in the Tests of Within-Subjects Effects, F (2, 27) = 19.13, p < 0.001, MSE = 0.278, ηp2 = 0.586. This indicates that the change in negative affect varied with immersion conditions. To examine the simple main effects for each immersion condition, data for each condition were analyzed using the Wilcoxon Signed-Rank Test. Figure 5 illustrates the negative affect scores with groups on the horizontal axis and groups * stages as separate plots. Results showed that the 360-VR nature environment significantly decreased negative affect from a mean of 2.66 (SD = 0.49) before immersion to a mean of 1.36 (SD = 0.23) after immersion, Z = -2.805, p = 0.005. Conversely, the neutral environment significantly increased negative affect from a mean of 2.03

02. Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

(SD = 0.56) before immersion to 2.79 (SD = 0.47), Z = -2.293, p = 0.022. The urban environment had no significant effect on negative affect, with scores changing from a mean of 2.07 (SD = 0.51) before immersion to a mean of 1.94 (SD = 0.48) post-immersion, Z = -0.140, p = 0.889. Stages * Groups was also found to have a statistically significant interaction on positive affect, as outlined in the Tests of Within-Subjects Effects, $F_{(2, 27)}$ = 18.25, p < 0.001, MSE = 0.088, $\eta p2$ = 0.575. This indicates that the change in positive affect varied with immersion conditions. To examine the simple main effects, the data for each immersion condition was split and analyzed separately. Positive affect scores are shown in Figure 5, with plots separated by Groups and Stages. A Wilcoxon Signed-Rank Test revealed that the 360-VR nature environment significantly increased positive affect from a mean of 2.00 (SD = 0.31) before immersion to a mean of 2.90 (SD = 0.33) after immersion, Z = -2.812, p = 0.005. Conversely, positive affect decreased significantly in the neutral environment, from a mean of 2.03 (SD = 0.38) before immersion to 1.82 (SD = 0.40), Z = -2.047, p = 0.041. Additionally, the urban environment showed a significant increase in positive affect from a mean of 2.10 (SD = 0.40) before immersion to a mean of 2.60 (SD = 0.65) post-immersion, Z = -2.051, p = 0.040.

Analysis of the Stroop Task on Attention

Stroop Task scores and response times at the post-immersion stage were compared to scores and response times at the post-stress stage. This was done using a mixed model repeated measures ANOVA, with stages (post-stress, post-immersion) as the within-subjects variables, and groups (immersion conditions of nature, neutral, urban environments) as the between-subjects factor. A statistically significant interaction was found between stages and groups on response time, as outlined in the Tests of Within-Subjects Effects, $F_{(2, 27)}$ = 15.184, p < 0.001, MSE = 9519.225, $\eta p2$ = 0.551. This indicates that participants' response times changed differently across the three immersion conditions. To examine the simple main effects for each condition, the data for each immersion condition were split and analyzed separately. Figure 7 illustrates the response times with Groups on the horizontal axis and Groups * Stages as separate plots. The 360-VR nature environment significantly reduced response times, from a mean of 1259.5 milliseconds (SD = 138.1) before immersion to a mean of 951.7 milliseconds (SD = 97.2) after immersion, Z = -2.701, p = 0.007. The neutral environment showed no significant effect on response times, changing from a mean of 1094.5

02. Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

milliseconds (SD = 75.7) before immersion to 1125.9 milliseconds (SD = 99.2), Z = -1.070, p = 0.285. The urban environment also revealed a significant decrease in response times, from a mean of 1092.5 milliseconds (SD = 44.6) before immersion to a mean of 934.2 milliseconds (SD = 88.6) post-immersion, Z = -2.803, p = 0.005. Finally, Stages * Groups was found to have a statistically significant interaction on Stroop Task scores, as outlined in the Tests of Within-Subjects Effects, $F_{(2, 27)}$ = 11.323, p < 0.001, MSE = 0.002, $\eta p2$ = 0.456. This indicates that participants' Stroop Task scores changed differently across the three immersion conditions. To examine the simple main effects for each condition, the data for each immersion condition were split and analyzed separately. Figure 7 illustrates the Stroop Task scores with Groups on the horizontal axis and Groups * Stages as separate plots. The 360-VR nature environment significantly improved Stroop Task scores, increasing from a mean of 0.90 (SD = 0.06) before immersion to a mean of 0.98 (SD = 0.04) after immersion, Z = -2.565, p = 0.010. Conversely, the neutral environment showed a negative effect on Stroop Task scores, decreasing from a mean of 0.90 (SD = 0.06) before immersion to 0.84 (SD = 0.07) after immersion, Z = -2.271, p = 0.023. The urban environment also revealed a significant improvement in Stroop Task scores, increasing from a mean of 0.90 (SD = 0.04) before immersion to a mean of 0.94 (SD = 0.06) post-immersion, Z = -1.994, p = 0.046.

DISCUSSION

Stress Manipulation Check of 'Mental Fatigue'

The two-hour work session successfully induced stress, significantly decreasing positive affect and increasing negative affect. The Stroop Task showed unexpected results with decreased response time and decreased accuracy from baseline to post-stress stages. While typically, faster and more accurate responses imply improved sustained attention (Bailey et al., 2018), this study observed decreased response times with increased errors, aligning with Boksem, Meijman, and Lorist (2006), who found that 'mental fatigue' impairs error monitoring and behavioral adjustment. The participants' decreased accuracy and response times indicate loss of cognitive control and additional recklessness, confirming that attentional fatigue was successfully induced.

The Restorative Effect of 360-VR Nature on Affect and Attention

02. Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

This study found evidence supporting the hypothesis that the 360-VR nature environment elicits restorative effects on both affect and attention. Figures 5 and 6 show significant increases in positive affect and decreases in negative affect after immersion in the 360-VR nature environment. These findings are consistent with previous studies (Anderson et al., 2017; Browning et al., 2019; Yu et al., 2018) demonstrating the restorative benefits of 360-VR nature environments on affect. Additionally, Figures 7 and 8 indicate improved performance on the Stroop Task, with decreased response times and increased accuracy post-immersion. This aligns with the "selective attention" theory of the Stroop effect (Lavie, 2005) and supports findings from Chung, Lee, and Park (2018) and Hedblom et al. (2019), indicating cognitive benefits of 360-VR nature videos.

360-VR Urban Environment May Also Have Restorative Effects

Figures 5 and 6 show that the 360-VR urban environment did not significantly influence negative affect but significantly increased positive affect. Although the negative affect scores showed a floor effect, the significant decrease in reaction time and increase in accuracy on the Stroop Task (Figures 6 and 7) suggest that the 360-VR urban immersion may have a restorative effect on both affect and attention. This finding contrasts with previous studies that demonstrated contact with urban settings failed to improve mood and recovery from stress (Yu et al., 2018). The concept of fascinating stimuli in ART might explain this; environments with high fascination value can elicit effortless attention and restore directed attention. The urban setting in this study, filmed in the aesthetically renowned city of Edinburgh, may possess high fascination value, thus offering restorative benefits.

360-VR Geometric Environment May Be Stressful

Contrary to Valtchanov's (2010) findings, the 360-VR geometric environment in this study was stressful, increasing negative affect, decreasing positive affect, and reducing Stroop Task scores without significantly changing response times. While ART would consider geometric shapes neutral due to the lack of elements requiring directed attention, Ulrich's (1981) theory suggests that the initial automatic affective response to an environment predicts subsequent cognitive responses. The geometric environment's urban-like visual aspects may have been perceived as threatening, leading to stress and worsened mood. Differences in interaction levels between the studies (passive VR use in the current study versus interactive VR in Valtchanov's) and the nature of stress induction (real-life work

versus a short arithmetic test) might also explain the differing results. Further research is needed to assess fascination value and participants' aesthetic preferences to draw more definitive conclusions.

PRACTICAL IMPLICATIONS AND CONCLUSIONS

The presented results indicate that the 360-VR nature environment has greater positive and restorative impacts on participants' affect and attention, while the 360-VR urban environment with high fascination value may also have positive impacts. Conversely, 360-VR geometric environments have worsened participants' affect and attention.

Implications are multi-folded. Firstly, incorporating 360-VR technology into employee wellness programs can revolutionize how businesses approach mental health and stress management. By offering 10-minute immersive nature breaks, companies can help employees quickly recover from stress and improve their focus, leading to enhanced productivity and job satisfaction. This approach not only benefits individual well-being but also fosters a more positive and supportive work environment. Secondly, the findings suggest that 360-VR environments can be used beyond stress relief. For instance, immersive VR experiences can be integrated into training and development programs. Simulated nature or urban settings can be used to create engaging and interactive training modules, enhancing learning outcomes and retention. This can be particularly useful for remote teams, providing a sense of presence and engagement that traditional e-learning platforms might lack. Teams can meet in immersive virtual settings that replicate natural or high-fascination urban environments, making virtual meetings more engaging and less draining than traditional video calls. This can improve communication and collaboration among remote teams. The study also highlights the importance of aesthetic fascination in office design. The third implication is that companies can redesign workspaces to incorporate elements of nature and high-fascination urban features, creating environments that reduce stress.

In conclusion, this study underscores the potential of 360-VR environments in enhancing workplace well-being, productivity, and overall employee satisfaction. By integrating these innovative solutions, businesses can create healthier, more engaging, and productive work environments. The implications extend beyond stress relief, offering opportunities for dynamic training, enhanced creativity, and more effective virtual collaboration.

02. Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

Table 1: Descriptive Analysis of All Collected Data

Dependent Variable	Stage	Group	Mean	SD	Dependent Variable	Stage	Group	Mean	SD
Negative Affect	Baseline	Nature	1.20	0.18	Response Time	Baseline	Nature	1616.2	190.3
		Neutral	1.19	0.14			Neutral	1959.5	142.5
		Urban	1.27	0.25			Urban	1881.8	93.6
	Post-stress	Nature	2.66	0.49		Post-stress	Nature	1259.5	138.1
		Neutral	2.03	0.56			Neutral	1094.5	75.7
		Urban	2.07	0.51			Urban	1092.5	44.6
	Post-immersion	Nature	1.36	0.23		Post-immersion	Nature	951.7	97.2
		Neutral	2.79	0.47			Neutral	1125.9	99.2
		Urban	1.94	0.48			Urban	934.2	88.6
Positive Affect	Baseline	Nature	3.22	0.55	Stroop Score	Baseline	Nature	0.95	0.08
		Neutral	3.50	0.47			Neutral	0.92	0.07
		Urban	3.83	0.25			Urban	0.97	0.05
	Post-stress	Nature	2.00	0.31		Post-stress	Nature	0.90	0.06
		Neutral	2.03	0.38			Neutral	0.90	0.06
		Urban	2.10	0.40			Urban	0.90	0.04
	Post-immersion	Nature	2.90	0.33		Post-immersion	Nature	0.98	0.04
		Neutral	1.82	0.40			Neutral	0.84	0.07
		Urban	2.60	0.65			Urban	0.94	0.06

Figure 1: The Oculus Quest

Figure 2: A Player Using the Oculus Quest

Figure 3: Screen Captures of Nature (Left), Geometric (Centre), and Urban (Right) 360-VR Environments
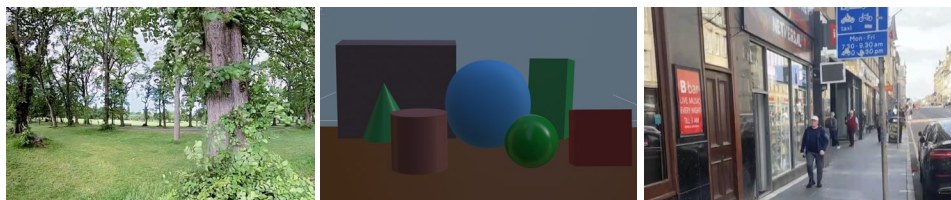
02. Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

Figure 4: Flow Diagram of the Data Collection Procedure
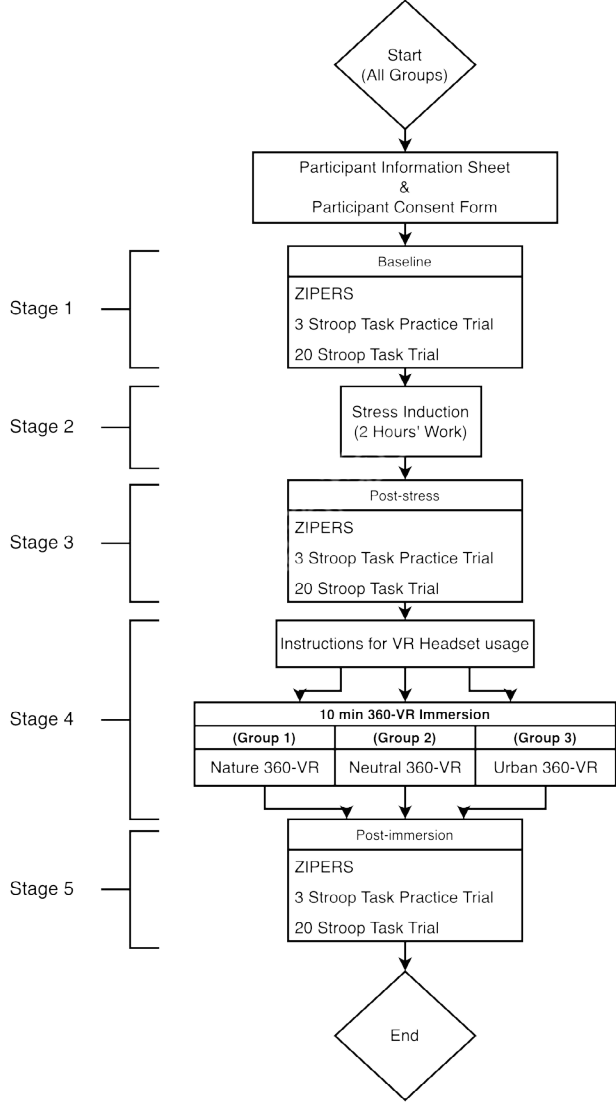
02. Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

Figure 5: ZIPERS Negative Affect Scores (Scale of 1 to 5)

Error bars: 95% CI
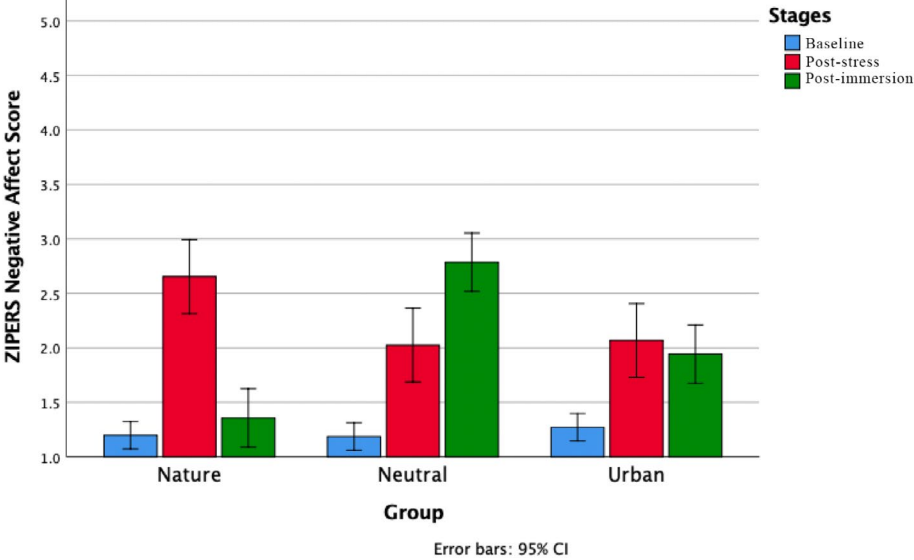
Figure 6: ZIPERS Positive Affect Scores (Scale of 1 to 5)
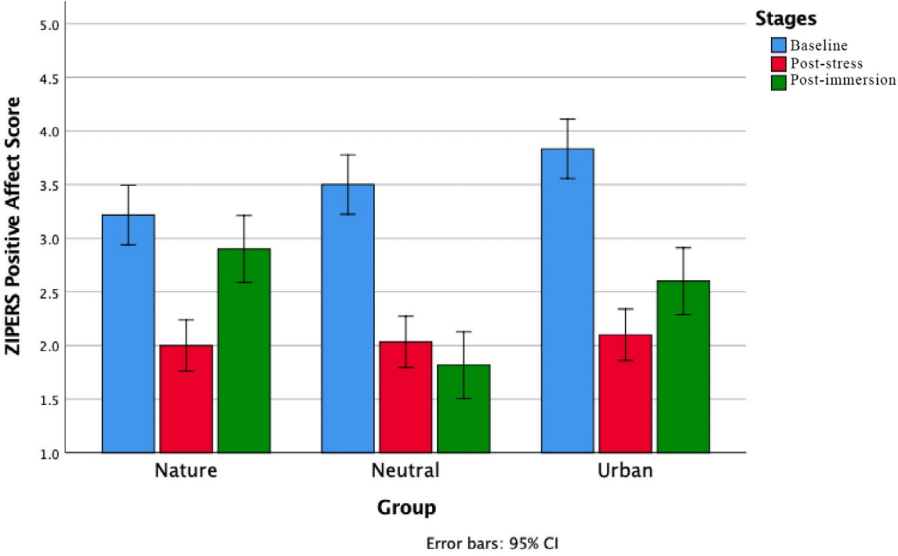
Error bars: 95% CI

02. Escape the Office: The Effect of Virtual Reality Nature and Urban Environments on Cognitive Performance and Affect

Figure 7: The Stroop Task Response Times (Scale of 0 to 2500 ms)
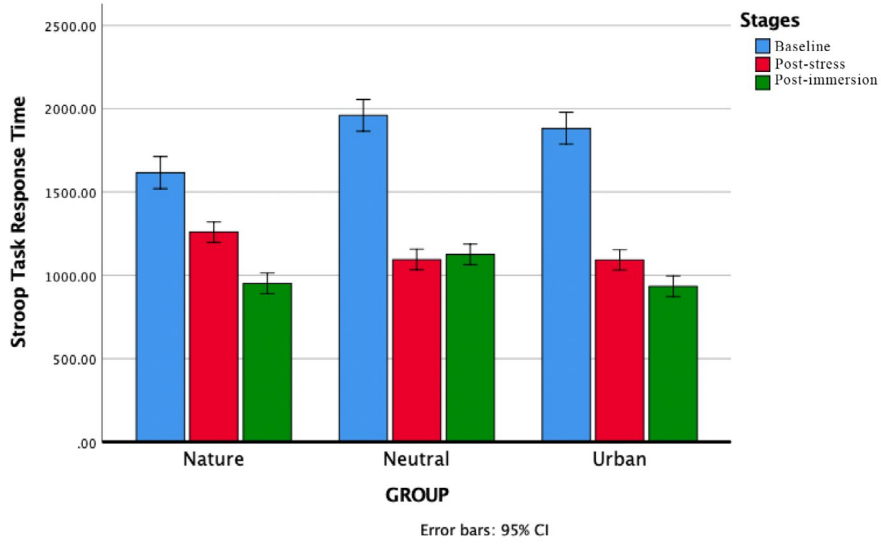
Figure 8: The Stroop Task Scores For Correct Response (Scale of 0.70 to 1.00)
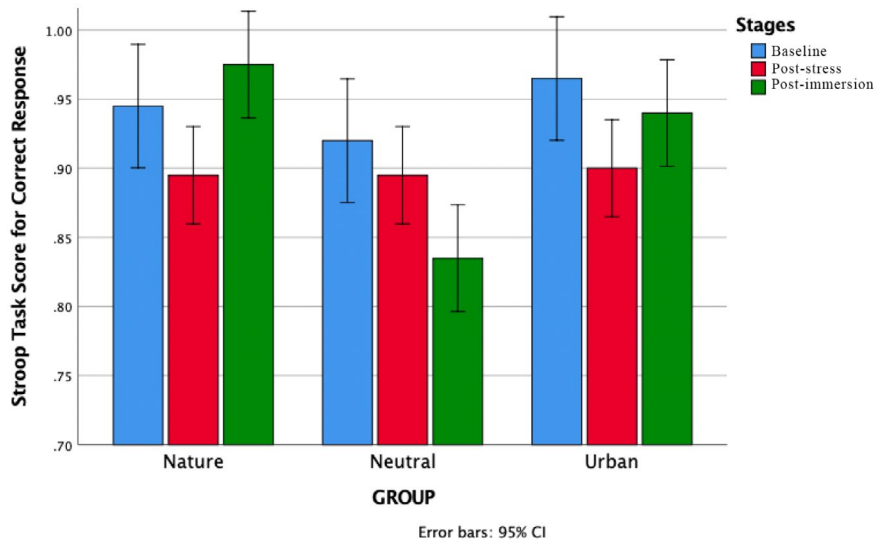
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Deconstructing the holistic nature of employee experience: A sociological perspective integrating agency and structure

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Deconstructing the holistic nature of employee experience: A sociological perspective integrating agency and structure

Abstract

Academic and practitioner interest in employee experience (EX) has been fuelled by technological advancements and is aimed at a multi-generational and discerning workforce. A significant obstacle in the theoretical exploration of EX is its inherent complexity as a holistic construct comprising of multiple distinct components such as human resources (HR) practices, structural systems, and organizational culture. This study seeks to deconstruct the holistic nature of EX, focusing specifically on HR practices integral to the construct. Adopting a sociological perspective grounded in the theories of agency and structure, the article proposes a framework of practices essential for investigating the comprehensive nature of EX. This conceptual study proposes giving equal importance to employee proactivity and organizational altruism as factors influencing EX.

Keywords: Employee experience, agency, structure, employee centric HRM

Introduction

EX has ambiguous origins. Unlike employee engagement that can be distinctly traced back to Kahn's (1990) seminal study on engagement at work, EX does not originate from a specific foundational work. Although the fundamental concept of examining employee experiences or perceptions concerning HR practices and organizational changes has been around for the past few decades (Nishii, Lepak & Schneider, 2008; Choi, 2011; Farndale & Kelliher, 2013; Katou, Budhwar & Patel, 2014; Peters, Poutsma, Van der Heijden, Bakker & Bruijn, 2014), the current incarnation of EX as a service sector-inspired *delivery model*, aimed at enhancing business outcomes, has developed only in the last decade or so (Plaskoff, 2017; Chen & Fulmer, 2018; Malik et.al., 2023; Joshi, Sekar & Das, 2023).

The emergence of EX can be attributed to both exogenous market forces and endogenous factors, such as the presence of a multi-generational workforce. A critical concern arises from powerful generational shifts that are altering established expectations regarding the employee-employer relationship (Ng et al., 2010). All this coincides with the rise of the experience economy (Hjorth and Kostera, 2007; Pine and Gilmore, 2011). The experience economy emphasises that, consumer preferences gravitate towards personally significant experiences. This experiential and consumerism wave has seemingly overflown into the employee psyche as well. Cornelius, Ozturk and Pezet (2022) note that "experience-oriented

consumption trends are mirrored in workers' relations with their employers as well" (p 434); thus, highlighting a shift in employee tendencies. Subsequently organizations distinguish themselves by crafting customised experiences for prospective and current employees, moving beyond the generic employer branding (Backhaus and Tikoo, 2004; Edwards, 2010; Kupper et al., 2021).

This has direct implications for HRM scholarship as well as practice. HRM research has had a managerialist focus, centred around management driven HRM (Cleveland et al., 2015; Marchington, 2015; Paauwe, 2009; Beer et.al., 2015). However, recent shifts in working life call for "reintegrating the employee perspective more fully into both HRM practice and research" (Laiho et.al 2022, p 445; Guest, 2017).

Employee experience and holism

The investigation of 'experience,' by its very nature, necessitates a holistic approach, as it encompasses a wide array of factors influencing an individual's perception and interaction with their environment (Caru & Cova, 2003). Drawing upon the principles of phenomenology, the conception of EX can be understood as a construct where the global (*holistic*) nature is discerned first, which shapes the understanding of its individual elements (Caru & Cova, 2003).

This phenomenological perspective of EX suggests that individual experiences at work are not isolated incidents but are interconnected and cumulatively contribute to the overall employee experience. This prioritisation challenges researchers to not only focus on discrete elements of EX but to also understand how these elements interact to form a coherent whole (Merleau-Ponty, 1965). This also presents unique challenges for empirical exploration of the holistic nature of EX. Defining what constitutes a 'holistic' employee experience is complex because it must capture a wide range of qualitative and quantitative aspects.

We seek to address this challenge. In addressing the complexities inherent in EX research, our study adopts a sociological lens that emphasises the interplay of agency and structure. This approach views experience as emerging from the dynamic interaction between individual agency and the structural constraints (Giddens, 1984). By applying this framework to EX, we can explore how employees'

independent actions and decisions are shaped by, and in turn shape, the organizational environment. To address this interplay, our study discusses the roles of various organizational practices in shaping a holistic EX. To ensure a comprehensive empirical examination of EX, it is essential to represent these practices adequately. To address this, we introduce a novel classification system for organizational practices informed by the dual concepts of agency and structure. This classification aims to categorise practices in a manner that highlights their role in either facilitating or restricting employee agency within the structural limits of the organization.

Employee agency, organizational structure, and employee experiences

Critiques of EX have argued that it could become another vehicle to transport implicit organizational beliefs and a means to legitimise HRM practices among the more powerful actors in the organization (Mahadevan & Schmitz, 2019; Heizmann & Fox, 2017). Cornelius, Ozturk and Pezet (2022) in an insightful commentary on experiential work, note that the 'emancipatory potential of experience' would be negated by organizational control if experience is 'misused as a technology for inducing content' (p 435). These arguments point out to the traditional criticism of management-centric approach that the managers can guide and determine employee's perceptions using 'managerial skills, knowledge and abilities or the HRM practices at their disposal'(Meijerink, Bondarouk and Lepak, 2015, p 220). Cornelius, Ozturk and Pezet (2022) highlighting the emancipatory nature of work, shift the frame of reference from the employee to the sociological transitions in the *nature of work*. Experiential work or work that is aimed at delivering experiences is formed by "succession of experiences instantiated at the interface of agency and structure" (p 435). We explore this 'definition of EX' using the sociological concept of agency and structure, which examines the interactions between individuals (agency) and social systems or structures (organizations) that both constrain and enable their actions (Giddens, 1984).

Employee Agency

Human agency in organizational analysis presents a challenge due to varying interpretations. It promises to bridge the gap between societal constraints and personal choice, but a clear definition remains elusive (Seeck & Parzefall, 2008). Giddens (1991) charting the history of human agency in organizational

frameworks noted that the early accounts of human agency were governed by 'institutionalised processes in which the role of the individual was rather passive' (Seeck & Parzefall, 2008 p 475). However, in contrast the modern individual is an *unattached expert*, and "presumes a close association with concepts of freedom and responsibility" (Knights & Willmott, 1999, p 84). Employee agency in the context of this study refers to the capacity of employees to make choices and initiate actions within their work environment. This includes decisions about how to perform tasks, collaboration with colleagues, responses to changes in the workplace and proactively voicing suggestions despite structural constraints.

Organizational Structure

A discussion on the sociological concept of 'social structure' invariably leads to its ubiquitous nature. In the context of this study, social structure implies organizational structure which would comprise of structural dimensions such as hierarchical layers, span of control, power centres as well as operational dimensions such as formal system of task and activity management, division of resources, co-ordination of actions and technological infrastructure (Daft, 2010; Doherty, Champion & Wang, 2010). A well-designed structure provides clear guidelines and expectations, which facilitates efficiency in operations. It defines the hierarchy within an organization, establishes the arrangement of work positions, and outlines how critical decisions are made. This structural clarity helps in aligning the organization's strategies with its objectives, ensuring that everyone moves towards a common goal (Robbins & Judge, 2018).

Interplay of agency & structure and implications for EX

The interplay between agency and structure in theorising EX, can be understood using Gidden's theory of structuration (Giddens, 1984), which posits that structure is both a medium and outcome of the practices it organises. Whereas agency involves the capability of actors to make a difference by exploiting structural contradictions or by leveraging its utilities (Giddens, 1984). Thus, agency refers to the capacity of individuals to act independently within these structures. In the context of EX, this theory

supports the notion that employee actions can reshape organizational structure, just as these structures provide the context for employee experiences. Contemporary scholars point out to the need for employee agency, by appealing to the 'emancipatory nature of work' and charting the rise of *experiential work* (Pezet & Poujol, 2020; Cornelius, Ozturk & Pezet, 2022). They argue that work is not restricted to employee-employer exchange but also about responsibility towards one's own life project, in other words the experiential nature of work is taking precedence over its other attributes (Cornelius, Ozturk & Pezet, 2022, Seeck & Parzefall, 2008, Pezet & Poujol, 2020). Thus, based on these arguments we present our first proposition as follows:

Proposition 1: *Employee agency exerts as much influence on holistic EX as organizational structure.*

Employee agency – Missing piece in current employee experience research

HRM scholarship shares the opinion that EX represents a potential avenue to both theoretical and practical advancements in HRM. For example, EX is regarded as an important source of employee engagement as mediated by organizational culture (Shenoy and Uchil, 2018; Tucker, 2020). Ghosh and Itam (2020) note that organizations are increasingly investing in 'experience designs' aiming to innovate sustainable human capital management strategies.

Nishii & Wright (2008) while investigating why HRM practices do not always produce desired results, inform that HR practices may be observed through three lenses – the practices themselves as intended by HRM, the enactment of the practices by managers and the employee experience of these practices. However, while scholars have studied individual HR practices and its impact on EX (Farndale & Kelliher, 2013) a lack of holistic understanding of EX is noticed. Three major themes are observed in extant EX literature. Firstly *service-oriented climate* through various pathways (Laiho, Saru and Seeck, 2022), second - *studies on employee perceptions* on HRM practices (Farndale and Kelliher, 2013) and third *practice inspired theme* exploring the role of technology in facilitating EX (Malik, Budhwar, Mohan and Srikanth, 2023).

EX in service oriented climate: Studies aiming at top down deductive approach examine the holistic nature of EX, by exploring factors that contribute to a strong HRM climate, or employee perceptions of

a strong HRM climate (Laiho, Saru & Seeck, 2022). This may also include examining employee perceptions under various context such as during crises like Covid (Joshi, Sekhar & Das, 2023) or for a specific cohort like Gen Y (Singh, Chaudhuri, Sihag & Shuck, 2023). The unit of analysis in these studies is not restricted to a single practice but the general perception of employees and emergent factors that can lead to a service-oriented climate (Laiho, Saru & Seeck, 2022). This approach though provides clarity about the factors that influence the holistic EX, does not consider the agency of the employee explicitly in the creation of the climate. Similarly, a framework for enhanced EX by Joshi, Sekhar & Das (2023) who examined employee online reviews during the Covid lists factors such as *work life balance, work practices, values, growth, work quality, tangible rewards*, and an *enabling environment*. The '*enabling environment*' comprising of *policies, politics and security* may be considered to encourage the agency of the individual, but this is not pointed out explicitly.

Studies in employee perceptions: The second major stream of study examines individual practices and inductively substantiates a holistic pattern for EX across the organization. For instance, an important study on EX by Farndale & Kelliher (2013) examined the single practice of performance appraisals and highlighted the impact on employee perceptions and experiences due to gaps in the design of the practice and the actual implementation of it. Similarly, studies have investigated the effects on EX of innovative work methods such as gamification (Sonta, 2021), wellness initiatives (Vignoli, Norcia, & Bertolotti, 2021), and the influence of employee voice (Prouska et al., 2021). These studies primarily focus on the impacts of specific practices or a set of similar practices on EX. Although these studies do not address the overall nature of EX, they recognize the importance of employee agency in influencing EX, as exemplified by the impact of employee voice (Prouska et al., 2021).

Role of technology in EX: The third and larger cohort of studies on EX, explores the role of technology in delivering experiences. These focus on the various applications of hi-tech technologies that can be used to enhance EX; for example - AI based HR applications and its positive influence on EX and EE (Malik et.al., 2023) or the use of bots for individualised EX (Pillai et.al.,2024; Malik et.al., 2022).

These observations on extant literature on EX, highlight that though agency is indirectly reflected in one or more practices chosen to analyse the holistic nature of EX, it is not consistent and often tilted

towards practices that symbolise organizational structure (such as appraisals, wellness initiatives, gamification) and not employee agency (such as employee voice or job crafting efforts by employees). One of the causes for this is the lack of any classification categories of that are based on the agency and structure viewpoint. We address this problem in this study. We take inspiration and instruments from customer experience to address this objective.

Customer Experience and touchpoints

Customer Experience (CX) is a multidimensional concept that focuses on the cognitive, behavioural, emotional, social, and sensory responses of the customer to the firm's offerings (Lemon & Verhoef, 2016). It primarily uses the constructs of *touchpoints* to control finer elements of customer interactions, thus designing a holistic customer experience (ibid). Lemon & Verhoef (2016) analogise touchpoints as building blocks of consumer decision journeys and thus together create the overall customer experience. Other terms used to define a touchpoint include notions such as "moment of truth" (Stein & Ramaseshan, 2016) and "contact point" (Wagner et.al, 2020).

In this study, touchpoints are viewed as points of interaction between the employee and the organization, including HR practices that involve employee-organization interactions and activities like using the organization's knowledge management systems. Employing touchpoints offers benefits like the straightforward application of established Customer Experience (CX) principles to the study of EX. Furthermore, it aids in achieving the study's goals of identifying key elements for a comprehensive exploration of EX, by facilitating classification and clustering of touchpoints.

Examination of holistic EX by classification of touchpoints

Classification as a technique for examining a holistic concept allows for the systematic organization of the concept's components. By breaking down a complex, integrated construct like EX into categorizable elements, researchers can more easily identify relationships, patterns, and underlying structures. As argued by Bowker and Star (1999), classification can reveal the dimensions and boundaries of a concept, making it more accessible for empirical study.

The scholarship on CX approaches classification of touchpoints in various ways (Santos & Goncalves, 2021); such as based on ownership i.e., who owns and controls the touchpoint, the brand, the service partner, or the customer (Lemon & Verhoef, 2016; Baxendale et.al., 2015). While some classification methods are unique to CX, some can be tweaked to classify touchpoints related to EX (see Figure 1).

---Figure 1 ---

One such classification is point of origin, which seeks to answer – who is the originator of the contact - is it firm initiated, or consumer initiated ? (Anderl et.al., 2016; De Haan et.al., 2013). This is the simplest of classifications, which can be applied to any context since it divides touchpoints into two distinct groups. In this study these groups are *Employee Initiated* and *Employer Initiated*. The term *employer* is replaced by organization, since it encompasses elements such as management, supervisors, teams, and the system in general. This classification provides an additional vantage point for this study, it reduces the interactions to only two actors – the employee and the organization.

---Table 2 here---

The table 2 presents a list of ten touchpoints classified into two categories. Rationale for the classification is derived from our experiential understanding of the practices and standard HRM textbook references. Academic constructs like job crafting which are non-standard touchpoints and represent a group of employee-initiated touchpoints were classified based on academic studies (Berg, Dutton & Wrzesniewski, 2013). While standard HRM practices like *recruitment* were classified as an employer-initiated touchpoints, based on the standard description of the *recruitment* process provided in HRM textbooks (such as Wilkinson & Dundon, 2021).

This categorization divides touchpoints into two broad groups. However, such a binary approach may overlook the subtleties captured by a more detailed classification. Hence, a secondary level of classification is explored subsequently. After an *initiator* driven classification, a *responder* driven classification could be the next choice. However, in a dyadic two-actor relationship, this would not add more categories to the classification. Instead, a classification based on *response type* is attempted. *Response type* in this context represents a mandatory vs voluntary response mechanism. For instance,

wellbeing programs rolled out by the organization would fall into the voluntary response category, while periodic performance appraisals would be grouped under mandatory response.

A voluntary response touchpoint can be described as an interaction where one of the parties has initiated a request, but the responder is not expected to respond immediately or may opt to not respond at all. This *passive* relationship represents instances where a response is desired but not mandated.

This classification based on *initiator* and *response type* leads to four distinct categories of touchpoints.

1. Employee initiated – proactive touchpoints
2. Employee initiated – transactional touchpoints
3. Organization initiated – altruistic touchpoints
4. Organization initiated – transactional touchpoints

Based on the above classification we propose:

Proposition 2: A holistic Employee Experience comprises of four distinct types of interactions, between employee and organization:

1). Interactions demonstrating employee proactivity

2). Transactional interactions initiated by the employee

3). Interactions demonstrating organizational altruism

4). Transactional interactions initiated by the organization

Employee initiated-proactive touchpoints

--------------------------------Figure 2 here---

This category of touchpoints initiates from the employee but may not receive a prompt or systemic response from the organization (see Figure 2). These could be informal point of views, or proactive suggestions from the employee (Ruck & Welch, 2012). It could also be ad-hoc employee-initiated attempts to understand and complete a job successfully. For instance, *job crafting*, where the employee proactively reaches out to anyone for help and seeks to mould his or her role or responsibility in accordance with the conditions of the surroundings (Wrzesniewski & Dutton, 2001). This category of touchpoints puts to test the digital as well as offline infrastructure of the organization. Communication

channels, digital platforms to voice opinions informally as well as a culture to listen and support would decide the success of this category of touchpoints (Berg, Dutton and Wrzesniewski, 2013).

Employee initiated-transactional touchpoints

--------------------Figure 3 here---

This category of touchpoints describes formal requests made by the employee in official settings such as - in the system or to the supervisor or to the senior management with an expectation of a timely response from the organization (see Figure 3). For instance, interactions that may involve basic policy related queries or questions and requests about ones specific job contracts (e.g., renegotiation of working hours based on changed personal circumstances) (Boxall, Purcell & Wright, 2007). Delay or lack of response to such touchpoints may have an immediate and adverse effect in the relationship between the two parties (Robson & Tourish, 2005). Some of the touchpoints that are classified under this category include – i-deals, requests made using e-HRM, request for specific interventions and grievances lodged in the system.

Thus, our third proposition concerns employee agency and is as follows:

Proposition 3: *In the context of Employee Experience, employee agency manifests in two discrete dimensions – firstly, through individual proactiveness and secondly through transactional interactions that are initiated by the employee.*

Employer initiated-altruistic touchpoints

--Figure 4 here---

Touchpoints initiated proactively by the Employer but without expecting a prompt response fall in this category (see Figure 4). These initiatives rely on voluntary participation of the employees, and may include incentives on participation (Mattke et.al, 2013). A typical example of this category includes wellness programs rolled out by organizations. The employee may not be under a contractual obligation to participate in any such event but may benefit by taking part in it. Along with intangibles such as behavioural shifts in employees such as increased enthusiasm, better motivation (Saks, 2022), return on investment (ROI), is also an important indicator when rolling out such initiatives. (Naydeck et.al.,

2008). This category of touchpoints caters to the notion of Perceived Organizational Support (POS) and is indicative of the *caring* nature of the organization (Rich et.al., 2010, Saks, 2006). Some typical examples of this category would include – wellness initiatives, behaviour nudges, job flexibility etc.

Employer initiated-transactional touchpoints

---------------------------------------Figure 5 here --

This category comprises of formal requests made by the organization to the employee via an official channel such as through the e-HRM portals or through a supervisory structure (see Figure 5). The organization would in return expect a timely and formal response or action from the employee (Kidwell & Bennett, 1993). This would include periodic requests such as participating in the performance appraisal process or unplanned requests such as taking part in a mandatory training program. The crux of daily transactional HRM practices would fall in this category, and the robustness of the systems, ease of use for both the parties would be vital for this category of touchpoints.

Proposition 4: *Organizational structure mediates EX in three distinct ways: firstly, through organizational altruism; secondly, via responses to interactions initiated by the employee; and thirdly, through interactions that are initiated by the organization itself.*

These four touchpoint types are summarised in table 3. These have also been paralleled with reciprocity norms of Social Exchange Theory (see table 3).

--Table 3 here---

Recommendations for further research

In organizational settings, experiences are shaped by the practices embedded within the organizational structure. Our research introduces a classification mechanism for these practices, which can serve as a guide for selecting practices for the empirical study of holistic EX. Currently, our classification mechanism categorises practices into four distinct classes that appear to be disjointed and unrelated. However, we anticipate that further research could uncover interrelationships among these practice

types. To advance this field, we propose that these practices exist along a continuum of EX, which spans from employee proactivity practices to organizational altruistic practices (see Figure 6).

---Figure 6 here---

Implications for practice

The classification mechanism introduced in this study, provides a blueprint for strategic planning for organizations. By identifying and categorising organizational practices, management can better align these practices with the overall goals of enhancing EX. This classification mechanism can be effectively utilized to guide investments in technology-driven EX initiatives.

Conclusion

This conceptual study has three objectives – first was to trace the current research landscape of EX, charting its developmental trajectory and identify new areas for investigation. Our literature review reveals that despite EX's apparent focus on employee-centricity, it is largely driven by management-controlled practices. Our study argues that an organizational framework that does not foster employee proactivity and limits agency does not effectively enhance EX.

This leads us to our second objective: to apply the sociological theories of agency and structure in understanding EX. This theoretical perspective underpins our first proposition, which asserts that employee agency and organizational structure are equally crucial in fostering a holistic EX. An overemphasis on structural practices at the expense of promoting agency may undermine the development of a truly comprehensive EX.

The third objective of this study is to deconstruct the concept of holistic EX itself. We observed that existing scholarship often prioritizes structural over agentic practices. To address this imbalance, we proposed a classification system that documents employee-employer interactions into four categories, giving balanced importance to both employee agency and organizational structure. Ultimately, the

primary contribution of this study is the recommendation to incorporate employee agency into all EX frameworks.

Tables:

Author	Definition
Plaskoff (2017)	'Employee's holistic perceptions of the relationship with his/her employing organization derived from all the encounters at touchpoints along the employee's journey'
Wride (2016)	'The employee experience is the sum of the various perceptions employees have about their interactions with the organization in which they work'
Bersin et.al (2017)	'A holistic view of life at work, requiring constant feedback, action and monitoring'
Ludike (2018)	'Sum total of experiences from a potential recruit to the last interaction at the end of employment'
Raia (2017)	'Meeting the needs and expectations of the employee from the application process to the hiring and daily work life'

Table 1: Definitions of Employee Experience (academic and practitioner sources)

Sr.No.	Touchpoint	Initiated by
1.	Job crafting	Employee
2.	Informal proactive suggestions	Employee
3.	Job Design	Organization
4.	Onboarding	Organization
5.	Policy related queries	Employee
6.	Employee Surveys (formal)	Organization
7.	Performance Management Systems (PMS)	Organization
8.	i-deals	Employee
9.	Wellness Initiatives	Organization
10.	Upskilling/training	Organization

Table 2: Classification of selected touchpoints based on initiator

Represents	Initiated by	Response mandated ?	Social Exchange Theory (reciprocity norms)	Examples
Employee Agency	Employee	Not expected	Proactiveness	Job crafting, proactive suggestions from the employee

Employee Agency	Employee	Response expected	Transactional	Grievances, queries, requests raised by employee
Organizational Structure	Organization	Not expected	Altruism	Wellbeing initiatives, wellness initiatives, CSR initiated by organization
Organizational structure	Organization	Expected	Transactional	Systemic processes -e.g. PMS, training requests initiated by organization

Table 3: Summary of the 4 types of touchpoints

Figures:
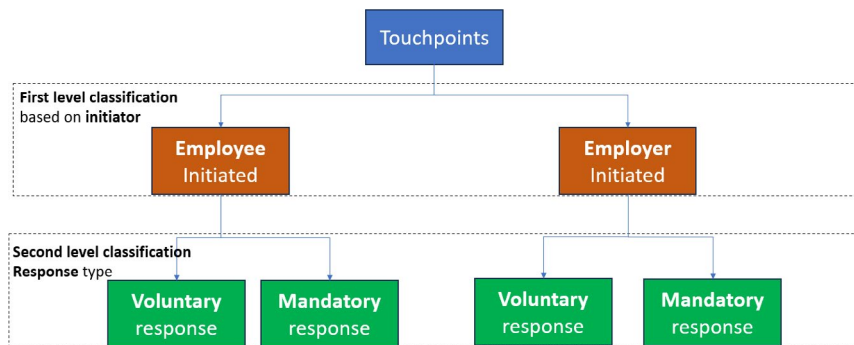
Figure 1: Two stage classification strategy.

Proactive interaction initiated by the employee
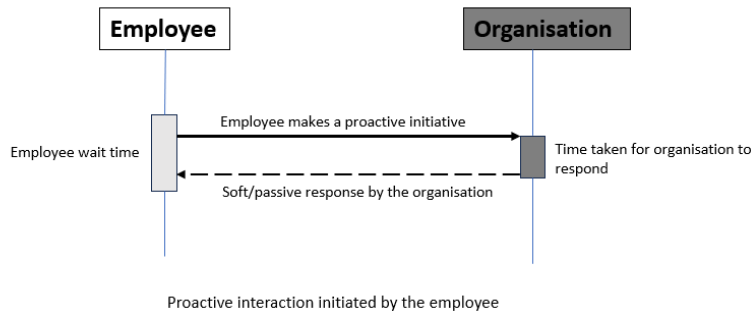
Figure 2: Proactive interaction initiated by the employee

Transactional interaction initiated by the employee
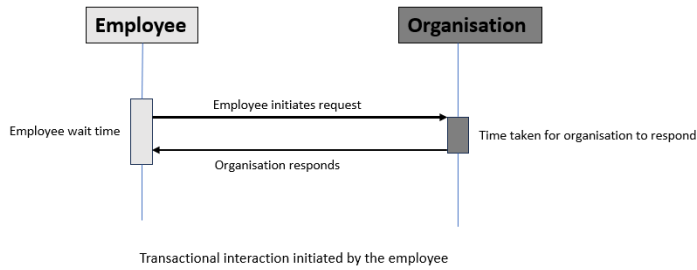
Figure 3: Transactional interaction initiated by the employee

Altruistic interaction initiated by the organisation
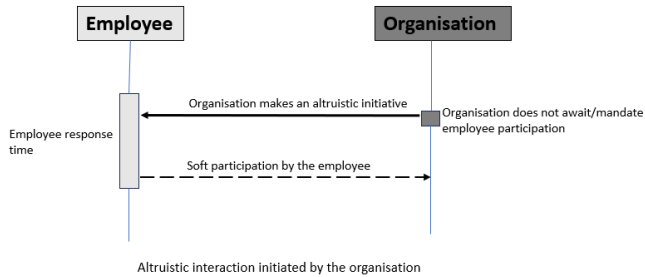
Figure 4: Altruistic interaction initiated by the organization
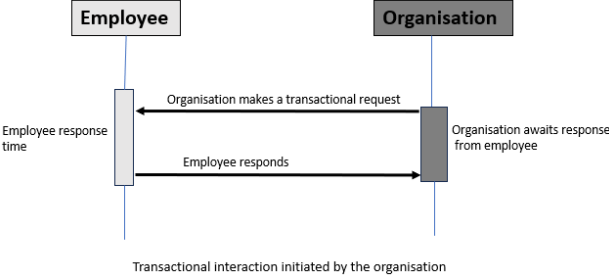
Figure 5: Transactional interaction initiated by the organization
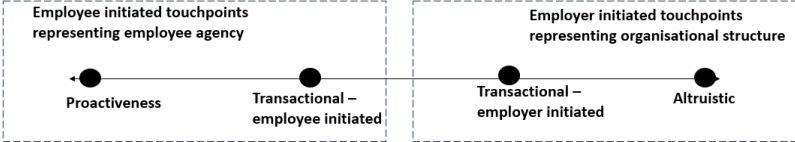
Figure 6: The four touchpoint types as a continuum

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Stream Number 07. Teaching and Learning

Professional development for sessional academics: Quality and engagement enhancement

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1

Professional development for sessional academics: Quality and engagement enhancement

ABSTRACT:

This article outlines the trial of a professional development (PD) program to enhance sessional academics' (SAs) pedagogical skill set and improve student learning experiences. Higher education in Australia is delivered by both continuing and sessional academics. The courses tend to attract large enrolment numbers and require multiple tutorial sections to be offered. Many of these tutorial sections are delivered by SAs who may have sound professional and/or discipline knowledge, but limited pedagogical understanding or skills to enhance student engagement and satisfaction. To address this aporia, a PD program was developed for the SAs using the Benchmarking Leadership and Advancement of Standards for Sessional Staff (BLASST) framework. This paper reflects on learnings and directions for further research.

Keywords: professional development, sessional academic, Australia, higher education, community of practice.

Overview

The research underpinning this article acknowledges and deeply values the contribution sessional academics (SAs) make to students' learning experience and knowledge outcomes in higher education. The research also recognises that when universities rely heavily on SAs to deliver core program contents, there is a duty of care to provide ongoing, iterative professional development (PD) activities for this critical workforce.

This paper reports on one such PD program for SAs at an Australian Business School. The PD initiative was developed with the following objectives in mind:

- Challenge dominant narratives of excellence by creating inclusive pedagogical spaces that address persistent inequalities in academic-facing PD programs (Burke, Stevenson, & Whelan, 2015).
- Provide opportunities for SAs to discuss their PD needs (Bryson, 2013).
- Cultivate and sustain a community of practice that enhances student success while supporting the transformation of teaching methods in higher education (Hattam & Weiler, 2021).
- Offer more critically responsive and tutor-centred PD aimed at reducing issues of misrecognition, illegitimacy, and vulnerability among SAs (Misiaszek, 2015).

2

Current understanding

SAs, also known as tutors, play an increasingly important role in creating an environment conducive to learning, improving student engagement, student learning experience, affecting student satisfaction and retention rates (Knott, Crane, Heslop, & Glass, 2015; Percy & Beaumont, 2008). SAs' roles are especially critical as higher education providers have institutionalised dependence on sessional staff as teachers (Andrew, Halcomb, Jackson, Peters, & Salamonson, 2010; Knott et al., 2015). In Australia, 66.5% of university teaching is now undertaken by sessional staff, statistically, almost twice as many casual staff are in teacher-only roles than full-time and fractional full-time staff (Department of Education, 2023).

Tertiary education is considered one of the most casualised education sectors in Australia (Knott et al., 2015). The Australian Business School which is the site of this study has nearly 60% of its teaching staff as SAs. This 60% of academic staff delivers nearly 80% of classes offered. In the context of constant change caused by COVID-19 and the massive development of technology and AI in higher education teaching and learning, both ongoing academics and SAs are under pressure to be engaged in increasingly complex tasks (Hitch, Mahoney, & Macfarlane, 2018). Such tasks may include engaging academically diverse and time-poor student cohorts and incorporating new pedagogies and technologies in both online and face-to-face teaching environments (Hitch et al., 2018).

In the literature, SAs are often described as 'invisible faculty,' with little attention given to their management, support, professional development, and integration into the university teaching team (Harvey & Fredericks, 2017; Hattam & Weiler, 2024; Kimber, 2003; Ryan, Burgess, Connell, & Groen, 2013). This marginalisation risks critically and negatively affect the overall quality of the higher education experience for students. Students expect their 'teachers', whether continuing or casual, to have equivalent teaching experience and qualifications. However, research shows that the majority of the casualised workforce likely has limited teaching experience or qualifications (Hattam & Weiler, 2024; Rothengatter & Hil, 2013).

3

SAs may be adequately qualified in their field and possess both significant knowledge and postgraduate qualifications in the fields they are selected to teach. However, SAs are not necessarily equipped with the skills and knowledge to effectively deliver and manage classes, perform consistent assessments, and deal with challenging student behaviour or students with special needs (Andrew et al., 2010; Chan, 2010). The literature also documents a strong desire among SAs to interact more with the broader university community and access PD opportunities to enhance their teaching pedagogy (Brown, Kelder, Freeman, & Carr, 2013; Hattam & Weiler, 2024; Rothengatter & Hil, 2013). Research has further pointed out that SAs value and appreciate opportunities to learn from each other's good teaching practices. These opportunities include peer observation, mentoring or discussion, advice on marking assignments, including sharing strategies for student engagement and developing an interactive teaching style (Bell & Mladenovic, 2008; Bell, Mladenovic, & Segara, 2010; Chester, 2012; Truuvert, 2014). Yet, literature reporting on such peer-to-peer practices is rare.

Research question

The developing SA PD program we report here was designed to explore an answer for the questions *"What do sessional academics need in academic development, support/teaching pedagogy, and community-building? And how to accommodate such needs"?*

Research approach

This PD programs was developed based on the Benchmarking Leadership and Advancement of Standards for Sessional Staff (BLASST) framework (Luzia & Harvey, 2013). This framework is often used to evaluate and enhance the quality of sessional staff teaching, management, policies, procedures, and practices (Hitch et al., 2018; Luzia et al., 2013). The framework is based on three principles: 1- *Quality Learning and Teaching* (refers to issues affecting the quality of SAs teaching and learning), 2- *Sessional Staff Support and Sustainability* (refers to the provision of consistent support and inclusive infrastructure for sessional staff) and 3 - *Sustainability* (refers to practices which encourage the retention of high-quality SAs and their pursuit of quality teaching (Luzia et al., 2013).

4

Concerning the research methods, the project is an action research (Zuber-Skerritt, 2013) aiming to deliver PD activities for SAs in the form of a community of practice. In other words, this study promote Stenhouse's (1975, p. 142) advocated idea that 'curriculum research and development ought to belong to the teachers.' and that 'it is not enough that teachers' work should be studied; they need to study it themselves.' Below are key activities in this project. We note that Part 1 is completed, but that Part 2 is still in development:

Part 1 - Completed

- *Class observations* have been conducted with 30 percent of the tutors in the School to identify the tutors' strengths and the areas needed for further support.
- *Open forums* were created (in the form of emails, Team meetings, and Teams chat) to provide SAs prompt support for their teaching queries.
- *Peer-to-peer support/mentoring* has been encouraged to provide on-going PD support if needed.
- *A questionnaire* was developed based on the lessons learned in the literature and compared with the findings from class observation and open forums.

Part 2 – In progress

- In the next stage of the research, the questionnaire will be sent to all SAs in the School to collect SAs data and develop a more granular understanding of their PD needs and preferences.
- SAs in the School will be invited to join *a co-design workshop* to work on the following questions: What do sessional academics need in *academic development, support/teaching pedagogy, and community-building? And how to accommodate such needs?*
- *A PD day* (in the form of community practice) will be organised to accommodate SAs' PD needs.
- *A Facebook group* (or other social media platform) will be created to provide in-time support and develop a sense of community among SAs in the School. This open and interactive forum will also help SAs find suggestions/answers for the problems/issues they face, thus reducing SAs to ask the same questions many times.
- SA's feedback will be sought at the end of semester 2, 2024, via *evaluation surveys* and *random interviews.*

5

Preliminary Findings from Part 1

The research team found that significant impediments to effective teaching practice emerged in the classroom and in student management. Data was collected through classroom observations of tutorials delivered by 20 SAs in the School and via team communication channels with the same group of SAs. While almost all tutors demonstrated sound knowledge of the course teaching themes, many struggled to enhance student engagement via face-toface classroom delivery. SAs also sent numerous messages in the teaching team's open forums seeking help in student group formation (for group assignments), assignment marking, trouble-shooting technical and conceptual issues around micro-credentials, or dealing with challenging students or students with special needs. Many SAs sent emails and asked repetitive questions about the above-mentioned problems. These initial findings strongly support the claim in the literature that although SAs are qualified and knowledgeable in their fields, they may lack the skills to effectively manage classes, conduct assessments, and handle challenging student behaviour or special needs (Andrew et al., 2010; Chan, 2010).

Our initial findings from the first round of observation and engagement with SAs also support the findings of Brown et al. (2013) and Rothengatter and Hil (2013) which suggest that SAs appreciate the opportunities to enhance their teaching pedagogy. SAs' positive responses and acknowledgement towards the observation feedback were reported despite initial resistance to observation. We understood this resistance as related to a power differential and a fear that, if the course management team came to the tutorials, it would be for the purpose of reporting negative practices rather than for supportive PD. There was also resistance from continuing academics to classroom observation and feedback. Continuing academics did not wish to set expectations for PD across the full suite of courses in the degree program. The opinion of some is that class observation is irrelevant to higher education pedagogy. Their assumption is that SAs are adults and professionals. They do not need hand-holding or micro-managing.

However, our well-planned, respectful class observation and constructive peer-to-peer feedback afterwards have received positive feedback from SAs. Tutors appreciated the feedback and expressed the

6

desire for more opportunities to enhance their teaching pedagogy and increase student engagement and learning outcomes. On the back of our supportive PD initiative, several SAs chose to actively create mentor-mentee relationships with one another. They shared with the course management team that the experience was positive as they learn valuable insights from their peer-to-peer interactions.

Contribution and Limitations

Preliminary research findings from Stage 1 encourage the pursuit of a second stage of the research project. In stage two, we hope to investigate precisely what type of PD activities would be appreciated by SAs in terms of tutor-centred support. Ideally, the PD agenda and outcomes sought need to reflect participatory action research principles: be initiated by SAs based on SAs' needs and accommodated by SAs (Morales, 2016; Zuber-Skerritt, 2013). In other words, this study hopes to make the case for a co-learning environment where SAs can learn from each other – as well as continuing staff – in a friendly and respectful manner. Providing experienced tutors with opportunities to share their rich teaching experience and expertise with their peers is also a way to enhance a scholarly community of practice, help universities retain high-quality tutors, increase teaching quality, while enhancing student engagement and satisfaction.

This study also undergirds the need to identify issues affecting the quality of SAs' teaching and learning practice in higher education. In order to provide a consistent student experience, it is vital to provide consistent support and inclusive infrastructure for sessional staff and to develop practices that encourage the retention of high-quality SAs per the BLASST framework (Luzia et al., 2013). This action research also acknowledges the active role of SAs can take in enhancing their quality of teaching by empowering this vital workforce to co-design their PD practices.

Implications

This study may shed some light on several good PD initiatives for SAs. It may be a reference for any institution seeking to provide SAs with further support to enhance their teaching quality and develop a community of practice among SAs in the context of the increasingly casualised education landscape. This

7

program differs from most popular top-down PD programs in that it is co-developed with SAs (in the co-design workshop) and run by SAs with continuing staff support.

This PD program does not necessarily need to replace any existing academic professional development programs designed to onboard SAs regarding university systems and processes. Instead, it complements existing training modules by providing a new, additional framework that further supports SAs in ways that are local, contextually specific, timely, tutor-centred, and responsive to changing student needs. The program has a potential to be applied across subject disciplines. It is suitable not only for recently hired SAs but also experienced tutors. As the educational landscape continues to change, the need for on-going support and developing a sense of belonging is valued along the spectrum of novice to mature SAs.

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8

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9

Human Resource is not a Resource at all: A Return-on-Investment perspective

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Human Resource is not a Resource at all: A Return-on-Investment perspective

ABSTRACT: *Organisational leaders and HR professionals often claim that employees are their greatest resource. To substantiate this, HR professionals need to demonstrate the benefits of their investments for employees and contributions of their employees effectively. However, many HR professionals are not well-versed in showcasing the return of their activities and investments for their employees' performance. In this paper, we present an example illustrating how HR professionals can calculate the return on investment (ROI) from HR-related activities and investments. Additionally, we explore the areas where HR professionals should focus their data analysis efforts in the era of AI. The insights from this conceptual paper have significant implications for HR managers regarding their role in data-driven decision-making and management.*

Keywords: Data-Driven HR, HR Analytics, Predictive Analytics, ROI

INTRODUCTION

In business, a resource is anything that can be used to generate economic value (Brush et al., 2001). For example, if we invest money in a business, we expect to generate more money (financial resource). Similarly, if we invest in improving customer satisfaction, we attract more customers (customer resource). When we invest in employees, such as by helping them acquire more knowledge or skills, these employees might grow and potentially contribute more profit to the organisation (Jo et al., 2024). However, the extent of their contribution often goes unmeasured, leaving the question of whether employees should be considered as resource or not (Fitz-enz and Mattox, 2014). It is the responsibility of Human Resource (HR) professionals to calculate and demonstrate the benefits of investing in employees, but they often either do not do this or lack the knowledge to do so. In this paper, we demonstrate a simple calculation that HR can use to present employees as invaluable resource.

In the contemporary business landscape, the assertion that employees are the greatest resource to an organisation is widely accepted (Enis, 2017). However, a critical examination reveals a paradox which manifest that employees are listed as expenses on balance sheets and income statements, rather than as a resource. The primary argument against considering employees as resource is the difficulty in quantifying their contribution to the financial bottom line (Parham & Heling, 2015). Consequently, all HR functions are listed as expenses. For example, a training program is always listed as a cost, but no one bothers to calculate how the new skills acquired from training contribute to the financial bottom line (Pease, 2015). This does not imply that employees do not contribute to the organisation's success; rather, it indicates a gap in how these contributions are measured and presented. This discrepancy calls into question the traditional view of human resources and highlights the necessity for a more analytical and data-driven approach to HR practices.

It is unjust to blame accounting, finance, information systems, or other departments for not recognising employees' contributions. Instead, HR professionals must be held accountable for their failure to demonstrate the impact of employees on the bottom line. This responsibility underscores the need for HR to adopt analytical tools and methodologies to quantify and showcase the value that employees bring to the organisation (Pease, 2015). This paper aims to address this paradox. Therefore, the primary objective of this paper is to explore and enhance our understanding of: *How can HR professionals demonstrate the benefits of HR functions, showing that investment in employees is not merely a cost but has a positive contribution?*

To achieve the above objective, we conducted an extensive literature review on data-driven HR practices and the return-on-investment (ROI) of HR functions. We also consulted AI-related articles to explore the potential interventions of AI in analysing HR data. The findings have implications for HR professionals and managers, highlighting the importance and methods of demonstrating the benefits of HR activities and investments.

Data-Driven HR Practices and ROI of HR Activities

The past two decades have witnessed a major shift towards data-driven communication technologies and an increasing interest in the use of Human Resource Analytics (HRA) across industries (Edwards and Edwards, 2019). HRA is an HR management practice enabled by information technology (IT) that uses visual, descriptive, and statistical analyses of data related to HR processes, organisational performance, and external economic benchmarks to establish business impact and enable data-driven decision-making (Marler and Boudreau, 2017). Despite the apparent and potential importance of HRA practices, many organisations have not fully embraced or utilised these new practices. A study undertaken by Deloitte found that 85% of organisations rate people data as important, yet only 42% of respondents consider themselves ready to exploit data-driven HRA practices (Deloitte, 2018).

Some researchers argue that while interest in new analytic opportunities, including big-data and artificial intelligence (AI), has risen in recent years (Tambe et al., 2019), there are doubts as to whether HR professionals are genuinely embracing and utilising these data-driven technologies and analytics (Palminteri & Lebreton, 2021). Some authors contend that the benefits of many HR activities are difficult to measure, such as the benefits of employee engagement or affirmative actions, while others argue that these benefits can be quantified in various ways (Marler and Boudreau, 2017). For example, the benefits of employee engagement can be measured through productivity or performance outputs (Vomberg et al., 2015). Furthermore, some authors assert that the outcomes of HR initiatives are subjective and context-dependent (Palminteri & Lebreton, 2021). On the other hand, some authors note that other functions, like marketing, are also subjective and context-based; for instance, sales in the marketing discipline depend on individual and contextual factors (Morwitz & Schmittlein, 1992). This

discussion thus indicates that there is nothing inherently wrong with measuring the benefits of HR activities and investments for employees.

ROI of HR Activities

One significant aspect of HRA is its potential to demonstrate the ROI of HR activities (Chalutz Ben-Gal, 2019). Traditionally, HR functions have been viewed as cost centres rather than value-generating entities. However, HRA allows HR professionals to quantify the positive contributions of HR activities, such as employee engagement and training and development programs, by measuring their ROI (Teixeira & Pereira, 2015). By providing empirical evidence of the ROI of HR activities, HR professionals can more effectively advocate for investments in human resources and demonstrate their strategic importance to organisational success. Thus, calculating ROI in HRA practices can transform the perception of HR functions from being a cost to a source of value creation.

The ROI measure quantifies the benefits of HR functions and investments in employees (Blaga & Gabor, 2018). It is calculated using the formula: ROI (%) = (Net HR Program Benefits / HR Program Costs) × 100. This ratio indicates whether an investment is viable or not (Chalutz Ben-Gal, 2019). A 100 percent ROI means that the net benefit equals the net cost, indicating a break-even point. By calculating ROI, organisations can make informed decisions about where to allocate resources to maximise employee productivity and engagement (Teixeira and Pereira, 2015). Further literature review is required to explore how HR professionals use ROI and measure the benefits of HR activities.

RESEARCH APPROACH

As a conceptual paper, this research has utilised recent and relevant HRM literature to form a narrative review of the use of ROI in HR activities and to answer the primary research question. This literature review also includes other AI-related activities in HRM to explore whether AI will be a suitable tool for calculating ROI for HR professionals.

FINDINGS

In HR articles, most researchers focus on measuring the ROI of training programs (Satiman et al., 2015; Teixeira and Pereira, 2015). These measures are often simple and straightforward. For example, they typically assume a benefit in return for the cost of a training program and calculate the ROI. Some authors even describe the ROI in qualitative terms such as "High," "Medium," or "Low" instead of providing a numerical value (Chalutz Ben-Gal, 2019). Despite the simplicity of this approach, Teixeire

and Pereira (2015) found that only eight percent of HR managers measure the ROI of their training programs.

While most authors calculate the benefit based on direct returns, HR does not work in a straightforward way. Training and development programs can be evaluated for their impact on employee productivity and retention rates (Devarakonda, 2019). By using HRA, HR professionals can measure improvements in performance and reduced turnover, thus demonstrating a clear ROI of a training program (Devarakonda, 2019). Similarly, employee engagement initiatives can be analysed to show their effect on overall organisational performance. Engaged employees are more likely to be productive, reduce absenteeism, and enhance customer satisfaction (Phillips, 2012). By applying ROI metrics, HR professionals can present data-driven evidence of how engagement strategies contribute to these positive outcomes, thereby justifying the investment in such programs.

DISCUSSION

As found in the literature on measuring ROI of HR activities, HR professionals often use predicted net benefits or lump-sum benefits of a program rather than real-life data (Satiman et al., 2015). Therefore, we propose the following example and its solution to demonstrate how to calculate the ROI of an HR program.

Example: During COVID-19, a CEO allowed her employees to work from home. Fifty employees accepted the offer. The average salary of these employees is $80.00 per hour, and the average working day is 8 hours. She provided each employee with a laptop costing $1500.00 (expected life of 1 year) and an additional $1000.00 for setting up a desk and chair at home. At the end of the year, this new arrangement reduced electricity costs by $50.00 per week. Data also shows that this flexible work arrangement improved productivity, equivalent to one hour of employee time fortnightly. Additionally, the new system reduced unplanned absences by 0.5 days per month per employee.

Solution: Step-by-Step calculation of ROI at the end of the year.
Initial Costs:
Laptops: Total cost of laptops=50×$1500=$75,000
Desk and Chair: Total cost of desk and chair=50×$1000=$50,000
Total Initial Costs: Total initial costs=$75,000+$50,000=$125,000

Savings and Gains:
Electricity Savings: Electricity savings per year=$50×52=$2,600
Productivity Gains: Total productivity gain for all employees=50×$2,080=$104,000

Reduced Unplanned Absences: Total value of unplanned absence reduction per year for all employees = 50×$3,840 = $192,000

Total Savings and Gains: Total savings and gains=$2,600+$104,000+$192,000=$298,600

Return on Investment (ROI):

ROI= {(Total Savings and Gains−Total Initial Costs)/Total Initial Costs} ×100
ROI= ($173,600/$125,000) ×100=138.88%

Therefore, the ROI at the end of the year is approximately 138.88%. An ROI of 138.88% means that the returns from the investment are 138.88% of the original cost. Essentially, for every dollar invested, the company gains an additional $1.39 in profit.

This calculation demonstrates how HR professionals can calculate benefits from a single HR program. Some might argue that some of the gains are context-dependent and based on assumptions. As discussed above, assumption and context-based gains are also used in other disciplines. For example, in marketing, a sales forecast depends on many assumptions and contextual factors. Therefore, it is acceptable to use assumptions and context-based gains in HR as long as these assumptions are explainable with theories and existing literature.

Will AI calculate ROI on behalf of HR professionals?

There is a growing view among many authors that since AI is capable of performing calculations and predictive analytics, HR professionals no longer need to possess the knowledge of calculating ROI. Reports indicates that 77% believe AI would improve job performance, while 33% expect it to handle more human tasks (Jain & Gupta, 2022). However, some authors are sceptical about AI's ability to conduct unbiased predictive analytics due to its reliance on historical data (Tambe et al., 2019). For instance, consider the use of an algorithm to predict hiring decisions. Machine learning algorithms trained on biased historical data may recommend hiring more white men, assuming they perform better, which can perpetuate biases (Tambe et al., 2019). This issue was notably highlighted when Amazon's hiring algorithm favoured white male candidates due to historical biases in job performance data (Tambe et al., 2019).

Furthermore, top managers express concerns about serious data breaches under privacy acts when uploading data to AI chatbots, potentially compromising sensitive information (Armstrong, 2023). In Australia, the penalty for private data breaches is currently $2.2 million. A survey of 2000 IT decision-makers across several countries found that 75% of employers are considering or implementing bans on AI technology due to data security and privacy risks (Armstrong, 2023). Similarly, 3 out of 4 employers are contemplating banning ChatGPT and similar AI tools due to concerns over data security (Armstrong, 2023). Therefore, with the increasing presence of AI, HR professionals need to possess robust knowledge of data analytics to avoid potential pitfalls and ensure accurate outcomes.

CONCLUSION

In conclusion, the traditional view of human resources as a nebulous, unquantifiable asset must evolve. HR professionals have a critical role in transforming HR into a measurable and strategic resource. By adopting data-driven HR practices and leveraging Human Resource Analytics, organisations can accurately calculate and showcase the contributions of their workforce. This shift not only validates the importance of employees as valuable assets but also aligns HR practices with the overarching goals of the organisation, ultimately driving growth and success.

Implication and Limitations

This research provides a scope for understanding the importance of HRA, particularly emphasising the legitimate significance of calculating the benefits of HR initiatives and investments for employee reasons. It demonstrates in detail how to calculate the ROI of HR activities. The research also addresses concerns regarding the use of AI for data analysis in predictive analytics. If HR professionals engage in measuring 'people' related tasks and activities, they will position employees as true assets and resources for the organisation.

However, since generative AI is a new and evolving domain, a cautionary note is warranted. The limitation of this paper lies in its focus on a rapidly expanding area of research. Therefore, this paper serves as a snapshot in time based on available information. The landscape of HRA is evolving rapidly, and the scope of ideas may change accordingly.

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Reconsidering the Concept of User Community as a Competitive Resource for User Entrepreneurs: A Case Study of a New Boutique Winery in Japan.)

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Stream 8.

Business Processes, Innovation and Supply Chain

Reconsidering the Concept of User Community as a Competitive Resource for User Entrepreneurs: A Case Study of a New Boutique Winery in Japan.

ABSTRACT:

This study reexamines user communities as a resource for competitive advantages for user entrepreneurs. User entrepreneurs create new businesses based on products and services they've used, leveraging the communities they belong to. They possess extensive pre-business knowledge as users. The paper explores how user entrepreneurs in town α in Hokkaido, Japan, construct and utilize their community for a winery business. It identifies diverse community member characteristics and highlights practical implications for entrepreneurs utilizing such communities. The study also underscores the community's richness in future theoretical explorations. Future research aims to visualize the personal network structure within Hokkaido Town α's user community and among user entrepreneurs.

Keywords: User Community, User Entrepreneurs, Personal Network, Discourse Analysis, Winery

BACKGROUND AND OBJECTIVES

This study aims to reexamine the concept of user communities, which can be an essential competitive resource for user entrepreneurs. Since the late 2000s, there has been increasing attention and debate surrounding the contributions of user entrepreneurs to the development of specific products and market economies. Since user entrepreneurs are themselves users, they can respond sensitively to the functions and values required by their products and services in the market. Therefore, they can initiate the development of new products that the market requires, develop new industries by sublimating existing products and services, and add functions and values to existing products that the product development department in the company overlooks. User entrepreneurs, on the other hand, may not have the backing of the firm and may lack the methods and knowledge of competition and production in the industry they are planning to enter and the scientific and technological knowledge at the core of their products. In this sense, they are at a disadvantage in terms of competitive resources compared to a company's development department or an actor already participating in the industry.

User entrepreneurs do not necessarily operate as individuals. User entrepreneurs are disadvantaged because they do not have the various available resources that existing firms have. However, they can utilise the user community to carry out their activities. The user community can be a vital resource for user entrepreneurs. However, existing studies have not necessarily paid attention to the

characteristics of the user community or even the characteristics of the people who make up the user community.

In our study, we analyze the composition of the user community, including the winery founders of new wineries established in Hokkaido, Japan. Recently, there has been a boom in the establishment of new wineries in Hokkaido, Japan, called boutique wineries, which aim to produce high-quality wine in small quantities. Many of the managers of these new wineries are originally wine lovers. In Japan, which is not necessarily a traditional wine-growing region, they derive many of their competitive resources from the user community. Our study analyzes how the user entrepreneur constructs a user community and how they perceive the user community through the case of a new winery established by a wine enthusiast who established a new winery in Hokkaido. We will reconsider the concept of the user community through this study.

USER ENTREPRENEUR AND USER COMMUNITY

User innovation

Traditionally, research on innovation and new product development has progressed based on the assumption that manufacturers are the main actors in innovation and new product development, while users are the main actors who consume the products made by the manufacturers. Therefore, users are mainly survey targets to explore market opportunities and potential customers of the company's products, and the focus of discussions has been on how manufacturers respond to them and the analysis of the effects of such responses. On the other hand, some studies began to emerge on the phenomenon of users conducting innovation and new product development (von Hippel, 1988).

User innovation is that users innovate and develop new products by themselves. They innovate and develop new products or modify and improve existing products to satisfy their needs (von Hippel, 2005). For example, LEGO, a Danish construction toy production company, actively engages in collaborative development with users to develop new products (Hienerth, Lettl, & Keinz, 2014). By utilizing the creativity of LEGO's users and feedback from the LEGO user community, the company has been able to continuously develop attractive new products and improve its existing products.

Stream 8.

Business Processes, Innovation and Supply Chain

Some previous research has noted differences between user-driven innovation and new product development outcomes and traditional firm-driven innovation and new product development outcomes. Studies focusing on user-driven development outcomes reveal the following. First, even if users undertake development activities to satisfy their own needs, some outcomes are also beneficial to other users and commercially attractive (Franke, von Hippel, & Schreier, 2006; Lilien, Morrison, Searls, Sonnack, & von Hippel, 2002). As a factor contributing to the good outcomes of user-driven innovation and new product development, users have better novelty and customer benefit scores than experts in the firm (e.g., marketers, engineers) when comparing the ideas needed for development activities (Poetz & Schreier, 2012). Furthermore, companies tend to keep development results and ideas related to new product development within the company, whereas users who intend to innovate and develop new products tend to disclose their ideas and development outcomes (e.g., prototypes) for free (von Hippel, 2017).

As described above, traditionally, users have been analyzed only as subjects who consume products and services. However, as a series of recent research results have shown, it has become shown that users are the source of value-creating activities such as innovation and new product development.

User Entrepreneur & User Community

Previous research on user innovation has pointed out that products developed by users not only satisfy their needs but spread throughout society (Baldwin, Hienerth, & von Hippel, 2006; de Jong & von Hippel, 2006). Diffusion of the products developed by users to society is among users (Peer-to-Peer) or commercialized by companies, entrepreneurship by users. In the following, we focus on user entrepreneurship and summarize the discussions in previous studies.

Shah and Tripsas (2007, p. 123) define 'user entrepreneurship as the commercialization of a new product and/or service by an individual or group of individuals who are also users of that product and/or service'. For example, a group of fishing enthusiasts found a fishing tackle manufacturer in Italy in order to satisfy their needs. They used their spare time to develop and improve lures to develop better-performing ones. The fishing community received the lures developed well and they subsequently started as a business (Milanesi, 2018). Research in the United States reveals that such user entrepreneurs are distributed across a wide range of product categories, not just specific product categories, as shown in the examples (Shah, Winston Smith, & Reedy, 2012).

Stream 8.

Business Processes, Innovation and Supply Chain

Prior research on user entrepreneurs has focused on (1) how they perceive business opportunities and generate ideas and (2) how they develop their businesses. Firstly, user entrepreneurs perceive business chances and create new ideas through their experience as users. In the first-place user entrepreneurs have been users of the product category that they develop their business. They learn knowledge about the product and become aware of some problems with the experience of using the product. Therefore, they have a wealth of information on the needs for innovation and new product development (von Hippel, 1994). This information may be commercially attractive (Franke et al., 2006). User entrepreneurs are able to use it for business development for that reason. For example, Shah and Tripsas (2007) discuss the case of a jogging enthusiast who started a business while raising her children. The founder, Phil Baechler, wanted to improve the performance of existing strollers for the long distances involved in jogging. To overcome this, he developed a stroller that could be adapted to situations such as jogging. Thus, one of the characteristics of user entrepreneurs is that they utilise the needs arising from their own circumstances and experiences as a source of business opportunities and ideas.

Secondly, the existing study on user entrepreneurs focuses on their business development methods. Generally, user entrepreneurs are on the side of users who consume existing products and services and do not have sufficient management resources or sales channels to conduct their business activities. User entrepreneurs, however, can overcome these challenges by utilising the user community (Franke & Shah, 2003; Füller, Jawecki, & Mühlbacher, 2007; Füller, Schroll, & von Hippel, 2013; Haefliger, Jäger, & von Krogh, 2010; Srivastava, Panda, & Williams, 2022). Therefore, the user community plays an important role in the business development of user entrepreneurs.

From the view of user entrepreneurs' effective utilization of user communities, previous research has developed two specific discussions. The first is about collaboration through user interaction. Users participate in user communities to let their ideas open, provide feedback on each other's ideas and prototypes, and work on improvements to create better products (Franke & Shah, 2003; Füller et al., 2007; Srivastava et al., 2022). In particular, Franke and Shah (2003) point out that support from the user community is essential for turning ideas into prototypes. Management resources (e.g., technology, production facilities, and so on) should complement each other within the user community during the development process (Haefliger et al., 2010; Hienerth, 2006).

The second is the discussion on the diffusion of outcomes developed by users. User entrepreneurs not only obtain feedback by disclosing their ideas and prototypes in the user community but also share their ideas and prototypes with other user entrepreneurs. In addition, the increased visibility of their ideas and prototypes in the user community can be expected to build their reputation as user entrepreneurs and increase the visibility of their development results in the community (Autio, Dahlander, & Frederiksen, 2013; Franke & Shah, 2003; Füller et al., 2007). As a result, users who wish to purchase within the user community will emerge due to increased awareness and high reputation (Haefliger et al., 2010; Hienerth, 2006; Shah & Tripsas, 2007). Füller et al. (2013) found that open software developed by user entrepreneurs through various activities in the user community is not only developed but becomes branded for a side effect. User entrepreneurs tend to be less active in promotion and have fewer sales channels (Haefliger et al., 2010; Shah & Tripsas, 2007). Therefore, the demand generated by awareness and reputation within the user community can be a competitive advantage for user entrepreneurs in the early stages of their businesses.

As described above, the relationship with the user community is essential for user entrepreneurs in business development. Although research has been conducted focusing on their interaction, there is a lack of understanding regarding the following three points. First, previous research has not always adequately considered the product characteristics of user entrepreneurs' businesses. Shah et al. (2012) confirmed the existence of user entrepreneurs in various product categories but did not refer to it from the perspective of mass-market products versus luxury goods. Second, we need to understand the interaction between user entrepreneurs and the user community from a dynamic perspective. Previous studies have pointed out that user communities conduct business while interacting with user entrepreneurs (e.g., Shah & Tripsas, 2007), but they have paid little attention to the characteristics of the users that make up the user community. The users that make up the user community do not necessarily have the same characteristics but have different characteristics and support the user entrepreneur in different ways. Previous studies, however, do not take such user characteristics into account. Third, there is a lack of knowledge on the process of how the relationship is established and how it changes in the surrounding environment and business growth. It will be necessary to clarify the contents of the black box remaining; the costs for user entrepreneurs to build

Stream 8.

Business Processes, Innovation and Supply Chain

and maintain relationships with user communities, as well as the various benefits they receive from these communities (e.g., Franke & Shah, 2003).

Extending the research on the concept of user entrepreneur and user community and its aspects, motivated by these research questions, will lead to a better understanding of how user entrepreneurs utilize user communities.

CASE DESCRIPTION AND ANALYSIS

In order to clarify how the user entrepreneur perceives and utilizes their user community, this study analyzes them through a case study about a new boutique winery that is achieving success in Hokkaido, Japan. We interviewed the founders of the boutique winery directly and also used articles about them to construct the case study. Interviews were conducted on multiple occasions, beginning in January 2023. We also conducted participant observation while assisting in the winery's grape production operations. We transcribed each interview, reviewed it among the co-researchers, and confirmed any questions with the interviewee via texting.

Mr. and Mrs. A have run Winery A in Hokkaido Town Alpha since 2015. The couple used to work in the medical profession, but their love of wine led them to frequent liquor stores and join a network of wine lovers. They decided to establish a winery through their participation in the wine-lovers network. They moved to Town α in 2014, and after purchasing land, including vineyards, they established their winery in 2015 and began to sell their wines in 2018. Today, they produce 13 types of grapes planted in their vineyards, and Winery A has grown to become one of the boutique wineries representing Town α.

Winery A, Mr. A, and Mrs. A

Mr. A had been a medical technician, and Mrs. A had worked as a nurse in their early 20s. Looking back on their lives in their late 20s, they realize that they have no interest except their work. While trying to find an interest, they started attending a wine-tasting event held at a wine shop in Sapporo, Hokkaido. Every year, the wine shop selects wines based on a particular theme and holds wine tastings, and as they compared and contrasted the various wines, they became increasingly involved in the world of wine. Mr. A and Mrs. A also became increasingly interested in wine as they attended the tastings together. Around this time, they began to make more wine-loving friends, mainly through the people who attended

the free tastings, and they began to visit areas away from Sapporo to enjoy wine and food. They have kept in touch with their wine-loving friends since this time.

In May 2014, Mr. and Mrs. A's life as winemakers began when they were approached by Mr. B, the winemaker at Winery B in town β, the town next to town α, where they had stopped on their way home from a wine party they had held with their wine-lover friends. Mr. B told Mr. and Mrs. A, "It would be great if young people like you came and made wine here." At that time, Mr. A thought that only large companies could make wine, but after hearing these words, he started to research wine production and learned that some people in Japan had established their wineries. He was also surprised to know that Winery C, the winery that made the wine that had the most significant impact on Mr. A, was also established by Mr. C who had quit his job and has run it on a relatively small scale. This led Mr. A to start thinking about himself not only as a wine drinker but also as a winemaker.

Shortly after, Mr. and Mrs. A made an appointment with Mr. B, who had approached them, to hear more about the private management of a small winery. On the day of their meeting with Mr. B, they went to Town α, where they met the deputy mayor and saw an empty vineyard. Mr. and Mrs. A reminisced about this time as follows.

> Mr. A: "*First, when I thought I would ask if it was possible for an individual to run a winery, the deputy mayor showed us the vineyards, and when we saw the vineyards, we became motivated to do it, too.*"
>
> Mrs. A: "*It all happened very quickly.*"

After going through this experience, in the winter of 2014, they decided to move, acquire a vineyard, and establish a winery. They made their decision about six months after Mr. B approached them. Then, in January 2015, Mr. A resigned from the hospital, and Mrs. A also resigned in February. They moved to Town α immediately after resigning and began working towards establishing a winery. While the cultivation of grapes for wine was still getting off the ground, Mrs. A worked as a nurse to earn a living. Mr. A trained at Winery B for two and a half years, learning how to make wine and developing his own ideas about the kind of wine he wanted to make (Mr. A). He says that he learned from Mr. B's

approach to winery management rather than his approach to winemaking. In particular, Mr.B's way of thinking about running a winery that focuses on tourism has influenced Mr.A.Mr. A said the following in an interview.

> Mr. A: "*I could really relate to the idea of focusing on tourism when running a winery, so from the very beginning, when I started my own winery, I wanted to make it a place that welcomed customers like a tourist destination.*"

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Today, Mr. and Mrs. A have focused on tourism elements in Winery A's management. Rather than seeing the agricultural volunteers as labor essential to vineyard and winery management, Mr. and Mrs. A treat them like guests (from Mr. J's interview). The fact that Mr. and Mrs. A wear hats and berets is also an action that comes from a spirit of service to welcome guests in an intelligent way.

While training at Winery B, Mr. and Mrs. A networked with many wineries in Hokkaido Town α to prepare to establish their winery. In particular, the encounter with Mr. D of Winery D, one of the most influential wineries in Hokkaido wine (Japanese wine), significantly impacted their winemaking. Mr. and Mrs. A have been commissioned by Winery D to make their own wine, and they sometimes ask Mr. D for his advice on winemaking.

The first release was in 2018, but grape production was low, and only a few hundred bottles of wine were completed. From the winery's establishment in 2015 until 2021, the income from the winery alone was not enough to support their lifestyle, and they relied on Mrs. A's income as a nurse.

The company established its own fan community for its brewery in 2020. Membership is divided into three tiers according to the amount of the annual membership fee. The success of these fundraising efforts, forming a fan community with many fans, and stabilizing the grape harvest have allowed the winery management to take off. In June 2021, Mrs. A. quit her nursing job.

Mr. and Mrs. A changed their winery name to "Winery A'" in December 2023.It has grown to become one of the flagship wineries in Town α, welcoming more tourists with the addition of newly completed accommodation facilities attached to the winery starting in 2024.

ANALYSIS FOR THE USER COMMUNITY OF WINERY A

As described in the case section, Mr. and Mrs. A are wine enthusiasts themselves and have been in the wine lover network. They obtained many resources for establishing and managing their winery from the network of many fellow wine lovers, the user network of wine. They started their own winery, and they are still running the winery with the wine lovers' network.

Ego network of Winery A, Mr. and Mrs. A

Mr. and Mrs. A''s ego network extracted from interviews and other information is shown in Figure 1. Table 1 to 6 show brief descriptions of each altars' functions may earn Mr. and Mrs A.

Insert Figure 1 about here

Fig. 1 illustrates the relationship of Winery A, Mr., and Mrs. A to other users. All actors depicted here are wine users, including wine lovers who love to drink wine as consumers, people who want to do something with wine, and so on. However, these users have different characteristics from the point of view of Winery A, Mr., and Mrs. A.

An indispensable group of users for Winery A, Mr. A and Mrs. A are Senior Brewers, many of whom, like Winery A, are also wineries founded by wine enthusiasts. The Senior Brewers are winemaking advisors and role models for Winery A, Mr. A, and Mrs. A. The Senior Brewers that Winery A, Mr. A, and Mrs. A recognize and associate themselves with A and Mrs. A are shown in Table 1.

Insert Table 1 about here

It is vital in any business to have people who join the company and business in the same year. They can be the closest competitors but also the closest collaborators. As shown in Table 2, Winery I is the Brewer established in the same year as Winery A, and a management policy that emphasizes tourism in particular can create synergies for both wineries.

Insert Table 2 about here

Stream 8.

Business Processes, Innovation and Supply Chain

As Mr. and Mrs. A were, some who were originally wine lovers came to Town α to become winemakers. And as many senior brewers have helped them, Mr. and Mrs. A welcome newcomers and give them advice. In particular, the people shown in Table 3, although they have not yet established their own winery, consider Winery A and Mr. and Mrs. A role models and are willing to help Winery A.

Insert Table 3 about here

The people shown in Table 3 were originally Local Vitalization Cooperators in Town α.   Local Vitalization Cooperators are people who move from urban areas to areas suffering from depopulation or other problems and who work to develop local products and support regional revitalization for the benefit of those areas. Each regional administration appoints them and sets a term. Local Vitalization Cooperators in Town α are appointed for a term of two years by people who want to start farming in Town α or who attempt to improve the regional brand of Town α.

The people shown in Table 4 are Local Vitalization Cooperators in Town α who were particularly influenced by the products and ideas of Mr. and Mrs. A and are still active Local Vitalization Cooperators as of 2024. Mr. J is a musician who initially worked in the entertainment industry, and he is good at providing enjoyment to people, so he manages the volunteers at Winery A while keeping them entertained. Mr. K is the current chief, and he comes up with meals that match the wine provided by Winery A for the volunteers.

Insert Table 4 about here

Local Administration of Town α is also an essential actor for the user community of Winery A, Mr., and Mrs. A. Local Administration of Town α attempts to achieve the revitalization of Town α, and so it is seeking to revitalize the agriculture and wine industries of Town α, as well as agri-tourism and wine-tourism using these industries. In this context, they are trying to use the wines of local wineries, including those of Winery A, as a resource for revitalizing the region of Town α. On the other hand, the Local Administration of Town α supports Winery A, Mr., and Mrs. A, such as assistance with acquiring a

vineyard. Table 5 lists the departments that are particularly important to the ego network of Winery A, Mr. and Mrs. A, within the Local Administration of Town α.

Insert Table 5 about here

Table 6 is simply a list of consumers of Winery A's products, not depicted in Tables 1-5. They sometimes provide labor as volunteers who help with farm work, or provide funding through crowdfunding.

Insert Table 6 about here

CONCLUSION: RECONSIDERATION FOR 'USER COMMUNITY'

Reconsideration for 'user community'

We can point out the following three when reconsidering the user community from our observation and analysis. First, the users who construct the user community have various characteristics, and the user entrepreneurs recognize these characteristics and develop their businesses by making good use of them. In existing studies, the users who form the user community are implicitly assumed to be so-called 'end users', and there has been no interest in their respective expertise and characteristics. However, in the analysis of this case, there are users with various traits and expertise, such as Senior/Junior Brewers, Brewer established in the same year, and Local Vitalization Cooperators, and Mr. and Mrs. A, the user entrepreneurs, recognize and make use of these characteristics and expertise.

Second, the user community consists of several layers in a multi-layered. In our analysis, while the Local Administration of Hokkaido Town α and Senior Brewers exist upstream of the wine industry, for example, Local Administration of Hokkaido Town α provided support for Mr. and Mrs. A to establish Winery A by acquiring vineyards, and Senior Brewers provided wine-making know-how and other production techniques, Local Vitalization Cooperators and Wine Lovers exist on the downstream side of production, helping with farm work, vinification, and bottling of wine. Existing studies of user communities have not assumed such a multi-layered structure of user communities, but in our analysis, we observed a multi-layered nature of user communities.

Stream 8.

Business Processes, Innovation and Supply Chain

Third, we focus on the temporality of user entrepreneurs' use of user communities. Our study targets user entrepreneurs as producers of non-industrial products. Significant differences between busy and off-peak periods characterize winery work as the production of non-industrial products. During off-peak periods, the winery only has tasks that the winery itself can handle, whereas during busy periods, the winery requires a large workforce. Therefore, during the busy season, the winery relies on volunteers, and the user community serves as the bearer of these volunteers. Through these volunteers, the user community can enjoy contact with the entrepreneurs and learn information and stories about the quality of the grape and the vinification process of the wine they are about to consume. In this case, we also observed that the user entrepreneurs manage the user community (e.g., by offering hospitality when they receive volunteers).

Limitations

While the ego network visualizes the structure of the social network surrounding the user entrepreneurs themselves, it does not reveal the social network's qualitative aspects. This highlights the need for further research to examine the user community from the following perspectives, indicating that there are still opportunities for exploration and your work is important.

First, the ego network in this study is only from the perspective of Winery A, Mr., and Mrs. A and does not include the perspective of the users who constitute the user community. We assume there are still users that Winery A, Mr., and Mrs. A were unable to talk about in our limited interviews. In future research, we will elaborate on the qualitative aspects and interactions between user entrepreneurs and user communities.

Second, the process of constructing a user community still needs to be clarified. If the user community is to contribute to the business of user entrepreneurs, it is necessary to clarify how the user community is constructed rather than consider it a given. More specifically, the discussion could focus on how the relationship between user entrepreneurs and user communities is established in the first place, and what kind of management resources are exchanged within that relationship.

Stream 8.

Business Processes, Innovation and Supply Chain

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Figure. 1 Ego network of Winery A, Mr. and Mrs. A
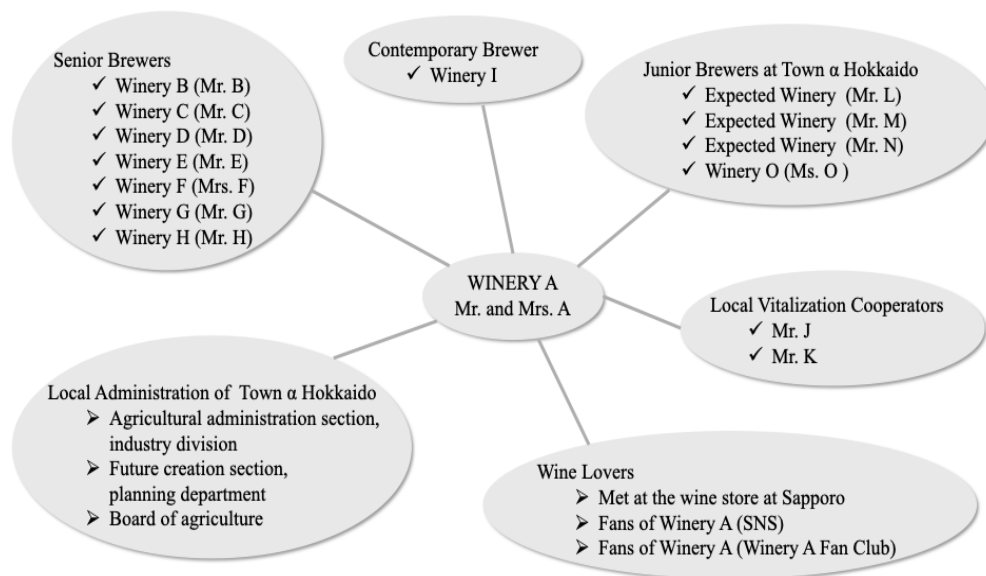
Table 1: The brief analysis of the community with Senior Brewers

Senior Brewers	
Winery B (Mr. B)	•Mr. B recommended Mr. and Mrs. A to become a winemaker. •The training location. Mr. A learned grape cultivation and winemaking from Winery B and Mr. B. •Mr. A learned that there is a tourism perspective in winery management.
Winery C (Mr. C, Mrs. C)	•The winery/winemaker that made the wine which made Mr. A realize the deliciousness of Japanese wine. •The winery/winemaker that led to the realization that there are individual winemakers.
Winery D (Mr. D)	•Contract winemaking. •Advisor on winemaking.
Winery E (Mr. E)	•First launched winery at Hokkaido Town α. •One of the admired winemakers to make natural wine.
Winery F (Mrs. F)	•The winery/winemaker that led to the realization that there are individual winemakers.
Winery G (Mr. G)	
Winery H (Mr. H)	

Table 2: The brief analysis of the community with Brewer established in the same year

Brewer established in the same year	
Winery I	•Management base is doing business in the advertising industry. •Mr. A thought there would be synergy if Winery A makes a winery cluster with Winery I.

Table 3: The brief analysis of the community with Junior Brewers at Hokkaido Town α

Junior Brewers at Hokkaido Town α	
Expected Winery A (Mr. L)	•Moved to Hokkaido Town α as a Local Vitalization Cooperator. •Winery A, and Mr. and Mrs. A have been considered as a role model. •Winery A gets help within its own vineyard.
Expected Winery A (Mr. M)	
Expected Winery A (Mr. N)	
Winery O (Ms. O)	

Table 4: The brief analysis of community with Local Vitalization Cooperators

Local Vitalization Cooperators	
Mr. J	•Inspired by Mr. and Mrs. A, Mr. J decided to be a Local Vitalization Cooperator of Hokkaido Town α. •Employed by Winery A. •While working at Winery A, Mr. J plans and manages events to make wines brewed at Hokkaido Town α and the town famous. •Mr. J respects Mr. and Mrs. A because of their spirit of entertainment.
Mr. K	•Mr. K helps Winery A with his experience as a chief.

Table 5: The brief analysis of the community with the Local Administration of Hokkaido Town α

Local Administration of Hokkaido Town α	
Agricultural administration section, industry department	•This section provides support to those involved in local agriculture.
Future creation section, planning department	•Section manages and provides support to migration and Local Vitalization Cooperators.
Board of Agriculture	•Board for approval of Vineyard purchases.

Stream 8.

Business Processes, Innovation and Supply Chain

Table 6: The brief analysis of the community with Wine Lovers

Wine Lovers	
Met at the wine store at Sapporo	•A community for having meals and wine for fun and learning about wine. •Community members have helped farm work at Winery A vineyard.
Fans of Winery A (SNS)	•1,497 people follow Mr. A's Facebook account (as of June 9, 2024).
Fans of Winery A (Winery A Fan Club)	•Fundraisings. •Winery A's fan community.

Stream Number and Title

Ego-driven fear overrides the rational managerial decision-making

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Ego-driven fear overrides rational managerial decision-making

ABSTRACT: *As businesses become more complex in an ever-changing business environment (Dugoin-Clément, 2024), it becomes challenging for them to manage ego-driven decision-makers (Hougaard & Carter, 2018). Several aspects of ego-driven decision-making are not fully understood in the literature (Byun & Al-Shammari, 2021). To explore ego-driven managerial decision-making, six participants were interviewed to investigate their individual lived experiences (Thompson, 2023). Open-ended questions were used to motivate the participants to answer freely and help the researchers identify a range of possible previously unknown factors (Mwita, 2022). Using Interpretive Phenomenological Analysis (Smith & Fieldsend, 2021), the findings suggest that ego-rooted factors such as importance of public approval and fear play a more significant role in ego-driven, organisational decision-making than previously thought.*

Keywords: ego, fear, public opinion, decision-making,

Overview

The fundamental assumption of this research is that there could be under-researched phenomena related to irrational, ego-driven managerial decisions made by well-educated, experienced decision-makers (Cragun, Olsen, & Wright, 2020). The existing literature does not appear to address all aspects of the topic of ego as it occurs in everyday situations in the organisational environment (Berglas, 2014). To understand the nature, characteristics and complexity of the ego, approaches beyond psychology must be taken into consideration. Literature suggests that ego-related personality variables influence managerial decision-making and outcomes (Tananchai, 2017). These may be emotional (Leon, Weidemann, Kneebone, & Bailey, 2024), psychological (Ibeh et al., 2024), social (Crawford & Jabbour, 2024), or even physiological (Dennison, Sazhin, & Smith, 2022). Thus, ego-related traits, feelings and emotions can affect a company's performance. As Marcum and Smith (2008) noted, every company's profit and loss statement include the invisible line item of ego, regardless of the decision-maker's position, experience or responsibility. Experts differ in their opinions as to whether these effects are positive negative or mixed (Rovelli, Massis, & Gomez-Mejia, 2022). Management theories have given less attention to the ego in the realm of decision-making than to its use as a discipline tool by management.

Current understanding

Sigmund Freud's ground-breaking research regarding the ego is widely known and is considered one of the most important contributions to psychology. His most enduring and important idea was that the human psyche (personality) has more than one aspect (McLeod, 2019). But Freud's work isn't the only or even the first approach to ego in modern psychology (Thurschwell, 2009). The concept of ego has been a major focus of modern psychology (Schultz, 2013) since its inception in the 19th century. Conwy Lloyd Morgan (1899) differentiated ego (or subjective) and non-ego (or objective) experiences.

When looking at managerial decision-making in an organisation, ego plays an important role. However, the phenomena of the ego cannot be understood solely through psychological factors. Decision-makers are not simply psychological entities, but also members of a given society with different cultural foundations and beliefs. They have ego-rooted personalities, emotions, feelings, ideas, interests, and philosophical principles. During decision-making, all of these ego-rooted factors may be taken into account. Nevertheless, there is no definition and clear understanding of ego from a management perspective.

The literature shows that numerous personal traits, feelings and emotions have been associated with ego, such as narcissism (Schyns, Lagowska, & Braun, 2022), hubris (Tang, Li, & Yang, 2015), intuition (Hallo & Nguyen, 2021), or heuristics (Atanasiu, Ruotsalainen, & N. Khapova, 2023). But with a dynamic and rapid transformation of society and organisations, things are changing very fast and other factors, in addition to those commonly studied, may also play a significant role. Hubris and narcissism have generated plenty of literature, but other traits of ego have not been the subject of much study. For instance, could fear or social pressure also play a role? Rumi (bin Othman, 2022) emphasised the link between fear and ego, and Erik Eriksson (Batra, 2013), Alred Adler (Mosak, 2005), Roy Baumeister (Baumeister & Vohs, 2007), Edward Deci, Richard Ryan (Deci & Ryan, 2012) indicated the link between ego and society. There have not been many studies relating this connection in the managerial decision-making space, which has focused rather on narcissism, hubris, heuristics and intuition.

There is fear among managers of being perceived as weak in decision-making. Furthermore, there is literature regarding toxic managerial behaviour linked to fear. Fear is more often viewed in organisational studies as a tool of managers than a constraining factor or driver of decision-making. Ego defensiveness refers to a manager's fear of being perceived as admitting their inadequacy if they listen to an employee's voice (Fast, Burris, & Bartel, 2014). Fear can certainly serve as an effective tool to help managers gain discipline and obedience, as well as improving organisational performance (Udovik, 2011). Personal fears surrounding decisions can cause leadership stress. A toxic, egocentric leader rules by invoking fear in people, directly and indirectly, and this may affect organisational values and systems (Tavanti, 2011). An ego-rooted management style also favours aggressive and risk-taking behaviour (O'Reilly & Hall, 2021).

An approach that takes a broad view of ego and ego-influenced behaviour and decisions could help better understand the nature and complexity of ego. Based on the literature, an overview of the components of the ego viewed through a multidisciplinary lens is depicted in Figure 1.

Figure 1: Components of the ego
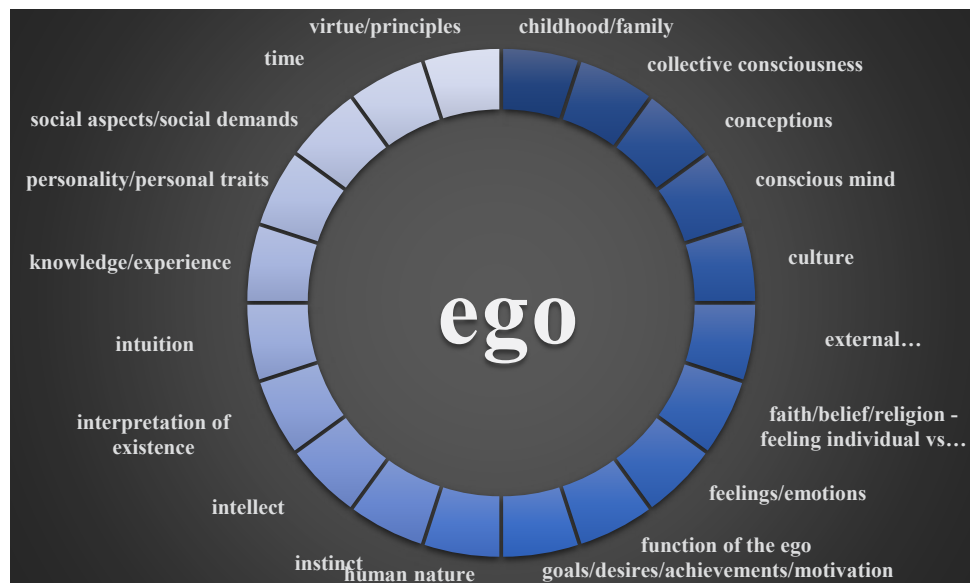
Research question

This research aims to unpack the role of the ego in organisational decision-making through investigating the significance of ego in organisational decision-making and in what ways it operates, as well as the influence of personal traits of decision-makers

Research approach

To explore the phenomenon of ego-driven fear in managerial decision-making, six participants were interviewed. Their individual lived experiences in their role as managerial decision-makers were explored. Qualitative research aims to understand the world through the eyes of those who live in it (Hatch, 2023). Qualitative approaches have become increasingly accepted because many phenomena of interest within various fields of social science are complex and require deep reflection and investigation (Smith & Nizza, 2022). The participants hold or have held managerial positions at the mid or top levels in private, public, and/or family business organisations. This research applies the Interpretive Phenomenological Analysis (IPA) approach (Smith & Nizza, 2022). Semi-structured interviews (Magaldi & Berler, 2020) were used in order to discuss the core topic of ego-driven, managerial decision-making but also to create a space for discovery. During the interviews, open-ended questions were used to motivate the participants to answer freely and help the researcher to identify a range of possible previously unknown factors or issues relating to ego in this context (Ivey, 2023).

Findings

Findings suggest that the ego plays a significant role in organisational decision-making. It probably plays a more significant role than previously understood. Ego influences organisational decision-making both positively and negatively. In many cases, these phenomena have been deeply understood and well-researched. It was interesting to observe that none of the participants cited the well-researched personal trait of hubris and only one mentioned narcissism as triggers of ego-rooted decision-making in their everyday experience. But all participants except one did mention fear in its various forms e.g. fear of failure, fear of exposure and some synonyms of fear such as being afraid,

insecurity, panic, being at risk and being threatened, as the significant trigger of ego-driven decision-making. These drivers of ego-influenced decision-making are not deeply understood, particularly from a management perspective. The findings also indicate that decision-makers focus on what the public thinks, rather than on the organisation's interests in decision-making, due to their ego. The findings indicate that there are other ego-rooted factors, such as the importance of public approval and fear, that play more significant roles in organisational decision-making than previously thought. It is reasonable to assume that these two factors are related.

Contribution and Limitations

As businesses become more complex in an ever-changing business environment, it becomes increasingly challenging for organisations to manage ego-driven decision-makers, especially given the current high levels of turbulence. Several aspects of ego-driven decision-making are not fully understood and elaborated. The findings of this research provide a deeper understanding of ego, decision-making, and decision-makers by exploring less-understood aspects of managerial decisions such as ego-driven decision making and their impact on organisational processes and outcomes. The findings suggest that: ego plays a significant role in organisational decision-making; and probably a more significant role than previously understood. The findings also indicate that ego influences organisational decision-making both positively and mainly negatively. Personal traits were alleged to play a significant role in ego-driven, organisational decision-making. They also indicated that there are other factors, such as the importance of public opinion and fear, that play a more significant role than previously contemplated, especially from a management perspective.

Further research could contribute to various fields, including organisational studies, psychology, sociology, and management studies, particularly strategic management. Future research could investigate a more comprehensive definition of ego and the nature of ego driven decisions in management. Research could uncover other less well-known factors. Ways that decision-makers try to mitigate the possibility of negative influences of ego or capitalise on positive aspects should be investigated. This could lead to management tools helpful in optimising decisions in this space.

Though this research provided valuable data, it is important to note its limitations. Qualitative research approaches our necessarily limited in terms of generalisability and subjectivity. Nevertheless, these limitations are more than made up for by the richness of the data made available by this approach. While the sample size is small, the average sample size for IPA research is between six and eight (Okoko, Tunison, & Walker, 2023); however, a larger and more homogeneous group would provide more sophisticated data. Exploring cultural differences may also be a valuable extension of this research

Implications

Scholars, organisations, and decision-makers could benefit significantly from the findings of this research, which explored some gaps and links between an organisation's decision-makers' ego and ego-driven decisions, providing both a theoretical and practical perspective. Further, this research provides valuable inputs regarding factors that assist decision-makers in maintaining high performance and coping with the negative impacts of their egos. Finding a way forward such as a management tool or a combination of tools that could mitigate the negative consequences and build strategies on the positive influences of the ego, must be the ultimate goal.

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Changing skills for advanced manufacturing: How vocational education responds to industry needs

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Stream 7 Teaching and Learning

Changing skills for advanced manufacturing: How vocational education responds to industry needs

ABSTRACT:

The Australian Government aims to reestablish sovereign manufacturing capability and revitalize the sector, requiring educational institutions to prepare individuals for work amid Industry 4.0 adoption. The research employs an employability lens to explore vocational education's response to evolving skill demands. Through a case study of a traditional vocational education provider, the study examines the institution's strategies for addressing skills development in advanced manufacturing and other emerging industries. Key findings include addressing stakeholder readiness for skills development in a rapidly changing environment; adaptation of training through microcredentials and higher apprenticeships to meet new skill and technology demands; and the critical role of collaboration with other education providers and stakeholders in cultivating a workforce equipped for advanced manufacturing contexts.

Keywords: employability, vocational education and training, advanced manufacturing, skills, microcredentials

A key management challenge for the Australian manufacturing industry is skill shortages and the ability to attract workers (Dean & Spoehr, 2018). Governments at all levels in Australia, along with business peak bodies, have acknowledged the need for vocational education and training, higher education and industry to work together to develop the manufacturing workforce skills base to meet local productivity needs and improve global competitiveness (Dean, Rainnie, Stanford, & Nahum, 2021). The development of advanced manufacturing processes provides possibilities to readjust the industry by creating new practices that are more efficient and sustainable (Dean & Spoehr, 2018). People will be working in advanced manufacturing or Industry 4.0 environments where machines and humans cooperate in a variety of ways including artificial intelligence, robots and other innovations such as collaborative robots (cobots) that assist people in their work (Bonfield, Salter, Longmuir, Benson, & Adachi, 2020).

Manufacturing workers hold lower levels of qualification than the broader Australian workforce. Statistics show that nearly 40% of manufacturing workers lack post-school qualifications, a figure surpassing the national industry average of 32%, while only 19% of workers in manufacturing possess a bachelor's degree or higher, compared to 34% nationally (AI Group, 2020). For Australian manufacturing to adopt Industry 4.0 technologies and processes, a higher skill base for workers will be required (Lammers, Guertle, Sick & Deuse, 2023). Dean et al. (2021) highlight the need for Australia to embrace a clear approach to technological innovation in

Australian manufacturing, including reviewing skills requirements and structures. This includes technical and hand skills which are skills related directly to undertaking a task (Tommasi, Perini, & Sartori, 2022).

Shifting expectations and requirements of skills and capacities necessary for a thriving manufacturing sector can be viewed through an employability lens. At its simplest level, employability can be defined as the ability to be employed (Leonard & Wilde, 2019). However, this definition is quite narrow, and the research considers the broader elements that lead an individual to be employed as part of its definition of employability (Tomlinson, McCafferty, Fuge, & Wood, 2017). Employability for a particular individual is determined by a range of factors including those often beyond an individual's control as the needs of industry and employers can ebb and flow through various economic cycles (McDonald, Grant-Smith, Moore, & Marston, 2020). Employability needs are often highlighted in industries and workplaces undergoing major technological shifts and where significant employment and/or skills deficits have been identified as a threat to the economic viability of the sector (Curtis & McKenzie, 2001).

This paper seeks to answer the question of how vocational education and training (VET) is responding to changing hand and technical skills required by the manufacturing industry due to technological change**.** It utilises employability as a lens to uncover how a public provider of vocational education supports learners and responds to industry's adoption of technology. The literature indicates employability has not been sufficiently applied to examine the rapid changes to manufacturing caused by the transition to Industry 4.0. The research will provide insights into these changes and how education adjusts to changing skills needs. Previous research has called for research into how education and training can support a digitally enabled workforce for the advanced manufacturing sector. (Laundon, McDonald, & Greentree, 2023; Winterton & Turner, 2019).

Vocational education in Australia is funded primarily by State Governments with governance and regulation being a federal government responsibility through the Australian Skills Quality Authority (ASQA) (Wheelahan, 2016). Complex funding and governance structures can hinder cross-sector collaboration, and while a few University/Vocational Education dual-sector providers exist, they remain

Stream 7 Teaching and Learning

exceptions (Maddocks et al., 2019). VET in Australia is underpinned by skill acquisition, utilising a competency-based approach (Montague, Connell, & Mumme, 2017). VET has had some recent challenges, particularly regarding private providers being caught in a range of poor practices that have damaged the sector (Billett, Choy, & Hodge, 2020). These problems have caused the regulators to tighten training delivery requirements thereby constraining delivery by teachers and hampering training development (Gekara & Snell, 2018).

VET has strong links to the various industry stakeholders through the development of training packages and work integrated learning requirements, particularly for apprentices and trainees. Training packages are the occupational skills standards against which training delivery and assessment of competency take place and are developed and endorsed by Jobs and Skills Councils. In 2023, 1500 providers were registered to deliver manufacturing related qualifications and/or units of competency in the Manufacturing and Engineering training packages (Training.gov.au, 2023). The diffusion of providers and training qualifications highlights the concerns about the quality and transferability of the training. Research into how VET can address evolving skills requirements such as those required by advanced manufacturing is required to guide improvements and promote increased industry, government and public confidence and support for the sector.

There are new approaches to skill development and acquisition outside traditional approaches and sometimes outside of formal training systems. Higher apprenticeships and microcredentials are approaches being developed to provide alternative options. As these are newer forms of education, little research has been undertaken into their delivery, adoption and outcomes. This research seeks to provide insights and evidence into how these newer skill formation programs are meeting manufacturing industry needs and building the employability of individuals.

METHODOLOGY

A case study methodology was employed to investigate the changing skills requirements of the advanced manufacturing sector. The methodology allows for an in-depth understanding of contexts and provides insight into how those who work in the VET system perceive and understand skills development (Stake, 2005). The site for the case study was a large VET public provider (with over 20,000 students)

Stream 7 Teaching and Learning

that delivers courses for advanced manufacturing. A purpose-built facility for advanced manufacturing processes will be completed in 2024. It is planned the building will house cobots and other advanced technologies. The site provides insight into how a traditional vocational education provider is responding to skills development needs for advanced manufacturing and other emerging industries. Data were gathered using in-depth, semi-structured interviews lasting approximately 1 hour with 10 VET personnel who influence and guide the development of courses, business managers, learning and teaching executives, course designers, career guidance professionals, teaching staff and staff with roles that include liaising between the education and training provider and the manufacturing industry. The sample size provides sufficient depth to contribute to the purposes and aim of the research (Boddy, 2016).

Thematic analysis was used to analyse the interview data (Braun & Clarke, 2019). The analysis sought to understand how employability was expressed and how people are positioned for hand and technical skills development. The first stage of analysis involved coding interview data drawing on theoretical concepts from employability literature centred on skills development for individuals, skills implications for institutions and skills requirements of industry. These codes highlighted how skills and skills development were positioned to respond to changing technological and skills needs. When undertaking the analysis, a focus on the skills needs of industry and the employability of the individual was central in theme development. In the second stage of analysis, the codes were refined into three themes that capture how the VET provider is responding to changing hand and technical skills needs. In refining codes into themes, consideration was given to how changing skills needs requires the navigation of existing systemic and institutional barriers, along with developing novel solutions.

RESULTS

The results section is organised into three analytic themes: 1. Readiness 2. Adaptation and 3. Collaboration. The themes demonstrate that hand and technical skill development is multifaceted, particularly when designing training for new types of skills and qualifications. The theme of readiness reflects the finding that VET requires learners to be ready to engage in coursework and be prepared through prior learning. As the VET system has specific course requirements, as outlined in training packages, readiness includes how training providers consider course design and equipment requirements.

The adaption considers how providers maintain currency about technological changes within business and industry. Additionally, they must understand changing trade and job requirements and adapt training content and delivery to these needs. Through the collaboration theme, it is evident that partnership development is necessary with individuals, education providers and industry all required to play a role. Key to effectively supporting change is consideration of the higher-order skills required to work in advanced work environments. Participant quotes are identified using participant numbers (P1 – P10).

Readiness

The theme of readiness emerged from participants' views on how well learners and industry can engage with skills development needs and how well the provider can orientate itself to support these needs. As students seek to develop their skills and prepare for working in advanced manufacturing environments their prior learning influences their readiness to learn. The institution staff try to make assessments of student literacy and numeracy levels before course entry and provide appropriate pathways, particularly if coming directly from school.

> The course we teach is very technical and ideally especially [for courses] like Electrotechnology, I'm looking at Year 12 completion with a higher level of mathematics…. I usually send them [those without numeracy/literacy skills] to a preparatory program where they study for two or three months to build up a little bit more maths and English skills, then they come back to us because otherwise it is too much effort for the learning support teacher as well as trade teacher. (P9)

Many interviewees observed that students still often have literacy and numeracy skills that fall below the requirements of their courses. These lower skill levels affect training because teachers must address additional learner needs to ensure students can handle the complexity of learning and develop the higher-order thinking skills necessary for skill development. Consequently, many students need teacher support to build these essential skills.

> There used to be a requirement for a minimum numeracy and literacy level in my students. It's now gone…. it also puts a lot of pressure on teachers to deliver the basics that are missing. (P2)

Ensuring that students can be trained on equipment that provides skills for advanced manufacturing environments can be a challenge to the provider as the limited capital investment is an issue. This is apparent in new and specialised training such as advanced technologies including robots and cobots limiting the hands-on experience the provider can give students in the classroom. The ability to source equipment is hampered by not being allowed to lease equipment. Support from industry to provide

essential equipment is often needed and reciprocal relationships are established.

> Capital investment versus leasing is another option. We're not allowed to lease equipment. So we have to do capital investment. And so we buy a 3D printer and tomorrow there's a new model out. But we have to write that printer off over 30 years. One of the big things in my role is working with industry to try and support us to get the equipment without us having to buy it. (P5)

The readiness of the provider also encompasses teaching staff. As more advanced technologies are implemented in workplaces, skills are changing and becoming more diagnostic and problem-solving focussed. Concerns about teachers' ability to respond to change are evident and proactive work to have teachers learn and understand the changes is needed.

> Teachers are the biggest issue that I've raised, our teachers are not prepared for this and don't have the skills. They are your typical trade teacher who did their time and apprenticeship when automation wasn't around, and robotics wasn't around. So there needs to be a significant investment in the educator and their skills, because if we don't do that, then no matter what we do and no matter what changes in industry and changes to our packages, our teachers are not going to be able to deliver because they don't have the skills or knowledge behind them to do it. (P7)

The institution recognises that it needs to anticipate changing skills needs and moving to meet industry and learner needs. Digital literacy and readiness to engage in digital work is a requirement for all people in work today. The provider aims to deliver training in flexible ways to help support learners engage in skill development ranging from short micro-courses to full qualifications.

> We've really got to evolve at the same pace or close to the same pace as industry and technology are evolving because, you know, I was talking about microcredentials as a way to provide people with really accessible skills in digital literacy, in these core skills now that you actually need to have to be able to engage in almost any aspect of work. If we don't find more flexible ways or more accessible ways for people to engage in that, we're literally going to leave people behind. (P8)

Adaptation

To be employable in an advanced manufacturing environment, people and organisations must adapt to new and different situations and ways of working. The adaptation theme shows how the VET provider supports learners and industry respond to changing hand and technical skill requirements. Although there is a willingness by educational providers there can be barriers to developing and delivering training. The VET system often responds slowly to changing skills needs with industry and peak bodies sometimes hamper training package development and adoption of technology advancement due to various industry and union agendas, particularly regarding recognition of learning and pay. Another barrier is that peak bodies will often not recognise VET qualifications as part of professional

membership and can require outdated modes of learning and practice to be evident before recognition is granted.

> when you're creating a training package, you're dealing with associations, unions and all of that kind of stuff. So that becomes a real hard sell at that level because they're like, no, they have different agendas of what they want out of people (P8)

In responding to industry needs training has been reconstituted as a product and product development teams within the institution have been established to develop new products for industry, particularly as new skill requirements emerge, and technology reshapes work. New training products are often orientated to upskilling and reskilling workers to use and adjust to technological demands, whether these can be recognised formally within a qualification or the organisation through specifically developed training.

> I meet with a lot of clients that there is no training package for them. So in that case, you're looking at, you know, providing training that's most aligned to them, but it may not be exactly what they need. So then you're looking at, you know, developing training for them. Often non-accredited, which is fine. but it can take longer and be more expensive. (P6)

As training package redevelopment can be slow and hampered by systemic factors such as the development and approval system, other forms of training are being introduced to support industry. These new forms of training include microcredentials which are being embraced by learners to close skills gaps and attain new learning needed for work.

> that was one where we developed a new certificate for autonomous technologies, and we developed micro-credentials and skill sets to attract, recruit, retain and transition staff in the resources sector. (P9)

Beyond working through some of the systemic issues the provider recognises that new forms of training will continue to be important as education and industry adapt. Rapid changes in industry generate new training needs education meaning providers must be able to respond quickly and work with industry to develop training that meets not only content but also delivery requirements.

> Making sure that we do have some flexibility in the qualifications where we need it, looking at Micro-credentials as a way to actually keep pace with the market and provide those skills and doesn't have to be online through our micro-credentials, we do micro-credentials up to 75 hours and that can be a combination of things, with face to face, classroom-based, hybrid. But we've just got to look at more flexible solutions for people to be able to engage. (P9)

The provider seeks to respond and adapt to the changing environment and makes pragmatic choices to support student learning and industry needs. They seek to work around systemic and other barriers

through novel and flexible options that consider the system's slowness. The solutions seek ways that allow for the newer approaches to be recognised as the system catches up. The provider seeks out opportunities for funding and other mechanisms to support these newer options.

Collaboration

The collaboration theme shows how students, educational institutions and industry interact to support skills development. Employability requires interpersonal competency as people need to work together, both within and across organisations. (Römgens, Scoupe, & Beausaert, 2020). In responding to changing skills needs, the ability to collaborate to provide recognition of training due to changing skills requirements can be complex, due to systemic issues such as awards and other workplace structures. Education providers need to consider the best way to work with the stakeholders and structure training that effectively addresses the needs of both learners and industry.

> Skill sets are the preferred way to transition, especially in new technology spaces. It could be 1 or 2 trades then skill sets. But the unions don't recognise skill sets because they don't want that person to be doing work that is not a wage increase level. That's why they would normally go Cert III, Cert IV, Diploma (P5)

Jobs and Skills Councils were established in November 2022 and are tasked with providing leadership to address skill and workforce challenges for industry groups (Department of Employment and Workplace Relations, 2024). Their predecessors, the Industry Clusters, were historically industry-driven with little consultation undertaken with training providers. The Jobs and Skills Councils seek to be more collaborative and work with education and industry. They are now actively consulting education providers on how best to structure training. The increased consultation enhances the relationships and providers feel that their concerns are now being heard.

> the new Jobs and Skills Councils and all of the research they're doing into, how do we get from here to here? There is an acknowledgement that the training packages are not fit for purpose. And how do we make it fit for purpose? (P6)

There is a demonstrated willingness of industry to work with training providers both formally and informally, and beneficial arrangements are made to enhance training for students and support business needs. Reciprocal arrangements, particularly in resourcing are evident with industry providing equipment that may not be easily bought or sourced by the provider.

> So they put all the equipment on our electric excavator. We don't own it. It's their equipment. They can use our equipment to demonstrate it to industry and industry come in and go. I didn't

Stream 7 Teaching and Learning

realise TAFE had this stuff. So, there's that win-win scenario for everyone. (P5)

As courses become more complex covering a range of technological topics in course materials closer collaborations with universities are emerging. These collaborations are seen as positive and promote a better understanding of the strengths of the different educational sectors. Higher apprenticeships, which incorporate a trade and higher education qualification, are being developed and co-delivered with a university partner. However, the implementation needs to be managed well to ensure the success of the program due to the way these new qualification levels impact remuneration and completion times.

> I think there's going to be a lot more higher-level apprenticeships. I know we've just done one in electrical which will go into electrical engineering. It's a Certificate III and a Bachelor of Engineering and it's a six-year program. But again, that's been working with AI group, a lot of union interactions also major employers because the employers have to invest in it at the start because it's a six-year program.(p5)

Staffing of the higher apprenticeship qualification will be integral to the success of the program and close work by the VET and higher education provider will need to be well considered. Having the right student, particularly initially, maybe a challenge as the student will need to meet the course entry requirements of the university qualification along with the commitment to a longer period of study

> you can't just have a normal mainstream teacher and potentially a normal mainstream lecturer just saying, oh, we're going to build it. You've got to have the people invested in how we make this work efficiently. The university will deliver the content to the apprentices instead of TAFE. We still do our assessments and practicums, but it'll be taught at a higher level, so it'll be taught at a university level. (P8)

Ensuring that learning is recognised and transferable remains challenging and requires collaboration between industry partners beyond the formal recognition of regulators such as ASQA. The recognition of industry is important to recognise the various types and forms of training. Utilising a variety of training types to support learners in gaining skills remains at the forefront of the provider's purpose.

> Then there are different levels of accreditation and endorsement. For example, there's ASQA accredited units, that type of thing. As far as we're concerned, ASQA is not the only body that needs to endorse skills and learning. If we are partnering with industry, which we are in all these cases and they endorse those skills and learning, then that's another form of accreditation. (P8)

That purpose was articulated by a product developer who summed up the drive of the provider to meet the needs of their stakeholders

> we need to offer people more solutions and be able to keep pace with what's happening in the world and technology and AI and, you know, people will be looking for solutions which we want to help provide. (P8)

Stream 7 Teaching and Learning

DISCUSSION

This research provides insights into how VET is responding to the changing hand and technical skills requirements of the advanced manufacturing industry workforce due to technological change. The themes of readiness, adaptation and collaboration highlight what educational institutions need to consider in the development and delivery of learning in a changing skills environment. Further, it shows how providers work to ensure that people have the skills required for employment in advanced manufacturing work environments.

The ability of the training provider to deliver training that supports the needs of industry, requires students to be ready to learn and come with prerequisite skills. Training providers recognise the importance of literacy and numeracy as they are foundational to success in learning (Levy, Briede, & Frost-Camilleri, 2021). Students entering VET come from various backgrounds, many of which are recognised as 'disadvantaged' in some way (Black & Yasukawa, 2013). A range of approaches have been advocated to support students to improve outcomes, however, these are often lost in policy debates pushing for more and higher qualified citizens (Levy et al., 2021). Providers often have challenges in ensuring that equipment and facilities are of industry standard. They often need to rely on the goodwill and support of industry to provide a reciprocal partnership arrangement as policy prevents the purchase of equipment. The ability of VET teachers to maintain currency and be abreast of changing workplace needs is also a challenge as they are also required to assist learners in closing gaps in literacy, numeracy and other foundational work skill requirements (Brennan Kemmis & Green, 2013). The readiness of institutions to support learners and industry is challenging and considerations about the funding and support of staff need to be a focus for policy and research to ensure that providers can be equipped to deliver training in rapidly changing environments.

The training provider recognises the changing skill needs required and the slowness of training package development. It responds by developing other offerings such as microcredentials which are not formally recognised or developing skill set training that may be recognised. To deliver skills training effectively, educational providers have looked to different forms of course delivery such as microcredentials and short courses (Reynoldson, 2022). The delivery of short training programs and qualifications in Australia has not been regulated with many providers promoting opportunities for

short, credentialed programs (Desmarchelier & Cary, 2022). A pitfall may be that recognition of the microcredential may be limited to specific contexts limiting their use (Reynoldson, 2022).

With disruptive technologies and the need to upskill workers in advanced manufacturing environments, industry is looking to a range of providers to create and provide contextualised learning to meet organisational needs (Varadarajan, Koh, & Daniel, 2023). The research demonstrates the provider's willingness to devote resources, time and effort to develop courses specifically for industry and employers. For VET to respond in a timely way, greater flexibility needs to be brought into the system to allow for the recognition of various types of learning. The flexibility suggested by the provider included reconsidering limitations on teachers being able to teach across training packages, particularly when it comes to foundational skills such as communication.

 Policy announcements such as the *Future Made in Australia* and *Working Future: The Australian Government's White Paper on Jobs and Opportunities* (Commonwealth of Australia, 2023) will continue to pay attention to the recruitment and retention of manufacturing workers who have ongoing skills development needs. These policies look to reestablish sovereign manufacturing capability and reinvigorate the manufacturing sector. The challenges of educational providers seeking to align training with industry needs have been recognised by the Government. Education and skills policy changes such as the AQF review implementation and the *Australian Universities Accord* (Australian Universities Accord, 2023) provide mechanisms by which education may be able to overcome some systemic barriers. These include closer collaboration across Higher Education and VET through course design and delivery to support changing industry skills needs. While the research demonstrates a willingness of educational providers to work together, the Government needs to continue to outwork policies that support the collaboration and closer integration of the education ecosystem in Australia.

The research adds to the employability literature as it shows the pivotal role education plays in supporting both industry and individuals to develop the skills required for work. The critique by industry that education cannot keep up and provide the skills development it would desire is often not due to the willingness of education providers (Doherty & Stephens, 2021). The research shows education providers are keen to develop training products and have specialist teams to design training to meet specific

industry needs, however, they can be hampered for a range of reasons including systemic blockages, capital and resource requirements and the skills capacity within the institutions. Further, it adds to the VET and employability literature demonstrating that VET providers are often pivotal in matching learners and employer skill requirements and that close collaboration is required to achieve positive outcomes.

CONCLUSION

In addressing how VET is responding to changing hand and technical skills requirements due to technological change in manufacturing the research explored insights from 10 in-depth interviews with staff from a large public provider of VET. Three key themes emerged from the interviews, the first being the readiness of stakeholders to engage in training, particularly in a rapidly changing environment. The second theme is the ability to adapt to skills needs by offering and delivering new forms of training in response to systemic and technological changes. This includes the development and delivery of microcredentials to counteract the slowness of training package development and to meet stakeholders' requirements, such as unions. Lastly, the theme of collaboration emerged, promoting closer ties to other education providers including higher education being key to delivering training for more technologically advanced work environments. The provider has established a partnership to develop higher apprenticeships and aims to facilitate recognition of learning to smooth access to the training people need.

Although the sample contained a range of perspectives, research across other providers and provider types could provide deeper and perhaps different insights. This could include private and dual sector providers to understand how broadly these themes apply. Research could investigate how the private sector responds to the challenges as they do not have access to the same public infrastructure and how dual sector providers might smooth transitions across education sectors. The study only considered the hand and technical skill aspects of employability. Research could consider broader aspects, such as the integration of soft skills and how people are positioned for lifelong learning.

Consideration of rapidly changing Government policy agendas across education and industry is important, and research into how these are impacting training providers to equip people for the future including for work is important. This includes exploring how deeper collaboration between industry and education might positively impact people and society as we transition to a world that is more reliant on technology and changing skills needs, as evident in the manufacturing sector.

Stream 7 Teaching and Learning

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Stream 3. Sustainability and Social Issues

Evolving Managerial Cognition for Sustainability: Insights from a Longitudinal Study on a Leadership Training Program

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Evolving Managerial Cognition for Sustainability: Insights from a Longitudinal Study on a Leadership Training Program

Stream 3. Sustainability and Social Issues

ABSTRACT:

We know little about how cognitive shifts towards sustainability can be facilitated among organizational leaders. Through a longitudinal study, we analyse how a leadership program for societal transformations influences managers' cognitive frames related to sustainable development. By accompanying 20 organisational leaders over 18 months we capture cognitive reframing processes regarding sustainability. Our findings reveal that creating safe spaces for discussion and individualized mentorship can be crucial for fostering holistic, paradoxical thinking. This process involves experiential learning and peer support, enabling leaders to reconcile conflicting objectives and integrate sustainability into decision-making. The exploration of these interactive methods offers new insights into the dynamic nature of cognitive frames and highlights the importance of relational and contextual factors in promoting sustainable leadership practices.

Keywords: cognitive frames, reframing, sustainable development, leadership

Structured Submission

Overview:

For decades, global crises such as climate change, biodiversity loss, malnutrition, and inequality have been widely discussed, yet insufficient action has been taken to address their underlying root causes. Instead, we seem to be regressing, intensifying the urgency for swift and radical change (IPCC, 2023; Richardson et al., 2023; Shrivastava, 1995). This necessity spans multiple levels, from consumer behaviour to governmental and systemic structures, as well as organizational practices concerning sourcing, production, and provision (Nightingale et al., 2020). Recognizing the need for change, recent research at the intersection of sustainability and organizational studies has begun examining the micro-foundations - specifically cognitive processes - that influence broader organizational outcomes and dynamics towards sustainable development (Bianchi & Testa, 2022; Carmine & De Marchi, 2023; Lashmar, Wade, Molyneaux, & Ashworth, 2023). This literature stream forms the foundation for our exploration of mindsets that can shape business-as-*unusual*.

When moving toward sustainable practices, managerial decision-making becomes a complex and multifaceted challenge. Leaders are tasked with reconciling conflicting objectives related to economic, environmental, and social sustainability, often grappling with tensions between short-term and long-term perspectives (Haffar & Searcy, 2019; Hahn, Preuss, Pinkse, & Figge, 2014; Sharma, Greco, Grewatsch, & Bansal, 2022). The diverse interests of stakeholders further complicate leadership (Hahn, Figge, Pinkse, &

Preuss, 2018; Prakash, 2001; Pryshlakivsky & Searcy, 2013). Organizational leaders are therefore compelled to undergo cognitive shifts and adopt new decision-making approaches to navigate this intricate landscape of external and internal transformations (Barr, Stimpert, & Huff, 1992; Millar, Hind, & Magala, 2012; Ringvold, Saebi, & Foss, 2023). In this research, we explore co-creational learning and mentoring as potential tools for cognitive shifts accelerating sustainability transformations. Specifically, the research examines practitioners' cognitive frames that function as mental shortcuts, influencing how individuals make sense of the world around them (Goffman, 1974). By accompanying 20 managers and leaders partaking in a one-year leadership training program aiming at societal transformations, we want to shed light on internal transformation processes that potentially lead to external transformations within and beyond their respective organizations.

Current understanding:

The prevailing business-as-usual approach adheres to the currently dominant business-case paradigm, prioritizing economic benefits above all else (Ergene, Banerjee, & Hoffman, 2021; Painter-Morland, Demuijnck, & Ornati, 2017). This paradigm is driven by a pervasive mindset within industries and companies, known as the business-case frame, which supports sustainability initiatives only when they align with tangible financial and competitive gains (Hahn et al., 2014; Schaltegger, Hörisch, & Freeman, 2019). Such frames limit the scope of sustainability considerations to those that are economically beneficial, potentially neglecting broader environmental and social impacts (Williams, Edwards, Angus-Leppan, & Benn, 2021).

Encouragingly, empirical evidence indicates that adopting a paradoxical frame can allow individuals and organizations to give greater consideration to environmental and social sustainability components (Menon, 2022; Poon & Law, 2022; Preuss & Fearne, 2021). A paradoxical frame permits a more comprehensive examination of various sustainability issues, integrating a multifaceted landscape of opportunities and challenges into the sensemaking process (Hahn et al., 2014). This frame embraces the coexistence of seemingly conflicting objectives, such as achieving profitability while also addressing environmental and social concerns (Poon & Law, 2022).

Both the business-case and paradoxical frames represent a spectrum of ideal types between which individuals can shift (Hahn et al., 2014). This scale-like arrangement of cognitive frames suggests that firmly characterized and standardized frames are rare, and in practice, individuals often exhibit characteristics of various cognitive frames. Moreover, cognitive frames are not static and can shift even over relatively short periods (Joseph, Borland, Orlitzky, & Lindgreen, 2020; Sharma & Jaiswal, 2018).

Transitioning towards sustainability-oriented sensemaking might require reframing processes that allow for the evolution or shift of current frames (Lahtinen & Yrjölä, 2019; Martinez, 2014; Menon, 2022). Reframing involves changing the way individuals perceive and interpret their experiences and the information they receive, thereby facilitating a shift in mindset (Cornelissen & Werner, 2014; Schwering,

2010). Effective reframing can help managers and leaders overcome entrenched business-case thinking and embrace more holistic approaches to sustainability.

Research question:

In this research, we want to generate insights into the reframing processes of managers' and leaders' cognitive frames through co-creational learning processes and other forms of training. We aim to answer: *How might we shape leaders' cognitive frames for sustainability transformations inside and outside of organizations?*

Research approach:

We follow a longitudinal study approach, accompanying research participants for at least one year during their participation in a leadership program focusing on societal transformation. These 20 participants all hold managerial and/or leadership roles within their respective organizations, covering a diverse range of industries and types of organizations. Participants come from different cultural backgrounds and live and work in various places around the world, thereby representing a global cohort of practitioners.

Applying a mixed-methods approach, including interviews, observations, and focus group discussions, we aim to enhance the insights and merit of the collected data. All components of the leadership program, such as monthly online workshops and two in-person training weeks are being observed. Artifacts created by the training participants during these sessions are documented. Additionally, multiple focus group discussions are facilitated. Finally, each participant is interviewed before and after their participation in the leadership program. These individual interviews include cognitive exercises to gain a better understanding of participants' cognitive frames. Particular focus is drawn on a Conceptual Content Cognitive Mapping (3CM) exercise conducted with all participants before and after their participation in the leadership program (Biedenweg & Monroe, 2013; Guckian, Hamilton, & De Young, 2018). This cognitive mind-mapping exercise aims to underscore our understanding of the potential frameshifts that individuals might have undergone in terms of their conceptualization related to sustainable development.

To analyse the data, we employ thematic analysis to identify patterns and themes within qualitative data. Further, we employ cluster analysis as well as comparative analysis to show changes in cognitive maps pre- and post-intervention, ensuring a comprehensive understanding of cognitive shifts related to sustainability. Throughout the data analysis process, we follow an abductive approach, deeply informed by shared input from research participants but guided by existing literature in the field.

Findings:

This is a work-in-progress paper; hence preliminary findings will be presented at the conference. Initial data analysis indicates that merely gaining knowledge about sustainable development and required leadership practices may not be sufficient for enhancing cognitive frames toward sustainability

considerations. Preliminary insights suggest that the traditional approach of knowledge dissemination needs to be complemented by more interactive and supportive methods.

More importantly, creating a safe space for leaders to exchange experiences, coupled with individualized mentorship, appears to be crucial. Such an environment not only allows leaders to discuss challenges and share best practices but also fosters a deeper engagement with paradoxical thinking. Through these exchanges, leaders can explore and reconcile conflicting objectives, such as balancing economic performance with social and environmental responsibilities. This process encourages a shift from a purely business-case frame to a more integrated, sustainability-oriented cognitive frame.

Additionally, early findings highlight the importance of long-term, continuous engagement in leadership development programs. Regular interactions and sustained mentorship provide the necessary support for leaders to gradually expand their current mindsets and incorporate more holistic, paradoxical perspectives. This iterative process of learning and reflection might be a key component to facilitating significant cognitive shifts.

Contribution and Limitations:

Overall, these preliminary outcomes of this research add to our current understanding by emphasizing that cognitive reframing processes towards sustainability require more than just the dissemination of information. They necessitate an environment that supports experiential learning, mentorship, and peer interactions. This finding challenges the conventional wisdom that knowledge acquisition alone can drive sustainable leadership and instead highlights the importance of relational and contextual factors in fostering cognitive development.

From a theoretical perspective, the research reinforces and extends the concept of cognitive frames and their malleability. It supports the understanding, that cognitive frames are dynamic and can be reshaped through deliberate interventions that promote reflection and dialogue. This has significant implications for theories of organizational behaviour and leadership, particularly in the context of sustainability.

Meanwhile, several limitations should be recognized in this study. First, the sample size is relatively small, which may limit the generalizability of the findings. Future studies should include larger and more diverse samples to validate and extend these insights. Second, the research focuses on a specific context namely the participants in a leadership program aimed at societal transformation. The results may not be directly applicable to all organizational settings or types of leadership training programs.

Implications:

Leaders and managers will benefit from understanding that fostering a sustainability mindset requires more than just knowing the facts and figures around sustainable development. By participating in programs that provide safe spaces for discussion and individualized mentorship, they can develop the cognitive flexibility needed to integrate sustainability into their decision-making processes, leading to more innovative and responsible business practices that balance economic, social, and environmental goals.

HR and training professionals can use these insights to design and implement more effective leadership development programs, incorporating elements of experiential learning, mentorship, and peer support to create environments that promote significant cognitive shifts towards sustainability.

Sustainability consultants and practitioners can apply the findings to improve their advisory services by recognizing the importance of cognitive frames and the need for safe, supportive environments for leaders, better-guiding organizations in their sustainability journeys.

Finally, the study provides a foundation for further academic research into cognitive frames and sustainability, enabling researchers to build on these preliminary findings to explore deeper into the mechanisms and long-term effects of cognitive reframing, thereby contributing to the theoretical and practical understanding of sustainable leadership.

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Exploring Resilience Development in a Poly-Crisis: A Study of International Entrepreneurial Firms in a Post-conflict Emerging Economy

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Exploring Resilience Development in a Poly-Crisis: A Study of International Entrepreneurial Firms in a Post-conflict Emerging Economy

ABSTRACT: *This study contributes to our understanding of factors that influence organisational learning help build organisational resilience against multiple external shocks by strengthening anticipation, coping, and adaptation among international entrepreneurial firms in a post-conflict emerging economy, Sri Lanka. It adopts an exploratory qualitative design with the Gioia methodology, involving 10 semi-structured interviews with senior-level managers of exporting firms.*

Keywords: international entrepreneurship, organisational learning, organisational resilience, multiple external shocks.

INTRODUCTION

External shocks are becoming more prevalent in an increasingly interdependent and interconnected world. For example, the COVID-19 pandemic triggered enormous uncertainty across the globe, adding pressure on entrepreneurial firms to adapt, change and become more agile (Sharma et al., 2020; Verbeke, 2020; Gereffi, 2020). The impact of the COVID-19 pandemic is an example of an external shock (Soluk, 2022) which was characterised by supply chain disruptions (Ali et al., 2022), unemployment and job losses (International Labour Organisation, 2021), and adverse impacts on world trade (World Trade Organization, 2020) that presented serious challenges to the survival of businesses (Soluk, 2022; Léon, 2020).

Furthermore, military conflicts like that involving Russia and Ukraine have intensified tensions in world trade (Khlystova et al., 2022). At the same time, fast-growing emerging economies such as Brazil, Russia, India, China, and South Africa (BRICS) are planning to launch a new currency to conduct their international business (IB) activities as a result of their financial and industrial dominance in the world (Kondratov, 2021). In addition to that, the dynamics of shipping and logistics on a global scale have been impacted due to the recent Red Sea crisis resulting in disrupting vessel transits, increasing freight rates and changing pricing practices (Notteboom et al., 2024). These tensions have resulted in higher levels of inflation for countries worldwide causing them balance of payment difficulties where many nations are unable to generate sufficient income from exports to cover expenses from imports. Some researchers have even argued that organizations are experiencing multiple external shocks at a more frequent rate leading to a state of poly-crisis: a convergence of multiple intersecting, simultaneously occurring crises (Tooze, 2021). Subject to these multiple external

1

shocks, some firms can survive or succeed while others fail. This is one reason organizations should be concerned about fostering resilience against these multiple external shocks.

According to Ciravegna and Michailova (2022), international entrepreneurship research has the potential to further investigate how organisational resilience leads to long run internationalisation performance of firms. Furthermore, entrepreneurial firms originating from contexts that are likely to be susceptible to external shocks such as emerging or post-conflict economies provide an ideal platform for such studies (Moritz et al., 2023). Moreover, international entrepreneurship research can be extended by investigating how learning helps to develop absorptive capacity of firms (Luo, 2020).

According to Hillmann and Guenther (2020), organisational resilience is highly context dependent and that firms in emerging economies face unique challenges. The context studied in this study is Sri Lanka. According to the International Monetary Fund (2021), Sri Lanka is considered a type of emerging economy that has undergone significant internal conflicts in the recent past and hence can be referred to as a post conflict emerging economy. Sri Lanka underwent a thirty-year civil war between 1981 to 2010. Also, Sri Lanka faced a devastating Tsunami in 2004 loosing 40000 lives. In the aftermath of the civil war, Sri Lanka faced multiple external shocks such as the Easter Sunday attacks in 2019, global pandemic of COVID-19, and an ongoing economic and political crisis. Concurrently, the Sri Lankan economy downturned by 3.6% in 2020 because of the impacts caused by COVID-19 (World Bank, 2022). Further, the inflation rate of Sri Lanka soared from 5.96% to 48.19% between 2021 to 2022 (Statista, 2023). Today, Sri Lanka is still undergoing an economic crisis while, exporting firms encounter the harmful impacts of the recent Red Sea Crisis as well. Sri Lanka's foreign exchange revenue is mainly generated through exporting firms contributing to 17.7% of its GDP in 2021 (Word Bank, 2022). For that reason, export-oriented Firms of Sri Lanka are a critical element in the national economy due to their financial contribution.

To bridge this research gap, this study utilizes the dynamic capability view as the theoretical base to link organisational learning with organizational resilience. Specifically, dynamic capabilities modify an organisation's processes and routines according to turbulent environmental conditions and thereby maintain a competitive advantage (Wang and Ahmed, 2007).

2

This study explores the factors that influence organisational learning to build organisational resilience against multiple external shocks. It focuses on exporting firms in a post-conflict emerging economy (Sri Lanka) as these firms are more susceptible to these shocks. This study considers resilience as a capability that develops in three steps including anticipation, coping and adaptation (Duchek, 2020) driven by organisational learning. It found that forecasting and scenario planning provide the necessary learning to improve anticipation, while leadership, culture, and internationalisation provide the situational learning to adapt, whereas working from home and digitalization facilitates experiential learning to withstand external shocks for international entrepreneurial firms.

LITERATURE REVIEW

External shocks

External shocks are generally extended crises over a specific time period that cause significant delays in restoring the prior equilibrium (Fligstein and McAdam, 2011; Soluk, 2022). These shocks are constituted by human interventions or acts of nature, for example, conflicts, wars, financial crises, natural disasters, terrorist attacks, and pandemics (Soluk, 2022). Such chaotic events are unforeseeable and hard to mitigate quickly (Ritchie, 2004). Further, this situation is aggravated as a result of information asymmetry hence create devastating impacts for business organizations (Phillips et al., 2021). According to Williams et al. (2017), a crisis or shock is conceptualized either as an isolated event (economic crisis) or an evolutionary process (organisational malaise). It is argued that external shocks will either transform organisational systems to match the situation or lead to business closure (Kennedy and Linnenluecke, 2022; Dow et al., 2013). Consequently, the occurrence of such adversities and crises within a close time and space is defined as multiple external shocks or poly-crisis (Su and Junge, 2023). To be prepared for unexpected future events there is growing interest in organisational resilience research to understand the influence of external shocks on internationalising firms (Su and Junge, 2023; Ciravegna and Michailova, 2022).

Furthermore, recent studies related to external shocks find that the impact of multiple external shocks can be varied based on the economic context. Several studies in emerging and unstable economies find that they are extra prone to multiple external shocks compared to the context of

3

developed economies (Maćkowiak, 2007; Léon, 2020; Tanaka, 2021; Moritz et al., 2023). Hence, we focus on internationalised entrepreneurial firms originating from emerging economy contexts.

Organisational Learning

Organisational learning has been identified as a process in which an organization advances the knowledge gained by individuals and utilizes that knowledge to create the organization's knowledge system (Chiva et al., 2014; Bolívar-Ramos et al., 2012).

Learning is also a continuous process (Antonacopoulou and Sheaffer, 2014) and differs according to situations (Evenseth et al., 2022). If an organization only learns after a specific situation (e.g., single external shock) then it is called single loop learning (Argyris and Schon, 1978). However, double loop learning appears once an organization sets up proper action before the situation takes place (Argyris, 2002). Also, triple loop learning points to an organization's ability to learn from its learning processes (Argyris, 1996; Argyris and Schon, 1978; Andersen, 2016). However, it is important to maintain a balance since learning may be driven by unintentional efforts (Levinthal and March, 1993; Lavie et al., 2010; Hernes and Irgens, 2012).

Organisational Resilience

As a multi-disciplinary phenomenon, organisational resilience is defined and conceptualized differently in different disciplines (Burnard and Bhamra, 2011). Resilience as a concept has no universal definition, which leads to further ambiguity and confusion (Khan et al., 2024; Napier et al., 2024). However, three aspects of resilience have been argued as being potentially important: resilience as an outcome, process, and capability/capacity.

Similarly, Duchek (2020) notes that organisational resilience has been embraced under three key perspectives: (1) as a capability or capacity mechanism (2) as a process mechanism and (3) as an outcome or result. Also, Linnenluecke (2017), emphasizes that by developing the required capabilities and sufficient analytical skills regarding how resilience is defined, determined, assessed, and maintained over a period of time, organizations can prepare themselves for the harmful impacts of external shocks.

4

The Relationship between Organisational Learning and Organisational Resilience

In organisational resilience research, factors such as organisational learning may be viewed from two perspectives: (1) an antecedent of organisational resilience (Khan et al., 2019; Burnard and Bhamra, 2019; Tang et al., 2023), and as (2) a consequence of organisational resilience (Hillmann and Guenther, 2020; Tasic et al., 2020). There have been many studies exploring the concept of resilience.

While organisational resilience has been studied from different perspectives, there is still an existing gap in better understanding the antecedents of organisational resilience (Su and Junge, 2023). For that reason, in this study we propose organisational learning as an antecedent of organisational resilience and investigates its role in building organisational resilience against multiple external shocks. There is also a dearth of empirical studies on focusing the whole resilience process (Evenseth et al., 2022). This sees organisational learning assisting companies to develop resilience to survive after crisis and create opportunities after adversities (AlMaian and Bu Qammaz, 2023). In line with this, preparation (anticipation), response (coping), and recovery (adaptation) of resilience need to be investigated with respect to multiple external shocks (Su and Junge, 2023).

Another gap is that most of the research has focused only on the domestically focused firms, public sector entities, tourist firms, and manufacturing firms. There are relatively few studies on entrepreneurial firms involved internationalisation (i.e., export-oriented firms) (Shela et al., 2021).

Conceptual Framework

Insert Figure 1 about here.

This conceptual model (figure 1) is adapted and developed based on Duchek (2020) capability-based organizational resilience model. This conceptualizes organizational resilience as a capability developed in three stages. From the research gaps identified, this project studies the influence of organizational learning on organizational resilience and performance in exporting firms.

METHODOLOGY

The qualitative research design is adopted in this proposed study to collect and analyze data. According to Else-Quest and Hyde (2016) emphasize that qualitative methods facilitate exploring the

5

Stream 5: Entrepreneurship & SMEs

rich understanding of the relationship equality or power. The ethics approval was obtained from the Edith Cowan University's ethics committee for this study.

In the current organisational resilience literature, the emphasis on multiple external shocks is inadequate (Su and Junge, 2023). Also, in explaining the role of organisational learning to build resilience in all of three stages (anticipation, coping and adaptation) is unclear (Evenseth et al., 2022). Also, due to the unique nature of the impacts caused by the multiple external shocks for exporting firms in Sri Lanka, it is difficult to understand how different firms have reacted. For that reason, this study uses an exploratory research design.

Insert Table 1 about here

The participant details are summarized in table 1. The sample of the study consists of 10 senior-level managers from international entrepreneurial firms in Sri Lanka through purposive sampling (Suri, 2011; Palinkas et al., 2015). They have been selected to gather rich data based on their relevance to the research question (Suri, 2011; Brown et al., 2017).

Data for this study was collected through semi-structured interviews. Each interview was around one hour (Barberia et al., 2008). All interviews were in English and conducted via Microsoft Teams and recorded with the participant's consent. To analyze the data detailed inductive coding (Saldaña, 2021) using QSR N-Vivo 16 and thematic analysis was conducted. This study employed the Gioia et al. (2012) method to interpret interview data systematically by developing first-order concepts, second-order themes, and aggregate dimensions.

FINDINGS AND DISCUSSION

The following section delves into research findings from the study. This is illustrated in Figure 1 and Table 2 as suggested by Gioia et al. (2012).

Insert Table 2 about here

6

Stream 5: Entrepreneurship & SMEs

Anticipation

The first stage of developing resilience is to be prepared for future external shocks, hence denoted as anticipation (Duchek, 2020). Knowledge elicitation to envision potential external shocks and take necessary steps to mitigate them is essential for today's business ecosystem (Hegde et al., 2019). Therefore, proactive rather than reactive as illustrated in the excerpt below:

> "So, I think in the case of COVID-19, our biggest learning was that we were always a few steps ahead. Initially, it didn't affect us immediately, but it affected our suppliers. Since then, we knew for sure that the pandemic would extend to the rest of the world as well. Therefore, we did a lot of planning to make sure our cash flows were strong and adequate inventories were maintained" (P6).

> "Post-COVID within the organisation we have established taskforces, we call them business intel units to predict the external environment and develop timely solutions. Of course, they can't predict things like terrorist attacks, but things like natural disasters, and political developments, are monitored via these business intel units" (P7).

The way these participants have described their preparation by forecasting before COVID-19 shows how it facilitated them to be resilient. Especially, their communication and coordination with their suppliers have helped them to understand the severity of the pandemic (Hegde et al., 2020). Therefore, they decided to restructure their financial status in advance by extra savings as a safety net (Bhaskara and Filimonau, 2021; Steen and Ferreira, 2020) as well as emphasizing the importance of maintaining buffer stocks to avoid disruptions in the manufacturing process (Chand and Loosemore, 2016). Consistent with Habiyaremye (2021) external analysis is streamlined using taskforces by learning from developments taking place in the ecosystem in order to anticipate external shocks.

Moreover, increasing the number of warehouse facilities is a proactive measure taken to prepare for future external shocks:

> "Pre-COVID, we never thought of having international warehouse facilities. But now we have opened warehouses in Australia and the US. We thought that, for us to give the maximum services and benefits to our customers we need to get more closer to them" (P2).

According to Scholten et al. (2019), opening up warehouses in different markets as a reaction to COVID-19 was a growth opportunity seized by the company by changing internal operations that led to knowledge creation in preparing for the economic crisis that Sri Lanka underwent.

Furthermore, scenario planning is a measure that was frequently mentioned by the participants of the study in terms of anticipating future external shocks.

7

"I think the extensive planning in terms of business continuity is important. We have come up with different scenarios and educate and train our employees. One such scenario was, we conducted a pilot training on hybrid working during the 2019 Easter attacks for our employees. I believe it helped a lot of our employees to quickly adopt the work-from-home method during COVID-19 and then in the economic crisis as well" (P8).

Because the scenario was planned, the firm had already known the necessary action that had to be taken during the COVID lockdown to maintain the pre-COVID performance level, and hence effective scenario planning enables firms to think about different futures and transfer knowledge efficiently (Hillmann et al., 2018).

The above findings highlight that the knowledge created via proactive measures helps international entrepreneurial firms to prepare (anticipate) in advance for external shocks, contrasting to the traditional approach which tries to rectify when something goes wrong (Sujan et al., 2017).

Coping

The second stage of developing organisational resilience is coping, the ability to accept the situation and develop and implement viable solutions (Duchek, 2020) while working under extreme time constraints (Christopher and Lee, 2004). Since shocks cannot be anticipated organisations need to cope through responsive learning mechanisms (Scholten et al., 2019).

As participants acknowledged, leadership was vital in coping with operations when firms encountered external shocks.

"I think the visionary leadership of our founder CEO was instrumental in our survival during COVID and the series of shocks it created. He made a bold decision to make a salary cut at a senior level starting from the board of directors. Then some of our competitors criticised him. But later we found that our competitors have done the same" (P5).

Consistent with Hegde et al. (2020), we found that the interviewees acknowledged that leadership is a critical element in resilience to facilitate coping with a crisis. Furthermore, learning from such coping actions as implementing a salary cut enables firms to generate revenue to improve their financial position amid a crisis (Bhaskara and Filimonau, 2021).

Additionally, respondents emphasized how organisational culture supported them.

"So, what we have basically learned is as long as we can be ahead of it and if we can run your organization like a startup, even if you look at this company, we have been in the business for 40 years, but we tried to create a culture of a startup internally where a lot of people come up with a lot of ideas. We'll try to evaluate ideas. We'll try to make changes. We'll try to change from one to the other. So, if we do that, I think we can face the external shocks successfully" (P10).

8

Stream 5: Entrepreneurship & SMEs

As the above quote emphasizes having an organisational culture similar to a start-up is a dynamic

capability that helps companies to diffuse knowledge individually or locally throughout the firm,

opening doors for all the employees to actively participate in the decision-making process (Barley,

2018; Nonaka, 1994; Hegde et al., 2020; Steen and Ferreira, 2020). Therefore, organizations have the

ability to be resilient when responding to external shocks because learning is an interactive process

that is embedded in the organisational culture (Habiyaremye, 2021). This is especially critical among

exporting firms that traded using global currencies like the US dollar. (Navarro-García et al., 2024).

> *"Our company has a dollar reserve because we received forex regularly with our exports during COVID-19. So, all our imports like packaging materials and ingredients matched with our export revenue. So, we did not have difficulties in terms of paying for imports where other businesses in Sri Lanka had issues during the economic crisis" (P1).*

> *"Some of our customers were still concerned about the Sri Lankan economic crisis and worried that we would not be able to deliver the output on time. With that, since we are a global company the other locations that we have around the world, we were able to give them alternatives and give them the comfort that a disruption in one location is not going to impact the whole company. With that also, we were able to manage the Sri Lankan situation" (P6).*

> *"During the dollar crisis in Sri Lanka, the government was telling us to convert all our foreign currency to Sri Lankan Rupees, which is not practical for an exporting business like ours because we import raw materials from foreign suppliers. Since we are anyway a global company, we have operations in a few other countries. Therefore, we have a separate investment arm, an offshore investment company. So we funded the raw material imports through that facility" (P4).*

According to P1 being a global company, their capability of earning revenue from dollars from

exports, and having operations in different countries reveals their resilience to overcome subsequent

shocks after COVID-19 such as the economic crisis (Nakatani, 2017). The participants purposefully

use foreign exchange earning income from exports to finance their imports; and use exports to

strategically respond to currency crises (Deb, 2005). This benefit was achieved due to the international

presence. Also, quotes of P6 and P4 of the availability of resources like offshore production and

financing facilities equip international entrepreneurial firms the ability to provide situational responses

when coping with external shocks (Hegde et al., 2019; Scholten et al., 2019).

The application of internationalization as situational learning and its development of resilience

is underexplored. Consistent with Anderson et al. (2020) and Al-Atwi et al. (2021) we noticed that the

learning development during the coping stage influences the stages of anticipation and adaptation

9

Stream 5: Entrepreneurship & SMEs

because leadership, culture, and financial strength are critical for international entrepreneurial firms in responding to external shocks.

Adaptation

The third and final stage of resilience is the recovery from external shocks that allows firms to become stronger than before, hence denoted as adaptation (Duchek, 2020). When organizations learn from previous external shocks, the knowledge gained helps them reduce the likelihood of harmful impacts from future shocks (Madsen, 2009). Such knowledge can be seen through new routines that enhance the capabilities of the firm (Lampel et al., 2009).

> *"We use SAP which is one of the sophisticated manufacturing ERP systems. That gives us flexible access from anywhere in the world to log into the system and complete our tasks. Since COVID, we have conducted MS Teams and Zoom meetings when dealing with our production plants located in four countries apart from Sri Lanka, where pre-COVID we had to travel" (P4).*

> *"When the Easter attacks happened in 2019 the entire organization moved from using desktop computers to laptop computers. So, every person had a laptop assigned to them. So, this was a huge benefit for us when COVID hit the next. However, there were some issues with the internet connection and speed where our employees live but we rectified them during COVID. This helped us during the local economic crisis where we had to undergo 8 to 10-hour power cuts daily. So, by the time, the power outage was severe, we provided the UPS (uninterruptible power supply) power for our employees" (P9).*

As mentioned above, working from home has become a routine for companies after they experienced the COVID-19 pandemic. Therefore, the experiential learning of transition towards a more virtual environment has led these companies to successfully adjust their operational routines and improve decision-making in adapting to the post-COVID environment (Ellis and Shpielberg, 2003). Since companies were able to perform their tasks uninterruptedly with the subsequent external shocks, the shifting towards a virtual environment can be considered a dynamic capability (Jiang et al., 2019).

Other adaptations using digital transformation efforts included shifting towards establishing smart factories and digital clothing. Below are some examples.

> *"Smart factories will be a game-changer which we are currently working on. That's not a crisis response at all. It's that this series of crises just made us as a company act faster to get there" (P6).*

> *"We are currently looking at moving towards digital clothing because the markets in the future will be a generation that is heavily on digital platforms. Therefore, we are looking at ways that we can operate and serve in that market" (P7).*

10

Stream 5: Entrepreneurship & SMEs

Smart factories improve production visibility for customers and suppliers while reducing daily communication expenses hence improving the production and financial efficiency of intentional entrepreneurial firms (Yu et al., 2022). Thereby, providing an organization-wide learning experience for the importance of digital transformation. Furthermore, the transition towards providing customer experiences such as digital clothing adds further value for these international entrepreneurial firms (Cennamo et al., 2020). However, the application of digital transformation efforts for the knowledge creation and thereby development of resilience is underexplored.

Additionally, COVID-19 as an opportunity to learn was discussed by the participants, hence leading them towards adapting many practices for increased performance in the future as illustrated in the excerpt below:

> *"Due to COVID, our e-commerce platform has further improved. We enhanced it with a more user-friendly outlook. As a result, the volume of our online sales increased. During the economic crisis also, this was helpful for our business because orders kept coming" (P1).*

As depicted in the above quote, the knowledge transfer took place in the means of digital infrastructure development has resulted in improved performance during multiple external shocks for the companies (Chand and Loosemore, 2016).

The influence of Social Media also created marketing opportunities by providing free and valuable information for customers exposing them to different experiences (Costa and Castro, 2021).

> *"The social media content created via bloggers/influencers on social media YouTube and TikTok has also helped us to blossom after COVID-19. Because pre-COVID lot of this information was provided by travel agents through their packages at a fee. But now a lot of information is free".* (P3)

In the case of Participant 3, tourism as an industry suffered during COVID-19 because of the international travel restrictions. However, social media content created by third-party influencers has provided a positive image of the country free of charge, hence attracting more international tourists. Post-covid, social media enabled many businesses to reach closer to customers, thus resulting in the enhancement of organizational resilience against external shocks (Martín-Rojas et al., 2023).

In addition to that, entrepreneurial internationalisation is a process that evolves in a step by step sequence over an extended period of time (Johanson and Vahlne, 1977; Casillas and Moreno-Menéndez, 2014). A rare quote that emphasized is importance during COVID-19 is given below.

11

Stream 5: Entrepreneurship & SMEs

"Pre-COVID, we were a local company doing a little bit of exports. But during COVID we were exploring the other markets and we realized that we could cater to those markets. So, we decided to fully shift to exporting. If you take us as a company pre-COVID, our revenue was around Rs. 5 million per annum. But post-COVID 2 years later, now our revenue is approximately Rs. 25 million per annum. We took that challenge, and it was hard in the beginning, but we ended up in a better place. So, the learnings and the practices that we followed during COVID brought us to this level" (P2).

Consistent with Bhaskara and Filimonau (2021), companies need to use knowledge management effectively to re-structure their business strategies in order to achieve improved performance in the post-COVID environment. Therefore, this company has utilized increased internationalisation activities as an effective learning to successfully adapt to subsequent multiple shocks.

RESEARCH CONTRIBUTIONS

First, in this study we contribute to the dynamic capability literature by using it as a theoretical underpinning. As a result, exploring how the nature of dynamic capability view adds to understanding of how organisational resilience can be built against multiple external shocks. Many studies have focused mainly on the adaptation stage (Evenseth et al., 2022). In contrast, we emphasize how distinct phases of resilience (anticipation, coping, and adaptation) are linked to the dynamic capability view/framework (sensing, seizing, and transforming) to modify an international entrepreneurial firm's processes and routines to face and recover from external shocks.

Second, in this study we aim to extend the organisational learning theory via studying resilience against multiple external shocks to achieve improved performance. Previous research has predominantly studied organisational learning theory, resilience, dynamic capability view in isolation with external shocks. As the number of studies that have combined these concepts and theories and explored their effect on multiple external shocks is limited, this study bridges the above-mentioned gap as well. Many studies have focused on a single external shock such as natural disasters, terrorist attacks, financial crisis or COVID-19 (e.g.Battisti et al., 2019; Habiyaremye, 2021), but there has been limited investigation of multiple external shocks in this area (Su and Junge, 2023).

Third, as explained by Hillmann and Guenther (2020), considering context adds deeper insights in terms of the distinct stages of organisational resilience. Our research therefore contributes to the understanding of organisational learning in developing organisational resilience in an emerging economy context among international entrepreneurial firms.

12

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13

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14

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15

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16

Stream 5: Entrepreneurship & SMEs

TABLES

Table 1. Profile of Interviewees

Participant	Organisation	Position	Industry	Number of employees
P1	T-1	Chief Financial Officer	Food and Beverages (Tea)	650
P2	C-2	Managing Director	Food and Beverages (Coconut)	5000
P3	Tr-1	Chief Executive Officer	Tourism (Leisure)	250
P4	A-1	General Manager - Risk and Control	Apparel	2,900
P5	A-2	Group Head - Risk and Control	Apparel	60000
P6	A-3	Senior General Manager - Finance & Strategy	Apparel	60000
P7	A-4	General Manager Business Development	Apparel	100000
P8	IT-1	Senior Director - Research and Development	IT and Software	800
P9	IT-2	Chief Operating Officer	IT and Software	305
P10	PC-1	Director / Chief Executive Officer	Porcelain and Ceramic	1500

17

Stream 5: Entrepreneurship & SMEs

Table 2. Concepts and Dimensions using Gioia Methodology

First Order Concepts	Second Order Themes	Aggregate Dimensions
Planning few steps ahead	Forecasting	Anticipation
Business intel Units		
Establish International warehouses		
Business Continuity Planning	Scenario Planning	
Making bold decisions	Leadership	Coping
Running the company like a startup	Organizational Culture	
Having a dollar reserve	Internationalization	
Having offshore production facilities		
Having offshore financing facilities		
Remote working	Working from home	Adaptation
Shifting to laptops from desktops		
Increasing cyber security		
Increased sales due to the e-commerce platform	Digitalization	
Establish a smart factory		
Transition to digital clothing		
Social media influence		
Fully shifting to exports	Restructure Business Strategies	

18

FIGURES

Figure 1. Conceptual Framework Model
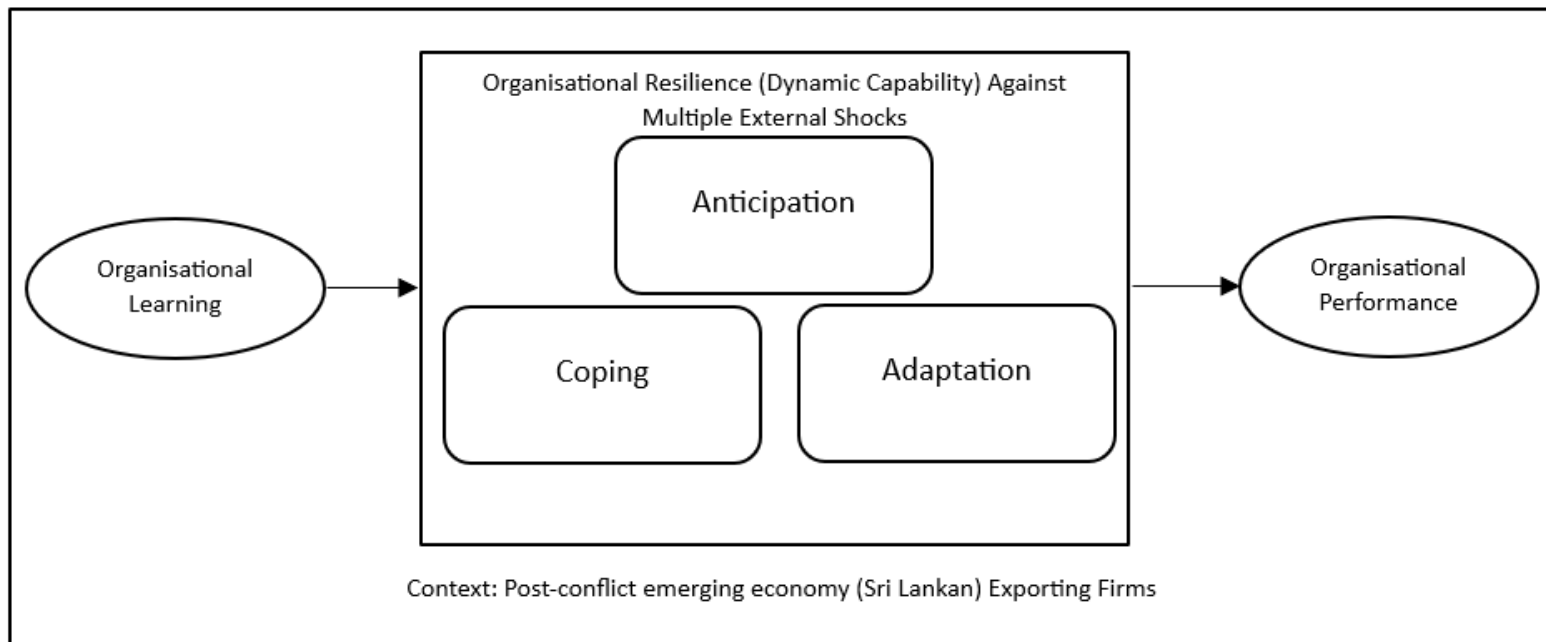
Does the Workspace Matter?

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Does the Workspace Matter?

Organizational space refers to the built environments that emerge from organizational activities, objects, arrangements, and social practices (Stephenson, Kuismin, Putnam, & Sivunen, 2020). Research in the domain of workspace shows that the workspace that employees work in impacts their behaviour. Furthermore, research has shown that workspace characteristics have an impact on employee reactions such as turnover intention, satisfaction at work and withdrawl from work (Oldham & Fried, 1987). Researchers have examined how changes in workspaces influence individual behaviors, perceptions, ways of relating and interacting, and organizational outcomes. They focused on how the removal of barriers, the manipulation of distance, and alterations in office layouts changed visibility, accessibility, privacy, and proximity. For instance, Coradi, Heinzen, and Boutellier (2015) showed how the removal of partitions stimulated cross-functional communication and enhanced organizational learning and innovation. Nilsson and Mattes (2015) illustrated how bringing geographically dispersed teams together in face-to-face meetings before beginning a project promoted trust among members. McElroy and Morrow (2010) investigated how office designs that moved from a 1970s cubicle arrangement to an open office plan led to positive perceptions of the organization's culture and increased commitment to the firm (Stephenson, Kuismin, Putnam, & Sivunen, 2020). Organizations around the world are making their workspace green. Research in this domain has been sparse; additionally most of the research has seen green building certifications as a proxy for green building (Parida, Ananthram, Chan, & Brown, 2021). While having a green certification may be beneficial for organizations, the physical environment of the office space would have different levels of sustainability. In this study, we examine the impact of green workspaces on employee behavior.

 The level of green within a workspace could be measured based on the level of CO2, indoor temperature, relative humidity, decibel level and lux level. The question we focus on is does working in a green environment benefit individuals. We argue that working in a green space would have a positive impact on employees. Furthermore, this positive psychological impact would lead to greater engagement with the organization.

Literature Review

The Green built Environment

In our study, we focus on the effect of light, temperature, humidity, CO2 levels and decibel levels. The research relating these on parameters on human behavior is pervasive in medical sciences.

Studies in medical science suggest that mood can be impacted by light (Olejniczak, et al., 2021). Besides supporting visual perception, ocular light exposure influences many aspects of human physiology and behaviour, including circadian rhythms, sleep, and alertness (both via circadian system–dependent and circadian system–independent routes), mood, neuroendocrine, and cognitive functions (TM, et al., 2022) . For a building to be considered green it needs to rely on energy efficient lighting systems. Additionally, many green building attempt to rely on using natural light as a way of reducing energy usage during daytime. Research in neuroscience has shown that natural sunlight has a positive effect on human well-being.

Because humans produce and exhale carbon dioxide (CO_2), concentrations of CO_2 in occupied indoor spaces are higher than concentrations outdoors. As the ventilation rate (i.e., rate of outdoor air supply to the indoors) per person decreases, the magnitude of the indoor–outdoor difference in CO_2 concentration increases. Consequently, peak indoor CO_2 concentrations, or the peak elevations of the indoor concentrations above those in

outdoor air, have often been used as rough indicators for outdoor-air ventilation rate per occupant (Persily & Dols, 1990). The need to reduce energy consumption provides an incentive for low rates of ventilation, leading to higher indoor CO_2 concentrations.Research in this domain suggests that most decision-making performance declines with higher concentrations of CO_2 . Indoor air quality is a crucial component of eco-friendly construction because it affects every other green aspect of the building as per World Green Building Council (WGBC) indoor air quality can be improved a number of structural and technological tools. Additionally, indoor air quality is a hallmark of a green building (Satish, et al., 2012).

Thermal comfort is important for health and well-being as well as productivity. A lack of thermal comfort causes stress among building occupants. When they are too warm, people can feel tired; when too cold, they will be restless and distracted. thermal comfort has to do with more than the temperature. It can be achieved only when the air temperature, humidity and the movement of the air are in proper balance with each other. Green buildings may be designed to be responsive to regional climate, and use less active strategies to help provide an acceptable range of thermal comfort through the seasons.[1]

Based on this understanding, we argue that green building will have a positive effect on human well-being. However, in the case of employees this will also have an impact on their work-productivity.

Thriving as Work

Thriving at work is defined as "the psychological state in which individuals experience both a sense of vitality and a sense of learning at work." (Walumbwa, Muchiri, Misati, Wu, &

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[1] https://www.greeneducationfoundation.org/green-building-program-sub/learn-about-green-building/1239-thermal-comfort.html

Meiliani, 2018). Vitality consists of feeling energized and having a zest for work. Learning refers to the sense that one can acquire and apply skills or knowledge to develop capability and confidence (Liu, Xu, & Zhang, 2020). Measuring employee thriving runs deeper than superficial issues at work. It looks at cultivating an environment that fosters the development of positive mental health and a sense of fulfilment among employees (Fathy, Pärn, Wilkins, & Zaki, 2020).

We argue that the indoor environment of the workplace will impact thriving. Research suggests that the indoor work environment may impact well-being of an employee (Fathy, Pärn, Wilkins, & Zaki, 2020). However, there is little or no empirical evidence to make this argument. We argue that given the positive effects of a green environment occupants within the green building will have better cognitive functioning. We believe that this will lead to a psychological state that is conducive for learning. Furthermore, occupants within a green building will be exposed to environment factors that have health benefits. Therefore, we argue that employees will experience a sense of vitality as well. Based on these arguments, we hypothesize that employees who work in a green indoor environment will have higher thriving that those who do not work in a green environment.

H1: Green indoor environment has a positive effect on employee thriving.

Work Engagement

Employee engagement has been studied in many research studies. Research suggests that employees" exhibit engagement when they become physically involved in tasks, whether alone or with others; are cognitively vigilant, focused, and attentive; and are emotionally connected to their work and others in the service of their work (Kahn, 1990; Rich et al., 2010). Employee engagement has been found to positively impact individual performance

(Yalabik, Popaitoon, Chowne, & Rayton, 2013), employee well-being (Jenkins & Delbridge, 2013), and work-related attitudes (Barrick, Thurgood, Smith, & Courtright, 2015).

A sense of thriving would lead employees to feel a sense of positive emotion in their workspace. It can be argued that this positive emotion would have an impact on work meaningfulness. Work meaningfulness is an important and critical element of engagement (Kahn, 1990). Therefore, we argue that thriving would lead to employee engagement

H2: Thriving would have a positive effect on employee engagement

Method

In order to see the effect of green work environments on thriving we first measured the green index.

We adopted this methodology adopted for arriving at a Green index:
 To arrive at the 1-5 range of comfort for each parameter, the ISHRAE 2016 standards have been taken as reference. The given range of optimum comfort for each of the parameter is as below:
 CO_2 = 350-440-530 (max)

Temperature (optimum) = 24 +/- 2.5

RH = 30-70%

Decibel = 40-45-50

Lux = 300-500-750

Based on these standards, the range for each parameter has been calculated.

1. CO_2 (Ambient minus Indoor) – the Class A as per the ISHRAE is 350 ppm or less. This is taken as the best scenario. And then assuming a uniform decline in the comfort as the levels increase, the class intervals have been calculated as follows:

Likert Scale	Co2
5	**<350**
4	**350 - 410**
3	410 - 470
2	470 - 530
1	>530

2. Indoor Temperature – The ISHRAE standards identify 24 +/- 2.5 Deg. C as the optimum temperature range for human comfort. To establish the best scenario, we undertook a small survey with occupants in our office space and arrived at the range of 22.5 – 25.5 C (24+/-1.5) as the optimum range in which most occupants felt comfortable. Assuming uniform decline in the comfort as the temperature deviate in either direction from this range, the class intervals have been calculated as below.

Likert Scale	Temp	
5	22.5 - 25.5	**24 +/- 1.5**
4	21.5 - 22.5 / 25.5 - 26.5	**24 +/- 2.5**
3	20.5 - 21.5 / 26.5 - 27.5	24 +/- 3.5
2	19.5 - 20.5 / 27.5 - 28.5	24 +/- 4.5
1	<19.5 / >28.5	

3. Relative Humidity (RH) – The comfort range identified is 30 – 70 percent as per the standards. Based on the expert's assessment, 45-55 percent is identified as the best scenario. Assuming uniform decline in the comfort as the relative humidity deviates in either direction from this range, the class intervals have been calculated as below.

Likert Scale	RH
5	45-55
4	40-45 / 55-60
3	35-40 / 60-65
2	30-35 / 65-70
1	<30 / >70

4. Decibel – The ISHRAE standards define 40-45-50 as the range, with 40 being the Class A or best scenario. Assuming a uniform decline in the comfort as the levels increase, the class intervals have been calculated as follows:

Likert Scale	Db
5	**<40**
4	40-43
3	43-47
2	47-50
1	>50

5. Lux Levels – The optimum levels for office environments as per the ISHRAE standards are 300-350, with an acceptable range of 110 (min) and 700 (max). thus, assuming uniform decline in the comfort as the lux levels deviate in either direction from the optimum range, the class intervals have been calculated as below.

Likert Scale	Lux
5	**300-350**
4	250-300 / 350-400
3	200-250 / 400-450
2	150-200 / 450-500
1	<150 / >500

Based on the available literature and expert understanding, it is difficult to ascertain which of the parameters have a more significant bearing on the human comfort and ability to work. Hence, the composite score does not attach weights to any of the parameters.

Next, we measured thriving and employee enagagement. We used the engagement scale provided by Shuck, Adelson, and Reio Jr (2017). Further, we used the Thriving scale provided by Porath, Spreitzer, , Gibson, and Garnett. (2012).

We used linear regression to identify the impact of the green index on the dependent variable.

Table 1 below provides the descriptive statistics of the variables used in this study

Table 1: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Employee Engagement	59	63.55932	7.012971	41	75
Thriving	59	41.0678	9.69334	8	54
Green	57	13.4386	3.469343	7	23
Comfort	50	23.76	3.408034	15	29

First, In order to understand the effect of green buildings and comfort of green buildings on employees, we first looked at the impact of a psychological state called thriving on employee engagement. Here we consider employee engagement as our dependent variable.

Variable Name	Co-efficient	p-value
Thriving	0.08	.07

We find that thriving has a positive impact on employee engagement. From the data analysis, a 1% change in thriving leads to an 8% increase in employee engagement.

Next, we focus on the role of green building and comfort on thriving

Variable Name	Co-efficient	p-Value
Green X Comfort	0.07	.08

In order to understand the effect of green buildings and comfort on thriving we ran multiple econometric model. However, we were constrained due to size of the sample. We found that a combination of green features and comfort had the largest effect on thriving. When isolated, we found that workspaces that have higher green scores and are considered more comfortable

together increase the state of thriving within employees. Further, a 1% increase in green features and comfort leads to a 7% increase in thriving.

Conclusion

This is one of the first attempts to understand if a green built environment has any impact on humans. We find that working a space that is green is actually very beneficial for employees. The respondent sample in the study is limited and the study will continue to strengthen this aspect. However, the findings can have very beneficial impacts for organizations. Additionally, we provide a business reason for organizations to think about going green in their workspaces.

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8. Business Processes, Innovation and Supply Chain

Adopting and domesticating design thinking within management subfields: The case of sport management

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Adopting and domesticating human-centred design thinking within management subfields: The case of sport management

ABSTRACT:

Our study was concerned with the adoption and domestication of human-centred 'design thinking' into management subfields as a derivative theory of management practice, as well as the implications of the same for the parent field of management. To provide a meaningful way forward for researchers and practitioners, we developed a framework that allows researchers to adopt design thinking into the practice of a subfield organisation via intervention in a manner which suits that organisation's current practice, allowing for subsequent domestication of design thinking into that practice. We present that framework here as it was employed in an intervention with the Sydney Sixers, a professional cricket club (i.e., an organisation in the management subfield of sport management).

Keywords:

design thinking, human-centred design, innovation, sport management, organisational behaviour

Overview

Our study was concerned with the adoption and domestication of human-centred 'design thinking' into management subfields as a derivative theory of management practice, as well as the implications of the same for the parent field of management. While different approaches to (i.e., models of) design thinking have been successfully employed in a diverse range of fields since the concept gained popularity circa 2008 (Joachim, 2021), these previous efforts typically employed 'off the shelf' design thinking models with little or no regard for the idiosyncrasies of the context in which the model was being used (Johansson-Sköldberg, Woodilla & Çetinkaya, 2013), potentially limiting the effectiveness of such interventions (Doherty, 2013) and arresting the maturation of design thinking as a practice and field of study (Kimbell, 2011). Considering management subfields have special features which define them as subfields, any management theory (such as design thinking) must be adopted into such subfields with awareness of and respect for these special features and idiosyncrasies (Doherty, 2013). To provide a meaningful way forward for researchers and practitioners, we developed a framework that allows researchers to adopt design thinking into the practice of a subfield organisation via intervention in a manner which suits that organisation's current practice, allowing for subsequent domestication of design

thinking into that practice. We present that framework here as it was employed in an intervention with the Sydney Sixers, a professional cricket club (i.e., an organisation in the management subfield of sport management).

Current understanding

Design thinking is a human-centred (or user-centred) management theory of practice that draws on the approaches employed by expert designers (such as empathy research and analysis) to allow non-design practitioners (such as managers) to generate and/or enhance value for their end users (Joachim, 2021). Since entering the popular management discourse in 2008, design thinking has evolved past early success stories from industry (which were primarily anecdotal; Kimbell, 2011) and has matured into a management theory of practice characterised by themes rather than rigid models or approaches (Carlgren, Rauth, and Elmquist, 2016). As it was originally promoted as a way for managers to innovate and/or solve intractable problems, design thinking has been adopted in fields as diverse as education, retail, health care, and food service (Joachim, 2021). However, many of these adoptions problematically viewed design thinking as a toolbox to be used situationally, rather than as an approach to practice (Johansson-Sköldberg et al., 2013). More recently, Carlgren and colleagues (2016) discovered that, while some organisations that self-identify as engaging in design thinking might start with an off the shelf model of the concept (e.g., the popular Stanford d.School model), those organisations eventually domesticated design thinking into their own way of doing things. By exploring the mindsets, techniques, and practices of those organisations, Carlgren and colleagues (2016) developed a scholarly framework of themes which characterised those design thinking practices (user focus, visualisation, problem framing, experimentation, and diversity [of perspectives]) and provided a standardised way for researchers to approach design thinking case studies. As such, their framework underpinned this study.

Research question

Considering management subfields such as sport management have special features that define them as a subfield (and thus must be considered when porting derivative theories from the parent field of

management; Doherty, 2013), our central research question was: how can design thinking be usefully adopted and domesticated into management subfields as a theory of practice derived from the parent field?

Research approach

Our intervention to domesticate design thinking as a theory of practice into sport management practice assumed a social constructivist perspective, which informed a qualitative approach to studying an instrumental case (Stake, 1995): the front office (i.e., administration) of the Sydney Sixers. The Sixers are one of eight member clubs of the Women's and Men's Big Bash League[s], being Australia's professional T20 cricket competitions. At the time of our study (before, during, and immediately after the 2018/19 competition seasons), the Sixers organisation consisted of six permanent staff (i.e., the case unit) who were supported by employees from other related organisations, interns, and volunteers.

Data were gathered via semi-structured interviews and observation. The interview guide was informed by Carlgren and colleagues' (2016) thematic design thinking framework to connect the mindsets, principles and techniques the Sixers were employing to those of design thinking practice. Pre- and post-interviews were conducted with each of the six core Sixers staff members. Observation was conducted during nine work-in-progress (WIP) meetings (being the Sixers' primary forum for strategy and innovation), during the workshop in which a design thinking activity was introduced to the team, and during two workshops in which the Sixers undertook a version of the design activity which they had modified to better suit their practice[s]. All data were subsequently coded through NVivo 12 using a hybrid inductive/deductive approach (Fereday & Muir-Cochrane, 2006). In seeking alignment with design thinking themes, data were analysed deductively using 44 indicators of alignment to those themes (as derived from Joachim, Schulenkorf, Schlenker, Frawley & Cohen, 2022) as *a priori* codes (Miles, Huberman & Saldaña, 2019). To establish emergent criteria of suitability for the Sixers' practice which a design activity would ideally meet, data were also coded inductively (i.e., in rounds). To ensure accurate and consistent coding, all

authors participated in cross-author checking (Patton, 2015) assisted by the audio recordings of all interviews and video recordings of observed workshops.

Findings

In the first stage of the intervention, seven criterion were established for identifying a design activity that would suit the way the Sixers preferred to work. Specifically, an activity was required which would: allow the Sixers to focus on a single issue, capture the experience of each individual member of the staff, be driven by imagery and visuals, facilitate collaboration, encourage sharing by every member of the staff, generate actionable tasks, and be structured and repeatable for future use. A single activity was identified which met all seven criteria: the Lightning Decision Jam (LDJ), a structured brainstorming activity which alternates between timed periods of individual and group activity.

In the second stage of the intervention, the LDJ was introduced to and undertaken by the Sixers staff in a two-hour workshop. The LDJ unfolded in five broad phases: (1) selection of a topic to brainstorm, (2) exploration of the problem or opportunity, (3) articulation of 'how might we' (HMW) questions which seek to overcome the problem, (4) ideation of answers to those HMW questions, and (5) prioritisation of the answers using a value matrix with axes of impact [on users] v. effort [for the team to implement] (Courtney, 2018). The topic on which the Sixers elected to employ the LDJ (Phase 1) was improving the manner in which they work internally (their processes and communication amongst themselves) and with others (internal and external partners). After exploring this problem space in an individual brainstorming session (Phase 2), the specific challenge of 'resourcing issues' was selected for further exploration. The team next articulated and voted upon HMW questions (Phase 3) which addressed their resourcing issues, ultimately selecting "how might we redistribute workloads?" as the most promising of those HMW questions. A subsequent individual brainstorming session (Phase 4) focused on generating answers to that question. After a round of silent voting on these answers, eight had received enough votes to progress to the final phase. These eight answers were then plotted by group consensus on a value matrix (Phase 5) of effort for the team to implement (high-low) and the impact (high-low) that implementation would have on

users (i.e., themselves). Ultimately, three ideas were identified which the team perceived to require low effort but which would have a high impact: to prioritise work based on impact, to engage in regular brainstorm sessions, and to employ diary [calendar] management solutions.

The third and final stage of the intervention focused on evaluating the intervention activity. The Sixers' use of the LDJ satisfied all criteria established in Stage One. Further, their use of the LDJ strengthened connections between their practice[s] and design thinking themes. For example, the silent voting embedded in the LDJ process represents a 'democratic spirit' that satisfied the Stage One criterion of 'facilitate collaboration' and also indicated alignment with the design thinking theme of 'diversity [of perspectives]' (Carlgren et al., 2016).

Finally, study of the Sixers' subsequent use of the LDJ in their annual 'planning days' strategy sessions revealed that they had made meaningful changes to the activity in order to better 'fit' it into their ongoing practice. Specifically, the initial brainstorming session of the LDJ (Phase 2) was replaced with ideas imported from their post-season debrief meetings, the generation of HMW questions (Phase 3) was omitted, and the prioritisation of action items (Phase 5) was shifted to their pre-season strategy meetings (rather than being conducted via a value matrix). These changes indicated the employment of intuitive generalisation on their part (as the modifications were made without researcher involvement; Stark & Torrance, 2004) and represented the domestication of design thinking into their practice (Doherty, 2013).

Contribution and limitations

Our study provides a scholarly framework for adopting and domesticating design thinking into management subfields as a theory of practice. The three phases of our intervention design (exploration, intervention, evaluation) allow for design thinking to be integrated into the existing practice of a subfield organisation, rather than being employed only as an off the shelf activity. Indeed, a key (and lingering) criticism of design thinking is that it is sometimes misinterpreted as a toolbox to be used situationally, rather than as an approach to practice (Johansson-Sköldberg et al., 2013). Our framework overcomes this

concern by allowing researchers to identify design thinking activities which suit the practice of the organisation seeking to adopt design thinking, rather than attempting to shape that practice to suit an off the shelf model of design thinking.

Our study is not without limitations. First, the identification of the LDJ as a suitable activity for the Sixers' preferred way of working was reliant upon the teaching and research expertise of the lead author, potentially biasing the selection process. Second, the involvement of the lead author as the facilitator of the LDJ might be considered a limitation. However, the lead author was involved merely to teach the LDJ to the Sixers and observe their use of the activity in a natural setting. The lead author did not facilitate the observed undertaking of the modified LDJ. The lead author's field notes from all observed [original and modified] LDJ workshops were reinforced by video and audio recording of the sessions, allowing for review and cross-checking by all authors. Finally, the findings of a case study are not generalisable to a larger population. However, detailed case studies enable intuitive generalisation through which researchers and practitioners can make sense of the findings through the lens of their own experience and then adapt those insights as they see fit (Stark & Torrance, 2004).

Implications

A scholarly framework is provided for researchers to carry out further interventions and/or case studies in a manner which accounts for the special features of management subfields and, accordingly, the specialised practices of organisations in those subfields. A growing canon of such case studies will help to refine the framework, contributing to the ongoing maturation of design thinking as a management theory of practice. Further, the organisations participating in these ongoing studies will benefit from the enhancements to their practice that design thinking has been shown to offer (Joachim et al., 2022; Joachim, Schulenkorf, Schlenker, Frawley & Cohen, 2024).

Funk (2019) notes that researchers in sport management (and, it can be inferred, other management subfields) rarely consider contributions back to the parent field when adopting theories from that field

into the subfield. Our framework contributes to both the management and design thinking fields by providing a means for adopting and domesticating design thinking into practice in a way which overcomes established criticisms of design thinking: namely that it is often treated as the end rather than the means and that it is often seen as a tool rather than a way of doing things (i.e., a theory of practice).

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Exploring the correlation between the quality of service and the customer's experience on level of satisfaction, and likelihood to return and recommend the service to others

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ABSTRACT

This study examines the influence of service quality on customer satisfaction, intention to revisit, and word-of-mouth (WOM) recommendations among Vietnamese tourists travelling abroad. Given the rising trend of outbound tourism in Vietnam, understanding the factors that drive customer satisfaction and subsequent WOM is crucial for service providers aiming to enhance their competitive edge. This study employed a face-to-face survey to collect data from 350 outbound Vietnamese tourists. The results of this study emphasise the importance of continuous service improvements and innovations to meet tourists' evolving expectations. For managers and practitioners in the tourism industry, these insights provide actionable recommendations for enhancing service delivery, boosting customer satisfaction, and leveraging WOM as a powerful marketing tool. This study enhances the understanding of the correlation between service quality, customer satisfaction, and WOM in the context of Vietnamese outbound tourism by filling gaps in the existing empirical evidence.

Keywords: *Quality Tourism Service, Customer Experience, Destination Trust, WOM, Satisfaction, Eevisit intention*

1. Introduction

Globalisation and increasing disposable income of Vietnamese consumers have driven a surge in outbound tourism, with Thailand being a popular destination (Jeaheng and Han, 2022; Jeaheng and Han, 2020). This trend requires a comprehensive understanding of the aspects that impact the satisfaction of Vietnamese tourists and their subsequent behaviour of spreading information through word-of-mouth communication (WOM) (Meng and Han, 2018; Nghiêm-Phú et al., 2021). In the tourism industry, service quality is a critical determinant of customer satisfaction, which in turn significantly impacts WOM, a key driver of tourism marketing and reputation building (Marcos et al., 2018; Marcos et al., 2022). Vietnamese tourists, like many others, heavily depend on personal recommendations and reviews when selecting travel destinations and services (Tran et al., 2019). Thus, it is crucial for travel agencies and service providers to prioritise the maintenance of high service quality to promote customer satisfaction and stimulate positive word-of-mouth. While the importance of these interactions is recognised, there is a noticeable dearth of research on the precise influence of service quality and customer experience on customer satisfaction, intention to revisit, and WOM among outbound Vietnamese tourists.

Prior research, such as the work conducted by Muskat et al. (2019), has elucidated the connections among quality, value, satisfaction, and behavioural intentions. Consumers' perceived value has a substantial influence on customer satisfaction, which, in turn, predicts behavioural intentions (Meeprom and Silanoi, 2020; Ghorbanzadeh et al., 2021; Wu et al., 2018; Jeong and Kim, 2020). These studies have shown that service quality and perceived value play crucial roles in determining satisfaction, which subsequently impacts behavioural intentions. Based on previous studies applied to the research in Vietnam, this study seeks to address these deficiencies by examining the influence of service quality on customer satisfaction and word-of-mouth (WOM) among Vietnamese tourists visiting Thailand. Comprehending these elements is crucial for service providers to improve their offers,

distinguish themselves from rivals, and establish enduring relationships with clients. The main goals of this study are to (1) determine the crucial elements of service quality and Customer Experience that impact customer satisfaction among Vietnamese outbound tourists; (2) analyse the connection between customer satisfaction, word-of-mouth (WOM), and revisit intention in this specific context; and (3) offer practical insights and recommendations to travel agencies and service providers to enhance their service quality and utilise WOM for marketing and expansion. The purpose of this research is to achieve these objectives in order to provide and significantly contribute to the existing literature on tourism marketing. Moreover, it provides practical recommendations for enhancing the customer experience of Vietnamese tourists travelling abroad. Consequently, this will facilitate sustainable expansion of the tourism sector in both Vietnam and Thailand. Figure 1 illustrates the theoretical framework of this study, which is discussed further in the subsequent sections.

2. Literature review

2.1 Mediating function of Destination trust

As service quality has become a key factor in the tourism industry, it is essential to examine its role in influencing customer satisfaction and word-of-mouth communication (WOM) among tourists (Carranza et al., 2019; Marcos et al., 2022; Rasheed and Rashid, 2023). Service quality can be understood as the perceived level of excellence in service delivery, encompassing various dimensions, such as tangibility, reliability, responsiveness, assurance, and empathy (Gholipour Soleimani and Einolahzadeh, 2018; Marcos et al., 2022). Exceptional services are crucial in the tourism industry because tourists frequently need flawless and immersive experiences (Bhat, 2012; Pandey and Sahu, 2020; Muskat et al. 2019). The significance of service quality is magnified in the context of outbound tourism (Nguyen et al., 2022), as tourists are exposed to unfamiliar surroundings and depend significantly on the quality of services offered by tour operators and destination management firms (Jeaheng and Han, 2020; Pandey and Sahu, 2020).

Trust in a destination plays a crucial role in determining the connection between quality of service and different customer results. Destination trust is an individual's confidence in their ability to offer secure, dependable, and gratifying experiences (Chen & Phou, 2013; Tran et al., 2019; Wu et al., 2018). Confidence in a certain place is established by consistent and favourable encounters, and it has a significant impact on shaping tourists' overall contentment and inclination to return to the location (Cheunkamon et al., 2022; Chen and Phou, 2013; Paisri et al., 2022). The aforementioned research indicates that trust in a certain travel destination has a beneficial impact on travellers' willingness to engage in favourable behaviours, such as recommending the destination to others and considering a future visit.

Revisit intention refers to the likelihood that tourists will choose to return to a destination in the future (Kim and Moon, 2009; Chen and Phou, 2013). It is an essential measure of client loyalty and long-term destination performance. The establishment of trust in a particular location, facilitated by the provision of excellent services, can greatly increase the likelihood of tourists choosing to return to that area (Hossain et al., 2022; Hossain et al., 2023). Hence, there is a positive correlation between the level of trust tourists have in a destination's dependability and excellence and their likelihood of considering it for future visits. Providing excellent service improves confidence in the location, thereby raising the probability of tourists considering a return visit.

Hypothesis 1a. Destination trust mediates the influence of quality tourism services on revisit intention.

Customer satisfaction in the tourism sector refers to evaluating how effectively a place fulfils or surpasses tourists' expectations in terms of the services and experiences offered (Choovanichchannon, 2015; Oh et al., 2007; Carranza et al., 2018). Satisfied customers are more inclined to create trust in their location, which can subsequently impact their future behavioural intentions, such as the intention to revisit and share positive word-of-mouth (Hossain et al., 2023; O'Cass and Grace 2004; Nghiêm-Phú et al., 2021; Meng and Han, 2018). A strong correlation exists between high service quality and customer satisfaction. Satisfaction acts as a mediator in the relationship between service quality and other behavioural outcomes. Besides that, Exceptional service quality cultivates confidence in the destination, resulting in elevated levels of consumer contentment (Wu et al., 2018; Choovanichchannon, 2015)

Hypothesis 1b. Trust in destination mediates the influence of quality tourism services on satisfaction.

Word-of-mouth communication (WOM) is a potent instrument in the tourism sector, as tourists disseminate their experiences and viewpoints about a destination to others (O'Cass & Grace, 2004). Favourable WOM can bolster a destination's standing and attract novel tourists (Marcos et al., 2022; Loureiro et al., 2021). The degree of confidence that tourists place in a destination can significantly impact their probability of participating in good WOM (Meng & Han, 2018). When tourists have confidence in a destination, they are more inclined to endorse it to others, thereby magnifying the favourable influence of service quality on WOM recommendations (Hossain et al., 2023; Hwang and Lee, 2019; Loureiro et al., 2021). Providing high-quality service establishes confidence in the location, which motivates tourists to participate in positive WOM (Hossain et al., 2023)

Hypothesis 1c. Destination trust mediates the influence of quality tourism services on WOM.

Customer experience refers to the entirety of a customer's contact with a service provider, which encompasses emotional, bodily, and sensory responses to service encounters (Paisri, 2022). Positive customer experiences in the tourism industry are essential for cultivating client satisfaction and loyalty, which are prerequisites for intention to revisit (Hossain et al., 2023; Marcos et al., 2022). Tourists who have interesting and memorable experiences are more inclined to develop positive attitudes towards the place and contemplate revisiting it in the future (Kim & Moon, 2009). Therefore, destination trust serves as an intermediary factor in the connection between consumer experience and intention to revisit. Trust in question can be ascribed to several aspects, including perceived safety, dependability of services, and general contentment with the place (Chen & Phou, 2013). Empirical investigations have emphasised the intermediary functions of destination trust. Chen and Phou (2013) discovered that the level of confidence in a destination plays a crucial role in influencing the connection between tourist satisfaction and the intention to revisit. Choovanichchannon's (2015) research highlights that when customers have a great experience, they are more likely to trust the place and be inclined to visit again. These findings support the claim that destination trust plays a crucial role in establishing enduring relationships between customer experiences and revisit intentions.

Hypothesis 2a. Destination trust mediates the influence of customer experience on revisit intention.

When travelling, positive client experiences contribute to the development of trust in the destination, thereby increasing satisfaction levels (Oh et al., 2007; Carranza et al., 2018; Wu et al., 2018). This statement implies that establishing trust is an essential route by which client experience leads to increased satisfaction. Trust reduces uncertainty and perceived risk (Alcántara-Pilar et al., 2018), which are essential factors in determining satisfaction, especially in the tourism context where experiences are often intangible and variable (Tian et al., 2022; Cheunkamon et al., 2022). Therefore, trust and satisfaction are essential in fostering enduring connections with clients. The connection between trust and enjoyment is especially significant in the field of tourism, where encounters are frequently characterised by high levels of engagement and emotion (Liu et al., 2019). This notion is further supported by expectation-disconfirmation theory, which proposes that when tourists' expectations are fulfilled or surpassed, resulting in positive experiences, their trust in the location is strengthened, leading to greater satisfaction (Hien et al., 2024).

Hypothesis 2b. Trust in destination mediates the influence of customer experience on satisfaction.

The correlation between consumer experience, destination trust, and WOM has received considerable attention in tourism research. Customer experience refers to the overall cognitive, emotional, and sensory reactions triggered by interactions with a service or location (Setiawan, 2021; Oh et al., 2007). In the field of tourism, a favourable customer experience is frequently associated with services of superior quality, pleasurable activities, and overall contentment with the chosen place (Jeong and Kim, 2020; Pandey and Sahu, 2020). Satisfied visitors are more inclined to engage in WOM by sharing their pleasant experiences with others, which has a strong influence on their behaviour (O'Cass and Grace, 2004; Jeaheng and Han, 2020; Setiawan et al., 2021). WOM plays a significant role in the tourism sector, as prospective tourists depend primarily on recommendations and reviews from others (Setiawan et al., 2021; Marcos et al., 2022). Establishing trust in a travel destination is achieved by consistently providing favourable experiences, which is crucial for minimising the perceived danger associated with travelling. When tourists have confidence in a destination, they are more inclined to

express favourable opinions about it and suggest it to others, thus amplifying WOM. Therefore, destination trust acts as a vital mediator in the relationship between customer experience and WOM. Positive customer experiences increase trust, thereby increasing the probability of tourists engaging in positive WOM (Setiawan 2021). This mediating impact indicates that trust plays a crucial role in transforming consumer experiences into positive WOM recommendations. Trust enhances the probability that tourists will divulge their experiences by diminishing doubt and bolstering the dependability of pleasant encounters.

Hypothesis 2c. Trust in destination mediates the influence of customer experience on WOM.

2.2 Mediating function of Satisfaction

Satisfaction is defined as the condition in which the achieved outcomes meet or exceed expectations (Choovanichchannon 2015). Satisfaction refers to tourists' general satisfaction with their experience at the place, which includes factors such as quality of service, attractions, and overall value (Carranza et al., 2018; Cheunkamon et al., 2022). When tourists have confidence in a certain site, they are more inclined to have favourable experiences that result in elevated levels of satisfaction (Hossain et al.,2021; Hossain et al., 2023). Consequently, contented tourists are more likely to revisit the destination as their favourable experiences strengthen their inclination to return (Chen and Phou, 2013; Ghorbanzadeh et al., 2021). Thus, satisfaction serves as a link, connecting trust in a destination with the wish to revisit, by converting trust into a gratifying experience that motivates repeated visits.

In addition, the measure of consumer loyalty and long-term success for locations relies heavily on the intention to revisit (Marcos et al., 2020). The establishment of trust in a particular location, which is facilitated by excellent service quality and favourable customer experiences, can greatly increase the likelihood of tourists choosing to return to that area. According to Liu et al. (2019), tourists are more inclined to choose a destination for future trips if they have a higher level of trust in reliability and quality. Customer satisfaction is boosted by trust in the destination, leading to a higher probability of tourists planning to revisit (Setiawan et al. 2021; Nghiêm-Phú 2021). Satisfaction acts as a mediator, converting the influence of trust into a positive, rewarding experience that motivates tourists to revisit. Gaining a comprehensive understanding of this intermediary function is essential for destination administrators seeking to improve repeat visitation rates and guarantee the long-term viability of tourism.

Hypothesis 3a. Satisfaction mediates the influence of Destination trust on revisit intentions.

When tourists have confidence in a place and find their experiences gratifying, they are more likely to spread their experiences to others, resulting in the generation of favourable WOM (Pandey and Sahu, 2020; Jeong and Kim, 2020). Satisfaction acts as the channel through which trust is transformed into positive WOM, as pleased and satisfied tourists are inherently more inclined to participate in good WOM (Hwang and Lee, 2019). Favourable WOM can bolster a destination's standing and entice fresh visitors (Loureiro et al., 2021). The WOM. When tourists have confidence in a destination, they are more inclined to endorse it to others, thereby magnifying the favourable influence of service quality and customer experience on word-of-mouth communication (Loureiro et al., 2021; O'Cass and Grace, 2004). Customer happiness is promoted by trust in a place, which in turn motivates tourists to engage in positive WOM (Hossain et al., 2018; Hossain et al., 2023). Satisfaction acts as a mediator between destination trust and WOM by converting trust into enjoyable and memorable experiences in which tourists are enthusiastic about sharing.

Hypothesis 3b. Satisfaction mediates DT's influence of Destination trust on WOM.

3. Methods

3.1 Measures

The primary objective of this study is to examine the elements that influence customer satisfaction, revisit intention, and WOM among Vietnamese tourists travelling abroad. This study focuses specifically on service quality and customer experience. Hence, the nature of the study was characterised as exploratory, with the objective of providing a detailed and analytical description. The measurements of the components in this study were predominantly derived from preexisting scales that demonstrated reliability and validity. The researchers used a five-point Likert scale to assess many factors including service quality, customer experience, destination trust, revisit intention, satisfaction,

and WOM. The rating scale for all the items ranged from 1 (indicating significant disagreement) to 5 (indicating strong agreement). According to the literature analysis, the research factors were assessed and are listed in Table 2.

----Insert Table 2 here------

3.2 Sample and data collection

In the data collection and survey design process, a comprehensive literature review on quality tourism service, customer experience, destination trust, WOM, Revisit intention, and satisfaction was conducted to select the appropriate measurement items. This measurement provides a diverse representation of Vietnamese tourists, allowing for a comprehensive analysis and generalisable findings regarding their travel experiences and perceptions of quality tourism services in Thailand. Data were collected from Vietnamese customers who participated in tours in Thailand. With the assistance of tour companies and tour guides, and through the cooperation of tourists, 350 completed questionnaires that met the study criteria were collected and analysed for further findings. The questionnaire comprised two sections: Basic Information and Travel Experience.

Among the participants, 54.9 percent were males and 45.1 percent were females. Regarding age distribution, 15.1 percent were under 18 years, 19.7 percent were between 18 and 24 years old, 15.1% fell between the ages of 25 and 34, 14.0% were between the ages of 35 and 44, 16.0% were between 45 and 54, and 20.0% were 55 and above. Regarding educational attainment, 26.6 percent had completed junior high school, 20.6% had finished high school, 24.3% held a university or college degree, and 28.6% had a graduate degree or higher. Regarding income, 47.4% earned less than 10 million VND, 12.6% earned 10–20 million VND, 14.0% earned 20–30 million VND, 14.3% earned 30–40 million VND, and 11.7% earned over 40 million VND.

Regarding travel frequency, 34.6 percent of the participants traveled abroad 1-2 times per year, 32.6 percent traveled 2-5 times, and 32.9 percent travelled more than 5 times. In terms of total trips abroad, 22.3 percent had traveled 1-2 times, 28.3 percent had traveled 2-5 times, 24.6 percent had traveled 5-7 times, and 24.9 percent had traveled over 7 times.

Participants traveled for various purposes: 160 for entertainment or resort, 152 for business, 142 for education, 155 for visiting relatives, and 161 for shopping. When booking trips abroad, 175 used travel agencies; 166 used online travel agencies (OTAs) such as Booking.com, Agoda, and Traveloka; 181 booked directly with service providers such as airlines and hotels; and 177 relied on acquaintances or friends. Demographic information and travel experiences of the participants are shown in Table 1.

-----Insert Table 1 here-----

4. Results

4.1. Scale validity and reliability

This study employed Confirmatory Factor Analysis (CFA) to estimate the measuring items. These items were assigned to their respective constructs and each factor demonstrated discriminant validity (Liu et al., 2023). Tables 2 and 3 present the statistical measures of averages, standard deviations (SD), composite reliability (CR), average variance extracted (AVE), and correlations among the research variables. The findings indicated that the composite dependability (CR) varied between 0.853 and 0.935, surpassing the threshold of 0.6. The Average Variance Extracted (AVE) for each factor ranged from 0.538 to 0.728, surpassing the threshold of 0.5. Thus, it can be inferred that the study's measurement scale demonstrated satisfactory convergent validity (Anderson, 2020).

In addition, a dependability test was used to measure the level of internal consistency of a variable. Cronbach's alpha is the prevailing measurement scale used for assessing reliability. Reliability encompasses various factors, and one widely employed measure for assessing the reliability of a multiscale assessment tool is the index of the scale's internal consistency (Cronbach, 1951). The objective of this test is to evaluate whether all items measure the same construct or demonstrate internal consistency which are above the threshold defined by Cronbach (1951). Based on dependability data, Cronbach's alpha values for all factors were

exceptionally high, ranging from 0.793 to 0.909. Additionally, all of the constructions' Cronbach's alpha values were above the benchmark of 0.70.

-----Insert Table 2 and Table 3 here-----

4.2. Hypotheses testing

This study employed a Structural Equation Model (SEM) to examine the causal links between variables and test hypotheses. The AMOS 24.0 and SPSS Statistics 24 tools were utilised to analyse the mediating and moderating effects among the latent variables. The measurement model demonstrated a satisfactory match to the data, as depicted in Figure 2, with all indexes surpassing the established standards (χ^2/df = 1.080; AGFI = 0.858; GFI = 0.870; CFI = 0.989; NFI = 0.871; TLI = 0.989; IFI = 0.989; RMSEA = 0.015; RMR=0.065); only AGFI and GFI slightly fell below the 0.9 threshold. According to Hair, a result closer to 0.9 would indicate a better fit, but there is no implicit standard to definitively assess the alignment between the observed data and the model (Hair, 2006). Therefore, the level of agreement between the model and the observed data in this investigation should be deemed satisfactory. In general, the model's ability to adapt was good and aligned with the theoretical framework of this study.

-----Insert Figure 2 here-----

4.3. Mediation variable effects analysis

The study posited Hypotheses 1a, 1b, and 1c, respectively, suggesting that the level of trust in a destination plays a mediating role in the links between quality tourism services and revisit intention, satisfaction, and WOM. In addition, bias-corrected confidence intervals were applied to all parameters in the model. Hypothesis 1a posited that quality tourism services have an indirect impact on Revisit Intention by means of destination trust. The findings demonstrated statistically significant indirect effects and supported Hypothesis 1a (β = 0.299, P < .01). Hypothesis 1b posited that Quality Tourism Service exerts an indirect influence on satisfaction by means of destination trust. The findings also demonstrated statistically significant indirect effects and supported Hypothesis 1b (β = 0.489, P < .01). In addition, the findings in Figure 2 support Hypothesis 1c because they reveal strong indirect effects (e.g. quality tourism service → destination trust → word-of-mouth communication; β = 0.197, P < .0).

The overall impact of customer experience on intention to revisit, mediated by destination trust, was significant (β = 0.184, P < 0.01). The total effect of Customer Experience on Satisfaction through Destination trust is significant (β = 0.393, P < 0.01). The total effect of customer experience on word-of-mouth communication through destination trust is significant (β = 0.158, P < 0.01). The indirect effect is confirmed to be positive and statistically significant. Therefore, Hypotheses 2a, 2b, and 2c are confirmed.

Hypotheses 3a and 3b posit that there are two indirect effects on the relationship between Destination trust and satisfaction. First, satisfaction acts as a mediator in the positive relationship between destination trust and revisit intentions. Second, satisfaction acts as a mediator in the positive relationship between destination trust and word-of-mouth communication. To incorporate the mediation effect, we employed the same methodology to examine Hypotheses 3a and 3b, using the bootstrap technique. The overall influence of destination trust on revisit intention through satisfaction is highly significant (β = 0.255, P < 0.01). The overall impact of trust in the destination on word-of-mouth communication through satisfaction is statistically significant (β = 0.327, P < 0.01). Thus, Hypotheses 3a and 3b are supported.

-----Insert Table 4 here-----

5. Conclusions

This study examined the impact of service quality and customer experience on customer satisfaction and WOM as well as the likelihood of returning Vietnamese outbound tourists. The results indicated that service quality and customer experience significantly influenced customer satisfaction, WOM-referrals, and intention to revisit. This underscores the significance of service quality in the tourism industry. Tourists who perceive a high level of service quality are more inclined to be content with their travel experience. This is consistent with prior research that has demonstrated a favourable association between service quality and customer pleasure (Bhat, 2012; Choovanichchannon,

2015). Vietnamese visitors prioritise different dimensions of service quality, including reliability, responsiveness, empathy, assurance, and tangibility, all of which collectively influence their total pleasure. The study revealed that customers who are content are more inclined to participate in positive WOM and have a tendency to communicate their positive experiences with friends and family, which can aid in drawing new consumers and maintaining current ones. This discovery emphasises the significance of upholding excellent service standards to promote client contentment, which subsequently leads to favourable WOM and improves the reputation of tourism service providers.

Furthermore, the role of destination trust as a mediator is validated. Trust in the destination plays a role in the connection between the quality of service and intention to revisit, as well as WOM. Therefore, it may be inferred that having trust in a location can amplify the beneficial impacts of perceived service quality on tourists' inclination to revisit and suggest a place to others. This finding aligns with prior studies that emphasise the importance of trust in shaping customer behaviour within the tourist domain (Chen & Phou, 2013; Kim & Moon, 2009). Furthermore, this study emphasises the significance of customer experience as a distinct variable. The study revealed that a pleasant customer experience has a considerable impact on destination trust, contentment, intention to revisit, and WOM recommendations. This implies that improving the total travel experience may result in increased levels of trust, contentment, and positive recommendations among visitors.

This finding has implications for managers. Tourism service providers should prioritise enhancing many facets of service quality to boost client satisfaction and promote positive word-of-mouth. These goals can be accomplished by consistently training employees, introducing creative service solutions, and upholding exceptional service-delivery standards. Moreover, cultivating trust in the location by guaranteeing the security, dependability, and generally favourable encounters of tourists can enhance the beneficial impacts of service quality on customer behaviour.

This study enhances the current literature by offering empirical evidence on the connections between service quality, customer experience, customer happiness, destination trust, and WOM in the context of Vietnamese outbound tourism. This enhances our understanding of the interplay and impact of these variables on tourist behaviour, providing new perspectives for future research.

Although this study makes important contributions, some shortcomings need to be addressed in future research. This study was conducted exclusively on Vietnamese visitors visiting Thailand, which may limit the applicability of the results to other tourist demographics or destinations. The present study specifically examined the favourable elements of service quality and WOM without delving into the possible adverse effects of subpar service quality or negative WOM. Subsequent investigations should consider these factors to achieve a more comprehensive comprehension of the intricacies at play. To improve the applicability of the findings, future research should investigate these correlations in various cultural and geographical settings.

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Table 1. Description of participants' background and travel experience in relation to this study.

Items	Frequency	Percent	Items	Frequency	Percent
Basic information			**Travel Experience**		
Gender			**Travel frequency**		
Female	158	45.1	1 ~ 2 time	121	34.6
Male	192	54.9	2 ~ 5 time	114	32.6
Age			Over 5 times	115	32.9
Under 18	53	15.1	**Total trips abroad**		
18 ~ 24	69	19.7	1 ~ 2 time	78	22.3
25 ~ 34	53	15.1	2 ~ 5 time	99	28.3
35 ~ 44	49	14.0	5 ~ 7 time	86	24.6
45 ~ 54	56	16.0	Over 7 times	87	24.9
51 and above	70	20.0	**Travel purpose**		
Education			Entertainment/resort	160	
Junior high school	93	26.6	Business	152	
High school	72	20.6	Education	142	
University/ college	85	24.3	Visit relatives	155	
Graduate University or	100	28.6	Shopping	161	
Income			**How do you usually book**		
10 million	166	47.4	Travel agency	175	
10 – 20 million	44	12.6	OTA ((Booking.com,	166	
20 – 30 million	49	14.0	Service providers	181	
30 – 40 million	50	14.3	Acquaintances or	177	
40 million and above	41	11.7			

Table 2. Descriptive statistics and Confirmatory Factor Analysis

Constructs and factors	Mean	S.D.	Factor Loading	CR	AVE
Quality Tourism Service (Bhat, 2012)					
1. Assurance *(Cronbach's alpha = .882)*				0.882	0.600
AS1 Employees are credible and courteous with tourists.	2.82	1.292	.780		
AS2 Experienced and competent tour and hotel escorts.	2.82	1.283	.748		
AS3 Willingness to help tourists and advice on how to use	2.87	1.283	.782		
AS4 The behaviour of employees' reinforces tourists'	2.75	1.271	.751		
AS5Tourists are being served by appropriate personnel.	2.88	1.303	.809		
2. Tangibles *(Cronbach's alpha = .909)*				0.909	0.588
TA1 Destinations are visually aesthetically attractive.	2.81	1.316	.759		
TA2 Modern and technologically relevant vehicles.	2.83	1.244	.755		
TA3 Overall cleanliness of the destination.	2.83	1.337	.804		
TA5Appealing accommodation facilities.	2.81	1.300	.781		
TA6 Personal safety and security.	2.83	1.272	.767		
TA7 Physical appearance of tour and hotel escorts (tidiness	2.83	1.294	.751		
TA8 High-quality meals.	2.91	1.273	.750		
3.Responsiveness *(Cronbach's alpha = .802)*				0.847	0.580
RES1 Provision of information on local events/entertainment	2.81	1.326	.756		
RES4 Sincere interest in problem-solving of tourist's	2.75	1.303	.798		
RES5 Sponsors act on participant's suggestions	2.84	1.220	.717		
4. Reliability *(Cronbach's alpha = .793)*				0.850	0.587
REL1 Insisting on error-free service.	2.85	1.279	.790		
REL4 Meeting the tour schedule.	2.69	1.237	.713		
REL5 No sudden increase in tour cost	2.79	1.235	.752		
Customer Experience (Paisri, 2022)					
5. Educational experience *(Cronbach's alpha = .849)*				0.850	0.586
EDE1 I learnt a lot during visit Thailan.	2.76	1.235	.746		
EDE2 The experience has made me more knowledgeable.	2.74	1.248	.772		
EDE3 It was a real learning experience.	2.83	1.325	.780		
EDE4 It stimulated my curiosity to learn new things.	2.83	1.285	.762		
6. Entertainment Experience *(Cronbach's alpha = .846)*				0.846	0.580
ENE1. Watching market activities of others was very	2.73	1.270	.780		
ENE2 Activities of market were amusing to watch.	2.80	1.330	.781		
ENE3 Activities of market were fun to watch.	2.71	1.237	.732		
ENE4 Market entertainment was captivating.	2.79	1.295	.752		
7. Esthetic Experience *(Cronbach's alpha = .900)*				0.900	0.601
ESE1 Market environment was very attractive.	2.78	1.313	.775		
ESE2 Market environment was pretty.	2.79	1.358	.813		
ESE3 Market environment really showed attention to design	2.85	1.315	.800		
ESE4 I felt a real sense of harmony.	2.79	1.196	.720		
ESE5 Market environment provided pleasure to my senses.	2.80	1.284	.767		
ESE6 Just being here was very pleasant.	2.73	1.173	.773		
8. Escapist Experience *(Cronbach's alpha = .879)*				0.879	0.593
EEX1 I felt I played a different character here.	2.81	1.319	.788		
EEX2 I felt like I was living in a different time or place.	2.77	1.204	.733		
EEX3 I completely escaped from reality.	2.88	1.328	.791		
EEX4 I totally forgot about my daily routine.	2.81	1.270	.758		
EEX5 I felt I was in a different world.	2.88	1.303	.780		

9. Destination trust *(Cronbach's alpha = .822) (Chen and Phou, 2013)*				0.844	0.575
DI1 Thailand area would compensate me in some ways for	2.69	1.268	.741		
DI2 Thailand temple area would make any effort to satisfy	2.73	1.309	.761		
DI3 I could rely on Thailand area to solve any problems with	2.75	1.269	.776		
DI4 Thailand area would be honest and sincere in addressing	2.70	1.229	.754		
10. Revisit Intention *(Cronbach's alpha = .795) (Kim and Moon, 2009)*				0.795	0.564
RI1 I would like to visit Thailand again.	2.98	1.224	.724		
RI2 I have a strong intention to bring my family and friends	2.97	1.228	.728		
RI3 Thailand would be a-must-go place when I plan for	2.90	1.290	.798		
11. Word-of-mouth communication *(Cronbach's alpha = .814)* (O'Cass và Grace ,2004)				0.816	0.597
WOMC1 My family/friends positively influenced my	2.88	1.271	.740		
WOMC2 My family/friends mentioned positive things I had	2.94	1.314	.791		
WOMC5 My family/friends helped me to make my decision	2.83	1.223	.785		
12. Satisfaction *(Cronbach's alpha = .867)* (Choovanichchannon, 2015)				0.867	0.566
SA1 Tourist destination must be environmental friendly.	2.67	1.215	.750		
SA2 Tourist destination must be unique in cultural heritage.	2.74	1.276	.778		
SA3 Tourist destination must offer food and beverage that	2.71	1.228	.757		
SA4 Tourist destination must offer public restrooms that are	2.65	1.262	.747		
SA5 Tourist destination must offer reasonable prices	2.77	1.249	.729		

Note: 1. N = 350
2. () Cronbach alpha.
3. Values in the lower diagonal are the correlation matrix.
4. Values in the upper diagonal are the covariance matrix. $^*P<.05;$ $^{**}P<.01;$ $^{***}P<.001$

Table 3: Means, Standard Deviations, Correlations and Discriminant validity

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Quality Tourism Service												
1. Assurance	**0.774**											
2. Tangibles	0.622***	**0.767**										
3.Responsiveness	0.594***	0.567***	**0.762**									
4. Reliability	0.524***	0.616***	0.625***	**0.766**								
Customer Experience												
5. Educational experience	0.255***	0.255***	0.278***	0.272***	**0.765**							
6. Entertainment Experience	0.258***	0.277***	0.273***	0.189**	0.447***	**0.761**						
7. Esthetic Experience	0.322***	0.262***	0.305***	0.267***	0.552***	0.597***	**0.775**					
8. Escapist Experience	0.229***	0.239***	0.301***	0.223***	0.600***	0.628***	0.563***	**0.770**				
9. Destination trust	0.549***	0.558***	0.608***	0.596***	0.486***	0.455***	0.537***	0.479***	**0.758**			
10. Revisit Intention	0.264***	0.344***	0.402***	0.425***	0.269***	0.293***	0.315***	0.303***	0.607***	**0.751**		
11.Word-of-mouth communication	0.301***	0.275***	0.396***	0.293***	0.307***	0.313***	0.370***	0.339***	0.602***	0.548***	**0.773**	
12. Satisfaction	0.353***	0.357***	0.373***	0.460***	0.355***	0.309***	0.351***	0.331***	0.723***	0.615***	0.651***	**0.753**
Mean Value	2.830	2.8214	2.815	2.767	2.7893	2.7571	2.7919	2.830	2.7072	2.9504	2.897	2.897
Standard deviation	1.0606	1.0212	1.0397	1.0357	1.05697	1.06182	1.0404	1.0553	0. 9560	1.0511	1.0444	1.0070

*Note: * P<.05; ** P<.01; *** P<.001. All the correlations are at P<.05. Square root of average variance extraction are shown on the diagonal in bold.*

Table 4. Mediation effect of perception of advantage and trust

Hypothesis path	Indirect Effect	Bias-corrected 95% CI		Percentile 95% CI		Results
		Lower	Upper	Lower	Upper	
H1a. Quality Tourism Service → Destination trust →Revisit Intention	.229**	.099	.396	.095	.392	Support
H1b. Quality Tourism Service → Destination trust →Satisfaction	.489**	.366	.660	.356	.646	Support
H1c. Quality Tourism Service → Destination trust → Word-of-mouth communication	.197**	.057	.362	.054	.357	Support
H2a. Customer Experience → Destination trust → Revisit Intention	.184**	.077	.328	.076	.326	Support
H2b. Customer Experience → Destination trust → Satisfaction	.393**	.260	.557	.264	.560	Support
H2c. Customer Experience → Destination trust → Word-of-mouth communication	.158**	.048	.329	.041	.316	Support
H3a. Destination trust → Satisfaction → Revisit Intention	.255**	.133	.419	.128	.406	Support
H3b. Destination trust → Satisfaction → Word-of-mouth communication	.327**	.195	.502	.185	.492	Support

Note: $^{*}P<.05;$ $^{**}P<.01;$ $^{***}P<.001$
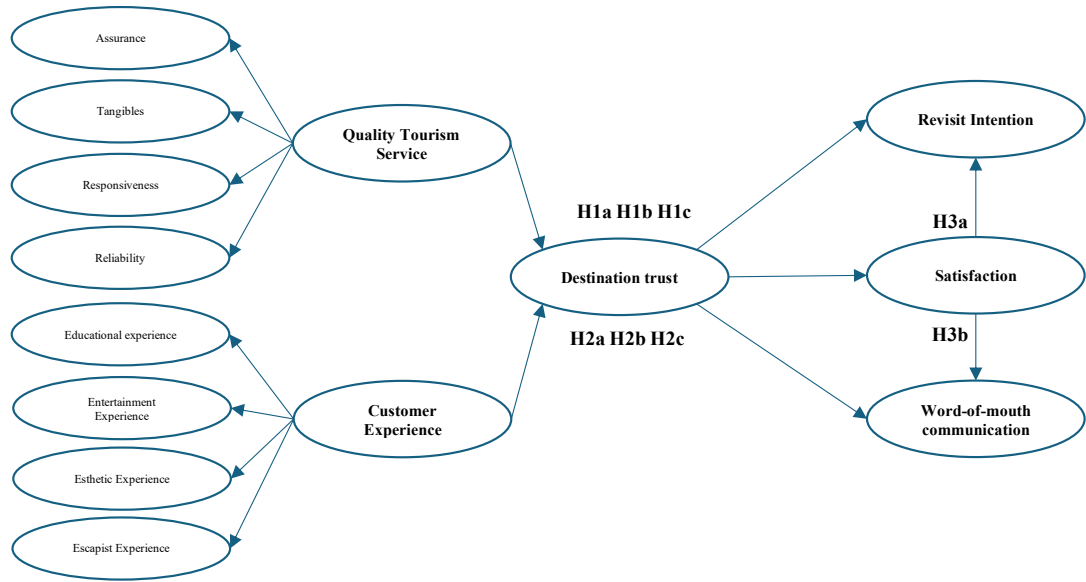
Figure 1. Proposed research framework.
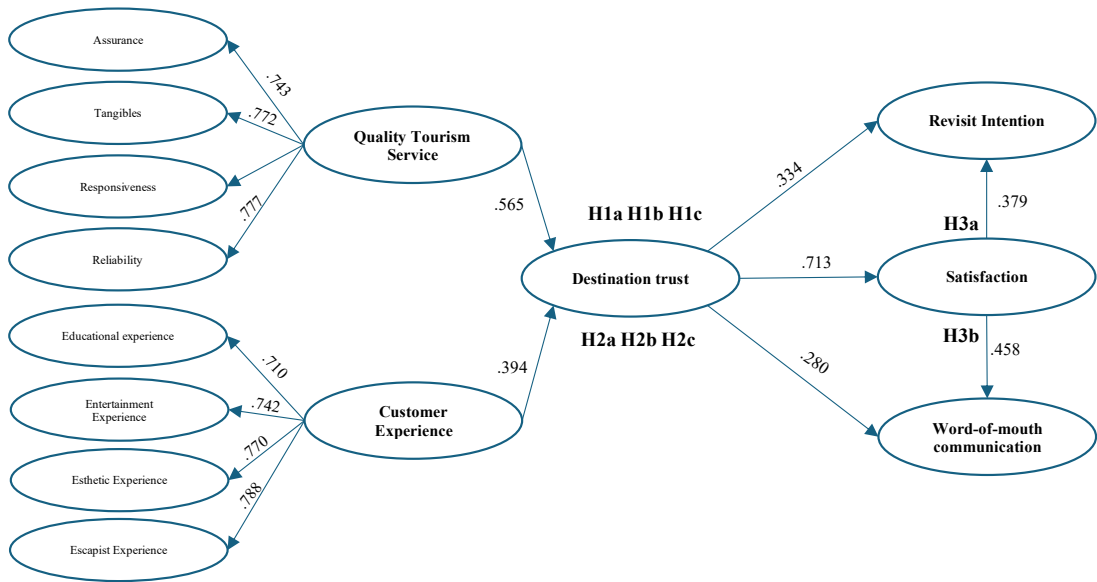
Figure 2. Research results for the proposed research framework

Stream 1. Human Resource Management

A moderated mediation model of line manager human resource (HR) implementation:
The interplay of beliefs, motivation, and attribution of intended HR practices

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Stream 1. Human Resource Management

A moderated mediation model of line manager human resource (HR) implementation:
The interplay of beliefs, motivation, and attribution of intended HR practices

ABSTRACT: *Drawing from social psychology and HR process research, we propose a conceptual model of line manager HR implementation that responds to criticisms concerning the neglect of their agency. We suggest that their implementation vary not just because of resource constraints, but also their understanding of information from HR decision-makers. We outline why and how line managers' motivation to interpret information and pre-existing HR beliefs moderate the relationship between intended HR practices and line managers' attribution of them. We add to the mechanism of HR implementation by proposing that aligned attribution enables line managers to see the value of intended HR practices, thus forming positive attitude that encourages their enactment. We conclude with meaningful avenues to further this line of research.*

Keywords: Line manager HR implementation; HR beliefs; HR system strength; HR attributions; attitude towards HR practice; HRM-performance link

Line managers are often the ones who implement HR practices (Thornhill & Saunders, 1998; Kulik & Bainbridge, 2006; Keegan, Huemann, & Turner, 2012). Indeed, many studies have found line managers to be implementers of day-to-day HR practices and such as personnel selection, training, performance appraisal, rewards, and grievances (Cunningham & Hyman, 1999; Sikora & Ferris 2011; Evans, 2017; Fu, Flood, Rousseau, & Morris 2020). Accordingly, line managers are increasingly viewed as a critical link in the HR process. The quality of their implementation of HR practices was found to be associated with employee outcomes such as job satisfaction (Vermeeren, Kuipers, Steijn, 2014), psychological contract perceptions (Guest, Sanders, Rodrigues, & Oliveira, 2021), and perceived distributive justice and organizational support (Vossaert, Anseel, Collewaert, & Foss, 2022).

To ensure the HR practices' expected outcomes are reached, consistent line manager HR implementation is crucial (Purcell & Hutchinson, 2007). In the process, a key criteria is the congruence between the intended form of HR practices and the actual enactment of these practices by line managers (Khilji & Wang, 2006; Guest & Bos-Nehles, 2013). Problematically, line managers do not necessarily act as prescribed (McGovern, Gratton, Stiles, & Truss, 1997). Their beliefs concerning the HR practices are not necessarily aligned with the HR function and other decision-makers (Maxwell

Stream 1. Human Resource Management

& Watson, 2006). They may be reluctant to engage in their HR role (Whittaker & Marchington, 2003) or even engage in counterproductive behaviours (Analoui, 1995). When line managers do implement HR practices, they may vary in the level of implementation (Sikora & Ferris, 2014). This variability in line manager implementation is important as their actions lead to variability in the HR related experience of their subordinates (Den Hartog, Boon, Verburg, & Croon, 2013). As a result, employee perceptions of HR practices and as a consequence their reactions often diverge from the expectations of the intended HR practices.

This observation has spurred a fast-growing stream of research that aims to understand the role of line managers in the HR implementation process. In one line of research, scholars have drawn on the ability, motivation, and opportunity framework (AMO) to examine line manager characteristics as antecedents to HR implementation effectiveness (e.g. Op de Beeck, Wynen, & Hondeghem, 2018). Yet, the mechanisms of how these factors impact implementation behaviour may be more complex than it appears (Kellner, Townsend, Wilkinson, Lawrence, & Greenfield, 2016) and the conclusion is mixed thus far (Bos-Nehles, Van Riemsdijk, & Jan Kees, 2013; Salvador-Gomez, Bou-Llusar, & Beltrán-Martin, 2023). In a second line of research, scholars have considered the role of contextual factors at the macro (Bos-Nehles, Bondarouk, & Labrenz, 2017), organizational (e.g. Gilbert, De Winne, & Sels, 2015), and unit level (e.g. Fu et al., 2020) in influencing line managers' HR practice enactment.

Much is still to be understood about line managers behaviours (Kurdi-Nakra, Kou, & Pak, 2022). One promising pathway is to consider line managers as agentic actors in the implementation process (Kehoe & Han, 2020; Guest, 2021). Although it has been shown that line managers' understanding of HR practices influences their enactment of the practices, limited attention has been given to examining how they interpret the intended HR practices that they are tasked with.

In this paper, we thus advance research by identifying how line managers' psychological process influence their understanding of information about intended HR practices. In the following, we develop a conceptual model of line manager HR implementation that details how line managers' pre-existing HR beliefs and motivation moderate their interpretation of HR decision-makers' communication. In the process, line managers develop attributions and form attitude towards those

Stream 1. Human Resource Management

practices that mediate the relationship between intended and actual HR practices. This submission will conclude with a discussion of future research directions and practical implications that stem from the conceptual model.

LINE MANAGER'S ROLE IN THE HRM PROCESS

Bowen and Ostroff (2004) drew from the concepts of situational strength (Mischel & Peake, 1982) and the covariation principle of attribution theory (Kelley, 1967) to conceptualize HR system as a multi-level signalling mechanism that should be aligned with an organization's business strategy. If an HR system embodies features that are highly distinct, consistent, and consensual, its HRM practices, policies, and processes can then deliver signals that are idiosyncratically interpreted and elicit the desired behaviours to improve business performance. Line managers are assumed in these cases to be the interpretive filters of the HRM content in their implementation. Importantly, for line managers to be effective in this capacity, they must correctly receive and interpret the HR signals themselves.

Wright and Nishii (2013) added nuance to the process and outlined a multi-level, multi-actor process model in which HR practices transition from an *intended* state, as originally designed and communicated by HR decision-makers, to an *actual* state, as interpreted and implemented by line managers, to that which is *perceived* by employees. Implementation of intended HR practices can be likened to a process of organisational change that requires line managers to 'learn new, unfamiliar behaviours with unknown effectiveness, and consequently elicit resistance. (Wright & Nishii, 2013, p.105).' In other words, the consideration of how to motivate line managers to engage in their HR role and internalise intended HR practices is crucial. This perspective gives further importance to consider line managers as active implementers of HR practices and understand the mechanisms of communication and interpretation underlying line managers' actions.

Despite evidence that suggest line managers are involved in the decision-making of HR practices (Suhail & Steen, 2021) and that their perception of HR practices are associated with their implementation (Sikora & Ferris, 2011; Dewettinck & Vroonen, 2017), few researchers have considered line managers as agentic actors (Hassan, Trullen, & Valverde, 2024). Indeed, it has been suggested that our understanding of line managers' role may be lacking (Townsend & Hutchinson,

Stream 1. Human Resource Management

2017). Their agency has been particularly understudied, which may be limiting our ability to study their enactment of HR practices. As such, alternative pathways that recognises the active role that line managers play in HR implementation should be considered to further our HRM-performance relationship understanding. In particular, how line managers receive and understand HR decision-makers' communication on intended HR practices appears to be an important question to probe.

A PSYCHOLOGICAL MODEL OF LINE MANAGER HR IMPLEMENTATION

The proposed model (Figure 1) conceptualises *intended HR practice* as the information that HR decision-makers communicate about the HR practices. As line managers process that information, they form *attributions of the intended HR practice*, which informs them of the cause-and-effect of the practices. Whether and how line managers interpret intended HR practices correctly is influenced by their *motivation* (the relevance of the intended HR practice to the operating context) and their *pre-existing HR beliefs* (general view of the value of HR practices and the HR function). When line managers derive attributions that are aligned with the intended HR practice's design, they are more likely to see the value of the practice. As such, favourable attribution lead line managers to form positive *attitude towards intended HR practice*, which in turn make them more willing to devote time and effort in enacting the HR practice as intended (*actual HR practice*).

Figure 1: Conceptual model of line managers' psychological process in HR implementation
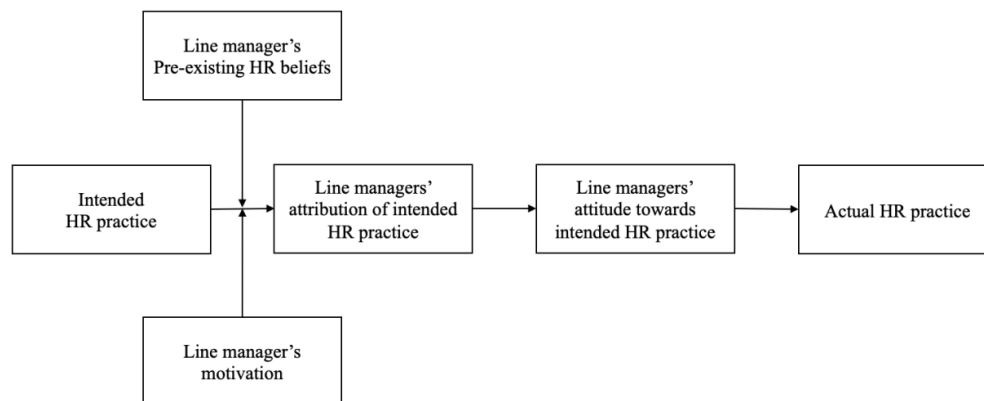
Stream 1. Human Resource Management

Theoretical development and propositions

Intended HR practices and line managers' attribution

Attribution research is not centered on a singular theory but spans multiple research streams (Kelley & Michela, 1980). The streams are built on Heider's (1958) seminal work on naïve psychology, which proposed that individuals attribute the reasons of success or failures of to internal (self) or external factors (environment). Kelley (1967) proposed the covariation principle of attribution theory suggesting the perceiver uses information from multiple observations of people's behaviours to infer the rationale behind their actions. This inference is made through the comparison of those information's level of distinctiveness (similarity of the observed person's response to other stimuli), consistency (similarity of the observed person's response to the same stimulus at other times), and consensus (similarity with other persons' response to the same stimulus). When the information is highly distinct, consistent, and consensual, people are more able to confidently derive at a causal explanation.

Another key development considers how the attributions that people form affect their subsequent emotions and behaviours (Weiner 1979, 1985). Nishii, Lepak and Schneider (2008) drew on Weiner's propositions and Heider's (1958) foundational work to construct the HR attributions theory, which posits that employees' attribution of a HR practice (for commitment or control motives) influences their response to it. Importantly, the study indicated that commitment attributions (that the practices' aim is to benefit employees) lead to more positive response to the HR practices. To date, the HR attribution theory has been primarily applied to employees (Hewett, Shantz, Mundy, & Alfes, 2018), and only more recently adopted by HRM scholars to understand line manager HR implementation (Yang & Arthur, 2021).

As Bowen and Ostroff (2004) suggests, the strength of a HR processes depends in part on line managers' role interpretive filters of HR signals for their subordinates. For line managers to be effective filters, however, HR decision-makers should deliver the appropriate information to be correctly interpreted by the line managers and foster an aligned understanding. We propose that line managers' HR attribution of intended HR practices is a way to measure the quality of HR decision-makers' communication. When the communicated information about intended HR practices is

Stream 1. Human Resource Management

distinctive, consistent, and consensual, line managers are likely to form attribution of the practices that are aligned to their expectations.

Proposition 1. Intended HR practice is positively associated with aligned line managers' attribution of the intended HR practice.

Line managers' motivation and pre-existing HR beliefs modeate the relationship between intended HR and line managers' attribution

Kelley and Michela (1980) argued that people's information processing is influenced by their *motivation* and *pre-existing beliefs*. Motivation refers to whether the perceived action has meaningful consequences to the perceiver. If an information does not concern a person's relevant interests, the person may not be motivated to make an attribution at all (Kelley & Michela, 1980). When people are not motivated to engage in a comprehensive causal search, they were found to rely on heuristics, such as their existing beliefs, to limit the range of possible causal explanations (Wong & Weiner, 1981). Even when people are motivated, their interpretation is still likely to be coloured by the beliefs that they already hold (Kelley & Michela, 1980). Such beliefs may include causal schemas that give people expectations of what and how causes combine to derive certain effects (Kelley, 1972). These schemas can be attached to subjects with certain dispositional qualities (Reeder & Brewer, 1979). They can also affect a person's intake and processing of information (Ross, Lepper & Hubbard, 1975). These mechanisms revolving people's pre-existing beliefs can be seen in stereotypes, in which people may conclude how the perceived person is like based only on previous encounters of individuals with certain attributes (Blair & Banaji, 1996).

In the context of HR implementation, line managers often operate under heavy workload with time constraints (Hutchinson & Purcell, 2010) and competing priorities (Townsend, Dundon, Cafferkey, & Kilroy, 2022). It has been found that line managers are more receptive to practices that they believe to be relevant to their contexts (Kossek, Ollier-Malaterre, Lee, Pichler, & Hall, 2016; Bos-Nehles et al., 2017; Makhecha, Srinivasan, Prabhu, & Mukherji, 2018). They may also face a lack of HR-related training (Harris, Doughty & Kirk, 2002) and low accountability for their HR involvement (Hewett, Sikora, Brees, & Moelijker, 2024). Together, these findings show that line managers may be limited in their capacity, ability, and motivation to correctly interpret the intended

Stream 1. Human Resource Management

HR practices. These constraints also suggest that line managers may choose what information to pay attention to.

Vuorenmaa, Sumelius, and Sanders (2023) drew from Kelley and Michela's (1980) framework and argued that line managers' motivation to receive and interpet information from HR decision-makers is shaped by their unit and organisational context. We continue with their reasoning and propose that the level of practice-context fit may serve as a motivation for line managers to process information regarding the intended HR practices. This level of motivation is expected to have a positive influence on the relationship between HR decision-makers' communication on and line managers' attribution of intended HR practices.

Proposition 2a. Line managers' motivation to process information concerning intended HR practices moderate the relationship between intended HR practices and line managers' attribution of intended HR practices.

Vuorenmaa and colleagues (2023) also showed that line managers' pre-existing HR beliefs, defined as the how line managers generally view the HR department, influences their understanding of information from HR decision-makers. Indeed, it has been found that line managers' personal experiences far outweigh the communicated value of the HR practice when considering the usefulness of performance management (Harris, 2001). An organizational culture that supports the HR function has also been shown to be associated with a higher level of line manager HR implementation overall (Sikora & Ferris, 2011). These findings indicate that past experiences and environmental factors may constitute line managers' pre-existing understanding of the value of HR practices and the HR function in general. Further, it has been found that there may be insufficient effort by HR decision-makers in communicating about the HR practices (Bondarouk, Jan Kees, & Lempsink, 2009). With a lack of information, attribution research suggests that people's pre-existing beliefs will play an even greater role in the conclusions they draw (Kelley & Michela, 1980). Hence, it cab be expected that line managers may not receive and interpret information about the HR practices as intended. Rather, their pre-existing HR beliefs may colour their attribution of the intended practices.

Proposition 2b. Line managers pre-existing HR beliefs moderate the relationship between intended HR practices and line managers' attribution of intended HR practices.

Stream 1. Human Resource Management

Line manager attributions and attitude towards intended HR practice

Although empirical studies of HR attributions have mostly focused on employees and provided tentative conclusions on causality (Hewett et al., 2018), they have shown a positive association between commitment attributions and key employee outcomes such as employee organisational commitment (Fontinha, José Chambel, & De Cuyper 2012), lower levels of emotional exhaustion (Shantz, Arevshatian, Alfes, & Bailey, 2016), and task performance (Chen & Wang, 2014). Applying this perspective to line managers, Yang and Arthur's study (2021) hypothesised that when line managers hold commitment attributions for the organisation's HR practices overall, they would anticipate to be held accountable for a failure to implement commitment HR practices. Accordingly, their results indicated that line managers' commitment HR attributions were associated with a higher level of commitment HR practices implementation. Importantly, their exploration provides a potential explanation of how HR attributions are related to the mechanisms behind line managers' HR implementation.

It has been shown that divergence between line managers and HR decision-makers negatively impacts HR implementation (Maxwell & Watson, 2006; Häell, Tengblad, Oudhuis, & Dellve, 2023). Line managers may not see the benefits of the practice for business (McGovern, 1999; Nehles, Riemsdijk, Kok, & Jan Kees, 2006). These negative attitudes that line managers hold results in a reluctance to engage in their HR role overall (Whittaker & Marchington, 2003), and are associated with lower level of HR practice implementation (Dewettinck & Vroonen, 2017). This is in line with the theory of planned behaviour's proposition that positive attitude towards a behaviour, defined as the outcome-related beliefs that a person forms given information about a behaviour (Fishbein & Ajzen, 1975), is a key driver for people to enact the behaviour (Ajzen, 1991). The theory of planned behaviour has also been applied to study behaviour change interventions (Hardeman et al., 2002). In this application, Ajzen and Manstead (2007) argued if the information presented to the target individuals does not instil positive attitude towards the intended behaviour, then the intervention is unlikely to elicit that behaviour.

Integrating these perspectives and findings, we propose that HR decision-makers' communication of intended HR practices can be likened to a behavioural change intervention with the

Stream 1. Human Resource Management

goal to drive line managers' adoption of HR practices. If this communication result in aligned HR attributions between line managers and the intended HR practices, line managers are more likely to understand the cause-and-effect of the practices. As a result of this correct interpretation, line managers may better see the intended HR practices' value. Hence, it can be expected that when HR decision-makers are able to elicit the right attributions through their communication with line managers, line managers are likely to form positive attitude towards the practices.

Proposition 3. Line managers' attribution of the intended HR practice is positively associated with line managers' attitude towards the practice.

Line managers' attitude towards intended HR practice and line manager HR implementation (actual HR practice)

The theory of planned behaviour posits that people's attitude towards a behaviour is a function of their beliefs concerning the potential outcome of the behaviour (Ajzen, 1991). Positive attitude towards the target behaviour is one of the key antecedents to one's enactment of the behaviour (Fishbein & Ajzen, 1975). As one of the most applied social psychological theories (Bosnjak, Ajzen, & Schmidt, 2020), the perspective has also been applied to study line manager HR implementation level (Sikora & Ferris, 2011). Dewettinck and Vroonen (2017) found that line managers' attitude towards performance management practices mediated the relationship between organisational factors and the frequency and duration of their enactment of performance management activities. Integrating the theory of planned behaviour into the process of line manager HR implementation provides a framework to not only predict line managers' implementation behaviours, but also to understand the effectiveness of HR decision-makers' communication on intended HR practices. As line managers have finite capacity and have personal aspirations, they need to prioritise certain responsibilities. It can be expected that when line managers form positive attitude towards the intended HR practices, they are likely to exert more time and effort to implement that practice as intended. Whereas if they find the practice to have little value, they will likely abstain from enacting it.

Proposition 4. Line managers' attitude towards the intended HR practice is positively associated with actual HR practice.

Stream 1. Human Resource Management

DISCUSSION

Drawing from findings on line manager HR implementation to date and perspectives from HRM process research and social psychology research, we argue that line managers' motivation and pre-existing HR beliefs have an influence on the relationship between intended HR practices and their attribution of those practices. When an intended HR practice fits the line managers' operating context, they are likely to be more motivated to receive and interpret information provided by HR decision-makers. Their pre-existing beliefs on the general value of HR practices and the HR function may colour their interpretation. The influence of those beliefs may be particularly impactful as line managers typically face constraints from the juggling of multiple responsibilities. If HR decision-makers are sending the right information in a distinctive, consistent, and consensual manner, and that the information is correctly interpreted by line managers, favourable attributions may be formed. This aligned understanding of the intended HR practice's cause-and-effect should inform line managers of the practice's value and foster positive attitude towards the practice. Ultimately, this positive attitude should drive line managers to enact the HR practice as intended.

Theoretical implications

The potential implications of this psychological view of line manager HR implementation are significant. HRM process theories have asserted the importance of HR decision-makers to send signals that are distinctive, consistent, and consensual, which are to be interpreted by line managers and then transmitted to their subordinates (Bowen & Ostroff, 2004) through consistent enactment of HR practices (Wright & Nishii, 2013). While various factors, such as AMO and various contextual variables, have been adopted to develop our understanding of line managers enactment of HR practices, consensus is yet to be reached as to how they work in conjunction to influence their behaviours (Kurdi-Nakra et al., 2022). A particular lack of attention to the agency of line managers in the implementation process has also been repeatedly pointed to (Guest, 2021; Townsend et al., 2022). This paper contributes to the scholarly understanding of the HRM-performance chain by providing a conceptual framework that considers the interplay of different individual (pre-existing HR beliefs) and contextual influences (motivation) on line manager HR implementation via their psychological

Stream 1. Human Resource Management

processes concerning information from HR decision-makers, ultimately affecting their decisions on HR implementation.

Future research

A few promising research questions stem from this paper's conceptual model. What type of HR or other pre-existing beliefs are most impactful in line managers' interpretation of intended HR practices? How to best arouse line managers' interest in HR decision-makers' communication? What interventions can best elicit aligned understanding between line managers and decision-makers of the intended HR practices? Assuming the right attributions were made and as a result positive attitude towards the practices were formed, what is the temporal stability of these mental constructs and the persistence their effect on line manager HR implementation? To address these questions, qualitative methods such as discourse-based analysis may provide a deep understanding of the pre-existing beliefs line managers hold and how these influence their understanding of intended HR practices. Longitudinal studies of line managers can provide insights into the strength and changes of those interpretations overtime. Finally, experiments can be adopted to test the relationships outlined in our proposed model and test the efficacy of different interventions designed around the psychological processes of line manager HR implementation.

Practical implications

This paper's conceptualisation of line manager HR implementation has a few important practical implications. HR decision-makers should consider how effective is their communication on intended HR practices when rallying line managers' support and adoption of those practices. If this communication does not elicit an aligned understanding of the cause-and-effect that underlies the practices' design, it is unlikely that line managers would see the value in the HR practices and in turn enacting them. Thus, causing deviations from the expected outcome of putting HR practices in place. Furthermore, attention should also be given to the ongoing experiences that line managers have with the HR function and HR practices. These experiences, if largely negative, may drive line managers to disregard or see intended HR practices in a bad light. Importantly, this suggests introduction of new practices should not be seen as a one-off event that is disconnected with the past, or the future. The way line managers view intended HR practices may also change overtime. Feedback they receive and

Stream 1. Human Resource Management

outcomes they experience from their continuous engagement with HR practices may update their understanding of the cost and benefits of implementing them. The HR-line relationship needs to be maintained to drive greater and persistent outcomes from line manager HR implementation.

CONCLUSION

In this paper, we proposed a psychological model of line manager HR implementation to demonstrate how line managers' pre-existing HR beliefs and motivation influence their interpretation and understanding of HR decision-makers' communication on intended HR practices. By drawing from theoretical perspectives of HRM process and social psychology research, the model offers and extension to understanding of differences in line managers' HR implementation behaviours. This model integrates knowledge of how individual and contextual factors influence line managers' HR implementation decisions and responds to calls for the recognition of their agentic role in the HR implementation process. This submission also contributes to HRM research and practice through a discussion of promising research directions for extending understanding the role of line managers in the transition from intended to perceived HRM.

Stream 1. Human Resource Management

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A Novel Methodology to Assess the Perspective of Indigenous Communities on Multinational Operations: The Case of Fiji

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1

A Novel Methodology to Assess the Perspective of Indigenous Communities on Multinational Operations: The Case of Fiji

Abstract:

Multinational organizations lack the proper understanding of Indigenous cultures when venturing into their territories, reducing the chances of positive impacts. We present a new methodological approach adapted from the Vanua Research Framework to understand Indigenous communities' views on multinationals' operations. As part of a research program assessing justice between multinationals and citizens from varied communities, this article focuses on Namosi Province, Fiji, to test this new approach. This new method is called 3D Veivosaki, and it involves three stages: *Da mai veivosaki* to seek permission from village leaders to conduct research, *Datou mai veivosaki* to identify knowledge holders by engaging with smaller groups, and *Daru mai veivosaki* to gain insights into the topic under study by meeting with knowledge holders.

Keywords: Indigenous research, Multinationals, Community development, 3D Veivosaki, Fiji, Justice

Overview

Multinational organizations (MNOs) venture into new horizons with predetermined perspectives on operational processes without fully understanding the complexity of the cultural makeup of Indigenous peoples causing more havoc than developing them. Understanding these complex problems necessitates new ways of research as Western methodologies have failed to address those complexities (Ruwhiu et al., 2021). The impact of multinational operations on the sustainable development of communities all over the world is something that needs to be better addressed. This is especially relevant when referring to Indigenous communities from the global south, whose interests have been systematically ignored and very limitedly studied (Bontempi, Del Bene, & Di Felice, 2023; Bruijn, Georgallis, Albino-Pimentel, Kourula, & Teegen, 2024). Furthermore, academic research has not been conducted according to their cultures and ways of living but using traditional Western approaches that we argue need to be changed. This research is part of a program that aims to address the sustainable development of remote communities from varied contexts to contribute to their development and the construction of just relationships with multinationals, advancing the academic understanding of socio-environmental justice

2

and social licence to operate in remote communities. It started assessing the views of the citizens from northern Chile, we are collecting data from inhabitants across the Lithium Triangle region, and now we aim to address communities in Fiji with this new methodology. This research program is an opportunity to try and test this novel approach in the context of Indigenous communities from Fiji (iTaukei). While the program has been focused on citizens in general, including Indigenous communities but not especially focused on them, part of the learning experience is that traditional approaches do not necessarily work well when addressing Indigenous peoples. Thus, the importance of this new methodology and the discussion expected to have at ANZAM 2024.

Current Understanding

Following sixteen years of authoritarian rule in Fiji, limited research has been conducted on the impact of MNOs within the country. This knowledge gap can be partially attributed to the suppression of political discourse under the previous regime. The current era, ushered in by a new government, promises greater freedom of expression, allowing Fijians to openly voice their concerns, including regarding MNOs' activities. Capitalizing on this newfound freedom, this research aims to test a new approach to listening to the voices of local people by investigating how extraction industries within the province of Namosi have conducted their operations over the past years, and the perceived effects on local communities.

The Talanoa method, commonly used for data collection in the Pacific (Loi-On, 2018), may not be suitable for collecting data in this research due to the significance of the topic. When conducting research on land, it is crucial to approach it with the utmost care. One cannot simply enter a village and organize a Talanoa session with everyone on their experience with MNOs in their village. Considering the lack of appropriate research techniques implemented when addressing Indigenous communities, we propose a novel method of the 3D veivosaki that is guided by Vanua Research Framework (VRF) that was advocated by Nabobo-Baba (2008) as a better option to understand the relationships between Indigenous people of Fiji and multinationals.

Fiji's history of political instability has undeniably shaped the way MNOs approach development initiatives within the country. Further complicating this landscape are the diverse needs

3

and collaboration styles of Fiji's distinct communities and settlements. To navigate this complexity, this research employs a mixed-methods approach to evaluate the effectiveness of MNO operations in serving the communities they aim to develop. While Fiji was once a regional development hub in the late 19th century, as evidenced by the concentration of regional offices in Suva (Chand Prasad, 2014; Mawi, 2015; Pak, 2019), this prominence has been eclipsed by periods of political unrest and allegations of corruption within various post-independence governments. However, Suva remains the seat of influential international organizations that, though not directly regulating MNOs, share overlapping objectives in research, conservation, and development. Capitalizing on a potential gap in knowledge due to past political constraints, this research seeks to address these issues by directly engaging with the Namosi community and gathering firsthand accounts of their experiences with extractive industries.

Research Question

Would a new research methodology, designed according to Indigenous culture, be more appropriate for gaining access to Indigenous communities in Fiji (iTaukei) to better understand their relationship with MNO in Fiji?

Research Approach

Indigenous research methodology

Given the sensitivity of the topic (Maiono, 2024) and guided by VRF, a methodology called 3D veivosaki was designed as the primary method for data collection (Nabobo-Baba, 2008) , which consists of three stages. However, before starting data collection, a research permit from the Tikina Council, under the Fijian Ministry of the iTaukei Affairs (Indigenous Affairs), must be obtained.

The first stage, *Da mai veivosaki*, is to gather all the village leaders together and seek permission to conduct research on their land during the *iSevusevu* ceremony. The iSevusevu ceremony occurs when someone arrives at a village or a person's home with the purpose of requesting permission to stay and provide an explanation for their visit. This stage is characterized by a hierarchical structure, with the Chief holding most of the power during the veivosaki. Access to knowledge is granted at this level. It is crucial to dress appropriately and use proper language when speaking to the Chief. This is where decisions are made, it represents the highest level of cultural engagement within a village.

Following, data collection moves to the second level of engagement, known as *Datou mai veivosaki*. During this stage, the researcher engages with smaller groups to identify knowledge holders, i.e. individuals who possess firsthand experience of the impacts of MNOs in the area. Typically, a

4

minimal power dynamic exists among the members at this stage, although the Indigenous knowledge holder retains significant authority. The researcher possesses limited influence over the flow of veivosaki.

Once a knowledge holder is identified, the conversation progresses to the *Daru mai veivosaki* stage, which represents the goal of the methodological process. The research methodology involves a series of meetings with these knowledge holders to gain insights into the topic under study. This is a one-on-one conversation in which dialogue enables direct inquiries about MNOs. The relaxed mode of communication allows for ease and openness. However, researchers need to be respectful and cautious, ensuring that boundaries are not overstepped, and the knowledge holder is not disrespected.

A critical aspect of this research involves ensuring informed consent from participants. This requires fostering trust, a concept integral to Fijian Indigenous culture known as *veiwekani* (relationship) and *vakarokoroko* (respect). Understanding the framework of relationships and its significance for iTaukei people in relation to their natural resources is crucial in Fiji. This understanding also includes the iTaukei conception of "meaningful development," which is intertwined with the intergenerational transfer of knowledge about the interconnectedness of living beings and their environment (Ens, Finlayson, Preuss, Jackson, & Holcombe, 2012; Reid, Young, Hinch, & Cooke, 2022). Indigenous knowledge holders have a deep understanding of these evolving dynamics, emphasizing the need for dialogue. In the case of Fiji, simply visiting an iTaukei village does not guarantee access to this knowledge. Researchers must acknowledge that such knowledge is primarily held for the benefit of the community and may not be readily shared with outsiders (Reid et al., 2022). Therefore, it is essential to adhere to established local protocols when seeking knowledge for research purposes. These protocols ensure that the value of Indigenous knowledge is recognized and respected.

Community selection

Although our initial intention was to include a broader range of community groups affected by MNOs in Fiji, the recruitment process and ethical approval procedures overseen by the Fijian government directed us to concentrate on Nabukebuke Village in Namosi Province, situated 30 km west of Suva.

5

This village was impacted by the Waisoi Mining project, an open-cast copper mine originally operated by Newcrest Mining Ltd. The mine, operating on land belonging to 15 Mataqali (clans), primarily affected the iTaukei population of 26 villages. The project created around 2,000 jobs during construction and 736 permanent positions were filled annually.

Data collection

It is always challenging for Western-formed academics to conduct research on Indigenous communities because of a lack of trust and poor local understanding. To address this challenge, we are partnering with a Fijian researcher based at the University of the South Pacific who has a proper understanding of local culture and has conducted research with local communities. Furthermore, to address the potential reluctance of participants to take part in recorded interviews, we also created a survey approaching community members through a mixed-methods approach. This design offers an alternative way to collect data by allowing participants to provide information indirectly through a selection of predetermined questions facilitated by the researcher. The design of the questionnaire was carefully aligned with the research objectives and enables us to collect comprehensive data within the limited time frame of our village visits. It is worth noting that some participants in the *veivosaki* setting may also prefer to complete the questionnaire either on paper or online, highlighting the need for flexibility in data collection methods. The sensitive nature of the topic requires us to acknowledge the possibility of participation bias, especially among prominent community figures who have strong connections to Newcrest Mining Ltd. These individuals may have dual roles in the community, so we need to adapt our approach. We aim to offer community members the choice to participate in "*daru mai veivosaki*" (in-depth, one-on-one conversations) or complete the survey remotely, either online or on paper. This mixed approach takes into account that some leaders may have conflicting priorities, as they may advocate for short-term economic benefits of the mining project while also recognizing the long-term importance of environmental sustainability for their communities.

6

Contributions and Limitations

The limitations of a "one size fits all" approach in Western research methodologies has failed to address the intricate challenges of our contemporary world (Ruwhiu et al., 2021). This paper presents a more effective approach, combining Indigenous research methodologies with mixed methods, in facilitating meaningful interactions between the researchers and Indigenous knowledge holders. This approach aims to ensure that participants feel comfortable providing accurate information without feeling pressured or afraid of being ridiculed. In Fijian Indigenous communities, there is a traditional communal system that influences their perspectives on MNOs. However, individuals who directly benefit from these organizations may sometimes experience marginalization by the community if they are not seen as contributing to the collective good through village working groups. Engaging in fieldwork extends beyond simply being physically present within an Indigenous community; it necessitates the collection of accurate information crucial for understanding and addressing the research questions. Researchers should prioritize the creation of safe spaces for participants. This will foster an environment where individuals feel empowered to freely express their ideas and articulate their experiences authentically. It is important to avoid imposing a singular research method on participants. In recognition of the increasing accessibility of modern technology within Indigenous communities, researchers should adopt a flexible approach. This will allow participants to choose the most suitable method for capturing their narratives, which will ultimately contribute to a more comprehensive understanding of the research questions.

7

Stream 4. Gender, Diversity and Indigeneity

Wāhine Māori entrepreneurs and business growth: The power of social and cultural capital

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Stream 4 – Gender, Diversity and Indigeneity

Wāhine Māori entrepreneurs and business growth: The power of social and cultural capital

ABSTRACT: *This paper examines how social and cultural capital support wāhine Māori entrepreneurs as founders to grow their businesses. The findings are based on the first of three rounds of interviews with 10 wāhine Māori entrepreneurs in Aotearoa New Zealand who have or are undergoing business growth. The results extend on previous Indigenous entrepreneurship research showing the benefits of social and cultural capital. This research highlights how wāhine Māori entrepreneurs can pursue business growth while maintaining their community and cultural identity. This topic has been selected as part of a broader doctoral study examining wāhine Māori entrepreneurs and business growth, which focuses on the cultural, social, and economic enablers and challenges.*

Keywords: Māori enterprise, wāhine Māori entrepreneurship, entrepreneurial growth, Indigenous entrepreneurship.

This paper contributes to the Indigenous entrepreneurship literature by exploring whether and how social and cultural capital support or hinder the business growth aspirations of wāhine Māori entrepreneurs in Aotearoa New Zealand. Wāhine means woman or women; Māori is their self-ascribed ethnic and descent group; entrepreneur is used as a proxy for business owner and founder. When combined, these characteristics constitute the distinctive group with which this paper is primarily interested—Indigenous women who self-identify as Māori, are business owners and founders, and want to or have grown their businesses. Success in business is associated with growth, which in management theory corresponds with favourable financial metrics over time, including increasing employee numbers, sales, profitability, and market share (Carter & Shaw, 2006; Welter et al., 2016). Hechavarria et al. (2019) believe there is no ideal benchmark for business success. Instead, a variety of measures is proposed, including intrinsic motivations of the entrepreneur (satisfaction as an owner-operator) and extrinsic motivations arising from outside factors (profit and accolades) (Mika, Dell, et al., 2022).

We argue that social and cultural capital represent vital sources of entrepreneurial capability for wāhine Māori entrepreneurs to achieve business growth and success, but their conceptualisation, operationalisation, and expression of these capabilities differs in some important ways, which we suspect is related to their entrepreneurial characteristics of identity, culture, gender, and enterprise. The entrepreneurs recounted family members' willingness to support their aspirations, friends and

2

colleagues provision of expertise at no cost, and enterprise assistance providers' willingness to help. Entrepreneurs utilised varying degrees of social and cultural capital, accepted support only when required, and acknowledged the support of particular providers. The paper proceeds by reviewing the concepts of wāhine Māori entrepreneurship, business growth, and social and cultural capital as a theoretical framework, following by an outline of the methods used. Early findings are discussed using the concepts of social and cultural capital. The paper concludes with comment about future analysis.

LITERATURE REVIEW

This literature review discusses social capital through the forms of bonding and bridging, and cultural capital and its three modes of embodied state, objectified state and matters of policy. Henry's (2017) framework representing social and cultural capital and their effects along with Mika's (2018) framework for Māori entrepreneurial capability development are discussed. These concepts are analysed within the context of wāhine Māori entrepreneurship and business growth.

Wāhine Māori entrepreneurship

We define wāhine Māori entrepreneurs as women who self-identify as Māori and are business owners and founders of their own enterprises. We qualify this definition by the condition that they want to or have grown their businesses to be able to understand this growth aspect of the entrepreneurial process. Indigenous people are the original inhabitants of a place, who wish to remain culturally and linguistically distinct, despite the effects of colonial or other forms of domination (World Bank, 2023). Who falls into this category, however, becomes murky in places with multiple ethnic groups who may all claim to have legitimacy as an Indigenous people. The United Nations avoids this conundrum by not defining Indigenous people, instead relying on self-identification and in-group recognition of the same (United Nations, 2009). When Indigenous people start, run, and grow enterprises, they are said to be engaging in Indigenous entrepreneurship because their enterprise ownership and ambitions are intended to be beneficial for Indigenous peoples (Mika, 2024) in which cultural context and world view are distinguishing factors (E. Henry et al., 2017; Klyver & Foley, 2012; Mika, Felzensztein, et al., 2022;

3

Peredo et al., 2004). Few studies, however, examine the role of women in Indigenous entrepreneurship and Indigenous economies, despite increasing sophistication in such research. For instance, while estimates of the Māori economy have shown remarkable progression (Mika et al., 2019), only recently has serious attention been given to the role of wāhine Māori entrepreneurs in business statistics (Schulze et al., 2024). Within the Māori economy, almost 40% of 23,000 Māori-owned businesses had wāhine Māori as owners (Te Puni Kōkiri, 2022). Thus, wāhine Māori entrepreneurs are Indigenous owners of enterprises within a growing Indigenous economy, but understanding of their approaches to growth at the firm-level continues to be lacking.

We are focussed on wāhine Māori entrepreneurship within the context of Māori enterprise, but what is a Māori business has been a vexing question for some time (Young, 1992). A simple definition of "a Māori business is one that is owned and run by and for Māori" (Jurado & Mika, 2022, p. 8). A more complex one adds to ownership and intentions the conditions of self-identification and operating according to Māori values (Mika et al., 2019). Stats NZ (2022) has since revised its definition of Māori business as "a business that is owned by a person or people who have Māori whakapapa (genealogy), and a representative of that business self-identifies that business as Māori" (p. 29). Ministry for Women (2019) takes a similarly inclusive approach, regarding Māori women wanting to start a business. Thus, Māori women in business are considered entrepreneurs, but wāhine Māori entrepreneurship is not defined (Ministry for Women, 2019). Zapalska and Brozik (2017) report findings from a study of Māori female entrepreneurship in the tourism industry without defining wāhine Māori entrepreneurship. While Māori, policy makers, and providers have been concerned about wāhine Māori entrepreneurship for some time (Hill, 2009), limited research is available on their approaches to business growth despite the continuity of the Māori Women's Development Incorporated (MWDI) since its inception in 1987 (C. Henry et al., 2017) alongside many other forms of enterprise assistance for Māori, including Māori business networks (Dell et al., 2017).

4

Entrepreneurial capabilities

Entrepreneurship, that is, the process of creatively generating value through combinations of material, product, process, organisation, and market (Schumpeter, 2000) is known to contribute to the growth of enterprises (the micro-level) (Ayinla Alarape, 2007) and economies (the macro-level) (Audretsch, 2007; Wennekers & Thurik, 1999). The economic advantages of small firms becoming big firms are extremely attractive to governments because of the jobs, incomes, tax, innovation, and foreign exchange this business growth generates (Acs & Szerb, 2006; Storey & Greene, 2010). Entrepreneurship is linked to competitive advantage and innovation (De Carolis & Saparito, 2006). For entrepreneurs who aspire to growing their businesses, it is important to capture a market and look to new opportunities for growth. According to Barney (1991), competitive advantage is when the resources and capabilities of enterprises are costly to replicate by rivals and are rare, valuable, hard to imitate and non-substitutable. Innovation uses existing resources with new wealth-generating capacity to generate new ideas, technologies and business models that unmet needs in the market (Drucker, 1985). Networks are also seen as critical, facilitating relations between entrepreneurs, resources, and opportunities (Aldrich, 1989; Aldrich & Zimmer, 1986). Bull and Willard (1993) argue that a supportive environment is critical to enterprise growth. Business networks and incubators can supplement the expertise of the entrepreneur (Wren & Storey, 2002) and add credibility to their enterprise (Aldrich & Zimmer, 1986). Informally, Birley (1985) finds that family and friends also aid entrepreneurs. Such a varied suite of enablers are all seemingly adding to the capabilities entrepreneurs need for enterprise growth. These capabilities can be psychological (McClelland, 1961), physical (Becker, 1964), cognitive (De Carolis & Saparito, 2006), and cultural (Xu & Song, 2011). Thus, capital is a resource, usually understood as a financial one (Hicks, 1939), but its enabling effects can see it recast in multiple forms, including social capital (relationships between people) (Bourdieu, 1977), human capital (people and what they know and can do) (Becker, 1964), and physical capital (plant, equipment, infrastructure and what can be done with them) (Janssen, 2018).

5

The contention that entrepreneurial capabilities make enterprise growth possible has been made before in the resource-based view of the firm (Firkin, 2001). In this view, resources are like assets but only become a capability once the asset is utilised for a productive purpose (Light & Gold, 2000). Only recently, has the idea of entrepreneurial capabilities been used to explain Indigenous enterprise development (Foley, 2004; Henry, 2012; Mika, 2015). Furneaux and Brown (2008) for instance, argue that Australia's Indigenous entrepreneurs inadequate access to multiple forms of capital (financial, human, social, physical) explains their lower participation in entrepreneurial activity, justifying policy to improve access to all the capitals. Māori entrepreneurs benefitted from business networking as an extension of their life skills formed through their interactions with whānau (family) and hapū (subtribe) (Foley & O'Connor, 2013). In a study of the New Zealand screen industry, Henry (2017) uncovered the importance of both social and cultural capital to Māori entrepreneurs' careers, particularly the importance of mentors and personal contacts. From this, she proposed a framework to represent social and cultural capital and their effects (see Table 1). The alignment of high cultural capital and high social capital resulted in better mainstream performance by the Māori screen industry entrepreneurs who participated in the study. Similarly, Mika (2018) considers entrepreneurial capabilities a "determinant of entrepreneurship" that exist as "aggregations of financial and non-financial assets" (p. 162). When integrated with indigeneity, that is, the quality of being Indigenous, entrepreneurial capabilities can be interpreted and applied through the cultural lens of Māori entrepreneurship, constituting Māori entrepreneurial capabilities, inclusive of five forms—social capital, human capital, cultural capital, financial capital, and spiritual capital (Mika, 2018). These capabilities, according to (Mika, 2018), can be acted upon by the entrepreneur or providers to support the growth of Māori enterprises (see Table 2). Importantly, however, the assistance should align with the identity of Māori entrepreneurs, the nature of their enterprise, and the state of the Māori economy to be effective (Warren et al., 2017).

Social capital

Social capital is a critical entrepreneurial capability for Māori entrepreneurs and their growth ambitions (Henry, 2012; Mika, 2015). According to Nahapiet and Ghoshal (1998), social capital is an

6

individual or social unit's resources obtained from its network of relationships. These resources can arise from business relationships, acquaintances, and group membership (Bourdieu, 1986; Yen et al., 2020). From an economic standpoint, social capital can be observed in information asymmetries among a network of people which can give rise to entrepreneurial opportunities (Foley & O'Connor, 2013), and seen as essential to business success (Bhagavatula et al., 2010), a business' reputation (Elfring & Hulsink, 2003), and the organising of resources (Batjargal, 2003). Adler and Kwon (2002) describe social capital as the "goodwill available to individuals or groups" (p. 23), which resides within individuals' relationships and relies on the selflessness of friends, colleagues and contacts (Burt, 1992). It is these relationships that provide resources for personal gain (Adler & Kwon, 2002; Leanna & Van Buren, 1999).

Two forms of social capital are relevant to wāhine Māori entrepreneurs and growth: bonding and bridging. Bonding social capital relates to the strength of internal ties and the depth of relationships within a collective (Adler & Kwon, 2002; Leanna & Van Buaren, 1999). An example is a group of entrepreneurs who are friends and share experiences. Bridging social capital relates to an entrepreneurs use of external social ties (Adler & Kwon, 2002; Burt, 1992, 1997). This includes when entrepreneurs interact with strangers at events to advance their business interests. According to Burt (1992), social capital does not uniformly advantage all entrepreneurs. It does, however, provide opportunities for enterprise formation and innovation, particularly in terms of information and influence (Adler & Kwon, 2002; Burt, 1992; Nahapiet & Ghoshal, 1998; Shane & Venkataraman, 2000; Tsai & Ghoshal, 1998).

Social capital enables Indigenous entrepreneurs to engage in economic activity through relationships within and outside of their communities (Frederking & Henry, 2006; Light & Dana, 2013). While drawing resources (social support) from their communities on the one hand, Indigenous entrepreneurs reciprocate by making themselves available as a resource on the other (Cahn, 2008; Mair & Marti, 2005). Naphapiet and Ghoshal (1998) regard social capital sociocultural network resources of Indigenous entrepreneurs. These resources include strategic relationships and that community resources that stem from them (Light & Dana, 2013).

7

Stream 4 – Gender, Diversity and Indigeneity

According to Mika (2018), social capital for Māori entrepreneurs comes from both kin (tribal) and non-kin (non-tribal) relationships with. Beyond traditional social groups, Barcham (1998) argues that Māori entrepreneurs will create new networks, particularly in urban settings, to obtain social capital. Henry et al. (2020) similarly finds Indigenous networks offer entrepreneurs multiple forms of capital, including social, cultural, and spiritual capital, garnering cooperation and the distribution of benefits.

Research has found that small and dense networks of relationships are important in providing support and solidarity when establishing an enterprise (Batjargal et al., 2019; Minniti, 2010; Robinson & Stubberud, 2011). As female-owned ventures grow, their number of weak ties grows (Smith et al., 2018). This is important as female entrepreneurs leverage the thoughts, market intelligence and resources beyond their internal social networks (Kim, 2014). This broader social scope enhances growth through sustainable competitive advantage (Dai et al., 2015; Jones & Taylor, 2012). There is a relationship between external social capital and enhanced female-owned business performance (Kim, 2014; Mozumdar et al., 2017; Sallah & Ceasar, 2020).

Cultural capital

Cultural capital is another crucial entrepreneurial capability for Māori entrepreneurs (Best & Love, 2011; Henry et al., 2020; Mika & Palmer, 2017). Cultural capital refers to the non-financial social assets which Bourdieu (1986) describes as competency and knowledge of high-status culture which includes art, fashion, music, etiquette, architecture and literature. According to Bourdieu (1986), cultural capital exists in three forms: (1) the embodied state, which is the propensity of one's mind and body; (2) the objectified state, which are tangible products such as cultural artefacts, societal products and a culture's native languages; and (3) the institutionalised state which recognises the cultural capital possessed by an organisation through validated in writings, artworks, and monuments. This can be produced materially which requires economic capital, and symbolically, requiring existing cultural capital (Mika, 2015).

8

To the holder, cultural capital is personal and attained at home or school. Bourdieu (1986) attributes the accumulation of cultural capital to the time a family provides their children. Gold & Light (2000) argue the cultural capital view of Bourdieu neglects the occupational culture of enterprise owners as entrepreneurs. Receiving informal knowledge of business from relatives who own enterprises is an example (Kiyosaki & Lechter, 1998). This omission, according to Mika (2015), disadvantages ethnic groups due to "the absence of exposure to the occupational culture of business owners" (p. 86).

Indigenous entrepreneurs utilise their cultural capital for legitimacy (Burt, 2005; Furneaux & Brown, 2008). This is possible through the lens of context, personal identity and self-efficacy which is a person's belief in their ability to achieve a goal or complete a task (Boyd & Vozikis, 1994). A result of these cultural capital components, results in enhanced entrepreneurial intent of Indigenous entrepreneurs (E. Henry et al., 2017). The melding of social and cultural capital, therefore, helps Indigenous entrepreneurial performance and its impact (Kayseas et al., 2014). Positive interactions are expected by their communities due to cultural values which including (1) whanaungatanga which acknowledges the importance of relationships (Bishop, 1996); (2) wairuatanga, the connection of spirituality among Māori (Hēnare, 2001); (3) manaakitanga in the form of generosity and reciprocity (Dell et al., 2022); (4) kaitiakitanga which is stewardship and guardianship of land and people (Kawharu, 2000); and (5) kotahitanga referring to unity among people and their environments, including with Māori ancestors (Durie, 2003; Henare, 2001; Marsden, 2003; Walker, 2003).

Indigenous entrepreneurship research shows the importance of social and cultural capital to entrepreneurship and Indigenous communities (Anderson et al., 2007; Cahn, 2008; McKeever et al., 2014) which occurs in collective cultural and social settings such family events, friend and colleague socialising, industry conferences, business networking and professional associations (Foley, 2012). These interactions can be examined by understanding the distinctions between bridging and bonding forms of networking (Adler & Kwon, 2002). Bonding networks can include a network grounded in traditional cultural heritage and social capital, while bridging networks can enable the Indigenous entrepreneur to move between the Indigenous and dominant culture (Foley & O'Connor, 2013).

9

Stream 4 – Gender, Diversity and Indigeneity

Cultural capital resides as cultural knowledge in Māori entrepreneurs, but is also apparent in "artefacts and institutions" (Mika, 2018, p. 163). For Māori entrepreneurs, cultural capital is the unique identities of whānau (family), hapū (sub-tribe), and iwi (tribe) which is expressed through mātauranga (wisdom), tikanga (customs), dialects, whakapapa (genealogy) and kawa (ceremony) (Dell et al., 2022). While difficult to measure using Western frameworks (Nana et al., 2021), attempts have, nonetheless, been made to assess cultural capital and its wellbeing effects for Māori (Kukutai et al., 2017; Stats NZ, 2020). E. Henry et al. (2017) argues that an entrepreneur's use of cultural values in business can be beneficial for their communities, with social capital having a more mainstream advantage.

Māori have an ability to deal with all layers of society (Foley & O'Connor (2013), which is consistent with Waldinger (1985) who suggests ethnic minorities can effectively navigate minority and dominant cultural relations. Māori must, however, prove themselves in competitive markets (Foley & O'Conner, 2013). Relationships can help Māori entrepreneurs build credibility and access suppliers and customers (Paige & Littrell, 2002). As a result, Māori have strong bridging networks based on cultural attributes and a comparably lower colonial impact (Foley & O'Conner, 2013). Within a Māori context, self-efficacy increases capital gain and in turn, generates social capital (E. Henry et al., 2017). Another study by Haar et al. (2021) also found Māori businesses that have higher cultural capital had stronger a stronger financial performance.

METHOD

This paper aims to understand the relationship between the constructs of social and cultural capital and their impact on wāhine Māori entrepreneurs and their business growth intentions and outcomes. This study uses a kaupapa Māori theory, methods and research philosophy (Pihama, 2001; Smith et al., 2012; Smith, 1999) and is part of a broader doctoral study that investigates the cultural, social, and economic enablers and challenges of wāhine Māori entrepreneurs and business growth. This, by answering the following questions: (1) what does being a wāhine Māori entrepreneur in New Zealand, mean? (2) how do wāhine Māori entrepreneurs define growth? And (3) what are the challenges and enablers to business growth as a wāhine Māori entrepreneur?

10

Stream 4 – Gender, Diversity and Indigeneity

The research incorporates initial findings from the first round of three interviews with 10 wāhine Māori entrepreneurs, who have experienced or are currently undergoing business growth. Interviews were held between April and May 2024, with two more interviews to be conducted with each participant by the end of 2024. All participants reside in New Zealand, living in places from Northland to Christchurch and have registered businesses which trade nationally, and in some cases, internationally to countries such as Australia, Samoa, China, Canada and the United States. Engaging entrepreneurs from a range of industries adds richness to the research and findings.

The interviews set out to answer the following question: whether and how social and cultural capital support or hinder the business growth aspirations of wāhine Māori entrepreneurs? The interviews were held via Zoom and at locations and times that suited all parties. After whakawhanaungatanga (establishing relationships) and an overview of the research was shared, the researcher asked the entrepreneurs open-ended questions in one-to-one sessions on the following topics: personal and business journey; goals in business and business growth; being a wāhine Māori entrepreneur; and the challenges and benefits of using formal and informal networks and support agencies.

Model development

Due to the limited literature in this area, we use Henry's (2017) and Mika's (2018) frameworks for Māori entrepreneurial capabilities to analyse data on wāhine Māori entrepreneurs and their business growth. The relevant principles that can be discerned from their frameworks are: (1) integration of Māori indigeneity with Western entrepreneurial identity; (2) balancing of cultural and commercial imperatives between manaakitanga, kaitiakitanga, and other values; (3) social, cultural, human, financial, and spiritual capital are interrelated, but we focus on social and cultural capital based on the interview data. The intended outcome is an understanding of how social and cultural capital function in relation to wāhine Māori entrepreneurs.

11

Stream 4 – Gender, Diversity and Indigeneity

FINDINGS

We present findings and themes from analysis of the first round of interviews, which show that social and cultural capital are important for personal and business growth among wāhine Māori entrepreneurs. We use acronyms to refer to participants, for instance, WME1 means the first wāhine Māori entrepreneur interviewed. Table 3 provides a summary of all participants by industry code, tribal affiliation and the indicates the types of social and cultural capital with which they engaged.

Social capital through bridging proved to be beneficial to the business growth of WME5.

> *"Some of the best support we've got is from New Zealand Trade and Enterprise. We obviously export to Australia. And they have helped us not only with our growth ambitions there, but also with our capital raised journey."*

Theory suggests as female-owned ventures grow, their number of weak ties grows. This social capital bridging was evident in the interviews. All wāhine Māori entrepreneurs spoke about how they broadened their network, actively seeking experts to provide guidance and knowledge on growth. WME1 shared how she reached out to an industry leader to be a sounding board on her moving into a new international market.

> *"It was having individuals that would give me a new perspective or challenge some of my thinking. So it wasn't just my own thought process by if I needed other opinions in there to try and balance things out or to get a better overview of what was happening in the situation. Whatever situation I was in."*

Social capital bridging was also evident through relationships formed because of common technical issues specific to an industry and also through the collegiality of being wāhine Māori entrepreneurs. Industry-specific networks were supportive, sometimes transactional; however, it was understood that their industry was small so keeping positive relationships was important for potential business opportunities. The second example also crosses to cultural capital. The 'sisterhood' of wāhine Māori entrepreneurship seemed to form through business opportunities or introductions from enterprise

12

support agencies. Participants talked about the importance of having 'like-minded' entrepreneurs who understood the grind of business, being Māori in business, and allowed them to be themselves. As a result, friendships formed, as well as business collaborations and growth opportunities. WME5 also discusses the power of social and cultural capital to build business and personal relationships overtime.

> *"And I've got a wāhine group. We catch up with this five of us. Four of us are Māori. We catch up regularly just, just to be like, there's no agenda. And it's just really uplifting. I don't know, it's so valuable. I wish everyone could have that more. But maybe it's a journey, you have to get to that point where you need it. And you've got to find the right people."*

All participants whakapapa (genealogy) Māori which is our unique form of cultural capital. The knowledge and values are weaved into our businesses and the way we conduct business. All think about their communities and who they can support others, particularly Māori, to achieve their business aspirations. WME2 is passionate about uplifting other wāhine Māori entrepreneurs:

> *"Being a Māori woman, supporting other Māori women in business, it's just natural for me… I'm like, man, I really want to help them."*

All participants were proud to be Māori and everyday navigate across Māori and dominant cultures, while operating within a competitive market. A combination of social and cultural capital was demonstrated by WME7 who was against the term mentoring as she believed it placed a formal expectation on both parties to continue to engage. This entrepreneur used the word 'champion' to describe her way of networking with others:

> *"I've had in my life champions… I've had one in particular, a woman, who championed me into various places in my life, which have been super formative. And when I say champion, it's that idea of putting you in a situation that they know you've got the goods for."*

13

Stream 4 – Gender, Diversity and Indigeneity

WME7 continues by describing champions as bringing you into a new professional space where you and your business can thrive. This way of thinking demonstrates the longevity of relationships through not just social capital, but also as Māori and our cultural capital to connect as relational people.

DISCUSSION AND CONCLUSION

This paper highlights the importance of social and cultural capital to support the personal and business growth of wāhine Māori entrepreneurs as a contribution to Māori and Indigenous entrepreneurship research. Wāhine Māori entrepreneurs utilise all parts of their networks from business relationships, family and acquaintances, through to industry and enterprise. These networks generate growth and development. When analysing social capital and cultural capital against the Māori entrepreneurial capability development framework (Mika, 2018), evidence suggests all entrepreneurs benefitted by the relationships, facilitation and networking that occurred, noting how advantageous it was for business growth with instances of both bonding and bridging social capital used.

In addition, some participants paid for business advisory and mentoring services, while others gave and received business advice at no charge. Finally, all saw the value of enterprise support at start-up phase, with most accessing these services early in their business journey. Utilising structural systems was also discussed by other wāhine Māori entrepreneurs who utilised other organisations such as Poutama Trust, Māori Women's Development Inc, Te Puni Kōkiri and Māori business networks. However, only one enterprise, New Zealand Trade and Enterprise, was seen as providing value to participants during their business growth phase. Over the next six months, two more interviews with each of the 10 participants will be conducted which will add findings and support theoretical development.

14

Stream 4 – Gender, Diversity and Indigeneity

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16

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18

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19

Table 1 Mika's framework for Māori entrepreneurial capability development

Māori entrepreneurial capabilities				
Social capital	**Human capital**	**Cultural capital**	**Financial capital**	**Spiritual capital**
Relationships	Knowledge and skills	Cultural identity	Income and wealth	Inner abilities
Facilitation and networking	Education and training	Cultural association	Self and others	Valued and active spirituality

Note. Reprinted from "Indigenous enterprises and economies" (1st ed., p. 163) by Mika, 2018, Massey University Press.

Table 2 Henry's framework for Māori entrepreneurial capability development

	Cultural capital	
Social capital	Negative	Positive
Strong	None	High
Weak	None	Low

Note. Reprinted from "Telling their own stories: Māori entrepreneurship in the mainstream screen industry," by E. Henry et al., 2017, Entrepreneurship & Regional Development, 24(1), 118-145. Copywrite 2017 by the Entrepreneurship & Regional Development.

20

Table 3 Descriptive data from the participants

#	Australian and New Zealand Standard Industrial Classification (ANZSIC) (Stats NZ, 2024)	Iwi*	Undergoing / experienced business growth**	Accessed Social and Cultural Capital
WME1	Information, media and telecommunication	Ngāti Mutunga, Te Ātiawa, Ngāti Whātua, Ngāpuhi, Te Rarawa	Undergoing business growth	Family, Māori business networks, business partner, industry network events, industry experts, paid personal development advisors, informal business mentors
WME2	Information, media and telecommunication	Rātana, Ngāti Tūwharetoa	Undergoing business growth	Family, business partner, New Zealand Trade & Enterprise (NZTE), Māori Women's Development Inc (WMDI), other wāhine Māori entrepreneurs, Māori business networks, industry network events, informal business mentors
WME3	Professional, scientific and technical services	Ngāti Whakaue, Ngāti Pikiao	Undergoing business growth	Poutama Trust, business partner, family, personal networks, local Māori business network, industry network events, industry experts, informal business mentors
WME4	Construction	Ngāti Porou, Rongowhakaata, Te Aitanga a Mahaki	Undergoing business growth	Poutama Trust, Te Puni Kōkiri (TPK), business partner, industry experts
WME5	Education and training	Ngāi Tahu, Ngāti Kahungunu	Undergoing business growth	Family, Board, NZTE, business partner, business investors, industry experts, other wāhine Māori entrepreneurs, informal business mentors
WME6	Retail trade	Ngāti Rangiwewehi, Taranaki	Undergoing business growth	Family, personal networks, New Zealand Trade & Enterprise (NZTE), Poutama Trust, TPK, other wāhine Māori entrepreneurs, Māori business networks, paid business advisors, informal business mentors
WME7	Professional, scientific and technical services	Ngāti Raukawa ki te Tonga, Ngāti Rārua	Experienced business growth	Family, personal networks, governance networks, New Zealand Trade & Enterprise (NZTE), industry networks, other wāhine Māori entrepreneurs, Māori business networks, informal business mentors

21

Stream 4 – Gender, Diversity and Indigeneity

#	Australian and New Zealand Standard Industrial Classification (ANZSIC) (Stats NZ, 2024)	Iwi*	Undergoing / experienced business growth**	Accessed Social and Cultural Capital
WME8	Professional, scientific and technical services	Ngāpuhi	Undergoing business growth	Business partner, personal networks, an investment group, industry networks
WME9	Administrative and support services	Ngā Rauru, Ngāti Ruanui, Ngāti Hineuru	Experienced business growth	Family, personal networks, governance networks, Poutama Trust, Māori business networks, Pacific Island networks
WME10	Professional, scientific and technical services	Ati-Hau-Nui-A-Pāpārangi	Undergoing business growth	Family, personal networks, New Zealand Trade & Enterprise (NZTE), industry networks, Māori business networks, Pacific Island networks, informal business mentors, paid business advisors

Notes: Data collected by lead author between April and May 2024. *Tribal affiliations; **Undergoing / experienced business growth = an indication after first interview with participants.

22

Stream 5: Entrepreneurship and SMEs

Entrepreneurial Opportunity and Institutional Void in Emerging Markets: Current State and Future Directions

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1

Entrepreneurial Opportunity and Institutional Void in Emerging Markets: Current State and Future Directions

ABSTRACT

Entrepreneurial opportunity to exploit institutional void in emerging markets is a growing field of research. Despite the growth of the field, studies on entrepreneurial opportunities are scattered which limits understanding of the actual advancement of the field. To synthesise scattered studies, 58 articles were selected systematically from leading academic journals over the period 1997 to 2023. The bibliographic coupling analysis allowed to identify themes of the literature which are (1) the intersection of strategies and institutions; (2) social organisations for community advancement; (3) the informal networks and alliances; and (4) purposive actions for change. The most frequently used theories are organisational institutionalism, network theory, resource-based view, and bricolage. The future directions show the paths for advancing the research field.

Keywords: Entrepreneurial opportunities, institutional voids, emerging markets, bibliographic coupling, and themes.

Overview

The institutional approach provides a promising lens for analysing the entrepreneurial activities of a country (Valdez & Richardson, 2013). Prior research in this area predominately centred on institutions, entrepreneurship, and economic growth (Urbano et al., 2019). Over the past decades, a new and growing body of literature has emphasised opportunities to exploit institutional voids, which is defined as uncertainty originating from institutions' absence or poor function (Khanna & Palepu, 1997; Rana & Sørensen, 2020). Institutional voids indicate an uncertain situation where institutional arrangements are absent, weak, or fail to accomplish the roles that impede market access, development, and functioning due to conflict, collision, and shift among existing institutions (Mair & Marti, 2009). Scholars have shown increased interest in how uncertain institutional contexts create spaces for opportunities as weakness in the institutional environment leads to positive outcomes for entrepreneurship (Smallbone & Welter, 2008; Tracey & Phillips, 2011). This research, which focused on opportunity creation in a weak institutional environment, has yielded a wealth of insights into how entrepreneurs develop a market, build informal networks to replace unsupportive formal institutions or craft strategies integrating institutions to exploit institutional voids (Hota et al., 2019; Parente et al., 2018; Puffer et al., 2010; Venkataraman et al., 2016). Therefore, the research on opportunity creation in emerging markets has appeared across disciplines such as management, entrepreneurship, and strategy (Mair et al., 2012;

2

Peprah et al., 2022; Van Wijk et al., 2014; Webb et al., 2009) where scholars have applied diverse theoretical approaches and methodologies for the investigation, which have advanced the field.

Current understanding

The robust discussion of the entrepreneurial opportunities to exploit institutional voids in emerging markets necessitates an integration of scattered literature to identify what has already been done. This integration facilitates understanding the advancement of the field that has shaped and even taken advantage of institutional voids for new opportunities in emerging markets. A comprehensive understanding of the interplay of institutions and opportunity is still far in advancing the integration of institutional theory and entrepreneurship in emerging markets. These deficiencies signal a need for a comprehensive synthesis of the dispersed work on entrepreneurial opportunities in the emerging market.

Research questions

A systematic literature review was conducted to foster a better understanding of the current status of research and map out the future (Pickering et al., 2014). The review aims to answer the following research questions: (1) What are the themes of the literature focus on entrepreneurial opportunities in the emerging market? (2) Which theoretical perspectives have been used to study entrepreneurial opportunities? (3) What are promising future avenues for research on entrepreneurial opportunities?

Research approach

A comprehensive systematic review is designed to understand entrepreneurial opportunities to exploit institutional voids in emerging markets. The review selected articles according to the following criteria. First, the systematic review selects articles where institutional voids are considered opportunity spaces for entrepreneurs (McKague et al., 2015; Venkataraman et al., 2016). Commercial, social, institutional, and international entrepreneurs create opportunities leveraging institutional voids of the emerging markets (Amoako et al., 2020; Mair et al., 2012; Peprah et al., 2022; Van Wijk et al., 2014). Therefore, article selection spans broader areas of entrepreneurship including social, institutional, and international. Second, this study covers articles that focus on entrepreneurial opportunities in emerging markets in

3

response to institutional voids. Opportunity is defined as a future situation that is deemed desirable and feasible (Stevenson & Jarillo, 1990). The desirable and feasible situations entrepreneurs create using resources for economic, social, and community value (Lashitew et al., 2020; Sydow et al., 2022; Williams & Shepherd, 2016) such as a new market for people (Mair et al., 2012), a new business model (Peprah et al., 2022), or a new form of an organisation (Lee & Hung, 2014). This is why the article's title includes 'entrepreneurial opportunity', but the search term does not. Third, the search for articles was limited between 1997 and 2023. The beginning year was chosen considering the publication of a paper by Khanna and Palepu (1997) which focused on institutional voids in emerging markets.

To capture the breadth and depth of studies, a search term was developed and used for identifying relevant articles from the SCOPUS and the Web of Science databases. The search term is ("institutional void*" OR "weak institution*" OR "poor institution*" OR "fragile institution*") AND ("entrepreneur*" OR "intermediar*" OR "enterpris*" OR "ventur*" OR "business*" OR "activit*" OR "firm*" OR "Multinat*" OR "subsidiar*"). The focus is on academic articles up to 2023, and the search in the two databases -SCOPUS (S) and Web of Science (WoS) - yielded 1,119 and 897 articles respectively. After the database search, a first screening was run to exclude articles based on book chapters, conference papers, reviews, books, press articles, and non-English articles. This reduced the number of articles to 851 (S) and 820 (WoS). Then a second screening was run by considering the journal ranking and only articles published in the A and A * journal of the Australian Business Deans Council (ABDC) list were included which yielded 85 (S) and 91 (WoS) articles. Finally, the title, abstract, and in some cases, full papers were read and further excluded articles considering the key focus that yielded 47 articles from both databases. In addition to the systematic search, a snowball technique was applied that yielded 11 articles and the number of papers finalised for the analysis was 58.

The selected articles were analysed by applying a bibliometric coupling with bibliographic data (such as abstracts, authors, titles, and keywords) to identify groups of similar publications to build clusters (Jain et al., 2023). A thematic analysis procedure was applied to develop themes for each cluster (Lim

4

et al., 2022). Vosviewer, a software visualising and constructing the network, was applied for the bibliographic analysis.

Findings

This study reviews articles on entrepreneurial opportunities to exploit institutional voids in emerging markets which were selected systematically. The selected articles were analysed rigorously for reliable results. The finding shows that articles are categorised into four clusters. The theme of the first cluster is the intersection of strategy and institutions. Entrepreneurs concentrate on strategies for building political networks with stakeholders to influence regulative institutions and obtain legitimacy to exploit institutional voids. This cluster shows the process of entrepreneurs in particular those looking for opportunities across national boundaries to impact the host country's government to receive favour from rules and policies (Reuber et al., 2018). The theme of the second cluster is the development of organisational arrangements such as new social structures (McKague et al., 2015) or markets (Mair et al., 2012) for the advancement of the community. These studies show how entrepreneurs work for social and community development by mobilising scarce resources and negotiating diversified stakeholders. The theme of the third cluster is building networks and alliances. Entrepreneurs unfamiliar with the local institutions experience difficulties with norms and values and unsupportive formal institutions. This encourages entrepreneurs to build informal relationships with stakeholders and alliances with local organisations and use them to compensate the unsupportive formal institutions. The final theme is purposive actions for change. The articles discuss actions taken by entrepreneurs purposively to achieve institutional changes and innovation in response to institutional voids. In addition to the contents, the review shows the number of theories applied by the researchers for studying opportunity creation leveraging institutional voids in emerging markets. The major theories are organisational institutionalism (Garud et al., 2007; Oliver, 1991), network theory (Borgatti & Halgin, 2011), resource-based view (Barney, 1991), and bricolage (Baker & Nelson, 2005). Some promising avenues for future research are identified. First, most of the studies focus on a single country with some exceptions (Ahlstrom & Bruton, 2006; De Silva et al., 2020; Jain & Koch, 2020; Puffer et al., 2010) where it can be more difficult to judge the impact of institutions in the setting (Bruton et al., 2010). Future studies

5

should consider wider applicability by including multiple countries. Second, a longitudinal study has great potential to provide insight into the opportunity creation process in response to institutional voids (Ahlstrom & Bruton, 2006). Only a few studies have found longitudinal (Bhatt et al., 2022; Khavul et al., 2013; Mair & Marti, 2009; Mair et al., 2012) that provide avenues for such types of studies in the future. Third, there are still insufficient studies of opportunity creation in response to the semi-formal but illegitimate institutions (Sutter et al., 2013). Emerging market scholars should focus on studies to address the gap in the literature.

Contributions

This review provides several contributions to the literature. First, this comprehensive review of entrepreneurial opportunities to respond to institutional voids contributes to enriching entrepreneurship literature of emerging markets. Second, this study identifies themes that are well-organised and structured representations of the ongoing intellectual conversation in the research field (Mmbaga et al., 2020). The retrospective overview of such conversation on entrepreneurial opportunities is important to understand the current advancement which creates spaces for further conversations. Third, the organised synthesis of the past contributes to mapping out future research on entrepreneurial opportunities to exploit institutional voids in the emerging market.

Limitations

This study selected articles published only A* and A ranked journals in the Australian Business Deans Council (ABDC) list to ensure quality (Vishnoi et al., 2022). Some articles were excluded from the final list as they did not meet the selection criteria. This limitation should be considered in the case of using the findings of the study.

Implications

Over the years, scholars have made substantial progress in advancing the understanding of entrepreneurial opportunities to exploit institutional voids in emerging markets. The synthesised extant research helps to clarify the development, structure, themes, and theories used in studying

6

entrepreneurial opportunities. It is expected that the study will be useful for the gradual expansion of the field and for scholars interested in working on entrepreneurial opportunities in a weak institutional environment for theoretical and practical advancements.

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11

08. Business Processes, Innovation and Supply Chain

Examining the Paradigmatic Perspective in the Management of the Supply Chain across the Reduction-Hol(istic) Spectrum via Semi-structured Interviews with Practitioners

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Stream Number and Title
(Arial 12 pt Regular Right)

Critical systems heuristics as a hermeneutical framework: insights from modern slavery reports of ASX50 companies

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Critical systems heuristics as a hermeneutical framework: insights from modern slavery reports of ASX50 companies

ABSTRACT:

The 2018 Modern Slavery Act introduced by the Commonwealth of Australia is designed as a mechanism to reduce supply chain slavery through mandated reporting for companies valued at more than $100 million AUD. Since the legislation's inception, debate and introduction, there has been continuous debate as to its utility in reducing supply chain labour exploitation and its purpose as a document as worldwide rates of labour exploitation (including slavery) continue to rise.
This working-in-progress paper aims to contribute to this debate by arguing that the artefacts of this legalisation—using the Modern Slavery reports of ASX50 companies—can be interpreted through the lens of Critical Systems Heuristics (CSH) with a focus on the boundary judgements of the report-writers (the companies) as a mechanism for understanding the concept of moral disengagement within supply chains.

Keywords: modern slavery, critical systems heuristics, hermeneutics, moral disengagement

Overview

This interactive paper presents a work-in-progress that is in the early stage of development, with an anticipated submission in early/mid-2025. This paper presents an overview of the topic, the proposed methodology and preliminary findings.

Introduced in 2018, the *Modern Slavery Act (2018)* requires companies that operate within Australia to "report annually on the risks of modern slavery in their operations and supply chains, and actions to address those risks." (2018). Within Australia, slavery is defined as the following:

> The condition of a person over whom any or all of the powers attaching to the right of ownership are exercised, including where such a condition results from a debt or contract made by the person. *(Criminal Code Act, 1995)*

Since its inception to June 2024, the Modern Slavery Statements Register (available at https://modernslaveryregister.gov.au/) has had 9702 mandatory (and 616 volunteer) statements lodged covering 14796 entities. Whilst the intention of such legislation as a core level is arguably non-controversial, there has been continuous critique of the design, purpose and utility of the legislation (alongside critique of similar legislation in other jurisdictions, such as the United Kingdom's Modern Slavery Act introduced in 2015). This research aims to continue with the critical analysis of the design, purpose and utility of MSA by focusing on the artefacts of this legislation: the modern slavery

statements/reports. The paper aims to explore whether the discursive nature of the reports allows for firms to (either wittingly or unwittingly) engage in *moral disengagement* (Bandura, 1999), whereby responsibility for eradicating forced labour is either diffused or displaced parts of the supply chain outside the control of these companies. The paper proposes an interpretive framework of analysis using critical systems heuristics (Ulrich, 1987; Ulrich & Reynolds, 2020) that is based on the hermeneutic cycle developed by the German philosopher Hans-Georg Gadamer (Farooq, 2018; Gadamer, 1989). The proposed research will apply this framework towards the most recent (2022) modern slavery statements published by ASX50 companies.

Current understanding

Modern Slavery and Legislative Responses

According to the International Labour Organisation (ILO, 2022, 2024), in 2021 approximately 49.6 million people can be categorised as either being forced to work (27.6 million) or forced into marriage (22 million): both of which together constitute the ILOs interpretation of modern slavery. Despite there being an underlying perception of global illegality of slavery, as identified by Schwarz (2020) there is a substantial separation between the *de jure* and *de facto* elements of slavery. In other words, despite the international obligations for many states to prevent slavery, in practice modern slavery continuous to flourish and increase (by 2.7 million people from 2016 and 2021 as identified in ILO, 2024), and often driven by the opaque nature of global supply chains (Shilling, Wiedmann, & Malik, 2021).

As response, national-level legislation has emerged to address forced labour emergent from business supply chains (examples including the UK Modern Slavery Act introduced in 2015, and the Australian Modern Slavery Act introduced in 2018). Within the Australian context, the 2018 legislation emerged from the *Joint Standing Committee on Foreign Affairs, Defence and Trade*'s 'Parliamentary Inquiry into Establishing a Modern Slavery Act in Australia' (Vijeyarasa, 2020; Wray-Bliss & Michelson, 2022 both undertake analyses of these submissions). This process, and the resultant legislation, has been criticised as being gender-blind (Vijeyarasa, 2020), creating an overreliance on tools such as codes of conduct and social auditing (Nolan & Frishling, 2019) and an

overall lack of consequences for non-compliance (Vijeyarasa, 2019). Upon implementation of the Act, the noncompliance issue was identified by the Australian Government (2022), which was argued that it was primarily driven by a lack of understanding of the Act by organisations. These criticisms follow similar discussions for the UK legislation (Ahmad, Haque, & Islam, 2023; Gutierrez-Huerter O, Gold, & Trautrims, 2021; Islam & Van Staden, 2021; Mai, Vourvachis, & Grubnic, 2023; Stevenson & Cole, 2018).

Moral disengagement as a pathway

This paper draws on the observation by Ahmad et al. (2023) that these legislative approaches serve as barriers for slavery eradication in non-Western countries as well as the finding in Wray-Bliss and Michelson (2022) that business discourse (particular in relation to modern slavery) serve to maintain hegemonic discourse around legislative impact on business operations.

One avenue for potential explanation for this is that legislative tools such as the MSA allow businesses to engage in *moral disengagement.* The eight subsections of moral disengagement are outlined in Table 1.

Table 1 Types of Moral Disengagement adapted from Bandura (1999, pp. 194-203)

Type of Moral Disengagement	Description
Moral Justification	Actions are resigned to create a moral imperative to act despite harm to others
Euphemistic Labelling	Language is used to reshape action as being morally acceptance through sanitization
Advantageous Comparison	The use of comparisons to either worse-off individuals or how harm against small numbers reduces harm against larger numbers
Displacement of Responsibility	Reduction or obscuring agentive role due to adherence to authority
Diffusion of Responsibility	Collective and group decision-making whereby individual agency is limited
Disregarding or distortion of Consequences	Harmful actions are easier to undertake when the consequences are not directly visible
Dehumanization	Stripping individuals of human qualities to reduce self-condemnation by the agent
Attribution of Blame	Individual conduct was caused by provocation of the victim, therefore suffering is the victim's own causality

Whilst it might appear contentious to apply an individual-level psychological framework for understanding a wider organisational phenomenon, this paper explores the value of such frameworks

as a tool for analysis by looking at the concept of *moral decoupling*. Following the well-established supply chain concept of decoupling points for push-pull inventory systems and information transfers (Mason-Jones & Towill, 1999), *moral decoupling points* refer to "a point through which materials, information, and money may be transferred, while acting as a roadblock for moral responsibility" (Eriksson, Hilletofth, & Hilmola, 2013, p. 11). Eriksson and Svensson (2016) refer to the moral decoupling point as the region between moral responsibility and moral disengagement in each action: in other words, the part of a supply chain where moral responsibility *decouples* from one organisation to another (falling into the *diffusion of responsibility* and *displacement of responsibility* lenses).

The paper argues that moral disengagement as expressed through modern slavery reports can be unpacked through the concept of *boundary critique* (Ulrich, 1987; Ulrich & Reynolds, 2020). This technique is part of the wider philosophical tool of *critical systems heuristics,* which aims to apply twelve 'boundary questions' (listed in Table 2 below) to understand the prevailing or predominant voices in a particular type of intervention and delineate between those involved in decision-making and those affected (Ulrich, 1996; Ulrich & Reynolds, 2020). These boundary questions are not fixed: meaning that they are designed to serve as guides (e.g. prompts) rather than rigid questions. These questions are delineated into four categories referred to as 'sources of influence', or the dimensions of the problem: *sources of motivation, sources of control, sources of knowledge and sources of legitimacy* (Ulrich & Reynolds, 2020).

Table 1 Boundary Questions of CSH (adapted from Ulrich & Reynolds 2020, p. 256)

Source of Influence	Question
Motivation	Who ought to be/is the intended beneficiary of the system (S)?
Motivation	What ought to be/is the purpose of S?
Motivation	What ought to be/is S's measure of success?
Control	Who ought to be/is in control of the conditions of success of S
Control	What conditions of success ought to be/are under the control of S?
Control	What conditions of success ought to be/ are outside the control of the decision maker
Knowledge	Who ought to be/is providing relevant knowledge and skills for S?
Knowledge	What ought to be/are relevant-knowledge and skills for S?
Knowledge	What ought to be/are regarded as assurances of successful implementation?
Legitimacy	Who ought to be/is representing the interests of those negatively affected by but not involved with S?

Legitimacy	What ought to be/are the opportunities for the interests of those negatively affected to have expression and freedom from the worldview of S?
Legitimacy	What space ought to be/is available for reconciling differing worldviews regarding S among those involved and affected?

Research question

The overarching aim of the research is to explore how the concept of moral disengagement may be interpreted from modern slavery reports, and to explore the value of applying a specific systems thinking tool (critical systems heuretics, as proposed in Ulrich, 1987, 1996; Ulrich & Reynolds, 2020) towards enhancing understanding of the contested space of modern slavery reports and legislative utility.

The paper aims to explore the following research questions:

1. How may the concept of *moral disengagement* be interpreted from modern slavery reports?

2. What are the practical implications for moral disengagement within modern slavery reports?

Research approach

This paper applies CSH as a form of hermeneutics following what Gadamer (1989) describes as a 'fore-projection', which in itself is influence by the Heideggerian ontological concepts of socio-temporality and *thrownness* (Heidegger, 1996), whereby a researcher always carried particular experiences that influence their own method of interpretation.

In terms of methodology, the paper uses CSH as a form of critical discourse analysis (Gee, 2014; Jorgensen & Phillips, 2002) to analyse the language used in the modern slavery reports. The reports will be coded based on the various boundary questions of CSH in order to underpin the hegemonic role of these artefacts, and the explore how they influence overall corporate discourse around business ethics and sustainability.

In terms of moral disengagement, themes related to the *displacement of responsibility* and *diffusion of responsibility* components will be coded within the data.

Findings

The artefacts—in other words the modern slavery reports—are based on ASX50 companies (as at 14/06/2024). Table 3 presents an example of how the four categories of CSH can be applied to modern slavery statements, using one example (Coles Group Limited, 2024) to illustrate this.

Within this analysis in Table 3, the system (S) for the purposes of this analysis is the *organisational approach towards addressing modern slavery,* following the idea of a system as a process and social construct rather than a thing-in-itself, or as an epistemological rather than ontological perspective on systems (Reynolds, 2020).

Based on the preliminary analysis of the example MS report, applying CSH shows that there are substantial variances in the System itself (e.g. the multiple types of motivation, control, knowledge and legitimacy). One potential avenue for exploration in terms of moral disengagement is the reframing of modern slavery as "modern slavery risk": in other words, a phenomenon that has a probability to occur within the organisation's operations, but one of which the company is not responsible for. For example, on p. 16 of the report Coles discusses factors that could cause, contribute or be directly linked to modern slavery, and identify that "the risk of modern slavery in our own operations to be low" and "we consider our greatest exposure to modern slavery risks is through our extended supply chain" (2024, p. 16). The continued research on this project will explore how the perhaps tacit acceptance that there will be supply chain slavery can constitute a displacement of responsibility. Another area for future exploration that is derived from the modern slavery report is the contract between *de jure* and *de fact:* or whether the realities within the report are matched by the realities outside the report. A way to explore this would be through comparison of the report to other discourses (such as media reporting of supply chain power imbalances and labour exploitation by supermarkets in Barrett, 2024; Campbell, 2024; Elmas, 2023).

Source of Influence	Case I: Coles Group Limited (2024)
Motivation	Intended beneficiary is both the relevant jurisdiction (p.1): This statement is provided by Coles Group Limited (ACN 004 089 936) as a joint statement under the Australian Modern Slavery Act 2018 Cth (Modern Slavery Act) for the period 27 June 2022 to 25 June 2023 (the reporting period or FY23). As well as the wider system (pg. 3): We aim to have a positive impact on our team members, customers, communities and supply chain. We have worked hard to understand how our business activities could negatively impact human rights, and where risks of modern slavery may be present in our operations and supply chains. The purpose of S can be derived from the follow (p.2): We aim to have a positive impact on our team members, customers, communities and supply chain. We have worked hard to understand how our business activities could negatively impact human rights, and where risks of modern slavery may be present in our operations and supply chains.
Control	Areas outside control of decision-maker (p.16): Modern Slavery below tier one can be difficult to identify and address. This is because Coles has no contractual relationship with these parties, for example, to require them to provide documentation or otherwise commit to complying with minimum standards In terms of conditions of success, the report lists both the governance mechanisms (such as policies discussed on p.39) and process, monitoring and training (p.48).
Knowledge	Knowledge and resources (p. 24): Our Ethical Sourcing Team is comprised of 12 employees in Australia, including two social compliance (ethical) auditors certified by the Association of Professional Social Compliance Auditors (APSCA). We also have one contractor in Hong Kong focused on supporting the implementation of our Ethical Sourcing Program at offshore sites in China, Malaysia, Taiwan and Thailand. In terms of companies further down the supply chain, it becomes apparent that due to supply chain size Coles' there becomes an increasing reliance on supplier audit reports (p.18): We receive regular audit reports from the supplier's manufacturing facility, which has been used to supply products to Coles since 2016, and have not identified any indicators of modern slavery.
Legitimacy	Legitimacy of Coles' approach to modern slavery (including varying worldviews) could be interpreted from their 'Collaboration and Stakeholder Engagement' section (p.43) as this identifies that level of engagement the report implies occurs. The report itself lists the length of engagement with supply chain workers (12500 worders interviews during 'ethical audits' on p. 43), however information about these processes is not covered. Those negatively impacted by S would be any individual or entity that is negatively impacted by Coles' approach towards addressing modern slavery. This may include parts of the supply chain that are identified as non-conforming in terms of performance (6953 critical or major non-compliance identified on p.(48).

Contribution and Limitations

The paper and wider project aims to develop CSH to be a hermeneutics tool, therefore contribution to the theoretical and methodological utility of this systems tool. It is anticipated that interpretation can be a limitation in of itself, as well as the focus on ASX50 listed companies in Australia. Whilst designed as a reflective tool for practitioner purposes, this paper argues that the core goals of CSH—to create a holistic awareness of values, power structures, knowledge basis and moral basis within any action (Ulrich & Reynolds, 2020)—can be adapted as a hermeneutical tool.

Implications

This research has implications for researchers and practitioners alike. From an academic perspective, the research will contribute to both theoretical and methodological discussions around the idea of modern slavery and the utility of CSH as a form of analysis for extant documents. The use of systems theories as a mechanism for exploring moral decision-making is an emergent theme within the literature (Mackay, 2024 in press), building on the concept of creativity as a problem-solving tool (Jackson, 2006) that this project aims to contribute to. In terms of practical benefits, the research aims to better understand the limitations of legislative tools such as the MSA (and the artefacts such legislation produces) by unpacking the power dynamics and voices that are included/excluded from these reports and provide ongoing commentary to the emergent discussion of combatting modern slavery.

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01. Human Resource Management

Investigating alternative pathways of justice perceptions and appraisal politics perceptions: Role of LMX and Perceived Control

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01. Human Resource Management

Investigating alternative pathways of justice perceptions and appraisal politics perceptions: Role of LMX and Perceived Control

ABSTRACT:
Organizations, particularly leaders and managers, ensure fairness, especially in the performance appraisal processes for employees, as it determines their pay and promotion. Although some research has explored the impact of interactional and procedural justice in different cultures, there remains a gap in the literature that can better explain the significance of each type of justice in various societies. It is possible that in some cultures, one type of justice holds greater importance, and its violation may lead to a strong sense of injustice. This study aims to explore the relationship between organizational justice and the perception of appraisal politics through alternative pathways. Specifically, it seeks to understand the influence of Leader-Member Exchange (LMX) and perceived control on this relationship.

Keywords:

Procedural justice, interactional justice, leader-member exchange (LMX), perceived control, perception of appraisal politics

Overview:

Performance appraisal evaluations heavily influence pay, rewards, and promotions of employees. If employees are not satisfied with their appraisals, it can give rise to perceptions of political bias in the appraisal procedures (Hochwarter W., Rosen C., Jordan S., Ferris G., Ejaz A. & Maher L., 2020). By implementing procedural justice and interactional justice, organizations can potentially mitigate these negative perceptions of perceived appraisal politics.

It is important to note that justice perceptions vary across cultures and align with cultural values. In cultures where power is highly concentrated among higher-ups, employees may seek greater involvement in the appraisal processes to achieve more desirable ratings. On the other hand, in relationship-oriented cultures, the fairness of appraisal processes is closely linked to the quality of relationships with supervisors (Ghosh, 2011; Leung K., Au Y., Fernandez-Dols J. & Iwawaki S., 1992). Organizations are microcosms of societies, where employees carry highly ingrained values such as power distance and high relationship-orientation to the work place.

By examining alternative theoretical pathways, we can understand deeply how procedural and interactional justice affect individuals' perceptions in the context of performance appraisals within a

01. Human Resource Management

specific cultural context characterized by high power distance and high relationship-oriented such as India (Chhokar J., Brodbeck F. & House R., 2007).

Current understanding:

Performance appraisal happens in various social context (Murphy & Cleveland, 1995)**,** where the relationship between supervisor and subordinate influences the process of performance appraisal and subordinate's reactions towards it (Elicker J., Levy P. & Hall R., 2006). Employees reactions to performance appraisals should also be studied in relation with their perception of justice (Levy & Williams, 2004; Liao & Rupp, 2005). It is crucial for organizations to assess and develop employees' skills and competencies, enhance performance and distribute rewards as per their outcomes (Fletcher, 2001). The dissatisfaction among employees with their performance appraisal processes can lead to the arousal of political perception related to appraisal. Political behaviours greatly influence performance appraisal processes and outcomes (Murphy & Cleveland, 1991).

Procedural justice is considered more relevant when examining politics (Andrews & Kacmar, 2001). If a member believes that promotions are done based on political manoeuvres rather than following just procedures, it will be seen as unjust or unfair. Similarly, interactional justice is frequently associated with employees' relationships with their managers. Studies have shown that clear and transparent communication can improve justice perceptions and enhance trust in decision-making processes (Ganster & Rosen, 2013). Additionally, research has shown that involving individuals in decision-making processes can improve perceptions of fairness and increase acceptance of decisions (Bies & Shapiro, 1987).

The quality of leader-member exchange (LMX), which includes factors such as information richness, trust, and communication frequency between leader and member, is related to the degree of perceived fairness (Pichler, 2012; Pichler S., Varma A., Michel J., Levy P., Budhwar P. & Sharma A., 2016). Various studies explore the relationship between the LMX and perception of organizational politics (Vigoda-Gadot, 2007), but no studies are available that examine the relationship between appraisal politics perception and leader-member exchange. Leaders are the closest proxy of an organization for

01. Human Resource Management

an employee working in it. The image of an organization an employee perceives is majorly through the way leaders behave and have relationships with the members.

Perceived control is defined as belief of people that they have ability to change outcomes in desired direction, and has an effect on individual work outcomes (Kahnweiler & Thompson, 2000). Employees having lower control in appraisal processes may feel that appraisals and performance ratings are given based on politicking and not on actual performance. Whereas, people having higher perceived control will feel that as they had greater control over job information and delivery which resulted in desired result, hence appraisals will also be in their favour.

Research question:

For countries like India that are high in power distance and high relationship oriented, we can explore which form of justice has more importance. The extant literature has highlighted high correlation between procedural justice, interactional justice, leader-member exchange, and perceived control constructs (Dulebohn & Ferris 2012; Dusterhoff C., Cunningham J. & MacGregor J., 2014). We try to explore which form of justice, whether procedural justice or interactional justice, affects the employees' perception of politics in the organization in high-power and high-relationship-oriented societies.

RQ1: Which form of justice, procedural or interactional justice, is more relevant or important in the formation of perception of appraisal politics in high power distance and high relationship-oriented societies?

Previous research has elaborately explained negative relationship between justice and perception of organizational politics but, limited number of research focusses on the appraisal politics. Low-quality leader-follower relationships can generate a loss of productivity within the workforce. Also, lack of perceived control over job results in loss of productivity. We think that LMX and perceived control would be a major explanator in the perception of appraisal politics and justice relationship.

RQ2: What is the relationship between procedural and interactional justice with the perception of appraisal politics from the employee's perspective?

01. Human Resource Management

Research approach:

Procedural justice concerns the fairness and impartiality of decision-making processes within organizations. Research indicates that when procedures are perceived as fair, individuals are more likely to accept and comply with outcomes (Tyler & Huo, 2002). In contexts such as performance reviews, where comparisons are inherent, perceptions of fairness in both process and outcome significantly impact employee satisfaction and trust (Dhiman & Maheshwari, 2013).

The control theory of procedural justice posits that people have a fundamental need for control and predictability in their lives (Thibaut & Walker, 1978). When organizations provide clear processes, opportunities for employee input, and effective grievance mechanisms, which are the core aspects of procedural justice, employees feel greater control over their jobs and outcomes reducing feelings of appraisal politics.

The group engagement model suggests that individuals' sense of procedural justice is influenced by their engagement with the organization, leaders and colleagues (Tyler & Blader, 2003). When employees feel connected and engaged, they are more likely to perceive procedures as fair and be satisfied with organizational decisions, fostering positive interpersonal relationships and reducing perceptions of political behaviour in appraisals.

In summary, ensuring procedural fairness not only enhances employee acceptance of decisions but also mitigates appraisal politics perceptions, thereby promoting trust, satisfaction, and effective organizational relationships. Hence, from the above discussion, we hypothesize that:

> *Hypothesis 1: Procedural justice will be negatively related to the perception of appraisal politics.*

Interactional justice, a facet of organizational justice, focuses on interpersonal fairness within teams and between employees and managers. Clear communication and involving individuals in decision-making enhance perceptions of fairness and trust (Bies & Shapiro, 1988; Ganster & Rosen, 2013). Equitable information sharing builds trust in leader-follower relationships (Lee Y., Kim S., Son M. & Kim M. 2015), reducing perceptions of appraisal politics. The quality of relationships between

01. Human Resource Management

appraisers and appraisees influences these perceptions negatively (Dhiman & Maheshwari, 2013). Open communication about ratings and decisions enhances interactional justice, mitigating appraisal politics. In performance appraisals, informational justice is crucial, ensuring fairness in explaining standards and performance feedback (Thurston & McNall, 2010). Providing employees with a voice in appraisals enhances their sense of control, reducing perceptions of politics. Clear explanations and information about ratings and decisions foster perceived control and reduce appraisal politics. Hence, based on the above discussions and explanations, we hypothesize that:

Hypothesis 2: Interactional justice will be negatively related to the perception of appraisal politics.

LMX may mediate the relationship between procedural justice and interactional justice with perception of appraisal politics. Group-value model of procedural justice states that employees are strongly influenced by their identification with the group, even if the identification is based on the least common circumstances (Lind & Tyler, 1988). Any group member expects value status in group, security provided by other members, and the opportunity to participate in the functioning of group aligned with the vision of leader. If employees feel that they were given enough opportunities to express their views and feelings about appraisal processes to their leaders and they are able to provide inputs during appraisal processes, it increases quality of relationship of employees with their leaders and are more likely to accept ratings. The in-group members have high-quality relationships with their managers and value their authority and trust them.

Hypothesis 3: The leader-member exchange will mediate the relationship between procedural justice and perception of appraisal politics.

We point out that if one assumes having high-quality relation with their manager and better forms of interaction can improve interactional justice perceptions, then members of in-group should have higher interactional justice perceptions because they get more care and support from their own group leader (Dansereau F., Graen G. & Haga W., 1975; Podsakoff & MacKenzie, 1993). Empirical research backs up this finding, as LMX mediates the relationship between interactional justice perceptions and

01. Human Resource Management

outcomes like performance, job happiness, and supervisor-directed OCB (Masterson S., Lewis K., Goldman B., Taylor M., 2000). Hence, the interpersonal factor of interactional justice also suggests that workers who are treated interactionally fairly will tend to form high-quality relationships with their supervisors.

Hypothesis 4: The leader-member exchange will mediate the relationship between interactional justice and perception of appraisal politics.

Procedural justice ensures that procedures are free of biases, all procedures are applied consistently and employees should have an opportunity to appeal against final ratings (Colquitt, 2001). Employees feel to have some degree of control over decision-making or in the processes involved in decision-making in procedurally just organizations. Similarly, if employees perceive their organization to be procedurally unfair to them, their perception of control will be weakened. The lack of perceived control over appraisal processes will make employees feel that appraisal processes are highly influenced by political considerations.

Hypothesis 5: Perceived control will mediate the relationship between procedural justice and perception of appraisal politics.

If employees feel that their organization is informationally fair with them, they perceive having higher control in processes and decision-making concerning appraisals. Hence, if the organization is interactionally just on the informational aspect, it enhances perceived control in employees of their appraisal processes. Through and detailed explanations of procedures in timely manner provides a sense of control for employees about the requirements and expectations of appraisals. The heightened sense of perceived control over appraisal processes in employees where organizations are interactionally fair to their employees will result in a reduced perception of appraisal politics as they have the information needed to do tasks and have access to voice mechanisms if they are dissatisfied with appraisal ratings. Hence, we propose that:

Hypothesis 6: Perceived control will mediate the relationship between interactional justice and perception of appraisal politics.

01. Human Resource Management

Figure 1 Conceptual framework of the study
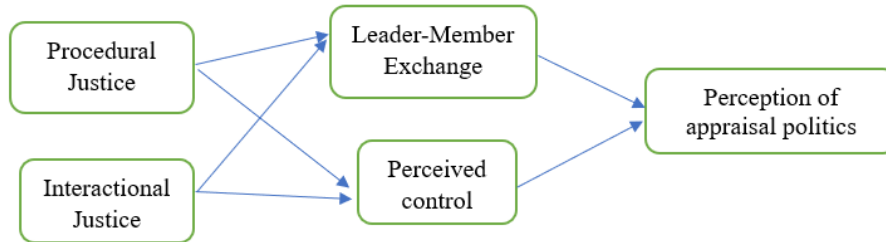
To test the above developed hypotheses, we are using survey method. We will be collecting data from professionals working in India having minimum of 2 years of experience in current organization. The study incorporated previously developed and validated scales, and measures are selected depending on their properties and use in similar studies. Data is collected in two phases to mitigate the common source bias.

Findings:

This is a work in progress project, and it is in data collection phase.

Contribution and Limitations:

The literature review has elaborated gaps in theories that need to be explored. By addressing to the gaps in literature we wish to advance the procedural and interactional justice theories in cultural context. We will be comparing justice that has high relevance in cultures, like India, which are high in power distance and highly relationship oriented. We can use this as a template to generalize similar results for cultures that are similar to Indian cultures. We also wish to advance performance appraisal theory by contributing in perception of appraisal politics theory, where we explain how does it gets affected under various contextual factor such as culture and hybrid form of work.

Implications:

We expect that organizations can benefit from the findings of our study. Our study will highlight the importance of culture and how organizations should consider that while designing HR policies to make employee feel more involved.

01. Human Resource Management

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COVER PAGE

Crisis Leadership: Unpacking Effective Leadership Attributes in the Australian Not for Profit Sector during COVID-19 Pandemic

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1

Title: Crisis Leadership: Unpacking Effective Leadership Attributes in the Australian Not for Profit Sector during COVID-19 Pandemic

Abstract

This paper aims to integrate the leadership attribute which may lead to a positive work environment and provide certainty among the members of Australian not-for-profit organisations during crisis. The study investigated leader perceptions of effective leadership attributes and behaviours during crisis. It is based on in depth interview of fifteen Chief Executive Officers of the Australian NFP organisation during COVID-19 pandemic as part of a greater research project on crisis leadership. The interviews were analysed using an interpretative methodology, resulting in the development of a thematic framework that encompasses leadership attributes and behaviours. The findings suggest that leadership is a journey where being visionary, passionate, and purposeful, empowering, transparent and trustworthy, and listening are key attribute of effective crisis leadership. In examining the key attributes of effective leaders during a crisis, our study uniquely contributes to the literature on crisis leadership by unpacking key attributes of effective leadership in crisis.

Keywords:

Crisis, Leadership, Crisis leadership, COVID-19, Not-for-Profit Sector

1.   Introduction

Effective leadership is an essential determinant of success for not-for-profit (Hereafter NFP) organisations. The term 'not-profit sector', 'not-for-profit' organisation, 'third sectors' and 'supporting sector' are used interchangeably in the literature discussing NFP. For this paper we will use the term not-for-profit (i.e., NFP). Seijts et al. (2023) argued that the best and worst in leaders were revealed across the public, private, and NFP sectors during the COVID-19 pandemic. People look for the best in their leaders, especially during a crisis (Wu et al., 2021; Riggio & Newstead, 2023a, 2023b). There continues to be a search for effective leader traits and attributes those may enable leaders to navigate through unexpected and highly disruptive events and crisis contexts (Wu et al., 2021; Klien and Delegach, 2023).

Leaders are widely seen as having a vital role in enhancing the efficiency and long-term viability of NFP (Durst & Newell, 2001; McMurray, Pirola-Merlo, Sarros, & Islam, 2010; Siddiqi, 2001; Walsh, McGregor-Lowndes, & Newton, 2008). Although the NFP sector applies many business practices for sustainability, their nature of operation and stakeholders are different from profit generating corporations. NFP leaders are often motivated by the desire to serve other members of the organisation, ultimately aiming to enhance their wisdom, autonomy, and likelihood of becoming leaders themselves. Several theoretical frameworks and empirical methodologies have been suggested to address the primary concerns related to leadership. However, the majority of research primarily concentrate on the profit generating sector/for-profit sector (Barker, 2002; Bolden, Hawkins, Gosling, & Taylor, 2011; Rost, 1993). While there are several studies on different leadership theories in NFP contexts (i.e., Gee, Nahm, Yu, & Cannella 2023; Muchiri, Gamage & Samad 2023; Rowold & Rohmann, 2009), there is limited scholarship on crisis leadership, specifically in Australian NFP sector. It is therefore pertinent to ask (1) what is a crisis and (2) What makes effective leaders during a crisis, specifically in the Australian NFP sector context? This study contributes to scholarship on crisis leadership, providing empirical evidence sourced from leaders of the Australian NFP who navigated a crisis situation such as the COVID-19 pandemic. The findings will pave the way for future research on construction of a measurement matrix of crisis leadership.

2

Literature Review

Crisis is generally defined as an unexpected event that is highly salient and disruptive (Bundy et al. 2017, Pearshon & Clair 1998; Wu, et al. 2021). Coombs (2007, p.164) describes crisis as 'a sudden and unexpected event that threatens to disrupt an organization's operations and poses both a financial and a reputational threat'. A crisis is often used interchangeably for situations such as accident, emergencies, disasters, and a range of business problems (Fraher, 2020). Crisis affects individuals in the society, within an organisation and in a greater level it may affect the complete organisation or the society. In an organizational context, a crisis is defined as the disruption of normal patterns of corporate activity by a sudden, overpowering and uncontrollable event (Seymour and Moore, 2000; Schneider, 2014; Grint, 2020). These crises can be economic, physical, informational, human resources, and reputational (Hutchins, 2008).

Studies on crisis leadership emphasised the need to understand the role of leaders in a crisis context and follower expectations, as it could moderate the effectiveness of leader behaviours and styles in crisis and influence how leadership manifests during crisis within certain sectors (Yukl, 2013; Klien and Delegach, 2023; Uhl-Bien et al., 2007; Uhl-Bien, 2021). Wu et al. (2021, p. 1) in their recent study on crisis leadership focused on the effects of the crisis on the behaviors and perceived attributes of leaders, their leadership styles, and the leadership process. However, Wu et al. (2021, p. 18) proposed that "despite the progress made in the crisis leadership literature, further investigation is required to advance the field and to better inform leaders of effective means for handling future crisis".

Indeed, the COVID-19 pandemic represents a crisis (Wu et al., 2021). The COVID-19 pandemic caused a major disruption in the Australian society in economically as well as general health and wellbeing of its citizens. The world is yet to completely recover from the hang on effect of COVID-19 pandemic. A crisis has huge impact on performance at the individual, group and organizational levels, and thus, warrants further research (Riggio and Newstead, 2023a, 2023b; Williams et al., 2017; Nguyen et al., 2022). The COVID-19 pandemic disrupted societies around the globe by affecting individual lives and organizations globally (Garretsen et al., 2022; Kaiser, 2020; Laustsen and Olsen, 2022; Seijts et al., 2023; Stoller, 2020). Seijts et al. (2023, p. 127) argued that "[t]he COVID-19 pandemic has illuminated the need for effective leadership in the public, private, and not-for-profit sectors, revealing the best and worst in leaders". The Australian NFP sector are not exception to that, and the recent pandemic significantly impacted Australian NFP sector in terms of its funding and day to day function.

The NFP sector is an essential component of any welfare state and constitutes a substantial portion of many nations' gross national product. The supporting sector has seen significant transformations as a result of developments in the Australian socio-economic environment in the last decade. It is confronted with the task of doing ever more with increasingly limited resources. Therefore, the matter of leadership becomes paramount in guaranteeing the long-term viability of NFP organisations. However, the scientific and professional literatures have observed that the NFP sector is now facing a shortage of capable executives (Ronquillo, Hein, & Carpenter, 2012; Tierney, 2006).

It is reasonable to presume that leaders are called upon to fulfil two primary objectives within the organisation. On the one hand, the leader serves as a team builder, responsible for recruiting and overseeing a group of followers with the ultimate objective of achieving specified objectives that are ultimately in accordance with the organization's objectives and scope. Conversely, the leader serves as a catalyst, encouraging adherents to adhere to the organization's mission, vision, and fundamental values.

3

The responsibilities of a leader remain largely unchanged while dealing with NFP organisations, notwithstanding the unique qualities of such organisations (Frumkin, 2005). NFP executives are required to address both internal and external challenges. In respect to the first point, they must handle the internal interactions with the board, the staff, and the volunteers, with the ultimate goals of increasing the organisational environment and improving the organization's capacity to fulfil the requirements of its relevant stakeholders. To ensure the long-term viability of the organisation, they must manage their connections with external supporters, such as funders and other stakeholders, while addressing external challenges (Nanus & Dobbs, 1999). Furthermore, NFP Chief Executive Officers (CEO) must address several issues that are absent in the profit generating sector. In the context of the debate, they face significant challenges when assessing the accomplishments of their team. When making choices, it is necessary to reconcile the adherence to market principles with the advancement of the philanthropic objectives endorsed by their organisation. Furthermore, the organization's capacity to achieve the desired objectives is heavily dependent on the contributions of volunteers, who have distinct requirements compared to the paid staff (Ronquillo et al., 2012). Thus, NFP leadership displays several distinctive characteristics that should be thoroughly examined by researchers and practitioners.

While Wu et al. (2021) contended that crisis leadership should be considered as an important domain within the leadership literature, Laurett and Ferreira (2018) argued that there is still a great deal to uncover in the realm of knowledge in the NFP sector. Jaskyte (2018) also argued that the study of leadership in NFP sector remains insufficiently explored. In view of the above this Our study aims to explore the nuances of leadership in NFP sector under crisis and explore the research question what leader attribute or behaviour makes people effective leaders under crisis?

2. Methodology

This research applied a qualitative approach to answer the research question. Given the necessity to reveal the multifaced aspects of the phenomenon being investigated, we adapted a qualitative, interview-based research approach. Qualitative research facilitates a more in-depth investigation using descriptive and individualistic approach. The processes used are inductive approach, rather than deductive. This helped to generate substantive themes and codes from our collected data so it can be used to explore and determine leadership in the current challenging environment and via specific observations that lead to pattern recognition, general conclusions had been drawn to understand the attributes that makes people good or bad leaders and contributes to the failure of leadership (Stern and Porr, 2011).

Applying self-selecting participants protocol, the participants represented a convenience sample, based on their availability. Following clearance from the relevant ethics committee (reference number: H14128), semi-structured interviews were conducted with fifteen CEOs of Australian NFP using the Zoom technology, each lasting approximately thirty minutes. In the context of literature, data collection was conducted until the point of saturation was reached, as described by Sandelowski (1995). According to the literature, it is advised that qualitative research should include a minimum of 12 samples in order to achieve data saturation (Clarke and Braun, 2013; Fugard and Potts, 2014; Guest, Bunce, and Johnson, 2006; and Sandelowski,1995).

An interview guide was designed, and invited discussions on (i) Interviewees' experience of leadership prior to and during the pandemic, including commentary on the challenges and opportunities posed by the crisis; (ii) Interviewees' experience and perceptions of positive and negative leadership traits, attributes and behaviours in the Australian NFP sector. Prompts were used based on specific interviewee arguments. Interviews were digitally recorded and

4

transcribed. Transcripts were checked by the research team to ensure that they were error-free. Thematic analysis was undertaken as recommended by Braun and Clarke (2013).

The interviews were analysed thematically using template analysis. Throughout this process, we were primarily focused on exploring and determining the coherence of the data collected and the extent to which it deepened our understanding of the leadership attributes and challenges during difficult times. Data was analysed using the Nvivo (Version 14.23.0) software.

The research questions for this study were addressed within a model framework of interpretivism and constructivism. A key principle adopted for this study was to reflect the CEOs' own accounts of their attributes, attitudes, opinions, challenges, and experiences as faithfully as was possible, while also accounting for the reflexive influence of the interpretations as the researchers (Schwandt,1994). Ensuring qualitative data was collected and analysed in a manner that respected and expressed the subjectivity of participants' accounts of their opinions, while also acknowledging and embracing the reflexive influence of researchers as the interpreters.

Latent coding was deployed to allow going beyond the descriptive level of the data and attempts to identify hidden meanings, underlying assumptions, ideas, and ideologies that shape or inform the descriptive content of the data (Thyme, et, al., 2013; Cash, & Snider, 2014). Applying this method, the analysis becomes much more interpretive, requiring a more creative and active role on the part of the researchers. Content analysis was piloted by highlighting the frequency of occurrence of a particular theme, content analysis allowed us to verify the persistency of certain themes. Understanding the frequency of occurrence of themes also allowed us to better understand the differing perspectives among interviewees (Lindgren, Lundman, & Graneheim, 2020). The analysis was initially conducted on each interviewee and then systematically compared across interviewees to facilitate theoretical generalization.

Finally, to ensure the reliability of the data, several approaches were used. Credibility was promoted through deep researcher engagement, detailed participant responses and allowing sufficient time for interviewees to share examples and anecdotes. Expert peers were asked to review the interview questions, a random sample of transcriptions, and the coding structure. Peer researchers were also invited to cross check the analysis process, ask critical questions, and review the emerging patterns. These steps were taken to ensure the credibility of the conclusions made. This led to the findings which are discussed in the following sections.

3.   Analysis and Discussions

The purpose of this study was to determine the NFP leadership attributes during crisis. The aim was to determine whether these attributes could be used as an analytical taxonomy for the issues that nonprofit leaders face. Seven leadership themes appeared to be prominent as a result of the analysis which ware discussed in the following sections**.**

3.1   Journey

Taking people in a journey appeared to be the most prominent theme appeared in this research. The act of leading the journey fulfils two primary purposes: firstly, it guarantees that the organization's board and personnel possess a uniform explanation of the organization's mission; secondly, it acts as a reference point against which the organisation assesses its achievements and adapts its course over time. Leaders in the Australian NFP sector consider leadership as a journey irrespective of the achievement of the goal. According to the respondents (i.e., Australian NFP CEOs) leadership is a journey by itself:

5

"Leadership for me is a journey, it's not about control. It's a service that I give. My leadership has been a journey. I'm not the same person I was 30 years ago, or 20 years ago, or 10 years ago so it certainly has been a journey". [NFP12]

"I think to be able to ask people to come on a journey with you without having that trust established is next to impossible…You've got to have enough of the process and the systems alongside being able to lead people and take them on a journey and that they feel that they understand where you're going, and you've been communicating to them all the way through". [NFP3]

"I see leadership is about a journey. And it's not what the end goal is. Whether we've achieved it or not". [NFP5]

Aligning individuals in a collective journey may be intricate, since it often necessitates leaders to make challenging compromises, such as balancing short-term and long-term objectives or deciding between managerial and leadership strategies. Furthermore, individuals and expeditions undergo constant development, and leaders must consistently reassess both to guarantee the nonprofit organization's agility and ability to adjust to the evolving circumstances and requirements of society. The idea of leadership as a journey is supported in the contemporary leadership literature (Trinder, 2008; Rainey, 2022; Samad, Al Jerjawi and Dadich,2023).

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Insert Figure 1 about here
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3.2   Visionary and well-planning

Vision appeared as a key theme in this research. Respondents argued that visionary leadership is a very potent instrument for leaders. Visions provide a visual representation of the future of a group, so enhancing the comprehension of followers about the potential development of the collective. Therefore, they provide their followers a significant cognitive framework that assists them in comprehending their environment and integrates organisational actions into a broader context. According to the respondents, vision include setting a goal or objective, articulate and communicate that vision clearly and incorporating the voice of the followers are essential for achieving the vision. Examples of the responses of the participants on vision is as follows:

"Leadership for me is the process of setting a vision, I guess, and encouraging others to get on board with that vision to make it a reality. What I'm wanting to do is try and build a team of people who want to see change happen in the way that we've described it in our vision. And my job is to help people to be inspired and to feel motivated towards that vision". [NFP2]

"I think that a strong vision, a really good sense of clarity of purpose, and not only being able to articulate what that is but really believing in that vision and being able to communicate that belief I think is like the radar that keeps the ship on track". [NFP7]

"It's all about allowing people whom you lead to have a voice, also allowing them to be creative and give them space and that's what leadership is all about. It's all about encouraging people to be the best they can and to support the vision… Some leaders are good leaders, but they don't know how to communicate their vision to the people, so they fail". [NFP11]

From the responses of the CEOs of the Australian NFP organisations, it is evident that the first and crucial stage is to attain strategic clarity. Attaining strategic clarity involves

6

providing specific and tangible answers to two fundamental questions that are central to a NFP organisation's vision, (1) What kind of impact are we willing to take responsibility for? (2) What actions must we take, and what actions must we avoid, in order to successfully get this desired outcome?

However, leaders in the NFP also acknowledge the fact that situations may change as often as they would and there may be occasions that the vision may not be achieved. A true leader must accept failure and move on with the lessons learned from the failure and reestablish the vision most appropriate. As one of the respondents mentioned:

> "I think leaders often are able to create big visions, have big dreams are quite determined and maybe quite good operationally about making them happen. But sometimes life changes or actually you were just wrong, and you actually have to hold a funeral on it. You have to say, wow, that was a good idea. But maybe that was a good idea it served its purpose for that time, but now it's time to let it go. And people don't do that well and so often we don't actually deliberately hold a funeral, we just let it go pear-shaped, and then it gets murky and then just gets messy". [NFP1]

Because of the crucial role of NFP organizational leaders and their capacity to lead companies with their vision, present-day leadership programs, for the NFP should seek to achieve beyond stressing visionary leader attributes. Leadership programs should equip future leaders to participate in styles that stress the shared aims of the participants and attain recognized results. Work meaningfulness is influenced by two factors: a job-related goal that provides a justification for one's effort, and the personal significance that one attributes to this reason. Visionary leadership promotes a sense of meaningfulness among followers by emphasising how organisational actions contribute to a specific goal. A greater knowledge of how visionary leadership boosts an organization's success is not just intriguing for the future of leadership study but critical to strengthen competitive advantage in both the nonprofit and corporate sectors. In earlier research on the attributes of effective leaders in politics during crisis, Samad, Al Jerjawi and Dadich (2023, p.6) argued "An effective leader will define the vision and communicate it to foster commitment and enthusiasm within the community during a crisis. Maran, Baldegger and Klosel (2021) found a significant relationship between vision and goal achievement. A word tree generated by the Nvivo software is presented at Appendix 1.

Insert Figure 2 about here

3.3   Purposeful and Passionate.

As mentioned above, a vision must have a purpose. Leaders need to assist companies establish a better sense of purpose by tying efforts to achieve the vison. Leaders employ purpose and passion as the foundation of their job. Knowing self and the purpose is critical here. Leaders must have the capacity to generate and explain a clear mission with the passion that creates meaning, engagement, and participation in the work of an organization. Leaders build their own personal purpose and then integrate it into a common vision and objectives with their coworkers. In crisis often people are afraid of the uncertainty and fear wrangling becomes an important of navigating through crisis. In this regard respondents in this research argued:

> "I think business sustainability is very important. However, staying really true to the purpose is very important too". [NFP4]

7

> "I think leadership is about serving. And before you serve, you need to know who you are and what your purpose is. So, without knowing where you're going and following a process, you cannot lead anybody". [NFP5]

> "When you know yourself, you know who you are, you know your purpose, you are focused, and you accomplish what you set out to be… That leadership has to be really made simple, where you can explain what your purpose and your vision are for your own life and for that of your organisation". [NFP13]

> "I actually think the best leaders have both passion and boundaries. I think if you're too passionate, sometimes you can't exercise good judgment, because you're too emotionally caught up. But I think you need to be emotionally engaged but still have some boundaries… I think ultimately for me, it comes back to the purpose of leading with love and fear wrangling. Abandoning fear and helping others abandon fear". [NFP1]

The word purpose is defined as the organisation's reason for existing how the company aspires to benefit stakeholders and contribute to the greater good. Thought leaders and experts most typically refer to 'purpose' in the context of companies and leadership. The social and relational stakeholder perspective of responsible leadership emerges from a higher purpose that provides the framework for the establishment of caring, inclusive connections with stakeholders. Extent literature on leadership also emphasises on the importance of having a purpose in leadership (By 2021; McIntyre, 2022). A word tree generated by the Nvivo software regarding purpose is presented at Appendix 1.

Insert Figure 3 about here

3.4   Ability to listen.

Active listening, with the intention of understanding and motivating others, is a fundamental principle in leadership. It is a crucial element in the leadership approach of all types of leaders, whether they are in social, political, or organisational roles, whether they are in profit generating or NFP sectors. According to the Australian NFP leaders who participated in this research listening is an important attribute of effective leadership:

> "In order to be a good leader, I need to be willing to listen and to take in alternate points of view. But I need to give myself a space to assess those views and to determine if I need to change or whether I keep doing the same thing… You are decisive but your listening, keeping the door open to feedback and other people's... Because I think good leaders need to listen". [NFP2]

> "I think good leaders are good listeners. And being able to, like I said earlier, being able to acknowledge your own strengths and weaknesses. And being able to consult. A good leader consults and takes responsibility for the outcome. No excuses. …So, what I would say is bad leadership is that people are only listening to themselves, they're not really truly making efforts to connect in meaningful ways with people, and they're not really trying". [NFP5]

> "It's all about allowing people whom you lead to have a voice, also allowing them to be creative and give them space and that's what leadership is all about. It's all about encouraging people to be the best they can and to support the vision". [NFP11]

8

NFP leaders must actively engage in listening and placing faith in others in order to comprehend the significance of and interrelationships among individual interests (including those of staff, board members, customers, and individual organisations) and the collective welfare (the overall well-being of a whole community). Recognising the need to balance personal interests with the greater good, nonprofit leaders must be mindful of the conflict between an individual's self-interest and their commitment to addressing social problems. In the presence of this conflict, it is essential for leaders to possess a clear vision in order to establish a culture that appreciates and harmonises both aspects and facilitates the transformation of this viewpoint into enduring action and transformation inside organisations. This argument is also supported in earlier literature on leadership (Baker, Dunne-Moses, Calarco & Gilkey 2019; Simmons, 2011).

Insert Figure 4 about here

3.5 Transparent

NFP leaders must engage in thoughtful and contextual deliberation over intricate matters such as openness and confidentiality. They should also be mindful of the potential consequences of total transparency on the public's view of the organisation. NFP leadership may foster a culture of integrity by transparently and efficiently conveying the organization's goals, initiatives, and accomplishments. It is important to recognise that those who claim to work for the benefit of the public also have a responsibility to gain the public's confidence. Trust is a crucial factor in a transparent relationship. NFP leaders are therefore obligated, both individually and in their professional capacity, to foster a culture of honesty that encompasses values such as transparency, responsibility, reliability, mutual esteem, civic excellence, and good citizenship. With regards to transparency the respondents argued:

> "I think, for me, what was needed from a leadership perspective is really good, open, transparent communication. So, I think, again, the only thing I know to do and what I've seen other good leaders do in those situations is to just be honest, open and transparent about the vulnerability." [NFP 6]

NFP organisations may be defined as entities that are guided by a goal rather than being only focused on market competitiveness, distinguishing them from for-profit organisations. As shown at figure 5, transparency of leaders values and action are necessary for building a trustful relationship between the leader and the led. The journey encompasses the fundamental objective of the organisation, which includes the scope of the tasks to be performed, the rationale for the organization's existence, and the customers and constituencies it is intended to serve. Respected and reliable leaders of NFP organisations are motivated to distinguish themselves from less reputable leaders in order to enhance their reputation. This is crucial since the non-profit sector cannot bear the repercussions of a public scandal and a loss of credibility, which would ultimately impact their ability to receive contributions and raise funds. Therefore, transparency and trust are essential in NFP leadership. It is argued that transparent communication within organisation promotes trust and confidence leading to higher employee engagement (Jiang & Men, 2017; Hadziahmetovic & Salihovic 2022).

Insert Figure 5 about here

3.6 Trustworthy and trusting others

9

Trust in people and being trustworthy both were found key ingredient of effective leadership. Collaborating with others who have different ideas may provide opportunities for diverse viewpoints, but it can also lead to disputes arising from these differing opinions. Trust helps leaders to take people along the journey and overcome difficulties. NFP leaders have the task of fostering individuals' ability to collaborate and promoting comprehension and admiration of other viewpoints.

> "Leadership is about earning trust with the people that you work with, electing them, selecting them, and they will join you and trust you and that's how it is. If there's no trust, leadership will collapse because they will just choose somebody else". [NFP 9]

> "I think you've got to develop trust. So, when you want the tough decisions to be made or the hard truth to be told, there's an element of trust that you've built up by what you've been able to demonstrate and prove before you get to that point… Even if you get it wrong, as I said before, if you've built up the trust and the credibility, people can be very forgiving. And I think as long as you can demonstrate that it came with good intent and there was a really solid background of why you would do that. I think there are some of the key challenges". [NFP3]

> "What helps us overcome challenges is trust and building alliances over the years. So, you know there is trust in those who work with you and work around you". [NFP5]
> "I think, when you're a leader, you've got to be trusting of people. You can't do everything yourself. Otherwise, it will be a dictatorship… I think good leaders need trusted advisors and people who help them stay level-headed. I think that helped me to balance, and I've certainly value having people whose opinions I trust and who helped me stay focused as well. [NFP2]

Trust and transparency are complimentary. Leaders must establish a clear and meaningful purpose and gain the confidence of others by being open and dedicated to their actions and words (Balchandani et al., 2019; Clegg et al., 2021; Shaninger et al., 2020). The importance of trust in leadership is widely discussed in the leadership literature (Burke, Sims, Lazzara and Salas, 2007; Mishra, & Mishra, 2013). Word tree associated with trust is presented as figure 6 at Appendix 1.

Insert Figure 6 about here

3.7 Empowering and Supportive

Empowering leadership refers to a distinct set of leader actions that may promote psychological empowerment, leading to improved job results. Empowering leadership aims to increase the followers' perception of the significance and self-assurance in relation to their job, involvement, and freedom to make decisions.

> "My role as a leader is also to make sure that I'm not alienating people and that I am building a support base for the things that I'm saying. I think that's really important. So, I spend a lot of time working with emerging leaders, providing them with information, context, opinion, and support". [NFP10]

> "At all times you are a leader, at all times you're making decisions, you're leading the way, you're showing the way, you're empowering people, you're empowering agencies". [NFP13]

10

> "I have seen a lot of leaders who particularly get into senior roles who just won't roll their sleeves up and do anything. And I think getting that sweet spot right between like empowering others, but not being tapped out and lazy and just thinking you're king or queen that's... I think they have poor leadership qualities". [NFP1]

Empowering individuals to take action is achieved via enabling and providing assistance. Inaction often arises from a lack of clear communication and implementation of assistance and empowerment. When individuals are left to decipher the path forward on their own, it may lead to fatigue and a lack of responsiveness.

Empowerment environment refers to the collective view of how much an organisation utilises structures, policies, and practices that promote employee empowerment. While it may be preferable for enabling leaders to have a strong ethical basis, it is important to note that empowering leadership and ethical leadership are distinct concepts. enabling leaders do not always prioritise an ethical stance. Not all leaders who possess ethical qualities are inherently empowering leaders. For instance, ethical leaders may emphasise ethical principles and norms in different task processes, although they may still maintain the bulk of decision-making or leadership power by refraining from sharing or assigning it to their followers. Empowerment can be achieved by being supportive. Being supportive is not only unidirectional but reciprocal. A supportive leader also gets support from the followers in times of failure:

> "Good leaders identify great people and support them to take over from them, but truly great leaders identify good people and support them so that one day they step out and into another role and they work for them. I think that's what great leadership is, just really recognizing the people who would be better at the job than you are and getting them to do it". [NFP1]

> "I've certainly failed, but I've been very fortunate that people around me have allowed me to fail and have helped pick me back up and been a support behind me. So, I think it's vulnerability-based trust, but you have to create that, it doesn't exist if you don't create it". [NFP3]

Insert Figure 7 about here

Leadership in nonprofit organisations is recognised as intricate in terms of behaviours, connections, group requirements, and mission goals. When the variety and responsibility burden of nonprofit leadership combines with the added constraints of organisational crises, the level of complexity increases significantly. The absence of leader evaluation in the context of nonprofit emergencies is alarming, considering that nonprofit leaders are a diverse group integrated into various positions and spaces within their organisations. They are responsible for establishing and nurturing the organisational relationships necessary for the success of NFP sector, especially in times of crisis. Therefore, it is not surprising that nonprofit executives who are facing crises regularly seek studies on crisis leadership.

From a values-orientation perspective, leaders who embrace humanistic values of transparency, trust, empowerment, besides attributes such as being visionary and purposeful through their actions, words are arguably more successful in creating a shared climate of trust and justice compared to leaders who gravitate towards narcissistic, unethical and artificial values. These are consistent with the literature indicating that authenticity, ethics, empathy, are key qualities of value-oriented and self-aware leaders during crises (Keselman and Saxe-Braithwaite, 2021, Maak et al., 2021, Seitjs, et al., 2023; Strum et al., 2017). Similarly,

11

leaders who anchor organizations' practices around values of choice, empowerment and inclusion are more likely to be able to take people through the journey when confronted with crisis. Our findings indicated that value-based attributes were externally focused on followers, as well as inwardly directed towards leaders.

4.   Contribution and Limitations

In examining the key attributes of effective leaders during a crisis, our study among the CEOs of Australian NFP uniquely contributes to the literature on crisis leadership by unpacking key attributes of effective leadership in Australian NFP. Our study makes a key contribution to knowledge by showing how NFP leaders need to be able to draw on specific crisis leadership attributes to address elevated work demands arising from crisis contexts. Due to travel restrictions, this study relied on virtual interviews using the Zoom technology, and thus did not benefit from observations that might have enabled us to better discern interviewee responses. Additionally, our interviews were conducted when COVID-19 was unfolding, and thus it is possible that it was too early for our interviewees to judge the full ramifications of the crisis. Thus, a longitudinal approach that tracks the evolution of the pandemic would likely contribute to a holistic picture of leadership attributes in times of crisis. Future research could also focus on developing a dedicated measurement instrument for crisis leadership To help with further clarification of the crisis leadership concept.

5.   Conclusion

NFP sector has an important role in the society, they have a distinct character, and their goal is different from the goals of profit generating corporate sector. Like any organisation, leadership is an important driver for achieving its strategic objective. NFP organisations often experience crises, but there are few studies that investigate how nonprofit executives make sense of these crises and navigate through them. Crises, such as the COVID-19 pandemic and its repercussions has intensified the strain on the resources of NFP organisations. The significance of leadership in challenging circumstances, such as during the COVID-19 pandemic, is evident more than ever before, with the pandemic providing unprecedented challenges to leaders across all sectors. Moreover, there is a growing demand to evaluate nonprofit leaders and their ability to navigate significant organisational changes, considering their positions in these distinct groups. This is particularly important due to the nuanced and significant changes in political, legal, financial, and social environments, as well as the rise in crises affecting nonprofit, for-profit, and governmental sectors caused by both human and nonhuman factors. Nonprofit executives often struggle with crisis response, which heightens the likelihood of organisational mission failure. Our study conducted among Australian NFP leaders during the COVIT 19 pandemic found that leadership is a journey in terms of the leaders' experience and in terms of leaders-follower relationship. The study also found that leader attributes and behaviours such as, visionary, having a clear purpose, passionate, able to listen, transparent, trustworthy and trusting others, empowering and supporting others are key attributes and behaviours that enable leaders in the Australian NFP during crisis.

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13

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14

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16

Appendix 1: Figures

Figure 1: Word tree associated with journey

17

vision

that

18

Figure 2: Word tree associated with vision

Figure 3: Word tree associated with purpose

19

listen

(word tree visualization)

Right-hand branches (linked by "to", ".", "and", "to"):

- as I said before . And so , yeah , good leaders are able to be divisive and be inclusive at the same
- see stuff from other people's point of view . I think being deeply wedded to your own perspective and not
- understand your context , all of those things , I think some leaders don't have the same level of passion for
- And of course , then you'll end up in a position that seems like ," Oh , well , they have this follower ." And
- But I think that process of listening is difficult because ... And you need trusted advisors around you . I think that
- I believe ... Maybe I haven't said this , not a deep understanding that everybody has a role in a team and
- They don't listen to the people that need to be listening to . So , they are only listening to themselves . And
- deeply understand . Your environmental context , your political contexts , your human contexts , what's happening for other people . and in that
- incorporate others' views as well . And I guess the converse of that for bad leaders is people who are
- to take in alternate points of view . But I need to give myself a space to assess those views
- more when you need to provide more leadership . Because I think when we say bad leadership , that's what I said ,
- or don't also embrace the criticism . Because leaders ... When you step in leadership , you will have a lot of challenges .
- my voice . Do I give debate to that to make my identity ? And I recognize my position of privilege
- people whom they know got more voices outside the table . So , for example , how many impacts , how many influences
- the people that need to be listening to . So , they are only listening to themselves . And bad leaders also
- they're people that are credible , they're people that are genuine , they're people that are confident and consistent . So they're
- what our clients need from us , adjust , and then negotiate that with funders ?" And that's what we ended up
- you . So , power with people is better than power without people as leaders . And I think that's what I

Left-hand branches:

- believer in themselves and to believe that the vision is worthwhile . If I look at leaders that I respect and
- Bad leaders
- Bad leaders don't listen . They — don't
- your personal interests , and the community interests , and those leaders who sometime become bad leaders are those leaders who
- focus as if nothing's happened ? We're just going to deliver our KPIs as per normal , or actually , do we really
- him and that's how we need to use our power and of course the role that power has to play . People
- at time being seen as frantic or being not clear , or not having a voice , or people don't want
- change how we're getting there . And I think good leaders are able to have that dialogue and are able
- different . So , yeah , I think mainly ego . I reckon that is the natural cusp of leadership really and unpreparedness
- decisiveness but your listening , keeping the door open to feedback and other people's . Because I think good leaders — need
- you can just see where you have your over the mark , where you need to adjust , where you
- that they don't have to do the work in a new setting . And you have to do the work
- that they're considering . So , I think the major challenge in that sense of leadership is to take the time
- think ego , Azaar , Ego . I think ego . Okay . Let me do a list for you . I think ego , inability
- totally competent in all of those things but yeah , certainly . Yeah , probably a big one for me is — willing
- what's important to me is that I'm ... In order to be a good leader , I need to be
- how many impacts , how many influences you feel in the community , make you a good leader and because people — will
- their moral ground and compass , goes with the Populist view , that's where the risk is , because of course , crowd

20

Figure 4: Word tree associated with listen

Figure 5: Word tree associated with transparent

21

Figure 6: Word tree associated with trust

22

Figure 7: Word tree associated with empowering

23

1

Inclusive and Sustainable Learning in Elite Universities: An inductive study on the experiences of Widening Participation students in Scotland

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Inclusive and Sustainable Learning in Elite Universities: An inductive study on the experiences of Widening Participation students in Scotland

ABSTRACT

This study explores the experiences of widening participation (WP) students in higher education, focusing on their challenges, coping strategies, and the implications for support systems. Through qualitative analysis, key themes emerged including academic preparedness, socio-economic barriers, mental health concerns, and perceptions of institutional support. Findings underscore the resilience and proactive nature of WP students, who navigate complex personal and academic landscapes with strategic goal-setting and self-reliance. However, dissatisfaction with institutional support services, exacerbated by bureaucratic hurdles and perceived inefficacy highlights areas for improvement. The study advocates for tailored interventions and policy adjustments to enhance inclusivity, support structures, and educational outcomes for WP students. Practical implications extend to universities, policy makers, advocacy groups, employers, and the broader research community, aiming to foster equity and empowerment within higher education

Keywords: widening participation, equality, inclusive learning, student mental health, student wellbeing, Scotland

1. Overview

 "Widening Participation" or "Fair Access" is a flagship initiative of the Scottish Government with a stated aim that 'by 2030 one-fifth of entrants to higher education should come from the 20-per-cent most deprived communities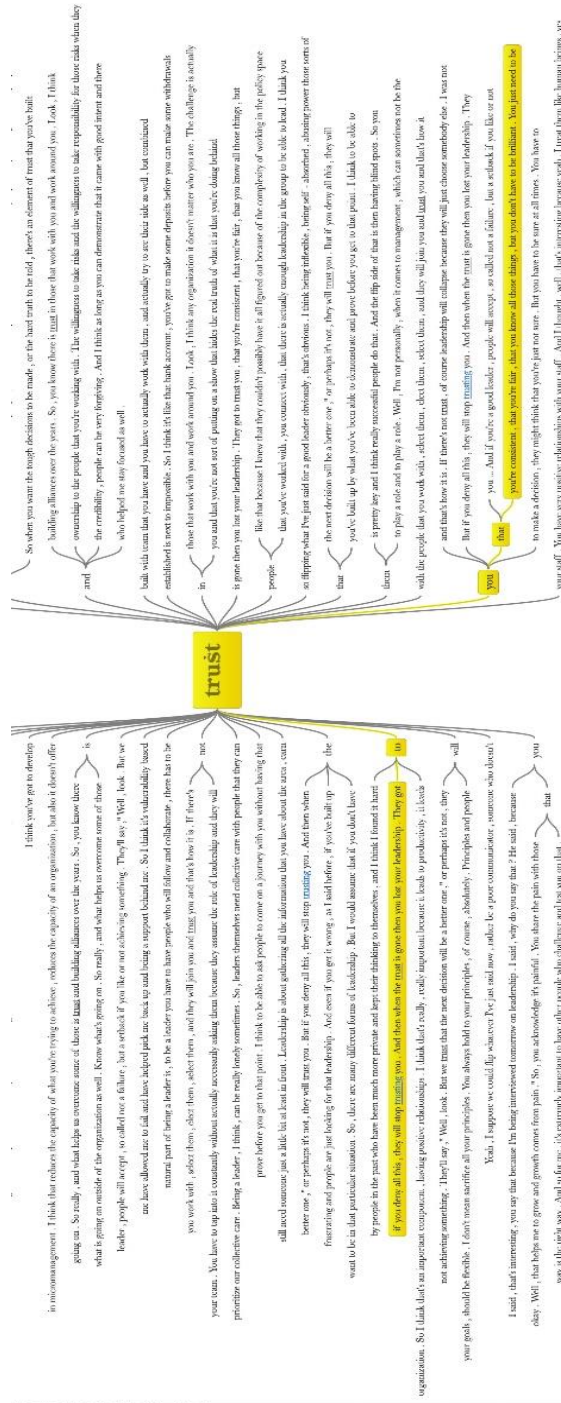 in Scotland' (Fair Access, 2024). However, little is known about how this group experience and cope with the transition into, and journey through university, particularly with respect to the mental health and well-being challenges they may face, or the ways in which they understand, and are supported with their wellbeing and mental health. This research aims to investigate the distinctive nature of mental health and wellbeing in the WP cohort in order to devise strategies to better support these vulnerable students to succeed.

2. Current understanding

The well-established links between poorer economic circumstances and poorer student well-being (e.g. Compton and Shim 2015; Roberts et al. 1999), suggest that understanding and improving student mental health has particular value for the WP cohort. WP students are perhaps doubly disadvantaged as they are more vulnerable to experiencing a greater range of challenges to their mental well-being,

such as social isolation, loneliness, financial insecurity, complex family circumstances and longer working and commuting hours outside of university. Indeed, WP students' relationships and journeys may differ from the students around them in terms of class politics, other forms of exclusion, the negotiation of various identities while at university and the support networks (personal and professional) they have in place; care-leavers are a good example of this (Loveday 2015; Southgate and Bennett, 2014). Such difference is further amplified at an 'elite' Russell Group institution, where the emphasis on self -directed and independent learning means personal resources, such as resilience and self-confidence, are essential.

A recent literature review on WP in Scotland (O'Toole et al., 2024) has identified the main areas of current understanding under the following topics (1) Factors affecting the decision to apply to university; (2) The transition from high school or further education into university; (3) Contextualised admissions; (4) Completion and level of attainment; (5) Economic, social and cultural capital; and (6) Equality, diversity and inclusion, with important differences noted between cohorts. In Friend's (2021) comparative study of WP students at US, English and Scottish Universities, Scottish WP Students emphasised how the 'social stigma of higher education attendance along the lines of socioeconomic status still exists' (p. 370). This compounded entrenched barriers, and served to make WP students feel shame, resentment and social exclusion acutely in comparison to their middle-class peers.

Furthermore, the 'Thriving Learners' report commissioned by the Mental Health Foundation Scotland (Maguire & Cameron, 2021) reveals how Scottish students' mental health is lower than the mean national figure, although the report does not specifically distinguish between WP and Non-WP respondents, (p. 14; cf. Scottish Health Survey, 2020). Rising social inequalities adversely affect the mental health of these student groups and place them at higher risk for poor overall wellbeing (McCloud & Bann, 2019; Royal College of Psychiatrists, 2021). Given rising societal awareness of the implications of poor mental health and multiple reports of the declining state of student mental health, this topic in particular requires research attention.

3. Research question

The objective of this study is to examine the journeys of WP students in and through an elite university in terms of mental health challenges, perceived well-being, and institutional supports and impact.

4. Research Design

A qualitative study was conducted to gather insights from students at different stages of their university experience through two phases of interviews. The study involved 38 participants: 6 experts, 30 current students, and 2 recent alumni. The study focused on two key samples: (A) expert interviews with university professionals responsible for student well-being and (B) students from WP backgrounds, with a reflective follow-up interview after one year.

4

4.1 Data Collection

Participants were recruited through purposive and snowball sampling methods (Silverman, 2009). Staff members with extensive experience in student support were identified and contacted directly. A professional relationship often existed between the researchers and these staff members, facilitating their willingness to participate. A semi-structured interview protocol was developed and deployed.

To recruit student participants, admissions data was reviewed to identify those with multiple contextual markers denoting WP status. Students were contacted, provided with an information leaflet and offered a £20 voucher incentive. Efforts were made to ensure diversity in gender, degree programs, and year of study. Semi-structured interviews, guided by a life-history approach and strict adherence to ethical practices (informed consent, confidentiality, and process consent), were conducted in November/December 2019, November/December 2020, and October/November 2021. The interviews aimed to explore not only what was said but also how it was said and what was left unsaid. A total of 49 interviews and one written response were collected, ranging from 20 minutes to 2 hours, averaging 44 minutes each. The sample included 28 females and 22 males, with over 46 hours of audio.

4.2 Data Analysis

The analysis was exploratory and inductive, beginning during data collection. Interviews were audio-recorded and transcribed professionally. Using NVivo, researchers systematically coded the data, developing codes inductively from the empirical data in line with the Gioia (2013) approach to grounded theory. Two researchers conducted the initial open coding (Strauss and Corbin, 1998), ensuring fidelity to participants' terms (Gioia et al., 2013). Disagreements were resolved through discussions and, if necessary, involving other team members. The analysis became more deductive as the team engaged with literature on WP, mental health in higher education institutions, and diversity management and inclusion in organizations.

5. Findings

5

First Order Concepts — Second Order Themes — Aggregate Dimensions
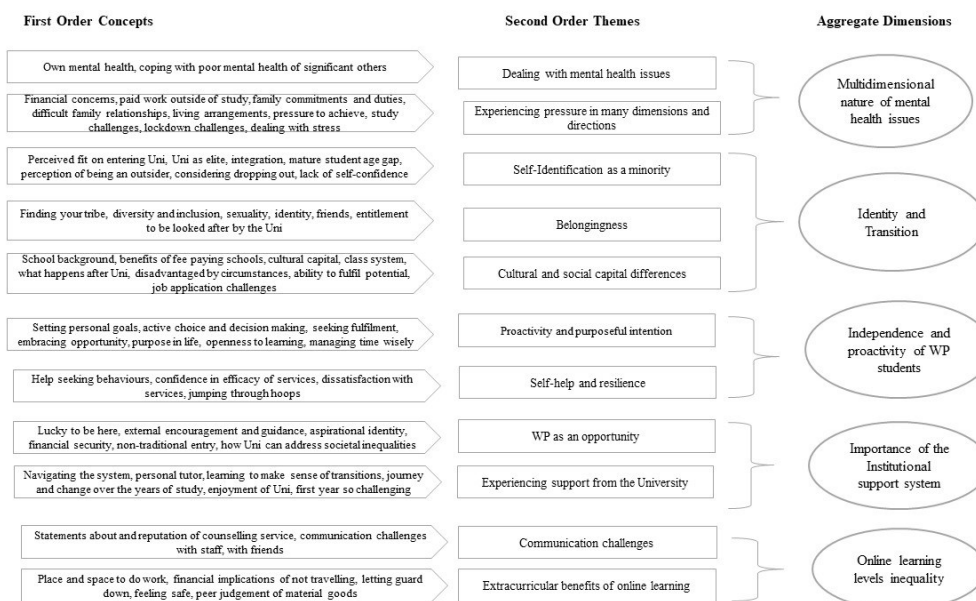
Table 1: Data structure indicating second order themes and aggregate dimensions

5.1 The Multidimensional Nature of Mental Health Issues

Students reported elevated stress and anxiety during exams and winter and only few sought help from university staff; those with diagnosed conditions sought external support. Many students doubted the efficacy of university counselling services for their specific needs. Stressors included financial concerns, family commitments, paid work, and unstable living arrangements, compounded by lockdown. Many reported experiencing emotional contagion from others' mental health issues and traumatic events. One student dealt with the aftermath of a parent's bankruptcy and suicide attempt, another paid the mortgage due to a parent's poor mental health.

5.2 Identity and Transition

Many students were unaware of the term "widening participation" and subsequent awareness of being categorized prompted reflections on the labelling's benefits. The university's reputation as "elitist" affected students' perceptions and experiences. One student expressed, "When I got a spot in this school... I knew wouldn't really fit in and that I wouldn't be as smart as other students due to my background." WP students faced additional challenges in feeling like they belonged due to differences in background and financial status. The transition to university was daunting, with anxiety about making friends and fitting in. A student said, "Settling in is quite a bit of a mental health challenge in

6

itself... probably just anxiety about how to meet new people." Experiences varied, with some finding a welcoming environment while others felt isolated. Students came from diverse backgrounds with varying levels of deprivation and educational attainment, for example one student expressed: "In my economics class there are a lot of people [who] have done economics in high school and my school didn't even offer that!" Some appreciated the diversity and opportunities at university, while others felt acutely disadvantaged and stigmatized by their background.

5.3 Independence and proactivity

The study revealed that, in the face of challenge, WP students display significant independence, resilience, and proactivity. WP students often set clear personal goals related to their studies and career paths. They managed their time effectively and were ambitious in their career aspirations, demonstrating a strategic approach to achieving long-term objectives, they also sought fulfilment from university life, embracing diverse opportunities and learning new skills. Openness to learning and effective time management were crucial aspects of their proactive mindset. WP students often relied on self-help strategies and resilience to navigate university life and its challenges. They knew when and where to seek support, whether from friends, family, or university services. However, there were varied levels of satisfaction with these services, and students often had to manage personal issues alongside academic demands. Despite the presence of support services, many students preferred self-reliance, reflecting a level of dissatisfaction with the efficacy and accessibility of institutional support. Some students found university counselling inadequate due to limited sessions and perceived it as a temporary fix rather than a comprehensive solution.

5.4 Institutional Support System

The university provides a broad range of mental health and wellbeing support services at multiple levels. These include counselling, disability services, career guidance, and financial support. Despite this, coordination and integration across services are often lacking, causing confusion and frustration. Many students struggled to navigate the various services, often needing to repeatedly share their stories with different departments. Multiple barriers prevent students from seeking and accessing support, including fear of judgment, imposter syndrome, administrative burdens, and stigma around mental health. The self-referral process can be particularly challenging, especially for students juggling complex personal circumstances. Some students also expressed dissatisfaction with the support they received, citing long waiting times and insufficient follow-up. The complexity of the university's support system and impersonal communication exacerbate access issues. Students reported difficulties in finding and utilizing support resources due to unclear communication channels and inconsistent academic support. This was particularly problematic for WP students, who often

7

faced additional personal and financial pressures compared to their peers from more privileged backgrounds.

5.5 Impact of Online Learning

Many WP students found online learning advantageous, offering flexibility, financial savings, and a psychologically safer environment for participation. The pandemic also acted as a leveller, enhancing the sense of community among students facing similar challenges.

Contribution and Limitations:

The study sheds light on the elevated stress, anxiety and emotional contagion experienced by students and underscores the diverse range of stressor and risk factors affecting WP students, including financial concerns and family obligations. It also identifies the barriers to help-seeking behaviour, which are crucial for improving the accessibility and effectiveness of support systems. The study has implications for student belonging, by exploring how students from diverse backgrounds navigate their identity within an elitist environment, and points to the importance of developing personal resilience as a coping mechanism. Universities can use the insights to develop tailored support strategies that address the specific challenges faced by WP students. Limitations include: sample size and generalizability, self-reported bias, a lack of longitudinal data and a detailed explanation of the cultural norms which influence WP students' experiences and outcomes.

Implications:

The findings of this study have implications for universities and educational institutions (admissions, support services, policy makers), educational policy makers (government, NGOs and advocacy groups), employers and workforce development agencies (to understand the unique challenges and strengths of WP students), students themselves (to gain awareness of common challenges and make informed decisions) and the research community.

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8

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Stream 9: Health Management and Organisation

Evaluating the 2022 New Zealand Health Reforms:
Insights from Event System Theory

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Evaluating the 2022 New Zealand Health Reforms: Insights from Event System Theory

ABSTRACT: *This study examines the 2022 New Zealand health system reforms using the Event System Theory (EST) to assess their impact and effectiveness over time. The Pae Ora reforms aimed to centralize healthcare management and address disparities through the creation of Health New Zealand and the Māori Health Authority. Despite initial promise, the reforms faced significant delays and criticisms. Through qualitative analysis of interviews and media articles, the study explores how the reforms' characteristics of novelty, disruption, and criticality evolved, influencing their outcomes. Findings highlight the importance of sustained resource allocation, stakeholder engagement, and adaptive leadership in maintaining reform momentum. This research provides insights for policymakers on enhancing the success and sustainability of large-scale public sector reforms.*

Keywords: New Zealand, Health Reforms, Event System Theory, Pae Ora, Evaluation

Overview

Aotearoa New Zealand (NZ) undertook a major health system reform in 2022 to address inefficiency, inequality in access, and variability in healthcare quality (New Zealand Parliament, 2022). The Pae Ora (Healthy Futures) reforms aimed to centralize district health boards into a single body, Health New Zealand, to streamline operations, reduce administrative overhead, and ensure uniform care (Tenbensel, Cumming & Willing, 2023). Additionally, a Māori Health Authority was created to target health disparities and enhance cultural competency (DPMC, 2021).

Recognized as one of the most significant public reforms in recent decades, these changes sought to create a sustainable, equitable healthcare system (Akmal et al., 2023). However, two years in, the reforms have faced significant delays and criticisms regarding structural and operational shortcomings, changing governmental priorities, and inadequate resource distribution and stakeholder engagement (Lorgelly & Exeter, 2023). Researchers have also questioned the feasibility and effectiveness of the reform strategies (Akmal et al., 2023; Tenbensel et al., 2023).

Using Event System Theory (EST), this study explores the health system's response to the reforms, examining how the event characteristics—novelty, disruption, and criticality—evolved over time and influenced the outcomes (Morgeson, Mitchell & Liu, 2015). EST helps us understand how events trigger

changes within systems, and this theoretical approach provides a structured lens to assess the reforms' impact and effectiveness .

Current Understanding

Despite numerous public sector reforms worldwide, there is a lack of research focused on understanding why such reforms often fail to achieve their intended outcomes (Dominis, Yazbeck & Hartel, 2018). Previous research on public sector reforms has predominantly taken a cross-sectional approach, often evaluating the outcomes only at the end of the reform process (Atun et al., 2015; Raisio, 2009). This method fails to capture the dynamic nature of reforms, which evolve over time. There is a significant gap in the literature regarding longitudinal analyses that explore reforms in a time-series fashion (Han, 2012; Li & Fu, 2017). Such an approach would allow for a detailed examination of how reforms, as events, gain or lose key characteristics—such as novelty, disruption, and criticality—over their implementation period. Understanding these temporal changes is crucial to identifying why many reforms ultimately produce below-par outcomes (Dhaliwal & Hanna, 2017; Villalobos Dintrans, 2019).

This research addresses this gap by examining how these characteristics impact the implementation and effectiveness of public sector reforms in the context of the 2022 NZ Health Reforms. Understanding these dynamics is crucial for developing strategies that ensure reforms meet their goals and produce lasting, positive changes in public sector management (Akmal et al., 2023).

Research Question

This research is guided by the following research questions:

1. What factors contribute to diminishing the impact and outcomes of public sector reforms?

2. Why the NZ Health Reforms lost traction and what can be learned from their management and implementation for future public management reforms.

Research Approach

This study used a qualitative methodology to analyze the outcomes of the 2022 NZ Health Reforms. We conducted semi-structured interviews with 34 participants from key healthcare organizations, including Te Whatu Ora (Health New Zealand), Te Aka Whai Ora (Māori Health Authority), and six Primary Health

Organizations (PHOs) across the North and South Islands. This ensured a diverse geographical representation of viewpoints (Whittemore, Chase & Mandle, 2001).

We also analyzed newspaper articles from all major New Zealand news sources using the Factiva database. This media analysis provided a broader context and a longitudinal perspective on the reform process, capturing public and expert opinions as well as governmental narratives (Akmal et al., 2023; Coffey, 2014). The analysis focused on how the reforms were presented and perceived in terms of novelty, disruption, and criticality, and how these perceptions interplayed with implementation. We used an abductive analytical approach, combining deductive coding based on pre-defined themes (based on EST) with inductive coding to uncover new insights (Timmermans & Tavory, 2012). This dual approach allowed us to thoroughly explore both anticipated and emerging themes, providing a robust understanding of the complex dynamics of the health reform process (Podgorodnichenko et al., 2021).

Findings

The results of our qualitative analysis reveal significant insights into the perceived impact and characteristics of the 2022 NZ Health Reforms. It was consistently reported that the health reforms did not result in any major changes within the system. Despite initial expectations, the reforms appeared to have minimal transformative impact on the healthcare landscape.

Utilizing the EST as an analytical lens, we assessed the inherent characteristics of the reforms—novelty, disruption, and criticality. While these characteristics were prominently highlighted in the initial design and announcements of the reforms, the analysis of our interview data in conjunction with newspaper articles revealed a notable decline in these qualities over time.

Initially, the reforms were widely perceived as groundbreaking and necessary 'disruption' intended to address critical inefficiencies and disparities within the healthcare system. Newspaper articles and public announcements around the time of the reforms' introduction echoed this sentiment, illustrating a strong alignment with the EST characteristics. However, as implementation progressed, these characteristics began to diminish.

While the novelty, disruptiveness, and criticality of the reforms were clearly articulated at the outset, these elements did not sustain throughout the implementation process. Interviewees expressed that over time, the reforms became increasingly viewed as procedural rather than transformative. The initial enthusiasm and

support that were evident in early media portrayals and public discussions gradually waned, leading to a perception that the reforms were not fundamentally altering the healthcare system as had been anticipated. This decline in the strength of the EST characteristics was further evidenced by a lack of significant operational changes or improvements reported by healthcare professionals and administrators involved in the day-to-day workings of the system. The anticipated overhaul of healthcare processes and outcomes did not materialize to the extent expected, leading to disillusionment among stakeholders and the general public alike.

Our study also identified several features that shed light on the reasons behind the decline in the event characteristics. These features, not traditionally encapsulated within the EST framework, emerged prominently during our interviews and could provide additional dimensions for assessing the strength and impact of events in organizational and public policy contexts.

One critical aspect that surfaced was the significance of **resource allocation and management** in determining the effectiveness of reform implementation. Participants frequently cited mismatches between the resources allocated and the actual demands of the reform processes. This discrepancy often led to delays, reduced efficacy in execution, and ultimately, a diminished perception of the reforms' disruptiveness and criticality. Incorporating a component that explicitly addresses resource dynamics within EST could provide a more nuanced understanding of why certain reforms fail to sustain their initial momentum or achieve their intended outcomes.

Another key feature that emerged was the role of **stakeholder engagement and communication** strategies. Our analysis indicated that while initial communication about the reforms was robust, leading to high expectations, the ongoing engagement and communication with stakeholders during the implementation phase were not as effective. This lack of sustained communication contributed to a gradual decrease in criticality, as stakeholders felt less involved and informed as the reform process progressed. Enhancing EST to include a focus on the quality and continuity of stakeholder communication could help explain variations in event impact over time.

Leadership emerged as a critical element in the success of the NZ Health Reforms. The effectiveness of leadership was highlighted not only in terms of guiding the reforms through various phases but also in aligning the vision across different layers of the healthcare system. Interviewees often pointed to

inconsistencies in leadership approaches, which led to mixed messages about the objectives and expected outcomes of the reforms. This misalignment contributed to a gradual erosion of the perceived novelty and disruptiveness of the reforms, as different leaders championed varying priorities and strategies.

Finally, the **adaptability** of the reform process in response to feedback was identified as a pivotal factor in the perceived success of governmental reforms. Participants noted that the reforms' structures were rigid and did not allow for sufficient adaptation based on real-time feedback and emerging challenges. This rigidity hindered the ability of the reforms to maintain their disruptive and critical nature, as they could not evolve in response to practical insights and stakeholder needs. By integrating a dimension that evaluates the flexibility and responsiveness of an event to feedback within the EST framework, researchers and policymakers could better predict and enhance the success of transformative initiatives.

Contributions and Limitations

The 2022 NZ Health Reforms have faced widespread criticism from researchers, media, the public, and opposition figures, centered on delays, lack of changes, increased administrative duties without vital health improvements, and poor management (Akmal et al., 2023; Johnston, 2024; NZ Doctor, 2023; Tenbensel et al., 2023). Our analysis reveals key reasons for these shortcomings:

1. **Lack of Novelty:** While intended to introduce substantial changes, many found the reforms lacked genuinely new or improved elements. This absence of novelty impacted buy-in from healthcare professionals, leading to lower support and engagement.

2. **Diminished Criticality**: Initially seen as crucial, the importance of the reforms waned due to delays and implementation issues, reducing momentum and stakeholder support over time.

3. **Insufficient Disruption:** Despite plans for significant changes in funding, care processes, and organizational structures, actual disruptions were minimal. Core systems and personnel remained largely unchanged, leading to disillusionment and skepticism about the reforms' effectiveness.

Our research challenges the view that events are static (Morgeson et al., 2015), proposing instead that complex reforms evolve over time. The characteristics of novelty, disruption, and criticality fluctuate throughout the lifecycle of reforms, impacting their success. This perspective suggests that continuous

management and adaptation of these characteristics are vital for maintaining stakeholder engagement and driving sustained change (Ford, 2008).

Moreover, our study highlights the need for a dynamic framework that assesses and monitors event characteristics over time, providing valuable insights for policymakers on maintaining and adapting reforms' critical aspects (Kiefer, Barclay & Conway, 2024). Continuous feedback loops and adaptive strategies are essential to address the natural decay of novelty, constructively mitigate disruptions, and reinforce criticality (Minniti, Rodriguez & Williams, 2024).

Additionally, the success of reforms depends on aligning clear objectives with practical execution, adequate resource management, and expertise development (Ingrams, Piotrowski & Berliner, 2020). Misalignment between planning and implementation, underestimation of necessary resources, and lack of expertise were significant factors in the reforms' shortcomings. Effective reforms require robust planning, resource allocation, adaptive execution, and continuous evaluation (Skorková, 2016).

This research has one primary limitation. The study was conducted in New Zealand, focusing solely on the NZ Health Reforms. Studying different countries or reform implementations might yield different results. However, our intention was to understand if events are static and if event characteristics can change over time. The selection of the NZ Health Reforms provided a suitable setting for this analysis.

Implications

The application of EST provides a novel lens to understand the complex dynamics of health policy reform. While the NZ Health Reforms were initially perceived as strong events that could instigate change in the system, their practical impact was undermined by implementation issues. This study underscores the importance of considering organizational and contextual factors in the planning and execution phases of health reforms. Future reforms can benefit from a more integrated approach that considers these factors to enhance the likelihood of successful implementation and sustainable impact.

The findings of this study have significant practical implications for policymakers, healthcare administrators, and public sector reformers. Policymakers can use these insights to design more effective and sustainable health reforms by understanding the importance of maintaining novelty, disruption, and criticality throughout the implementation process. Healthcare administrators will benefit from recognizing the need for continuous stakeholder engagement, adequate resource allocation, and adaptive strategies to

address emerging challenges and to maintain the event strength. This study also offers valuable lessons for public sector reformers worldwide, highlighting the necessity of a dynamic and flexible approach to reform implementation, ensuring that the intended transformative impacts are realized and sustained over time. By addressing the identified shortcomings, these stakeholders can improve the overall efficiency, equity, and quality of healthcare services, ultimately benefiting the broader public.

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ANZAM 2024
Stream 2: Organisational Behaviour

The effect of leaders' dispositional resistance to change on their health and wellbeing during organizational change: The role of emotion regulation and emotional intelligence.

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1

ANZAM 2024
Stream 2: Organisational Behaviour

The effect of leaders' dispositional resistance to change on their health and wellbeing during organizational change: The role of emotion regulation and emotional intelligence.

ABSTRACT:

   Research often ignores leaders' reactions during organizational change and particularly their emotional reactions and personal outcomes. Change in organizations can stir emotions in the workplace and, if not managed correctly by the leader, can significantly impact the leader's wellbeing. To advance our knowledge of this phenomenon, we develop and test a model that examines whether the expected negative relationship between a leader's dispositional resistance to change and wellbeing is affected by the emotional regulation strategies they adopt and their emotional intelligence. Data from 359 leaders in a split administration cross sectional survey reveals a link between resistance to change and negative health and wellbeing for leaders mediated by emotional reappraisal. This effect is moderated by emotional intelligence.

Keywords: Organizational Change, Leaders, Emotions, Emotion Regulation, Change Resistance

INTRODUCTION

Organizational change is an emotionally charged process (Helpap & Bekmeier-Feuerhahn, 2016). This is particularly so for leaders who are required to manage their own emotions as well as the emotions of others during change (Gooty, Gavin, & Ashkanasy, 2009). If the emotions experienced during change are not managed correctly by the leader, this can significantly impact the potential for success from the change as well as the leader's performance (Li & Ahlstrom, 2016). In this paper, we outline our preliminary investigation of a model developed to examine how a leader's dispositional resistance to change, emotional intelligence ability, and use of emotional regulations strategies during organizational change affects their health and wellbeing. By examining these variables, we bring focus to a previously underexplored phenomenon regarding leaders' affective responses during change and the impact on their own health (i.e., not employees). Practically, this research will enable organizations to better develop processes and tools to support leaders when dealing with change in the workplace.

2

PRELIMINARY INVESTIGATION MODEL AND HYPOTHESES

Our model (Figure 1) is underpinned by the process model of emotion regulation (Gross, 1998a). Drawing on this theory, we propose that a leader's health and wellbeing outcomes during change are, at least in part, related to their dispositional resistance to change. We further argue that this relationship is mediated by their use of three main emotion regulation strategies (i.e., reappraisal, suppression, expression) and that their use of emotional regulation strategies is moderated by the leaders' level of emotional intelligence. We develop our hypotheses more fully in the following sections.

Insert Figure 1 about here.

HYPOTHESES

Leaders' Dispositional Resistance to Change and health outcomes during Organizational Change.

Often in organizational change research, a leader's individual differences including positive and negative affect (Law, Wong, & Song, 2004) and personality are seen as influencing their reactions to change responses (Oreg, 2003). Indeed, often a focus of research is on an individual's dispositional resistance to organizational change (Jamil, O'Donohue, Xerri, & Radford, 2022; Rafferty & Restubog, 2017; Oreg & Berson, 2011). Dispositional resistance to change more broadly is important as it may engender a negative emotional reaction leading to poor wellbeing and performance outcomes in the specific organizational change context (Rafferty & Restubog, 2017). Rafferty & Restubog (2017) also posit an organizations' change history to be an antecedent of an employees' appraisal of the change which can be seen as a violation of the psychological contract the employee perceives with their organization. This contract breach also has the potential to create an emotional reaction to the change. On this basis, understanding a leader's ability to regulate emotions experienced from dispositional resistance to change is important to achieve better organizational and personal outcomes (Rafferty & Jimmieson, 2017).

Research has determined that employees' experience of previous organizational change can have an impact on their resistance to future changes and a negative impact on their health and wellbeing including mental health (Bamberger, Vinding, Larsen, & Nielsen, 2012; Raza, Khan, & Mujtaba., 2018).

3

This a great cause for concern for the organization and more seriously, the individual (Loretto, Platt, & Popham, 2010; Rafferty, Jimmieson, & Armenakis, 2013). Added to this, however, is the notion of dispositional resistance to change, that is, an individual tendency to resist, avoid, devalue, support change (Oreg, 2003). In sum the employees' experience of change and their dispositional resistance to change can result in significant negative emotions. If, as we argue, a leader is required to manage both their own emotions and the emotions of those they lead, the negative effects may be particularly salient for leaders during change.

Studies on employee resistance to change determine that employees are more likely to experience general negative feelings and attitude on the job, increasing stress levels and lowering job satisfaction (Gross, 2001; Oreg, 2006; Struijs, 2012). Rafferty & Restubog (2017) argue these employee appraisals of the change leads to increased turnover intentions. Struijs study across ten (10) different Dutch organizations found the relationship between resistance to change and turnover intention was mediated by job satisfaction, and further highlighted that lower job satisfaction leads to high intentions to leave the organization. Lower job satisfaction and higher turnover intentions have been linked to worse health and wellbeing outcomes including burnout (Scanlan & Still, 2013).

From this we propose the following hypothesis:

Hypothesis 1: Leaders with higher dispositional resistance to change will have poorer health and wellbeing outcomes during organizational change.

Emotional regulation during change.

The Gross (1998a, 1998b) process model of emotion regulation outlines a framework of regulatory processes by which emotions being experienced might be adjusted (i.e., up or down in intensity, or to a different discrete emotion). The process model of emotion regulation involves antecedent-focused and response-focused regulation strategies. Antecedent-focused strategies allow the individual to manipulate information *before* the emotional event occurs and the emotion is fully experienced (e.g., *reappraisal*). Response-focused strategies are used to modify expressed emotion *after* an emotional event has been fully experienced (e.g., *suppression*). Gross argues individuals enact emotion

4

regulation strategies to modify their emotional experience and expression (Gross, 1998a), with reappraisal and suppression relating to various indicators of health and dysfunction (Gross, 1998a, 1998b; John & Gross, 2003). Studies also suggest expression to be an emotion regulation strategy displaying authentic expression of the emotions experienced (Diefendorff, Croyle, & Gosserand, 2005). Although expression does not involve a deliberate attempt to change the emotion experienced, scholars argue it is an emotion regulation strategy due to the individual increasing or decreasing the intensity of the emotion being experienced through no conscious effort or control (Hülsheger, Lang, Schewe, & Zijlstra, 2015; Mikolajczak, Nelis, Hansenne, & Quoidbach, 2008,). Where constraint of emotion is the chosen path, individuals can enact emotion regulation strategies to modify the expression to align with the leaders chosen goals (Geddes & Callister, 2007; Lawrence, Troth, Jordan, & Collins, 2011). When leaders choose to modify expression to suppress the emotion being experienced, negative health and wellbeing outcomes are likely (John & Gross, 2004, 2007; Lawrence et al., 2011; Richards & Gross, 2000), and can lead to decreased job satisfaction (Geddes & Callister, 2007).

Understanding the management of emotions, specifically in organisational change, is crucial to achieve a successful change program. Scholars argue emotion regulation processes impact leadership performance based on the strategy chosen during change and the leader's effort required to enact that emotion regulation strategy (Torrence & Connelly, 2019). Research suggests organizational change can result in mixed outcomes often linked to the individual's emotional reactions to change. From a positive perspective, change sees opportunity and personal development to negative outcomes such as changed ways of working and negotiating new workplace relationships (Kiefer 2005, Kotter, 1995). studies on consequences of negative emotions during change argue the more change employees experience, the more negative emotions will be experienced daily (Huy, 1999; Kiefer, 2005).

Leaders experiencing emotions during change may enact a range of different emotion regulation strategies including reappraisal, expression, or suppression (Gross, 1998a, 1998b; Lawrence et al., 2011). Indeed, Hudson, Jordan and Troth (2023) found in qualitative interviews with 25 leaders that, during change, leaders will regulate their emotions predominantly using suppression to maintain a professional

5

demeanour regardless of the impact on their health and wellbeing. In this quantitative study, we build on this research to examine whether and how the link between a leader's resistance and their health and wellbeing outcomes is mediated by the emotion regulation strategies enacted.

From this, we hypothesise:

Hypothesis 2: The relationship between a leader's dispositional resistance to change and health & wellbeing outcomes is mediated by the emotion regulation strategies (i.e., reappraisal, suppression, expression) they use.

The moderating role of emotional intelligence,

Salovey and Mayer (1990) describe emotional intelligence as one's ability to accurately recognise, understand, and manage our own emotions, or recognise, understand, and influence emotions of others. Emotional intelligence varies greatly across individuals with emotionally intelligent people able to discriminate between emotions (in self and others, verbal or non-verbal), and exploit this information to best navigate their thinking process and responses (Mayer, Caruso, & Salovey; Salovey & Mayer, 1990).

Often the emotion regulation strategy enacted by the leader is dependent on many variables such as the leader's positive or negative affect (Thompson, 2007), personality (Rammstedt & John, 2006), perception of change (Rafferty& Minbashian, 2019), resistance to the change (Oreg, 2003), emotions experienced by the leader, and the leader's ability to manage their emotions which is often described as emotional intelligence (Salovey & Mayer, 1990). A leader's emotional intelligence is thought to be related to an individual's ability to enact an appropriate emotion regulation strategy when needed (Jordan, 2004; Miao, Humphrey, & Qian, 2016, 2017; Troth, Townsend, Loudoun, & Burgess, 2023). For example, individuals high in emotion intelligence regulate at the earliest point and have the potential to use more antecedent focused regulation which have been shown to be more effective in improving wellbeing. (Schutte, Manes, & Malouff, 2009).

6

Consequently, we argue that a leader's emotional intelligence assists the leader in managing discrete emotions experienced during organizational change and influences the emotion regulation strategies enacted. On this basis we predict:

Hypothesis 3a: A leaders' emotional intelligence will moderate the effect of their dispositional resistance to change on their use of emotional regulation strategies

Overall leading from these hypotheses and to complete our model we propose.

Hypothesis 4: A leader's wellbeing outcomes from dispositional resistance to change are mediated by emotion regulation strategy enacted in turn moderated by leader emotional intelligence ability.

In the next section we outline our study.

METHOD

Procedure

This study was reviewed by a University Human Research Ethics Committee and approved. The study was conducted as a cross-sectional data collection with split administration design using existing and validated measures (Creswell, 2009, Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). A commercial survey company was engaged to conduct the study. Participants were asked to complete two surveys approximately 2 weeks apart. The participants were asked to answer basic demographic questions and measures assessing your workplace emotions and attitudes. Completing this survey at home or at work – the survey took approximately 10-minutes to complete at Time 1 and 13m to complete at Time 2.

Sample

The sample consisted of leaders with a minimum of 5-years' experience employed in an organization about to undergo organizational change or currently undergoing organizational change/s (e.g., acquisition, expansion, people centric, structural, technological). The sample of leaders totaled 307 participants who came from private and public organisations with a minimum of 5 years' experience in a leadership role. Participants were also required to be employed in an organization about to undergo or

7

currently undergoing organizational change (e.g., acquisition, expansion, people centric, structural, technological). The sample was 61.3% male with an average age between 31 and 40 with approximately 13 years of experience as a leader. The sample was drawn from a range of industries with 75.5% coming from the private sector.

Measures

Dispositional Resistance to Change

Dispositional Resistance to Change was measured using a scale developed by Oreg (2003). This scale measures the leader's individual tendencies to resist, avoid, devalue, and support change. The scale consists of 17-items across four (4) constructs being routine seeking (RS), emotional reaction (ER), short-term focus (SF) and cognitive rigidity (CR), for example: 'I generally consider changes to be a negative thing' (RS); 'When I am informed of a change of plans, I tense up a bit' (ER); 'Changing plans seems like a real hassle to me' (SF); 'My views are very consistent over time' (CR). Responses range from *1 = Strongly Disagree to 7 = Strongly Agree*. Reliability was performed using Cronbach's alpha procedure across all four (4) constructs yielded .89.

Emotion Regulation

Gross and John's (2003) *emotion regulation questionnaire* (*ERQ*) measured the leader's ability to enact an antecedent-focused or response-focused emotion regulation strategy. The ERQ consists of 14-items. An example of an antecedent-focused item included: 'When I want to feel less negative emotion', and 'I change the way I'm thinking about the situation'. The ERQ can also be used to measure the participant leader's ability adopt a response-focused emotion regulation strategy, for example: 'When I am feeling negative emotions', 'I make sure not to express them'. The ERQ can also be used to measure the participant leader expression, for example: 'What I'm feeling is written all over my face'. Each item is anchored by the 7-point Likert scale where *1 = Strongly disagree to 7 = Strongly agree*. Reliability performed using Cronbach's alpha procedure yielded a coefficient alpha .90 (Reappraisal); .86 (Expressive Suppression); and .73 (Emotional Suppression).'

8

Health and Wellbeing

To measure health and wellbeing we used the *General Health Questionnaire* (GHQ-12) which measured the leader's self-reported general health, psychological disorders and strains (Goldberg & Hillier, 1979; Goldberg et al., 1997). The questionnaire comprises 12-items that comprise two 6-item subscales of positive and negative health outcomes. A typical item includes: 'Lost much sleep over worry.' and 'Felt capable of making decisions about things.' Response options used a 4-point likert type scale including: *not at all, no more than usual, rather more than usual, much more than usual*; Reliability assessed using Cronbach's alpha yielded a coefficient alpha of .81 (Positive) and .91 (Negative).

Emotional Intelligence.

EI was assessed using Wong and Law's 16-item Emotional Intelligence Scale (WLEIS; Wong & Law 2002). The items include "I have a good sense of why I have certain feelings most of the time" and "I have a good understanding of the emotions of people around me". A 7-point Likert response format (*1 = strongly disagree*, 7 = *strongly agree*) was used. Reliability coefficients have been reported to range from .80 to .90 for each of these EI measures (Wong & Law 2002). Reliability based on a Cronbach's alpha in for this measure yielded .88.

Controls.

Demographic information (e.g., *Sex*, *Age, Experience*) were collected as controls for the analyses.

RESULTS

Descriptive Statistics

Table 1 below reports the means, standard deviations, correlations and alphas for the study. Table 1 reveals a negative relationship between leadership experience and emotional suppression (r =-0 .12, p <.05) showing experienced leaders reported using less emotion suppression as a regulation strategy. The table also reveals a negative relationship between dispositional resistance to change and emotional intelligence (r = - 0.31, p <.01) showing those leaders reporting higher dispositional resistance to change

9

were lower in emotional intelligence. In terms of positive health outcomes, the data reveals a negative

relationship to dispositional resistance to change (r = -0.17, p <.01) and a positive relationship to

emotional intelligence (r = .36, p <.01). There is also a positive relationship between the emotion

regulation strategy of cognitive reappraisal and positive health outcomes (r = .25, p <.01). Finally, a

positive relationship emerged between the emotion regulation strategy of reappraisal and emotional

intelligence (r = .53, p <.01).

Insert Table 1 about here.

The main statistical approach to the data collected from Time 1 was moderated mediated analysis

utilising the SPSS PROCESS macro (Hayes, 2017). PROCESS applies bootstrapping procedures to

address irregularities in data distributions (Preacher, Rucker, & Hayes, 2007). The utilisation of

bootstrapping confidence intervals in PROCESS analysis provides an advantage over the more traditional

multiple regression and Sobel test, allowing for irregularities in the sampling distribution (Hayes, 2012).

All analyses used 5,000 bootstrap samples and 95% CI with the variables. The independent variables

were mean-centred prior to analysis to increase the interpretability and meaning of the tests of

significance (Hayes, 2017). PROCESS Model 7 was conducted twice to test the hypotheses supporting

our moderated mediated model (Figure 1), with tested pathways between dispositional resistance to

change (independent variable), reappraisal, suppression, and expression of emotions (mediators),

emotional intelligence (moderator) and the two health outcomes: negative and positive health (dependent

variables).

Insert Table 2 about here.

In support of Hypothesis 1, leaders higher in dispositional resistance to change reported

significantly more negative health and wellbeing outcomes (β =.36, t = 8.38, p <.001). and significantly

10

lower positive health outcomes (β = -.10, t = -3.99, p <.001). In terms of Hypotheses 2, the results showed that higher levels of reappraisal (β = .02, p <.05) partly explained (or mediated) the positive effect of dispositional resistance to change on leaders' negative health outcomes. In terms of positive health outcomes, the results showed that lower levels of reappraisal (β = -.01, p <.05) and higher levels of suppression (β = .02, p <.05) partly explained (or mediated) the negative effects of dispositional resistance of change on leaders' positive health outcomes.

In terms of Hypothesis 3, emotional intelligence was found to moderate the effects of dispositional resistance to change on leaders' use of suppression (β =.20, t = 2.43, p = .02). Johnson-Neyman significant tests showed leaders reporting higher emotional intelligence scores reported greater use of suppression during organizational change if they also had higher levels of dispositional resistance to change. There were no significant moderation effects for reappraisal or expression strategies. Table 2 also shows there were no significant effects for the full moderated mediation model for either negative or positive health outcomes (dependent variables). H4 was not supported.

DISCUSSION

The aim of our study was to better understand the relationship between a leader's dispositional resistance to change and their health and wellbeing outcomes during organizational change. We also sought to examine the role of emotion regulation and emotional intelligence in this relationship. Our data suggests that leaders with higher dispositional resistance to change in general also experience higher negative health outcomes and lower positive health outcomes during organizational change. This supported Hypothesis 1. Hypotheses 2 was partially supported. Unexpectedly, leaders with higher dispositional resistance who used more reappraisal were found to have higher negative health outcomes. However, the finding that those leaders with higher resistance who used less reappraisal, more suppression, and more expression had lower positive health outcomes was more in line with predictions. In terms of Hypothesis 3, we found that when leaders with higher dispositional resistance to change also had higher EI they were significantly more likely to use suppression as an emotional regulation strategy.

11

This seemingly unexpected finding is in line with earlier qualitative findings (see Hudson, Jordan & Troth, 2023) that show leaders are impacted by norms of professionalism during organizational change that involve emotional display rules of non-expression of negative emotions. Previous studies reveal that leaders agree their role requires them to manage their emotions during organizational change (Chrusciel, 2006). The Hudson et al (2023) qualitative study goes further, determining leaders were more likely to respond to affective events with the specific emotion regulation strategy of suppression to maintain their professionalism, even if it undermined their health and wellbeing (i.e., they did not want to show a weakness as a leader). Our study provides quantitative support for these findings. Further, as noted earlier, the leader's suppression may result in a positive outcome for employees, but more often than not, at the cost of negative health consequences for themselves.

LIMITATIONS & FUTURE DIRECTIONS

There are a number of limitations in our study. Specifically, one limitation is *common method bias* based on consistently using self-report likert type scales in the study (Podsakoff et al., 2003). While we attempted to minimise *common method bias* by adopting split data collection across two points in time and varying response format (Jordan & Troth, 2020), we need to acknowledge our results may have been affected by Common Method. We also acknowledge that our final sample may not a true representation of the population of leaders (Theofanidis & Fountouki, 2019) and lacked contextual relevance. We encourage researchers to replicate our study across a broad range of organisations to test our conclusions.

12

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ANZAM 2024
Stream 2: Organisational Behaviour

Leader dispositional resistance to change and their health and wellbeing: The role of emotion regulation and emotional intelligence

Figure 1: Theoretical Model

20

Table 1: Resistance to change, emotion regulation, health and wellbeing and emotional intelligence

	Mean	S.D.	1	2	3	4	5	6	7	8	9	0
1. Gender	.94	.08										
2. Age	.44	.08	.03									
3. Experience	3.78	1.89	.04	43**								
4. Resistance to Change	.00	.95	.00	.11*	0.04	.89)						
5. Emotional Intelligence	.63	.78	0.03	.02	.03	.31**	.88)					
6. ER Reappraisal	.27	.07	0.03	.06	0.00	.12*	53**	.90)				
7. ER Suppression	.16	.29	0.06	.12*	.00	24**	.01	20**	.86)			
8. Expression	.43	.13	.07	0.09	.01	22**	.06	.03	.29**	.73)		
9. General Health Positive	.90	.43	0.10	.02	0.01	.17**	36**	25**	12*	.042	.81)	
10. General Health Negative	.95	.77	.04	.14**	0.04	46**	.35**	.17**	.06	130*	.55**	.91)

N = 307 ** p <.01 * p <.05   Alpha reliabilities are on the diagonal.

21

Table 2: Reappraisal, suppression and expression as mediators between dispositional resistance to change and negative and positive health outcomes with emotional intelligence as the moderator

DV	IV	Mediator 1		Mediator 2		Mediator 3		Moderator
Health & Wellbeing	Dispositional Resistance to Change	Emotion Regulation: Reappraisal		Emotion Regulation: Suppression		Emotion Regulation: Expression		Emotional Intelligence Ability
Y	X	M₁		M₂		M₃		W
	Direct Effects *BCoff, (SE)*	Direct Effects of iv *Coeff, (SE)*	Indirect Effects *Effect (Boot LLCI, ULCI)*	Direct Effects of iv *Coeff, (SE)*	Indirect Effects *Effect (Boot LLCI, ULCI)*	Direct Effects of iv *Coeff, (SE)*	Indirect Effects *Effect (Boot LLCI, ULCI)*	Moderating effects *Coeff, (SE)*
Negative	.36** (.04)	-.08* (-.04)	.02* (-.151, -.001)	-.01 (.03)	.00 (-.024, .021)	.02 (.04)	.00 (-.016, .029)	R= -.0-4 (-.16, .08) S = .20* (.04, .37) E= .05 (-.09, .20)
Positive	-10** (.03)	.08* (.02)	-.01* (-.015, -.001)	.06* (.02)	.02* (.004, .039)	.05* (.02)	.02*(.001, .035)	R= -.0-4 (-.16, .08) S = .20* (.04, .37) E= .05 (-.09, .20)

Notes: N = 121; B (Unstandardised coefficient) for outcome variables; θ (Effect) for indirect effects. SE = standard error; LLCI = lower confidence intervals; UCLI = upper confidence intervals; ^ = CI do not cross zero; n/s = not significant for the index of moderated mediation; $p < 0.05$*, $p < 0.01$**; CI = 95, Boot strapping = 5000

22

ANZAM 2024
Stream 2: Organisational Behaviour

The effect of leaders' dispositional resistance to change on their health and wellbeing during organizational change: The role of emotion regulation and emotional intelligence.

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1

ANZAM 2024
Stream 2: Organisational Behaviour

The effect of leaders' dispositional resistance to change on their health and wellbeing during organizational change: The role of emotion regulation and emotional intelligence.

ABSTRACT:

Research often ignores leaders' reactions during organizational change and particularly their emotional reactions and personal outcomes. Change in organizations can stir emotions in the workplace and, if not managed correctly by the leader, can significantly impact the leader's wellbeing. To advance our knowledge of this phenomenon, we develop and test a model that examines whether the expected negative relationship between a leader's dispositional resistance to change and wellbeing is affected by the emotional regulation strategies they adopt and their emotional intelligence. Data from 359 leaders in a split administration cross sectional survey reveals a link between resistance to change and negative health and wellbeing for leaders mediated by emotional reappraisal. This effect is moderated by emotional intelligence.

Keywords: Organizational Change, Leaders, Emotions, Emotion Regulation, Change Resistance

INTRODUCTION

Organizational change is an emotionally charged process (Helpap & Bekmeier-Feuerhahn, 2016). This is particularly so for leaders who are required to manage their own emotions as well as the emotions of others during change (Gooty, Gavin, & Ashkanasy, 2009). If the emotions experienced during change are not managed correctly by the leader, this can significantly impact the potential for success from the change as well as the leader's performance (Li & Ahlstrom, 2016). In this paper, we outline our preliminary investigation of a model developed to examine how a leader's dispositional resistance to change, emotional intelligence ability, and use of emotional regulations strategies during organizational change affects their health and wellbeing. By examining these variables, we bring focus to a previously underexplored phenomenon regarding leaders' affective responses during change and the impact on their own health (i.e., not employees). Practically, this research will enable organizations to better develop processes and tools to support leaders when dealing with change in the workplace.

2

PRELIMINARY INVESTIGATION MODEL AND HYPOTHESES

Our model (Figure 1) is underpinned by the process model of emotion regulation (Gross, 1998a). Drawing on this theory, we propose that a leader's health and wellbeing outcomes during change are, at least in part, related to their dispositional resistance to change. We further argue that this relationship is mediated by their use of three main emotion regulation strategies (i.e., reappraisal, suppression, expression) and that their use of emotional regulation strategies is moderated by the leaders' level of emotional intelligence. We develop our hypotheses more fully in the following sections.

Insert Figure 1 about here.

HYPOTHESES

Leaders' Dispositional Resistance to Change and health outcomes during Organizational Change.

Often in organizational change research, a leader's individual differences including positive and negative affect (Law, Wong, & Song, 2004) and personality are seen as influencing their reactions to change responses (Oreg, 2003). Indeed, often a focus of research is on an individual's dispositional resistance to organizational change (Jamil, O'Donohue, Xerri, & Radford, 2022; Rafferty & Restubog, 2017; Oreg & Berson, 2011). Dispositional resistance to change more broadly is important as it may engender a negative emotional reaction leading to poor wellbeing and performance outcomes in the specific organizational change context (Rafferty & Restubog, 2017). Rafferty & Restubog (2017) also posit an organizations' change history to be an antecedent of an employees' appraisal of the change which can be seen as a violation of the psychological contract the employee perceives with their organization. This contract breach also has the potential to create an emotional reaction to the change. On this basis, understanding a leader's ability to regulate emotions experienced from dispositional resistance to change is important to achieve better organizational and personal outcomes (Rafferty & Jimmieson, 2017).

Research has determined that employees' experience of previous organizational change can have an impact on their resistance to future changes and a negative impact on their health and wellbeing including mental health (Bamberger, Vinding, Larsen, & Nielsen, 2012; Raza, Khan, & Mujtaba., 2018).

3

This a great cause for concern for the organization and more seriously, the individual (Loretto, Platt, & Popham, 2010; Rafferty, Jimmieson, & Armenakis, 2013). Added to this, however, is the notion of dispositional resistance to change, that is, an individual tendency to resist, avoid, devalue, support change (Oreg, 2003). In sum the employees' experience of change and their dispositional resistance to change can result in significant negative emotions. If, as we argue, a leader is required to manage both their own emotions and the emotions of those they lead, the negative effects may be particularly salient for leaders during change.

Studies on employee resistance to change determine that employees are more likely to experience general negative feelings and attitude on the job, increasing stress levels and lowering job satisfaction (Gross, 2001; Oreg, 2006; Struijs, 2012). Rafferty & Restubog (2017) argue these employee appraisals of the change leads to increased turnover intentions. Struijs study across ten (10) different Dutch organizations found the relationship between resistance to change and turnover intention was mediated by job satisfaction, and further highlighted that lower job satisfaction leads to high intentions to leave the organization. Lower job satisfaction and higher turnover intentions have been linked to worse health and wellbeing outcomes including burnout (Scanlan & Still, 2013).

From this we propose the following hypothesis:

Hypothesis 1: Leaders with higher dispositional resistance to change will have poorer health and wellbeing outcomes during organizational change.

Emotional regulation during change.

The Gross (1998a, 1998b) process model of emotion regulation outlines a framework of regulatory processes by which emotions being experienced might be adjusted (i.e., up or down in intensity, or to a different discrete emotion). The process model of emotion regulation involves antecedent-focused and response-focused regulation strategies. Antecedent-focused strategies allow the individual to manipulate information *before* the emotional event occurs and the emotion is fully experienced (e.g., *reappraisal*). Response-focused strategies are used to modify expressed emotion *after* an emotional event has been fully experienced (e.g., *suppression*). Gross argues individuals enact emotion

4

regulation strategies to modify their emotional experience and expression (Gross, 1998a), with reappraisal and suppression relating to various indicators of health and dysfunction (Gross, 1998a, 1998b; John & Gross, 2003). Studies also suggest expression to be an emotion regulation strategy displaying authentic expression of the emotions experienced (Diefendorff, Croyle, & Gosserand, 2005). Although expression does not involve a deliberate attempt to change the emotion experienced, scholars argue it is an emotion regulation strategy due to the individual increasing or decreasing the intensity of the emotion being experienced through no conscious effort or control (Hülsheger, Lang, Schewe, & Zijlstra, 2015; Mikolajczak, Nelis, Hansenne, & Quoidbach, 2008,). Where constraint of emotion is the chosen path, individuals can enact emotion regulation strategies to modify the expression to align with the leaders chosen goals (Geddes & Callister, 2007; Lawrence, Troth, Jordan, & Collins, 2011). When leaders choose to modify expression to suppress the emotion being experienced, negative health and wellbeing outcomes are likely (John & Gross, 2004, 2007; Lawrence et al., 2011; Richards & Gross, 2000), and can lead to decreased job satisfaction (Geddes & Callister, 2007).

Understanding the management of emotions, specifically in organisational change, is crucial to achieve a successful change program. Scholars argue emotion regulation processes impact leadership performance based on the strategy chosen during change and the leader's effort required to enact that emotion regulation strategy (Torrence & Connelly, 2019). Research suggests organizational change can result in mixed outcomes often linked to the individual's emotional reactions to change. From a positive perspective, change sees opportunity and personal development to negative outcomes such as changed ways of working and negotiating new workplace relationships (Kiefer 2005, Kotter, 1995). studies on consequences of negative emotions during change argue the more change employees experience, the more negative emotions will be experienced daily (Huy, 1999; Kiefer, 2005).

Leaders experiencing emotions during change may enact a range of different emotion regulation strategies including reappraisal, expression, or suppression (Gross, 1998a, 1998b; Lawrence et al., 2011). Indeed, Hudson, Jordan and Troth (2023) found in qualitative interviews with 25 leaders that, during change, leaders will regulate their emotions predominantly using suppression to maintain a professional

5

demeanour regardless of the impact on their health and wellbeing. In this quantitative study, we build on this research to examine whether and how the link between a leader's resistance and their health and wellbeing outcomes is mediated by the emotion regulation strategies enacted.

From this, we hypothesise:

Hypothesis 2: The relationship between a leader's dispositional resistance to change and health & wellbeing outcomes is mediated by the emotion regulation strategies (i.e., reappraisal, suppression, expression) they use.

The moderating role of emotional intelligence,

Salovey and Mayer (1990) describe emotional intelligence as one's ability to accurately recognise, understand, and manage our own emotions, or recognise, understand, and influence emotions of others. Emotional intelligence varies greatly across individuals with emotionally intelligent people able to discriminate between emotions (in self and others, verbal or non-verbal), and exploit this information to best navigate their thinking process and responses (Mayer, Caruso, & Salovey; Salovey & Mayer, 1990).

Often the emotion regulation strategy enacted by the leader is dependent on many variables such as the leader's positive or negative affect (Thompson, 2007), personality (Rammstedt & John, 2006), perception of change (Rafferty& Minbashian, 2019), resistance to the change (Oreg, 2003), emotions experienced by the leader, and the leader's ability to manage their emotions which is often described as emotional intelligence (Salovey & Mayer, 1990). A leader's emotional intelligence is thought to be related to an individual's ability to enact an appropriate emotion regulation strategy when needed (Jordan, 2004; Miao, Humphrey, & Qian, 2016, 2017; Troth, Townsend, Loudoun, & Burgess, 2023). For example, individuals high in emotion intelligence regulate at the earliest point and have the potential to use more antecedent focused regulation which have been shown to be more effective in improving wellbeing. (Schutte, Manes, & Malouff, 2009).

6

Consequently, we argue that a leader's emotional intelligence assists the leader in managing discrete emotions experienced during organizational change and influences the emotion regulation strategies enacted. On this basis we predict:

Hypothesis 3a: A leaders' emotional intelligence will moderate the effect of their dispositional resistance to change on their use of emotional regulation strategies

Overall leading from these hypotheses and to complete our model we propose.

Hypothesis 4: A leader's wellbeing outcomes from dispositional resistance to change are mediated by emotion regulation strategy enacted in turn moderated by leader emotional intelligence ability.

In the next section we outline our study.

METHOD

Procedure

This study was reviewed by a University Human Research Ethics Committee and approved. The study was conducted as a cross-sectional data collection with split administration design using existing and validated measures (Creswell, 2009, Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). A commercial survey company was engaged to conduct the study. Participants were asked to complete two surveys approximately 2 weeks apart. The participants were asked to answer basic demographic questions and measures assessing your workplace emotions and attitudes. Completing this survey at home or at work – the survey took approximately 10-minutes to complete at Time 1 and 13m to complete at Time 2.

Sample

The sample consisted of leaders with a minimum of 5-years' experience employed in an organization about to undergo organizational change or currently undergoing organizational change/s (e.g., acquisition, expansion, people centric, structural, technological). The sample of leaders totaled 307 participants who came from private and public organisations with a minimum of 5 years' experience in a leadership role. Participants were also required to be employed in an organization about to undergo or

7

currently undergoing organizational change (e.g., acquisition, expansion, people centric, structural, technological). The sample was 61.3% male with an average age between 31 and 40 with approximately 13 years of experience as a leader. The sample was drawn from a range of industries with 75.5% coming from the private sector.

Measures

Dispositional Resistance to Change

Dispositional Resistance to Change was measured using a scale developed by Oreg (2003). This scale measures the leader's individual tendencies to resist, avoid, devalue, and support change. The scale consists of 17-items across four (4) constructs being routine seeking (RS), emotional reaction (ER), short-term focus (SF) and cognitive rigidity (CR), for example: 'I generally consider changes to be a negative thing' (RS); 'When I am informed of a change of plans, I tense up a bit' (ER); 'Changing plans seems like a real hassle to me' (SF); 'My views are very consistent over time' (CR). Responses range from *1 = Strongly Disagree to 7 = Strongly Agree*. Reliability was performed using Cronbach's alpha procedure across all four (4) constructs yielded .89.

Emotion Regulation

Gross and John's (2003) *emotion regulation questionnaire* (*ERQ*) measured the leader's ability to enact an antecedent-focused or response-focused emotion regulation strategy. The ERQ consists of 14-items. An example of an antecedent-focused item included: 'When I want to feel less negative emotion', and 'I change the way I'm thinking about the situation'. The ERQ can also be used to measure the participant leader's ability adopt a response-focused emotion regulation strategy, for example: 'When I am feeling negative emotions', 'I make sure not to express them'. The ERQ can also be used to measure the participant leader expression, for example: 'What I'm feeling is written all over my face'. Each item is anchored by the 7-point Likert scale where *1 = Strongly disagree to 7 = Strongly agree*. Reliability performed using Cronbach's alpha procedure yielded a coefficient alpha .90 (Reappraisal); .86 (Expressive Suppression); and .73 (Emotional Suppression).'

8

Health and Wellbeing

To measure health and wellbeing we used the *General Health Questionnaire* (GHQ-12) which measured the leader's self-reported general health, psychological disorders and strains (Goldberg & Hillier, 1979; Goldberg et al., 1997). The questionnaire comprises 12-items that comprise two 6-item subscales of positive and negative health outcomes. A typical item includes: 'Lost much sleep over worry.' and 'Felt capable of making decisions about things.' Response options used a 4-point likert type scale including: *not at all, no more than usual, rather more than usual, much more than usual*; Reliability assessed using Cronbach's alpha yielded a coefficient alpha of .81 (Positive) and .91 (Negative).

Emotional Intelligence.

EI was assessed using Wong and Law's 16-item Emotional Intelligence Scale (WLEIS; Wong & Law 2002). The items include "I have a good sense of why I have certain feelings most of the time" and "I have a good understanding of the emotions of people around me". A 7-point Likert response format (*1 = strongly disagree*, 7 = *strongly agree*) was used. Reliability coefficients have been reported to range from .80 to .90 for each of these EI measures (Wong & Law 2002). Reliability based on a Cronbach's alpha in for this measure yielded .88.

Controls.

Demographic information (e.g., *Sex*, *Age, Experience*) were collected as controls for the analyses.

RESULTS

Descriptive Statistics

Table 1 below reports the means, standard deviations, correlations and alphas for the study. Table 1 reveals a negative relationship between leadership experience and emotional suppression (r =-0 .12, p <.05) showing experienced leaders reported using less emotion suppression as a regulation strategy. The table also reveals a negative relationship between dispositional resistance to change and emotional intelligence (r = - 0.31, p <.01) showing those leaders reporting higher dispositional resistance to change

9

were lower in emotional intelligence. In terms of positive health outcomes, the data reveals a negative

relationship to dispositional resistance to change (r = -0.17, p <.01) and a positive relationship to

emotional intelligence (r = .36, p <.01). There is also a positive relationship between the emotion

regulation strategy of cognitive reappraisal and positive health outcomes (r = .25, p <.01). Finally, a

positive relationship emerged between the emotion regulation strategy of reappraisal and emotional

intelligence (r = .53, p <.01).

Insert Table 1 about here.

The main statistical approach to the data collected from Time 1 was moderated mediated analysis

utilising the SPSS PROCESS macro (Hayes, 2017). PROCESS applies bootstrapping procedures to

address irregularities in data distributions (Preacher, Rucker, & Hayes, 2007). The utilisation of

bootstrapping confidence intervals in PROCESS analysis provides an advantage over the more traditional

multiple regression and Sobel test, allowing for irregularities in the sampling distribution (Hayes, 2012).

All analyses used 5,000 bootstrap samples and 95% CI with the variables. The independent variables

were mean-centred prior to analysis to increase the interpretability and meaning of the tests of

significance (Hayes, 2017). PROCESS Model 7 was conducted twice to test the hypotheses supporting

our moderated mediated model (Figure 1), with tested pathways between dispositional resistance to

change (independent variable), reappraisal, suppression, and expression of emotions (mediators),

emotional intelligence (moderator) and the two health outcomes: negative and positive health (dependent

variables).

Insert Table 2 about here.

In support of Hypothesis 1, leaders higher in dispositional resistance to change reported

significantly more negative health and wellbeing outcomes (β =.36, t = 8.38, p <.001). and significantly

10

lower positive health outcomes ($\beta = -.10$, $t = -3.99$, $p < .001$). In terms of Hypotheses 2, the results showed that higher levels of reappraisal ($\beta = .02$, $p < .05$) partly explained (or mediated) the positive effect of dispositional resistance to change on leaders' negative health outcomes. In terms of positive health outcomes, the results showed that lower levels of reappraisal ($\beta = -.01$, $p < .05$) and higher levels of suppression ($\beta = .02$, $p < .05$) partly explained (or mediated) the negative effects of dispositional resistance of change on leaders' positive health outcomes.

In terms of Hypothesis 3, emotional intelligence was found to moderate the effects of dispositional resistance to change on leaders' use of suppression ($\beta = .20$, $t = 2.43$, $p = .02$). Johnson-Neyman significant tests showed leaders reporting higher emotional intelligence scores reported greater use of suppression during organizational change if they also had higher levels of dispositional resistance to change. There were no significant moderation effects for reappraisal or expression strategies. Table 2 also shows there were no significant effects for the full moderated mediation model for either negative or positive health outcomes (dependent variables). H4 was not supported.

DISCUSSION

The aim of our study was to better understand the relationship between a leader's dispositional resistance to change and their health and wellbeing outcomes during organizational change. We also sought to examine the role of emotion regulation and emotional intelligence in this relationship. Our data suggests that leaders with higher dispositional resistance to change in general also experience higher negative health outcomes and lower positive health outcomes during organizational change. This supported Hypothesis 1. Hypotheses 2 was partially supported. Unexpectedly, leaders with higher dispositional resistance who used more reappraisal were found to have higher negative health outcomes. However, the finding that those leaders with higher resistance who used less reappraisal, more suppression, and more expression had lower positive health outcomes was more in line with predictions. In terms of Hypothesis 3, we found that when leaders with higher dispositional resistance to change also had higher EI they were significantly more likely to use suppression as an emotional regulation strategy.

11

This seemingly unexpected finding is in line with earlier qualitative findings (see Hudson, Jordan & Troth, 2023) that show leaders are impacted by norms of professionalism during organizational change that involve emotional display rules of non-expression of negative emotions. Previous studies reveal that leaders agree their role requires them to manage their emotions during organizational change (Chrusciel, 2006). The Hudson et al (2023) qualitative study goes further, determining leaders were more likely to respond to affective events with the specific emotion regulation strategy of suppression to maintain their professionalism, even if it undermined their health and wellbeing (i.e., they did not want to show a weakness as a leader). Our study provides quantitative support for these findings. Further, as noted earlier, the leader's suppression may result in a positive outcome for employees, but more often than not, at the cost of negative health consequences for themselves.

LIMITATIONS & FUTURE DIRECTIONS

There are a number of limitations in our study. Specifically, one limitation is *common method bias* based on consistently using self-report likert type scales in the study (Podsakoff et al., 2003). While we attempted to minimise *common method bias* by adopting split data collection across two points in time and varying response format (Jordan & Troth, 2020), we need to acknowledge our results may have been affected by Common Method. We also acknowledge that our final sample may not a true representation of the population of leaders (Theofanidis & Fountouki, 2019) and lacked contextual relevance. We encourage researchers to replicate our study across a broad range of organisations to test our conclusions.

12

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18

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19

Leader dispositional resistance to change and their health and wellbeing: The role of emotion regulation and emotional intelligence

Figure 1: Theoretical Model

20

Table 1: Resistance to change, emotion regulation, health and wellbeing and emotional intelligence

	Mean	S.D.										0
1. Gender	.94	.08										
2. Age	.44	.08	.03									
3. Experience	3.78	1.89	.04	43**								
4. Resistance to Change	.00	.95	.00	.11*	0.04	.89)						
5. Emotional Intelligence	.63	.78	0.03	.02	.03	.31**	.88)					
6. ER Reappraisal	.27	.07	0.03	.06	0.00	.12*	53**	.90)				
7. ER Suppression	.16	.29	0.06	.12*	.00	24**	.01	20**	.86)			
8. Expression	.43	.13	.07	0.09	.01	22**	.06	.03	.29**	.73)		
9. General Health Positive	.90	.43	0.10	.02	0.01	.17**	36**	25**	12*	.042	.81)	
10. General Health Negative	.95	.77	.04	.14**	0.04	46**	.35**	.17**	.06	130*	.55**	.91)

N = 307 ** p <.01 * p <.05   Alpha reliabilities are on the diagonal.

21

Table 2: Reappraisal, suppression and expression as mediators between dispositional resistance to change
and negative and positive health outcomes with emotional intelligence as the moderator

DV	IV	Mediator 1		Mediator 2		Mediator 3		Moderator
Health & Wellbeing	Dispositional Resistance to Change	Emotion Regulation: Reappraisal		Emotion Regulation: Suppression		Emotion Regulation: Expression		Emotional Intelligence Ability
Y	X	M_1		M_2		M_3		W
	Direct Effects *BCoff, (SE)*	Direct Effects of iv *Coeff, (SE)*	Indirect Effects Effect *(Boot LLCI, ULCI)*	Direct Effects of iv *Coeff, (SE)*	Indirect Effects Effect *(Boot LLCI, ULCI)*	Direct Effects of iv *Coeff, (SE)*	Indirect Effects *Effect (Boot LLCI, ULCI)*	Moderating effects *Coeff, (SE)*
Negative	.36** (.04)	-.08* (-.04)	.02* (-.151, -.001)	-.01 (.03)	.00 (-.024, .021)	.02 (.04)	.00 (-.016, .029)	R= -.0-4 (-.16, .08) S = .20* (.04, .37) E= .05 (-.09, .20)
Positive	-10** (.03)	.08* (.02)	-.01* (-.015, -.001)	.06* (.02)	.02* (.004, .039)	.05* (.02)	.02*(.001, .035)	R= -.0-4 (-.16, .08) S = .20* (.04, .37) E= .05 (-.09, .20)

Notes: N = 121; B (Unstandardised coefficient) for outcome variables; θ (Effect) for indirect effects. SE = standard error; LLCI = lower confidence intervals; UCLI = upper confidence intervals; ^ = CI do not cross zero; n/s = not significant for the index of moderated mediation; p < 0.05*, p < 0.01**; CI = 95, Boot strapping = 5000

22

Unveiling Antecedents of Blockchain Adoption in the Saudi Pharmaceutical Supply Chain: A Multi-Stakeholder Perspective

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Stream 8: Business Processes, Innovation, and Supply Chain

Unveiling Antecedents of Blockchain Adoption in the Saudi Pharmaceutical Supply Chain: A Multi-Stakeholder Perspective

ABSTRACT: *Blockchain technology, with its potential to enhance traceability and transparency, holds the key to revolutionising pharmaceutical supply chains. Despite the current nascent adoption rates, especially in emerging economies, this qualitative study explores the antecedents of Blockchain adoption in Saudi Arabia's pharmaceutical supply chain through a cross-sector thematic analysis involving manufacturers, wholesalers, technology providers, and hospitals. Through the lens of the modified Unified Theory of Acceptance and Use of Technology (UTAUT), findings from 26 semi-structured interviews reveal nine key antecedents: enablers, challenges, and dual-aspect antecedents. This study, the first in Saudi Arabia to extend UTAUT by conducting a cross-sectoral thematic analysis for the pharmaceutical supply chain, offers actionable recommendations aligned with Saudi Vision 2030 to enhance technology transformation and operational efficiency.*

Keywords: Blockchain, Technology Adoption, UTAUT, Pharmaceutical Supply Chain, Saudi Arabia, Cross-Sector Analysis

The pharmaceutical supply chain (PSC) is vital for public health in Saudi Arabia, ensuring the availability of essential medications (AlRuthia et al., 2023). However, it faces various challenges, including drug shortages worsened by events such as the COVID-19 pandemic (AlRuthia et al., 2023), counterfeit drugs (Al-Worafi, 2023), inefficient tracking and monitoring systems (Alharthi et al., 2020), and data integrity issues (Bali et al., 2021; Ghadge et al., 2023). The pandemic has underscored the urgent need for resilient pharmaceutical supply chains, highlighting the importance of addressing vulnerabilities (Sabat et al., 2022; Tawfik et al., 2022).

Blockchain Technology (BCT), with its decentralised and immutable ledger, has emerged as a potential solution to these challenges, offering enhanced transparency, traceability, and security within the PSC, especially in emerging economies like India (Badhotiya et al., 2021), Pakistan (Aslam et al., 2021), Nigeria (Labaran & Hamma, 2021), and Saudi Arabia (Abdel, 2023). This innovation promises to revolutionise supply chain management and ensure the delivery of safe, high-quality medications to consumers, instilling confidence in the industry's future (Ghadge et al., 2023; Niu et al., 2021).

Despite its transformative potential, empirical research on Blockchain adoption within the pharmaceutical sector in emerging economies remains limited, particularly in Saudi Arabia (Alharthi et al., 2020; Alshahrani & Alshahrani, 2021; Elhag & Alshehri, 2023). Therefore, this study addresses these gaps by qualitatively exploring the factors influencing BCT adoption within the Saudi PSC. Guided by the modified Unified Theory of Acceptance and Use of Technology (UTAUT), this research will undertake a cross-sectoral analysis of the four main Saudi PSC entities: manufacturers, wholesalers, technology providers, and hospitals. This

1

Stream 8: Business Processes, Innovation, and Supply Chain

pioneering study will contribute to extending UTAUT and technology adoption theory in emerging economies, offering actionable recommendations aligned with Saudi Vision 2030 to enhance the Saudi PSC's technology transformation and operational efficiency.

Literature Review

Pharmaceutical Supply Chain

The pharmaceutical supply chain (PSC), a complex network designed to ensure the safe and efficient delivery of essential medications to patients (Ghadge et al., 2023), faces persistent challenges that compromise its integrity and effectiveness. Counterfeit drugs, which account for an estimated 10% of the global medicine market (Al-Worafi, 2023; Bali et al., 2021), pose a significant threat to public health and undermine confidence in healthcare systems. Tracking inefficiencies and data integrity issues impede timely interventions and quality assurance within the PSC (AlRuthia et al., 2023; Ghadge et al., 2023). These challenges are particularly pronounced in emerging economies like Saudi Arabia, where up to 30% of medications in circulation may be counterfeit (Abdel, 2023; A. Alzahrani et al., 2022; Khwaji, 2022). To address these critical issues and ensure the availability of authentic, high-quality medications, innovative solutions that enhance transparency, traceability, and security within the PSC are urgently required (AlRuthia et al., 2023; Bali et al., 2021; Ghadge et al., 2023).

Blockchain Technology for Pharmaceutical Supply Chain

Blockchain technology, first introduced in 2008 with Bitcoin by Satoshi Nakamoto (Nakamoto, 2008), is a distributed ledger system offering the potential to revolutionise transparency, traceability, and security within the public sector (PSC) (Badhotiya et al., 2021; Liu et al., 2021; Vishwakarma et al., 2023). Its core attributes of decentralisation, immutability, and cryptographic security can ensure the integrity and authenticity of pharmaceutical products throughout the supply chain (Ghadge et al., 2023; Kim, 2024). By enabling the meticulous tracking of pharmaceuticals from manufacturer to consumer, Blockchain technology offers a powerful tool to combat the pervasive issue of counterfeit or substandard medications (Liu et al., 2021; Niu et al., 2021). Despite this transformative potential, empirical research on Blockchain adoption within the pharmaceutical sector of emerging economies, particularly in Saudi Arabia, remains limited (Alharthi et al., 2020; Alshahrani & Alshahrani, 2021; Elhag & Alshehri, 2023). This research gap underscores the pressing need for further investigation into the specific factors that enable or hinder the implementation of Blockchain technology within this unique context.

2

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Saudi Arabia Context

Blockchain technology has gained significant interest across various sectors in Saudi Arabia, including finance(Alshareef & Tunio, 2022), education(Alshareef, 2022), construction(Azmi et al., 2022), healthcare (Elhag & Alshehri, 2023) and pharmaceutical industry(Alharthi et al., 2020; Alshahrani & Alshahrani, 2021). Under Vision 2030, the Saudi government has actively promoted technological innovation and economic diversification, recognising Blockchain's transformative potential (Vision 2030, 2016). The adoption of Blockchain technology in Saudi Arabia is expected to significantly increase the country's Blockchain market share to $250 billion(Alshareef, 2022) (Basiouni, 2022). This is evident in pilot projects such as the Saudi Central Bank's (SAMA) Project Aber, in collaboration with the Central Bank of the UAE (Alkhodre et al., 2019; Iqtait, 2023), and a partnership with IBM exploring Blockchain applications in trade finance and supply chain management (Alshareef & Tunio, 2022; A. Basiouni, 2022).

Despite the interest, studies, and these initiatives, the adoption rate of Blockchain technology within Saudi Arabia remains low(Alshareef, 2022) (Alharthi et al., 2020; A. Basiouni, 2022). Moreover, no study covers the pharmaceutical supply chain in Saudi Arabia. Thus, addressing this gap is critical, as the current landscape is marked by persistent challenges for this vital sector, such as counterfeit drugs, lack of transparency, and inefficient recall processes (Alharthi et al., 2020; Alshahrani & Alshahrani, 2021; Elhag & Alshehri, 2023). To the best of the researcher's knowledge, this is the first study focused on the Saudi Arabia pharmaceutical supply chain sector, providing a qualitative exploration of the perspectives within this sector.

Underpinning Theory and Conceptual Framework

The Unified Theory of Acceptance and Use of Technology (UTAUT) framework, developed by(Venkatesh et al., 2003), provides a comprehensive understanding of the technology adoption process. It integrates constructs from eight prominent models: the Theory of Reasoned Action (TRA)(Fishbein et al., 1980), the Technology Acceptance Model (TAM) (Davis et al., 1989), the Motivational Model (MM)(Davis et al., 1989), the Theory of Planned Behaviour (TPB)(Ajzen, 1991), Combined TAM and TPB (C-TAM-TPB) (Taylor & Todd, 1995), the Model of PC Utilisation (MPCU) (Thompson et al., 1991, Innovation Diffusion Theory (IDT) {Rogers, 1995 #1024), and Social Cognitive Theory (SCT) (Bandura, 1986). The core of the UTAUT model consists of four fundamental constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003).

While the original UTAUT theory provides a solid foundation for identifying determinants of technology adoption, yet several studies have highlighted the need to incorporate additional constructs to comprehensively explore the adoption of BCT, especially in emerging economies(Alazab et al., 2020; Bhardwaj et al., 2021; Janssen et al., 2020; Wong et al., 2020). Therefore, this study incorporates three additional constructs into the UTAUT framework: regulatory support, trust in technology, and technical affinity. These constructs are crucial

3

Stream 8: Business Processes, Innovation, and Supply Chain

in existing studies for successfully integrating technology (Alazab et al., 2020; Barka et al., 2022; Bhardwaj et al., 2021; H. et al., 2021; Wong et al., 2020).

Moreover, existing studies have shown that regulatory support enhances new technologies' perceived reliability and stability, thereby increasing adoption rates (Bhardwaj et al., 2021; Wong et al., 2020). Technical affinity, referring to the degree to which users actively approach or avoid interacting with new technical systems, is a reliable predictor of successful technology integration (Janssen et al., 2020; Wong et al., 2020). Trust in technology is also a significant predictor of adoption, influencing whether individuals embrace or avoid new technologies based on their trust in their functionality and reliability (Alazab et al., 2020; Barka et al., 2022). Thus, this modified UTAUT theory considered the Saudi PSC context, proposed, and guided this study, as illustrated in Figure 1.
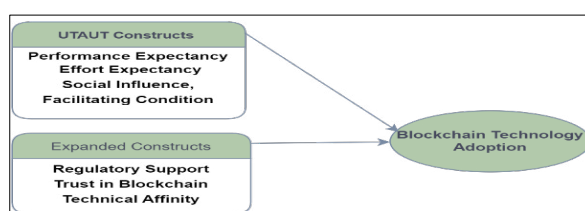
Figure 1: Proposed Framework

Source: Authors

Methodology

Research Design

This exploratory qualitative study utilised semi-structured interviews to gather in-depth insights into the factors influencing the adoption of Blockchain technology (BCT) within the Saudi pharmaceutical supply chain (PSC). The interview questionnaire is informed by a comprehensive literature review, expert feedback and pilot testing (Creswell & Creswell, 2017; Myers, 2019). The interview questionnaire was designed to align with the study's objectives and context. The questions were formulated through the lens of the modified UTAUT framework (Figure 1) (Alazab et al., 2020; Barka et al., 2022; Bhardwaj et al., 2021; H. Wang et al., 2021; Wong et al., 2020). Following a rigorous back-translation approach to identify and resolve any discrepancies and ensure accuracy (Aloudah, 2022). The refined questions were based on feedback from three specialists in Saudi PSC and Blockchain technology. This resulted in minor adjustments to improve clarity and contextual relevance. Consequently, the final questionnaire comprises 25 questions divided into four main sections: general information, experiences and perceptions, domain-specific questions, and a conclusion.

Sampling

To ensure a diverse range of perspectives, purposive and snowball sampling techniques were employed to recruit participants (Myers, 2019). Initially, desktop research of open-access government websites and professional networks identified potential participants (Ali et al., 2020). The selection criteria prioritised

4

Stream 8: Business Processes, Innovation, and Supply Chain

individuals with at least three years of PSC experience or significant involvement in Blockchain initiatives and organisations representing diverse PSC sectors (manufacturers, wholesalers, technology providers, and hospitals) who were actively engaged in PSC initiatives and committed to advancing BCT. This approach aligns with research emphasising the importance of expertise, diverse perspectives, and industry engagement in adopting Blockchain solutions within complex supply chains (Aslam et al., 2021; Taherdoost, 2022; Wamba et al., 2020). Ultimately, 26 participants from 18 organisations were interviewed, comprising five participants from pharmaceutical manufacturers, seven from wholesalers, six from technology providers, and eight from hospitals, reaching data saturation when no new themes emerged (Creswell & Creswell, 2017; Myers, 2019).

Data Collection and Ethical Considerations

Face-to-face semi-structured interviews, lasting 40-60 minutes, were conducted to facilitate in-depth exploration of complex phenomena (Creswell & Creswell, 2017; Myers, 2019). The interview protocol was adapted from Jacob and Furgerson (2012)to ensure consistency and reliability. The Participants received information sheets and consent forms in both Arabic and English. Additionally, the interviews were audio-recorded with consent, and participants reviewed transcripts for accuracy and completeness. Moreover, ethical approval was obtained from the Victoria University Human Research Ethics Committee (VUHREC), and all data were managed and stored in compliance with Australian data protection regulations to ensure participant privacy and confidentiality.

Data Analysis

This study employs a cross-sectoral thematic analysis, adapted from Braun and Clarke (2006) and Miller, Scanlan, and Phillippo (2017), chosen for its robustness in identifying patterns across different entities and ensuring comprehensive thematic development. The analysis process involved several steps, as summarised in Table 1.

Table 1 Summary of Thematic Analysis Steps

Step	How Applied in This Study	Example
Familiarisation with Data	Transcribed and reviewed all interviews multiple times, using NVivo for word frequency analysis.	
Code Generation	Systematically labelled meaningful data units with codes.	"Data Security," "Faster Transactions," "Digital Records," "Improved performance," "Save Time," "Paperless," "Drug shortage."
Grouping Initial Themes	Grouped codes into broader themes based on conceptual similarities.	Theme 1: Process Streamlining (from "Improved Efficiency," "Save Time," "Paperless"). Theme 2: Information Transparency (from "Data Security," "Faster Transactions," "Digital Records").
Reviewing Initial Themes	Refined themes to ensure they accurately represent the data.	Revised Theme 1: Operational Efficiency. Revised Theme 2: Supply Chain Visibility.
Creating Codebook	Developed a list of codes and their definitions.	Defined themes: Operational Efficiency (efficiency improvements, cost reduction).
Comparing Across Entities	Identified similarities and differences across entities.	Compared themes across PSC entities.
Synthesising Themes and Reporting	Integrated themes into a comprehensive analysis.	Synthesised themes for reporting findings.
Adapted from Braun and Clarke (2006) and Miller et al. (2017)		

5

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Trustworthiness

To ensure robust and trustworthy results, this study adhered to Guba and Lincoln's (1994) trustworthiness criteria: credibility, transferability, dependability, and confirmability. Credibility was enhanced through pilot testing and member checking, allowing participants to verify transcript accuracy (Myers, 2019). Transferability was achieved by providing detailed contextual information about participants and the Saudi Arabia PSC. Dependability was maintained with a structured interview guide and meticulous transcription. Confirmability was ensured by minimising researcher bias through a three-expert review of the interview guide. This comprehensive approach ensured the reliability and validity of the study's findings.

Findings and Discussion

This section presents and discusses the findings of the cross-sectoral analysis, revealing nine key antecedents to BCT adoption within the Saudi PSC, classified as two enablers, three challenges, and four dual-aspect factors. A nuanced examination of these antecedents highlights shared perspectives and sector-specific difficulties, providing a comprehensive understanding of the factors influencing BCT adoption. Additionally, participant and organisation demographics are detailed to provide context for interpreting these findings.

Participant and Organization Demographics

The study involved 26 participants from various sectors of the Saudi PSC, primarily male and holding middle management or executive roles. Participants had significant industry experience and diverse educational backgrounds, representing medium to large enterprises(a summary of demographic information is provided in Table 2 below.

Table *2* Summary of Participant and Organization Demographics

PSC Entity	Participant Codes	Age Range (years)	Education	Experience Range (years)	Common Designations	Organisation Size (Large: + 250, Medium: ≥250)	Avg. Interview Duration (min)
Hospitals	H1, H2, H3, H4, H5, H6, H7, H8	43-58	7 Bachelors, 1 Master's	9-31	Pharmacy Manager, Executive Manager, IT Manager	6 Large, 2 Medium	53
Wholesalers	W9, W10, W11, W12, W13, W14, W15	38-58	5 Bachelors, 2 Master's, 1 PhD	9-28	Logistics Specialist, Regional Manager, Operations Manager	5 Large, 2 Medium	55
Tech Providers	T16, T17, T18, T19, T20, T21	29-56	6 Bachelors, 1 Master's	7-22	Biomedical Engineer, General Manager, IT Manager	6 Medium	56
Manufacturers	M22, M23, M24, M25, M26	33-55	5 Bachelors, 1 Master's	9-23	Supply Chain Manager, Warehouse Manager, Logistics Manager	3 Large, 3 Medium	51
Source: Authors							

6

Stream 8: Business Processes, Innovation, and Supply Chain

Cross-Sectoral Thematic Analysis

Enablers

1. **Performance expectancy** (PE) is the belief that Blockchain will significantly enhance job performance and motivate stakeholders to embrace this technology (Sharma et al.; Venkatesh et al.). This antecedent explores three thematic areas that encourage stakeholders to adopt BCT based on their expected improvements in performance: operational efficiency, enhanced supply chain visibility, and industry transformations.

Cross-Sectoral Similarities: Stakeholders across various sectors recognise the potential of BCT to improve operational efficiency. For instance, manufacturers and wholesalers emphasise operational efficiency improvements. Participant M22 noted, *"Blockchain will reduce the need for manual data entry, leading to less human error and repetitive tasks, which saves our time."* Hospitals highlight supply chain visibility, with Participant H3 stating, *"Blockchain lets us make sure that every drug we give out is genuine, can be tracked, and is safe for our patients."* Technology providers focus on industry transformation. This broad recognition of BCT's benefits aligns with the UTAUT framework, emphasising the importance of perceived usefulness in technology adoption (Sharma et al., 2023; Venkatesh et al., 2003).

Cross-Sectoral Differences: Despite these similarities, the emphasis on specific benefits varies by sector. Manufacturers focus on streamlining production processes, while wholesalers prioritise the accuracy of financial transactions. Participant W13 mentioned, *"For us, the accuracy and speed of financial transactions are paramount, and Blockchain offers a significant improvement in this area."* Hospitals emphasise patient safety and supply chain visibility, whereas technology providers underscore broader industry-wide changes. Participant T19 stated, *"Blockchain is not just a tool; it is a game-changer for the entire industry, promising a new level of transparency and efficiency."* These differences highlight the context-dependent nature of perceived benefits, supporting the concept of task-technology fit, where technology is more readily adopted when it directly addresses specific user needs (Goodhue & Thompson, 1995; Kouhizadeh et al., 2021).

2. **Social influence** (SI) refers to how individuals perceive others, such as peers, managers, and industry leaders, who believe they should use BCT (Davis et al.; Sharma et al.; Venkatesh et al.). Its associated themes include peers and friends, managers and industry leaders, and social media.

Cross-Sectoral Similarities: Social influence is crucial across all sectors, with peer interactions and endorsements from industry leaders significantly shaping attitudes towards BCT. Participant T16 stated, *"Blockchain is not just about improving things; it is about rethinking and changing the business model for the whole pharmaceutical industry."* Additionally, Participant M22 shared, *"My colleagues and I regularly discussed potential uses and brainstormed ways to incorporate these technologies into our everyday lives,"* demonstrating the importance of peer influence. This finding is consistent with the Diffusion of Innovations

7

Stream 8: Business Processes, Innovation, and Supply Chain

Theory, which emphasises the impact of social networks and opinion leaders on adopting new technologies (Nguyen et al., 2021; Rogers, 1995).

Cross-Sectoral Differences: Social influence varies across sectors. Manufacturers and wholesalers rely heavily on peer networks and informal interactions, whereas technology providers and hospitals emphasise formal endorsements from industry leaders. Participant H6 noted, *"Endorsements from top industry leaders and healthcare administrators play a crucial role in our decision to adopt new technologies."* Participant W11 commented, *"We tend to follow what our peers and immediate business partners recommend rather than formal endorsements."* This variation underscores the need for tailored communication strategies to foster BCT adoption. The differing sources of social influence—peers for manufacturers and wholesalers and industry leaders for technology providers and hospitals—highlight the importance of context in shaping adoption decisions (A. et al., 2022; Kouhizadeh et al., 2021).

Challenges
1. **Regulatory support** refers to the governmental and institutional frameworks that either facilitate or impede the adoption of BCT(Janssen et al., 2020; Wong et al., 2020). Its associated themes include current regulatory ambiguity and Saudi initiatives.

Cross-Sectoral Similarities: Regulatory ambiguity is a common challenge across all sectors. Participant M22 mentioned*, "I think there is no specific law that targets BCT; I think this may be the reason for the low interest in the growth and adoption of Blockchain in the sector."* Similarly, Participant H5 expressed, *"Without clear regulations, it is hard to commit fully to implementing new technologies."* This finding aligns with existing research on regulatory uncertainty as a barrier to technology adoption in highly regulated industries such as PSC (Badhotiya et al., 2021; Niu et al., 2021).

Cross-Sectoral Differences: Manufacturers and hospitals are mainly concerned with regulatory ambiguities and the associated risks, while technology providers view regulatory uncertainty as an opportunity to shape future regulations. Participant T20 highlighted, *"Regulatory ambiguity can be an opportunity for us to influence future policies."* Wholesalers are optimistic about future regulatory clarity. Participant W14 stated, *"We believe regulations will soon catch up and provide clearer guidelines."* This suggests that a uniform regulatory framework may not be practical, and sector-specific regulations that address unique challenges and opportunities are necessary (Aljadeed et al., 2021; Azmi et al., 2022).

2. **Organizational barriers,** which emerged as a new antecedent from the data, refer to internal obstacles within the PSC that hinder BCT adoption, including hierarchical structures, managerial resistance, and financial constraints (Alshareef & Tunio, 2022; Kouhizadeh et al., 2021).

8

Stream 8: Business Processes, Innovation, and Supply Chain

Cross-Sectoral Similarities: Managerial hierarchy and resistance to change are significant barriers across all sectors. Participant W13 remarked, *"Technology promises efficiency, but the financial cost could be extremely high, so we are unprepared."* Participant M24 added, *"Our managers are often resistant to change, which slows the adoption of new technologies."* These barriers are commonly cited in the literature as obstacles to technology adoption (Kouhizadeh et al., 2021)

Cross-Sectoral Differences: Financial constraints are a universal concern, but the impact of hierarchical structures and managerial resistance varies. Manufacturers and hospitals face more pronounced challenges due to rigid hierarchies, whereas technology providers experience these barriers to a lesser extent. Participant H8 noted*, "Our hierarchical structure makes it difficult to implement new technologies quickly."* Participant T19 stated, *"We have fewer hierarchical issues, but financial constraints still pose a challenge."* This variation highlights the need for tailored change management strategies (Kouhizadeh et al., 2021; Wang et al., 2021).

3. **Pharma-specific barriers**, another new antecedent identified from the data, refer to challenges unique to the pharmaceutical industry, such as communication inefficiencies, integration difficulties, and sector-specific barriers (Khwaji et al., 2021; Vishwakarma et al., 2023).

Cross-Sectoral Similarities: Communication and data management issues are prevalent across all sectors. Participant M23 highlighted, *"Keeping our products top-notch and authentic is essential, but the current paper-based systems make tracking every batch and shipment challenging. Blockchain could revolutionise this process."* Participant H7 stated*, "The inefficiencies in our communication systems are a major hurdle in ensuring drug safety and authenticity."* This finding underscores the unique challenges of the pharmaceutical industry, as discussed in existing literature (Ghadge et al., 2023; Liu et al., 2021; Vishwakarma et al., 2023).

Cross-Sectoral Differences: The impact of pharma-specific barriers varies across sectors. Manufacturers focus on drug tracking, wholesalers on communication methods, technology providers on data integration, and hospitals on PSC integration. Participant T18 stated, *"Integrating Blockchain with our existing data systems is a major challenge."* Participant H6 commented, *"Ensuring all parts of the supply chain communicate effectively is challenging."* This variation necessitates sector-specific solutions to address the unique challenges of the pharmaceutical industry (Badhotiya et al., 2021; Niu et al., 2021).

Dual-Aspect Antecedents

1. **Effort expectancy** refers to the degree to which individuals believe using BCT will be easy and require minimal effort (Kouhizadeh et al., 2021; Venkatesh et al., 2003). Its associated themes include perceived ease of use and perceived complexity.

Cross-Sectoral Similarities: Most sectors perceive BCT as easy to use due to familiarity with digital tools. Participant M26 noted, "Due to my experience with Oracle systems, I am highly confident that Blockchain

9

Stream 8: Business Processes, Innovation, and Supply Chain

will enhance our current data management capabilities." Similarly, Participant T20 stated, *"My experience with similar technologies makes it easier for us to adopt Blockchain."* This aligns with the UTAUT theory, emphasising the importance of perceived ease of use in technology adoption (Sharma et al., 2023; Venkatesh et al., 2003).

Cross-Sectoral Differences: Hospitals perceive BCT as more complex than other sectors due to a lack of exposure. Participant H5 remarked, "*Learning the RSD(Saudi Tracking system) was an enormous job, and I fear Blockchain would be similar."* This indicates the need for targeted training programs to bridge the gap between perceived complexity and actual readiness (Badhotiya et al., 2021; Nguyen et al., 2021). This difference highlights the necessity of user-friendly solutions and comprehensive training to facilitate BCT adoption in the healthcare sector.

2. **Facilitating conditions** refer to the extent to which individuals believe that the existing organisational and technical infrastructure supports the adoption of BCT (Sharma et al., 2023; Venkatesh et al., 2003). Its associated themes include infrastructure challenges and infrastructure readiness.

Cross-Sectoral Similarities: Infrastructure readiness is a common theme across sectors, with many stakeholders recognising the need for robust technical support. Participant W10 emphasised, *"Our technical infrastructure is top-notch, with the latest hardware and comprehensive software solutions."* This supports the UTAUT framework, which highlights the role of facilitating conditions in technology adoption (Venkatesh et al., 2003).

Cross-Sectoral Differences: Manufacturers and hospitals face more significant infrastructure challenges than wholesalers and technology providers. Participant M25 noted, "*Our IT department is struggling to keep up with fixing system malfunctions and connectivity issues. The servers and hardware we have are outdated, and this makes it challenging to adopt technologies."* Conversely, Participant T18 stated, *"We have a well-established IT infrastructure, which makes integrating new technologies like Blockchain relatively smooth."* This variation underscores the need for sector-specific investments in infrastructure (Hastig & Sodhi, 2020).

3. **Trust in technology** refers to BCT's perceived reliability, security, and effectiveness within the PSC (Janssen et al., 2020; Wong et al., 2020). Its associated themes include trust in Blockchain and barriers to trusting Blockchain.

Cross-Sectoral Similarities: Trust in BCT is high among technology providers and wholesalers. Participant T20 highlighted, *"I think Blockchain allows us to maintain a tamperproof record of all transactions, ensuring the security and integrity of information across the entire supply chain."* Participant W15 added, *"Blockchain's security features are its biggest asset."* This finding is consistent with literature on the importance of trust in technology adoption.

10

Stream 8: Business Processes, Innovation, and Supply Chain

Cross-Sectoral Differences: Manufacturers and hospitals exhibit lower trust in BCT due to concerns about risks and the lack of clear regulations. Participant M22 noted, *"Without more practical examples and clear regulations, it is hard to fully trust Blockchain."* Participant H7 stated, *"Our main concern is the lack of clear guidelines and regulations, which makes it risky to fully trust and implement Blockchain."* This underscores the importance of building trust through transparent communication and proven success stories (Ali et al., 2020).

4. **Technical affinity** refers to an individual's predisposition toward actively engaging with or avoiding BCT(Janssen et al., 2020; Wong et al., 2020). Its associated themes include technical expertise and curiosity about Blockchain.

Cross-Sectoral Similarities: Curiosity about BCT is shared across all sectors, with varying levels of technical expertise. Participant M24 commented, *"I am curious to learn more about Blockchain, even though I am not technically inclined."* This curiosity aligns with literature emphasising the role of technical affinity in successful technology integration (Janssen et al., 2020; Wong et al., 2020).

Cross-Sectoral Differences: Technology providers exhibit high technical affinity and proactively seek knowledge about BCT. Participant T16 noted, *"We are always looking to learn and integrate new technologies like Blockchain into our processes."* In contrast, hospitals show lower technical affinity due to less exposure and technical expertise. Participant H5 stated, *"Our staff need more training to be comfortable with new technologies like Blockchain."* Manufacturers and wholesalers have moderate technical affinity, expressing interest but needing more technical support. This highlights the need for tailored training programs to enhance technical readiness across different sectors (Niu et al., 2021).

Conclusion

This study unveils the multifaceted factors influencing the adoption of Blockchain Technology (BCT) in the Saudi PSC. It highlights performance expectancy and social influence as critical enablers, while regulatory and pharma-specific barriers and organisational resistance pose significant challenges. The dual nature of antecedents, such as effort expectancy, facilitating conditions, trust in technology, and technical affinity, necessitates strategic approaches, emphasising the need for investments in infrastructure and targeted training programmes to address these varied impacts. The revised theoretical framework is presented in Figure 2
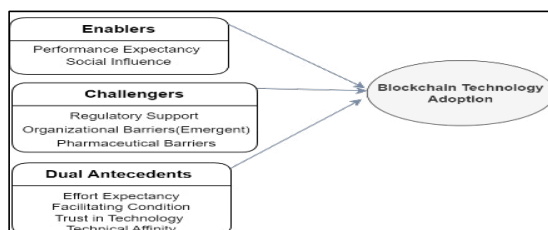
Figure 2 Revised Conceptual Framework

Source: Authors

11

Stream 8: Business Processes, Innovation, and Supply Chain

Theoretical and Practical Contribution

This study contributes to the theoretical understanding of BCT adoption by validating and extending the modified UTAUT framework within the Saudi PSC. This research enhances our knowledge of technology adoption in emerging economies, particularly in the critical pharmaceutical sector, where the absence of comprehensive regulatory frameworks and robust technological infrastructure, coupled with a cultural preference for established practices, hinder the adoption of Blockchain solutions (Alshareef & Tunio, 2022; A. Basiouni, 2022).

In addition, this study addresses gaps in the literature on emerging economies and qualitative BCT adoption studies; the findings offer practical insights for stakeholders. The study aligns with Saudi Vision 2030 goals by guiding the development of sector-specific regulations and change management strategies. It emphasises the need to address both enabling and inhibiting factors for successful BCT adoption in the PSC.

Limitations and Future Directions

This study's focus on the Saudi PSC through qualitative methods may limit the generalizability of its findings. Future research should explore diverse sectors and countries, employing mixed methods or survey approaches to offer a more comprehensive understanding. Longitudinal studies could examine BCT's long-term impacts and scaling challenges in complex supply chains, considering the evolving landscape of Blockchain technology adoption.

12

Stream 8: Business Processes, Innovation, and Supply Chain

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13

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14

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15

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16

Stream Number 2 Organisational Behaviour

The Digital Disconnect: Unravelling the impact of work-related ICT use after hours on quiet quitting

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The Digital Disconnect: Unravelling the impact of work-related ICT use after hours on quiet quitting

ABSTRACT: *This research aims to uncover the complex dynamics of work-related ICT use after hours (WICT_USE) and its impact on quiet quitting among employees in Malaysia. The flexibility afforded by information and communication technologies aids in balancing work and personal life; however, constant connectivity can blur boundaries, causing adverse impact. The research addresses gaps by providing insight on how WICT_USE influences quiet quitting, a phenomenon where employees perform only their contracted duties without extra effort. Data from three-wave online survey among 232 full-time employees in Malaysia reveal that while mobile convenience gratification positively moderates the relationship between WICT_USE and work-life balance (WLB), social interaction gratification does not. Findings also show a direct relationship between WICT_USE and quiet quitting, with WLB serving as a partial mediator, highlighting the critical need for organizational to address employee engagement in the digital era.*

Keywords: Work-related ICT use (WICT_USE), Quiet quitting, Work-life balance (WLB), Social interaction gratification, Mobile convenience gratification

Overview

Spurred on by the COVID-19 pandemic, wide diffusion of mobile devices and the high broadband penetration provide opportunities to manage work tasks flexibly. Ideally, communication technologies allow employees to stay connected without the time and physical proximity constraints. However, this constant connectivity, perceived as essential for productivity and career enhancement, has resulted work-related information and communication technology (ICT) uses extended beyond contracted hours. This flexibility has contributed double-edged effects on employee outcome (Zhang, Tekleab, Piszczek, & Qiu, 2023).

There is a gap in understanding how work-related information communication and technology use after hours (WICT_USE) affects work-life balance (WLB) and contributes to quiet quitting. Quiet quitting, where employees only perform their duties within contractual requirements without additional effort or time (Karrani, Bani-Melhem & Mohd-Shamsudin, 2024), has direct impacts on organizational productivity, employee morale and overall economic. According to Gallup's State of the Global Workplace 2023 report, rates of quiet quitting has reached 59% globally, costing an amount of USD 8.8 trillion yearly, equivalent to about 9% of global GDP (Dennehy, 2023). These statistics highlight the severity of the phenomenon and necessitate a comprehensive examination on the underlying mechanisms and conditions under which WICT_USE influences on quiet quitting.

Current Understanding

Work-related ICT use after hours (WICT_USE)

WICT_USE has been labelled as a double-edged sword, due to its flexibility 'paradox.' (Liao, Feng, Zheng, & Zhou, 2024; Zhang et al., 2023). Some researchers reveal that increased work autonomy helps employees restore the balance between work and non-work domains, positively impacting WLB (Abelsen, Vatne, Mikalef, & Choudrie, 2021). Conversely, others argue that constant availability has made WLB a far-reaching dream (Khalid, Weng, Luqman, Rasheed, & Hina, 2022). The inconsistent findings suggest a complex mechanism underlying the impact of WICT_USE on WLB, making it difficult to unravel. Media use is a rational decision, guided primarily by one's motives and gratifications. Different motives are formed through different psychological processes, which explain the different outcomes of the same behaviors (Deci & Ryan, 2012). Thus, the critical condition of the double-edged effects should be the gratifications obtained from WICT_USE. Uses and Gratification theory (Katz, Haas, & Gurevitch, 1973) identifies two conditions influencing the relationship between WICT_USE and WLB, namely (a) social interaction gratification, which refers to if one feel comfortable to communicate through the technology-enabled space (Phang, Kankanhalli, & Sabherwal, 2009) and (b) mobile convenience gratification, which refers to the ease of using ICT with less effort, without time and space constraints (Ha, Kim, Libaque-Saenz, Chang, & Park, 2015).

Employees use ICT to for workplace socialization or managing work-related matters due to convenience features afforded after work hours. Those gratified may have more positive perceptions of WICT_USE and WLB. Thus, it is proposed that the relationship between WICT_USE and WLB will be positive for those with higher gratifications, as below:

H1: The relationship between WICT_USE and WLB will be positive for employees with higher social interaction gratification.

H2: The relationship between WICT_USE and WLB will be positive for those with higher mobile convenience gratification.

Quiet Quitting

Despite no consensus on the definition, quiet quitting has been labelled as a double-edged sword, sparking debacle on its differing perspectives. Some view quiet quitters as disengaged (Formica & Sfodera, 2022), that bring damaging impacts on workplace morale, productivity and overall performance (Anand, Doll, & Ray 2023). Others see quiet quitting as a positive movement to regain WLB, rejecting "hustle culture" (Mahand & Caldwell, 2023; Serenko, 2023). Since quiet quitting is believed to be the reaction to intense workloads, extended work hours, and burnout (Anand et al., 2023); it is likely that prolonged WICT_USE could be linked to the causes of quiet quitting.

The relationship between WICT_USE, WLB and quiet quitting is explained through the Self-Determination Theory (SDT), which highlights that autonomy in control of one's own behaviors, is crucial for motivation and engagement (Deci & Ryan, 2012). WICT_USE can reduce the sense of autonomy by creating a persistent connectivity expectation, thus intruding into employees' personal life. Subsequently, employees may feel of being controlled and diminish motivation; thereby, they may withdraw effort and become disengaged. Given that, it is assumed that there is a significant relationship between WICT_USE and quiet quitting. Recently, researchers revealed that work-life imbalance is the main reason for quiet quitting (Aydin & Azizoğlu, 2022). In the study context, WLB is a critical mediator in the relationship between WICT_USE and quiet quitting. SDT suggests that a balance between work and personal life is critical in fulfilling the autonomy. When WICT_USE disrupts this balance, employees tend to quiet quit, as they attempt to regain their personal life and minimise the unfavourable impact on their well-being.

Hence, the relationship is hypothesized as:

H3: There is a significant relationship between WICT_USE and quiet quitting.

H4: WLB mediates the relationship between WICT_USE and quiet quitting.

Overall, the research model can be represented in Figure 1.

Figure 1: Research Model
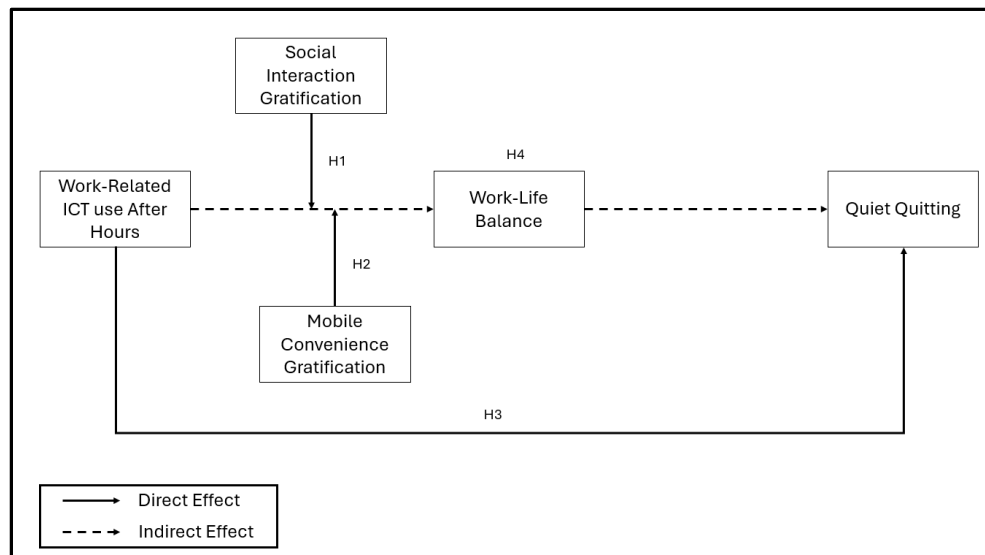
Research Question

The study seeks to answer the research questions of:

Research Question 1: To what extent does social interaction gratification and mobile convenience gratification moderate the relationship between WICT_USE and WLB?

Research Question 2: What is the relationship of WICT_USE in quiet quitting?

Research Question 3: To what extent does WLB mediate the relationship between WICT_USE and quiet quitting?

Research Approach

The sample was recruited using snowball sampling through social media and professional network among full-time employees in Malaysia. A three-wave online survey was conducted. In first phase, demographic and WICT_USE data were collected from 312 employees. Six weeks later, 312 respondents in the first phase were contacted; however, only 262 employees responded to social interaction gratification, mobile convenience gratification and WLB assessments. In the final phase, only 232 returned their assessment of quiet quitting. The sample size is adequate based on power analysis with 0.80 power and 0.15 effect size, as it has exceeded the minimum sample size of 92 (Faul, Erdfelder, Buchner, & Lang, 2009). The email address is the unique identifier to match the three-waves survey. To reduce the drop-out rate, e-voucher was given each time for completing the survey questionnaire. Respondents were primarily male (58.62%), single (62.07%), 26-year-olds and below (43.53%), and obtained Bachelor's degree or equivalent (50.86%), with tenure year of 1 to 5 years (50.43%) (Refer Table 1).

Table 1: Profile of participants.

Variables	Category	Frequency	Percentage (%)
Gender	Male	136	58.62
	Female	96	41.38
Marital Status	Single	144	62.07
	Married	85	36.64
	Others	3	1.29
Age Group	26 and below	101	43.53
	27 to 40	81	34.91
	41 to 58	32	13.79
	59 and above	18	7.76
Education	Certificate	19	8.19
	Diploma	75	32.33
	Bachelor's Degree or equivalent	118	50.86
	Postgraduate Degree	20	8.62
Tenure Years	< 1	21	9.05
	1 – 5	117	50.43
	>= 6	90	40.52

WICT_USE was measured with a 3-item scale originally developed by Boswell and Olson-Buchanan (2007) and later refined by Ma, Xie, Tang, Shen, and Zhang (2016), using a 5-point Likert scale (1 = "never" to 5 = "always"). WLB was rated using the 5-item scale by Talukder, Vickers, and Khan (2018). A 6-item scale of social interaction gratification by Lee, Lee, and Choi (2012) and a 5-item scale of mobile convenience gratification by Ha et al. (2015) were rated using 5-point Likert scales (1 = "strongly disagree"; 5 = "strongly agree"). Quiet quitting was assessed using 8-items scale developed by Anand et al. (2023) with 7-point Likert scales (1 = "strongly disagree"; 7 = "strongly agree").

As the study aimed to unveil complex relationship between the WICT_USE and quiet quitting by testing mediating effects and moderating effects simultaneously, PLS-SEM was deemed as the most rigorous choice (Hair, Hult, Ringle, & Sarstedt, 2022). The data analysis was performed using SmartPLS 4.0.1.0 software (Ringle, Wende, & Becker, 2024) by evaluating both (1) measurement model and (2) structural model.

Findings

The assessment of reflective measurement model is summarized in Table 2. Two items from the Social Interaction Gratification scale and one item from the Quiet Quitting scale were removed due to low loadings (refer Table 1). Despite some items had loadings below 0.708, removal was not required because their average variance extracted (AVE) and composite reliability (CR) surpassed the respective threshold (AVE >= 0.50 and CR >= 0.70) (Hair et al., 2022). Adequate discriminant validity was confirmed with all Heterotrait-Monotrait (HTMT) ratio values falling below 0.90 threshold (Table 3) (Henseler, Ringle, & Sarstedt, 2015). This is acceptable if constructs under investigation are relatively similar (Hair et al., 2022).

Table 2: Assessment of measurement model

Constructs	Items	Loading	CR	AVE
WICT_USE	ICT_USE1	0.755	0.608	0.557
	ICT_USE2	0.771		
	ICT_USE3	0.711		
Mobile Convenience Gratification	MC1	0.834	0.858	0.632
	MC2	0.798		
	MC3	0.786		
	MC4	0.815		
	MC5	0.738		
Quiet Quitting	QQ1	0.721	0.850	0.521
	QQ2	0.708		
	QQ3	0.678		
	QQ4	0.720		
	QQ5	0.685		
	QQ7	0.801		
	QQ8	0.733		
Social Interaction Gratification	SI1	0.738	0.740	0.562
	SI2	0.818		
	SI3	0.783		
	SI4	0.650		
Work-life Balance	WLB1	0.794	0.832	0.594
	WLB2	0.787		
	WLB3	0.790		
	WLB4	0.739		
	WLB5	0.742		

Table 3: Heterotrait–monotrait (HTMT) ratio

	Mobile Convenience Gratification	Quiet Quitting	Social Interaction Gratification	WICT_USE	Work-life Balance
Mobile Convenience Gratification					
Quiet Quitting	0.736				
Social Interaction Gratification	0.636	0.671			
WICT_USE	0.744	0.889	0.702		
Work-life Balance	0.651	0.630	0.723	0.659	

All inner VIF values fell below 3.3 threshold (Diamantopoulos & Siguaw, 2006), indicating no collinearity issue. Then, a bootstrapping procedure with 10,000 re-samples was performed to test hypothesis (Preacher & Hayes, 2008). H2, H3 and H4 were confirmed, but H1 was not (Refer Table 4 and Figure 2).

Table 4: Significance of hypothesis

	β	Standard Error	t-values	p-values	BCI LL	BCI UL
Moderating Effect						
WICT_USE -> Work-life Balance	0.158	0.071	2.238	0.013	0.036	0.266
H1: Social Interaction Gratification x WICT_USE -> Work-life Balance	-0.127	0.067	1.888	0.030	-0.229	-0.008
H2: Mobile Convenience Gratification x WICT_USE -> Work-life Balance	0.152	0.058	2.615	0.004	0.055	0.245
Direct Effect						
H3: WICT_USE -> Quiet Quitting	0.540	0.054	9.971	0.000	0.448	0.626
Indirect Effect						
H4: WICT_USE -> Work-life Balance -> Quiet Quitting	0.045	0.022	2.017	0.022	0.010	0.083

In support of H2, the moderating role of mobile convenience gratification was observed for those with higher gratification, where the increase in WICT_USE resulted in higher WLB (Figure 2). This could be attributed to gratification obtained from the ease in using work-related technology, which enables employees to respond and handle work-matters efficiently, even after workhours. This aligns with study by Gan and Li (2018). Conversely, while the moderating role of social interaction gratification (H1) was significant, the hypothesised relationship was not supported. Interestingly, even when not engaged in active connections with co-workers, those with low social interaction gratification experienced higher WLB from increased WICT_USE. This could be attributed to the demographic composition of the participants with majority of Gen Z. This generation prefers individual tasks and embraces physical connections rather than technology-enabled interactions (Deloitte, 2018). Thus, their WLB gains more from WICT_USE since they do not rely heavily digital means for social interactions. These results revealed that the WICT_USE renders those employees with different gratifications, with differing levels

of WLB, adding further support to the moderating role of mobile convenience and social interaction gratification.

Figure 2: Interaction plot for Mobile Convenience Gratification x WICT_USE
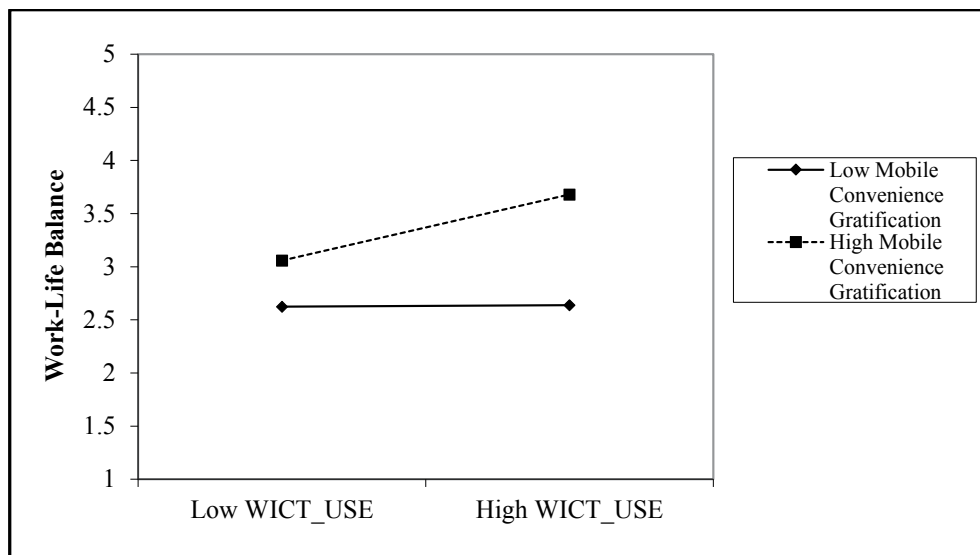
Additionally, there is a positive relationship between WICT_USE on quiet quitting (H3). Consistent with assumption of SDT, WICT_USE intrudes on employees' personal time, leading to reduced motivation, and increased withdrawals. Complementary to the direct relationship between WICT_USE and quiet quitting, the role of WLB as a partial mediator (H4) was supported, signifying that quiet quitting could be affected directly by WICT_USE and indirectly via WLB.

The coefficient of determination, R^2, indicated that 51.4% of the variance in quiet quitting is explained by the model, implying a significant predictive power (Cohen, 1988), similar to study in related context (Xueyun, Al Mamun, Yang, Naznen, & Ali, 2024). The PLSPredict 10-fold procedure (Shmueli et al., 2019) showed that majority of errors in the LM was comparatively higher than those in the PLS model, hence, a medium predictive relevance was concluded.

Contribution and Limitations

The study offers insights into how WICT_USE influences quiet quitting through WLB, supported by SDT. The insignificant moderating effect of social interaction gratification in the opposite direction provides an avenue for future research.

Limitations include the use of non-probability sampling method, which may limit the generalizability of findings. Another limitation relates to the heterogeneity within the sample population. To combat this, researchers could employ multi-group analysis to address heterogeneity issues and better develop the policies that cater the diverse needs of employees.

Implications

The findings have practical implications for organizations and policymakers. Employers can benefit from understanding the impact of WICT_USE on employee engagement and productivity. By promoting healthy WLB practices and regulating after-hours communication expectations, organizations can mitigate the risks of quiet quitting. Policymakers can also use these insights to develop guidelines and regulations that protect employees' WLB in an increasingly digital work environment.

In conclusion, to manage quiet quitters, a multifaceted strategy is needed, focusing on WLB through WICT_USE is possible. Employers should avoid on developing one-size-fits-all solutions, considering the impact of different gratifications.

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Rediscovering Effective Leadership Attributes During Crisis in Australian Higher Education Context

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1

Rediscovering Effective Leadership Attributes During Crisis in Australian Higher Education Context

Abstract

This study explores leader perceptions of effective leadership attributes in Australian Higher Education Sector (HES) during the COVID-19 pandemic which is indeed a crisis. Semi-structured virtual interviews were conducted with thirteen senior leaders from the Australian HES as part of a greater project for developing a measurement matrix for crisis leadership. The cognitive resource theory (CRT) underpins this study on effective crisis leadership attributes within the Australian HES. This approach facilitated a shared workplace climate of trust and justice. This study explored crisis leadership based on the lived experience of leaders in the Australian HES during a crisis. This study revealed that crisis leadership attributes were manifested at three overlapping levels of analysis: individual, group and organizational levels. Thematic analysis revealed that values-oriented leaders tend to embrace humanistic values such as ethics, empathy, authenticity, and self-awareness through their actions. From a cognitive-based perspective, leaders with strategic knowledge respond to a crisis resiliently. A limitation of this study was that it was cross-sectional and due to health restrictions during the COVID-19 pandemic, this study relied on virtual interviews. A longitudinal study would contribute to the development of a holistic picture of leadership attributes during a crisis. By laying a solid foundation for understanding individual, group and organizational level crisis leadership attributes from cognitive and value-based perspectives this study contributes positively to the knowledge of crisis leadership in the HES. It will also facilitate the development of a measurement matrix for crisis leadership.

Keywords: COVID-19, crisis leadership, leader attributes, higher education sector.

Introduction

As organizations navigate through incredibly challenging times such as natural disasters, pandemic, and man-made crises (e.g., wars, financial crisis), where employees look up to their leaders for direction to resolve challenges and crises (Wu *et al*., 2021; Riggio & Newstead, 2023a, 2023b).

2

During a crisis, employees' performance is dependent on how they respond to their immediate leaders' ability to influence their cognitions, and behaviors.

The significance of leadership in crisis, such as during the COVID-19 pandemic, is evident more than ever before, with the pandemic posing unprecedented challenges to leaders across different sectors. Seijts *et al. (*2023) argued that the best and worst in leaders were revealed across the public, private, and not-for-profit sectors during the COVID-19 pandemic. Hence, there continues to be a search for effective leader traits and attributes appropriate for unexpected and highly disruptive events or crisis (Wu *et al.*, 2021; Klien & Delegach, 2023). Recent research views crisis leadership as focusing '…on the processes of how a crisis influences leaders, how leaders exert influence on the affect, cognitions, and behaviors of different stakeholders around times of crisis, and why some leaders are more effective than others in crisis context" (Wu *et al.*, 2021, p. 3).

While recent studies suggest that specific leader attributes impact employees' work performance (Yukl, 2013), further research is needed to unearth relevant leader attributes that facilitate employees' wellbeing and performance during crises. For the Australian HES, the COVID-19 pandemic not only had health and financial implications, but also impacted its workplace relationships, especially how supervisors and subordinates interacted and the mode of delivery of knowledge to the students (Garretsen *et al.,* 2022; Kaiser, 2020; Laustsen & Olsen, 2022; Seijts *et al.,* 2023; Stoller, 2020). However, the knowledge on crisis leadership, specifically in the HES context scarce except a handful of studies (Angelakis et al., 2024; Garretsen, *et al.,* 2022; Gigliotti, 2020; Wu *et al.,* 2021). Another limitation of the literature is, most of the literature discussed about crisis management instead of crisis leadership (Bundy *et al.,* 2017; Riggio & Newstead, 2023a). A recent review on crisis leadership (Bundy *et al.,* 2017) in fact focused on crisis management more broadly. Although (James *et al.,* 2011- From Wu *et al.,* 2021) argued that crisis management covers crisis leadership, and a variety of topics that are not necessarily related to leadership. Wu *et al.* (2021, p.1) argued that crisis management does not incorporate core issues of leadership such as "(1) the effects of crises on the

3

behaviors and perceived attributes of leaders, their leadership styles, and leadership processes, (2) the types of leader characteristics, behaviors, and leadership styles that have been most frequently examined in the crisis context, and (3) how specific levels of leaders, such as top management teams (TMT), respond to crises". Riggio and Newstead (2023a) argued that there is a need for more specific research to identify the knowledge, skills, behaviors, and processes most essential to effective crisis leadership. Hence, there is a need for further knowledge regarding specific leader attributes, behavior and leadership styles exhibited by effective leaders to resolve crisis situations (Grover & Hasel, 2015). Hence, this study applied the cognitive resource theory (CRT, Fiedler & Garcia, 1987) for exploring the leader attributes during crisis. Our study aims to explore the following research questions:

RQ1. What makes people effective leaders during crisis?

RQ2. How effective leadership manifests during crises?

Literature Review

Australian higher education sector (HES) during crisis

The HES has its unique characteristics and challenges in terms of its mission, funding, diverse staff and student sector and delivery of knowledge. While leadership in HES has focused on issues like achieving strategic commercial gain, it is also evident that leadership in HES is different from leadership within a commercial, non-commercial or political setting (Smith and Wolverton, 2010).

Globally, the HES have undergone significant transformations over recent decades. These changes have been caused by increasing globalization, fluctuations to government funding policy, changes in delivery of education services, advancement in information and communication technology (ICT), a shift in the student demographic, and major (Giroux, 2002). The COVID-19 pandemic further added to the complexity and challenges faced by the HES (Al-Asfour *et al.,* 2022: Jarvis & Mishra, 2024). Seijts *et al.* (2023, p. 127) proposed that, "[t]he COVID-19 pandemic has illuminated the need for

4

effective leadership in the public, private, and not-for-profit sectors, revealing the best and worst in leaders".

A study by the Australian Government Tertiary Education Quality and Standard Agency (TEQSA) reported that this crisis led to a shift towards the hybrid models for knowledge delivery away from face-to-face teaching and learning. This in turn, generated the proliferation of online and offshore delivery methods and involvement of third-party arrangements. The report also argued that the pandemic would affect the role of HES leaders in relation to the transparency of HES admission (TEQSA, 2021). A recent survey by the Australian National Education Tertiary Union (NTEU, 2020) also found that most employees were not satisfied with the performance of senior management who held leadership positions, with most respondents indicating that Australian Universities had become too corporate in their outlook. Furthermore, most respondents expressed that public education institutions did not show leadership for the greater good (Australian Leadership Index, 2020; National Survey Report, 2020).

The uncertainty surrounding the HES has promoted researchers and practitioners to advocate for effective leaders with unique characteristics necessary to lead the HES (Baroudi, 2022; Greatbatch, 2015; Peters & Ryan, 2015; Samad *et al.,* 2014). During crisis, leaders project themselves and their vision in crisis, even when they have limited understanding on how, why and when their vision may affect their team outcome. Therefore, it is pertinent to explore what makes effective leader during crisis.

Crisis leadership

Crises can broadly be described as events that are unexpected, highly disruptive and highly salient (Bundy *et al.,* 2017; Pearson & Clair, 1998; Wu *et al.,* 2021; Riggio & Newstead, 2023a, 2023b). The term crisis, often applied interchangeably for situations such as a manmade or natural disaster, accident, and emergencies (Fraher, 2020; Stam *et al.,* 2018). A crisis can be economic, physical, reputational and in terms of human resources and informational dimensions (Hutchins, 2008). It has

5

significant impact on performance of individuals, group and organisations. For example, the COVID-19 pandemic disrupted societies around the globe by affecting individual lives and organizations globally (Garretsen *et al.,* 2022; Kaiser, 2020; Laustsen & Olsen, 2022; Seijts *et al.,* 2023).

Wu *et al.* (2021, p. 1) summarized the recent research on crisis leadership focusing on the effects of the crisis on the behaviors and perceived attributes of leaders, their leadership styles, and the leadership process. Wu *et al.* (2021) argued that "crisis leadership should be regarded as an important domain within leadership research" (p. 3). Given the increasing complexity of the business world and the likelihood future crises, there is a need investing crisis leadership for crisis detection and for formulating appropriate management strategies (Dirani *et al.,* 2020; Somer *et al.,* 2016; Sanfuentes *et al.,* 2021). Contemporary studies further emphasize the need to understand the crisis context and follower expectations, especially as it could moderate the effectiveness of certain leader behaviors and styles, and consequently impact how leadership manifests within certain sectors (Yukl, 2013; Klien & Delegach, 2023; Uhl-Bien *et al.,* 2007; Uhl-Bien, 2021). As against relying on the leader's styles and behaviors that are effective during peace time or normal situations, there is growing research emphasizing the need for examining crisis leadership (Wu *et al.,* 2021; Riggio & Newstead, 2023a, 2023b; Williams et al., 2017; Wittmer & Hopkins, 2022). Consistent with the argument of Wu et al. (2021) scholars (Riggio & Newstead, 2023a, 2023b; Williams et al., 2017) argue that crisis leadership warrants further research. Recognizing that crisis situations are usually fluid and complex, this growing literature on crisis leadership proposes that understanding the dynamics of effective leadership under crisis and development of a measurement tool specific to leadership during a crisis can facilitate further studies on crisis leadership and would greatly contribute to the leadership literature.

The Cognitive Resource Theory

The theory underpinning this study is the cognitive resource theory (CRT) developed by Fiedler and Garcia (1987). The CRT argues that intelligence along with other cognitive resources are essential

6

for leaders to effectively execute their core functions of planning, decision-making, communication, and monitoring. The CRT also proposes that, in complex situations, leaders' thoughts are overshadowed by the thoughts of failure, thereby diminishing their ability to implement key leadership tasks (Fiedler, 1986; Fiedler & Garcia, 1987). It is therefore argued that, specific crisis leadership attributes and cognitive resources are necessary during crisis to mitigate the impact of sudden unexpected crisis and for directing their intellectual abilities to accomplish their leadership tasks in crisis. Thus, CRT (Fiedler & Garcia, 1987) may be considered as a useful theoretical lens for exploring key attributes for effective crisis leadership.

Methodological Approach

Following the ethics approval (Approval No. H14128), this study used a qualitative research methodology to capture the rich experiences and responses of thirteen key informants (six male respondents and seven female respondents) from the Australian HES. The respondents include, Vice Chancellors, Deputy Vice Chancellors, Deans, Deputy deans and senior executives in the Australian HES. These informants held senior leadership roles in Australian public universities and had in-depth knowledge and experience of the HES. The sample size was a sample of convenience based on the publicly available information and was driven by thematic saturation, with data collection ending once no new themes emerged from the data (Baker & Edwards, 2012) and the argument that the minimum sample size that is deemed sufficient "to understand the common perceptions and experiences among a group of relatively homogeneous individuals' is twelve" (Guest *et al.,* 2006, p. 79). In view of the the structures of public Australian universities and standardized administrative processes the population was considered fairly homogeneous.

Due to various travel and health restrictions during COVID-19, semi-structured interviews were conducted using the Zoom technology and lasted approximately one hour. An interview guide was designed to discuss the interviewees' lived experience of leadership prior to and during the pandemic,

7

challenged faced by them and their perceptions of positive and negative leadership attributes and behaviors in the Australian HES.

Interviews were digitally recorded and transcribed and checked by the research team to ensure their accuracy. Thematic analysis was undertaken as recommended by Braun and Clarke (2006). The analysis and interpretation of interview data lead to three categories of themes namely individual, group and organisational level themes as presented in Appendix 1.

Insert Figure 1 about here

Several measures were adopted to ensure the rigor of the study. For example, credibility was promoted through deep researcher engagement, detailed participant responses and allowing sufficient time for interviewees to share their experiences and views including examples and anecdotes. Peer debriefing was used for validation (Creswell, 2014). The data was reviewed by an informed colleague not involved in the research project. The following section would describe the findings (at individual, group and organisational level) of this study.

Findings

The individual level

Authentic and empathetic

The interviewees stressed the importance of leaders being 'authentic' to win the hearts and minds of followers. The study found that, leaders who align their messages and actions with their internal values were more likely to be seen as genuine even if their messages were divisive in nature:

> *'Why is Donald Trump so popular?… Why is Pauline Hanson popular?… It's because they are authentic. It's not the people particularly like what they are saying, but they believe that's what they feel… You cannot lead if you are not saying what is in your heart' (HES1).*

Likewise, informants also identified 'empathy' as being a core attribute of effective leadership during crisis. Being empathetic towards the needs of different employees and employee groups was said to

8

be critical during crisis. For other interviewees, empathetic actions were associated to leaders' active listening and communication skills, emotional intelligence to display the appropriate emotions when interacting with followers:

> *'There's the challenge that the leader has of controlling their own particular personal and emotional reactions to the crisis ... When you're a leader, you have to deal with everyone, whether you like them or not... The leader has to overcome their own personal inclinations or even prejudices to deal with everybody' (HES7).*

Additionally, empathy was framed by a few respondents as a leader's ability to trust, be inclusive and actively engage with all stakeholders, irrespective of their ranks in the organizational structure. This is reflected below:

> *'Engagement is quite important, engagement with staff at all levels. There are some leaders who only go around and talk to people on the top... Relationship building in higher education is absolutely critical. And this is relationship building with schools, with faculties, with departments, with campuses, with partners, if you partner in overseas countries or local partners in Australia, research partners' (HES9).*

Ethical

Being 'ethical' was found to be a critical attribute of leaders during crisis. For example, an interviewee stressed the importance of walking the talk when it comes to living up to organizational values:

> *'If you talk about equity, you have to support equity and try to make that part of the value of what you do' (HES5).*

However, there was some concern regarding leadership failure driven by *unethical* leadership attitudes and behaviors:

9

'What makes people bad leaders is that they have no anchor point in their values… no compass direction… of who they are, what they stand for, how they work with others. They don't take responsibility for their decision-making' (HES2).

The interviewees reflected some unethical behaviors where universities used the pandemic as an instrument for undertaking restructuring and workforce downsizing. Acknowledging the fact that the Australian universities were placed under economic duress during COVID-19 pandemic, the respondents were concerned with the manner in which employee were terminated in several higher education institutions.

'Staff that are being selected for termination and it's surprising as in they are being selected because they are union members, and that could be coincidental, but I really doubt it' (HES6).

'This crisis was genuine, but they [universities] brutally disposed of people in those [senior management] levels who hadn't done anything wrong' (HES7).

While an interviewee mentioned of how unethical leadership can have disastrous consequences in terms of the university performance, innovation and reputation, another respondent argued that organizational structures that encourage conformism, groupthink and protect unethical leaders ultimately facilitate bad leadership:

'Good people do stupid things because the rewards are there. We give in a little bit… to succeed, to climb the greasy pole' (HES12).

In addition to its ethical implications and ongoing decision-making dilemmas, university leaders face challenges in terms of advancing competing sustainability outcomes in the form of financial and social outcomes.

Strategic and resourceful

The respondents emphasized on 'Strategic insight and resourcefulness' as a key attribute of an effective leader during crisis.

10

During crisis, leaders are expected to apply their intelligence and technical knowledge to rapidly process information, harness resources and adapt to changing situations. Strategic planning ahead of any crises was considered crucial for leaders to navigate through volatile and uncertain situation during crisis. It was argued that rigid leaders who are unable to embrace change and operate in silos are prone to confusion in times of crisis:

> *'Ambiguity and irrationality and chopping and changing the policy course in a way that doesn't respond to data and evidence… it leaves followers confused and usually doesn't help the response to the crisis…*
>
> *A very clear set of values and principles, very clear objectives, being able to continue to lead under pressure, being open to new information and very humble about learning very quickly, what the new environment contains rather than just going by what from the past, being prepared to be a learner all over again. I think it's very important' (HES7).*

Trustworthy and able to delegate

During crisis leaders need to be trustworthy and also trust their followers. Trust the invisible glue that connects leaders with their followers in times of crisis. This enables leaders to deligate and empower their followers.

> *"People need to be able to trust you. And that's goes back to the ethical principles. If you're a person of integrity, even in times of crisis, when you're asking people to do things that they don't like, they will do it if they trust you… They [Leaders] really need to trust others around them to collaborate and then go forth and do things… For example, we couldn't respond to the crisis in higher education last year, with the borders closing and the shutdowns, without a lot of delegation of responsibilities down the line and trusting academic leaders and academics to interpret the requirements in the best possible way." (HES7).*

Open communication

11

An open and transparent communication is the ley to establishing trust between the leader and the followers, especially during crisis. No matter how visionary a leader is it essential to be transparent and being able to communicate the vision, specially during crisis.

> *"I think communication is really important, and I know that one's not really specific to education as such, but I think it is incredibly important in the higher education sector because so many of the staff working in higher education are themselves excellent communicators, that's the kind of stuff and workforce that we have … I guess being a bad leader would be not showing all the qualities I just mentioned last time, so not being aware of other people's emotions, not doing the good communication, not having patience, not being resilient, all those things."* (HES11).

> *"I think it's about being open, honest and a lot of communication is needed in order for... I think where there's a lack of communication, that's where the likelihood of failure is… we've done a bit of research on how leaders communicate during crisis. And we found that a very collective focused, group focused communication style, where you focus on the group outcomes rather than individual outcomes. So it's about empathy. We found that it is communication around the "we", and this is our organization. And supporting other colleagues works better than communication which is very focused on the individual."* (HES13).

The group level

Influencing through soft power

Respondents I this study unanimously echoed the view that impactful leaders are able to obtain desired behaviors and attitudes from followers even I times of crisis. The issue was the mechanism through which a leader may influence followers during crisis. According to most respondents, leaders inherently have access to a legitimate source of power due to their role and hierarchical status (i.e., hard power) which enable them to command and maintain a certain degree of control on the followers. However, the interviewees also acknowledged the fact that, within the HES, the informal or 'soft'

12

power approach is the preferred option to influence followers. It was argued that the 'soft' power approach requires creating a shared vision and motivating the followers to work together for a common goal.

> *'One of the great things that they [leaders] can do to be successful, is that more distributed model. You may have positional authority in the hierarchy, but it's not about necessarily wielding that power in a way that has negative impacts, but much more using that power to influence people' (HES8).*

> *'In higher education, we see more examples of implicit or less formal versions of power, which is where people own the trust and respect of colleagues around them. And therefore they are quite powerful, because their words are powerful, their actions are powerful, because other people are looking to them for direction' (HES11).*

Furthermore, it was emphasized that, the synchronization of leader and follower expectations and the identification of power sources within the organization are important components of managing dissent:

> *'We often have dissent. It's either overt, which is great because at least you can talk it through and come up with solutions and problem solve... What is much harder is covert dissent, and this is where you get people who have formed a little cluster and... they're feeling left behind, and it's a shame they feel they are not able to bring it to you... You need their participation all the way along' (HES6).*

Respondents also shared their view that sometimes leaders fail to nurture follower commitment to, and ownership of, the organisational vision. This reinforces the need for two-way communication channels and empathetic employment relationships.

Commitment to inclusion

The study revealed that a key attribute of crisis leadership is related to leaders' ability and commitment to building an inclusive and safe workplaces. A respondent revealed how, in times of

13

crisis, the caring responsibility for minorities extended beyond lockdowns. This also applied to universities' broader ecosystem in terms of supporting and protecting its students.

> 'COVID played out differently for Aboriginal people… the government directives advise that those people shouldn't come… [Indigenous staff] started staying at home a lot longer than staff who were non-indigenous. And that was the same with people who are chronically unwell' (HES5).

The above finding suggests that leaders' commitment to inclusion is an important attribute for crisis management. It can be argued that fostering an inclusive culture characterized by fairness, equity, and values of unityrequires leaders to instill those values within policies, processes, and actions well before the emergence of a crisis. By setting the stage for a collective mindset and positive workplace culture, leaders are able to draw on employees' commitment and goodwill when faced with unexpected threats. In other words, commitment to inclusion seems to be a pre-condition to leadership crisis responses. Paradoxically, there was evidence of barriers to leadership inclusion in the HES as a respondent stated:

> 'In Australia, the higher education system is primarily driven by Anglo strengths… If we look at the Vice Chancellors at 39 universities, there's 38 of them are white. And if we look at the senior management of those as well the teams are primarily white as well. And that's irrespective of having people who are culturally diverse in this country for decades… along with indigenous Australians that have been graduating from universities now since 1969. So, we don't see that translating into those management… We're just seeing a change in the seats between men and women, but essentially, they're all white' (HES5).

This finding indicates that leaders at senior management levels may not be practicing what they preach in terms of diversity and inclusion. Arguably, this gap between the rhetoric and reality of inclusion in the HES has the ability to navigate through the challenging time of crisis.

The Organizational Level

Challenges in the HES

14

HES faces a variety of challenges those were exacerbated by the COVID-19 pandemic. Not only do universities operate within a competitive and resource-scarce environment, but they are also characterized by bureaucratic and rigid structures which limit leaders' ability to adapt to changing environmental conditions. Furthermore, HES faced competing stakeholder demands, and leaders had to be conscious of the power status of stakeholders.

> *'What complicates everything in a higher education sector is that you are managing so many variables… Higher education institutions have state government to please; they have students who increasingly are framed as consumers, not students. They have to respond to try to build relationships with local communities… The higher education environment has this kind of dual, complex governance structure, where we have academic governance alongside the sort of board-level governance' (HES3).*

The interviewees also spoke of the trend of corporatization of universities and the shift of leadership attributes and mindsets into a more businesslike HES (Giroux, 2002). Staff downsizing was amplified given that, unlike other industries, the HES was not eligible for government assistance packages.

Finally, issues relating to leadership composition and development were identified. An absence of a diverse leadership bench signaled a lack of inclusive values and practices in the higher education sector, as well as a lack of succession planning:

> *'We have a system in Australia where we are trying to bring people from overseas; from UK, from Europe and they don't stay very long… If you identify some really good leaders… if you nurture them, you develop them, you are basically growing capability within Australia, rather than going outside' (HES9).*

Funding is another concern for HES leadership and it shapes how leaders may operate leading to corporatization in the HES.

> *"In higher education, power is a really vexed thing because universities are reliant to some extent on government, and they are extremely reliant on government for things like regulation*

15

and control, standards, and that type of compliance. They are less reliant, but nevertheless reliant on government funding. They're powerful in their own organizations, but outside of their own organizations they are powerless, and that's why you've got the groups such as Universities Australia, and the Australian Higher Ed Association that provide representation for universities at government level" (HES6).

Staff attrition was identified as a central barrier to trust building in higher education institutions. Turnover seemed to be either driven by organizational culture or triggered by the pandemic. In the latter case, border closures and declining enrolment numbers pushed universities to contract their workforce. Job losses were amplified given that, unlike other industries, the higher education sector was not eligible for government assistance packages. Thus, employees perceived cross-university movement as a strategy for professional development:

"There's a lot of mobility in workforces in universities… I think implicit in the culture that's developing in Australian universities is people looking to move regularly within their jobs because they think that that's what's good on their CV as they move through their career. And that's probably at odds with developing long term leadership and establishing relationships with people" (HES11).

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"We have a system in Australia where we are trying to bring people from overseas; from UK, from other countries, from Europe and they don't stay very long… If you identify some really good leaders… if you nurture them, you develop them, you are basically growing capability within Australia, rather than going outside" (HES9).

Mitigating factors

16

Despite the above challenges, it was suggested that the pandemic might serve as a pathway to innovate and reimagine the education sector, provided that leaders remain open to opportunities generated by the crisis:

> *'There's cause for optimism in higher education… it's been a massive shock event for universities that allows them to think about how they pivot, how they turn those business models around… when you have less, in terms of resources, it does make you become more focused in what you want to do and why' (HES8).*

Further, stakeholder engagement and advocacy were said to mitigate some of the challenges. This comes back to prior discussions on how empathetic leadership attributes and behaviors may build a sense of followership.

Discussion

Our study contributes to the literature on crisis leadership by revealing key attributes of leaders manifesting at individual, group and organizational levels. This study also unpacks the different sources of leadership attributes during crisis and distinguishes between values-oriented and cognitive-based attributes. From a values-orientation perspective, leaders who embrace humanistic values of authenticity, empathy, ethics and self-awareness and consistently model these values are arguably more successful in creating a shared climate of trust and justice at a time of crisis. These are consistent with the literature indicating that authenticity, ethics, empathy, and sound judgement, are key qualities of value-oriented and self-aware leaders during crises (Keselman & Saxe-Braithwaite, 2021, Maak *et al.*, 2021, Seitjs, *et al.*, 2023; Strum *et al.*, 2017). Similarly, leaders who anchor organizations' practices around values of choice, empowerment and inclusion are more likely to be able to pull together followers when confronted with unexpected events. Our findings indicated that value-based attributes were externally focused on followers, as well as inwardly directed towards leaders.

From a cognitive-based perspective, it was noticeable that leaders with strategic knowledge and entrepreneurial mindset can act in a resilient manner in the face of a crisis. At the same time, the HES

17

do not operate in a vacuum. External forces such as funding and governance models, crisis volatility and competing stakeholder interests impact strategies and resources available to leaders in their response to crises. Figure 1 highlights Effective leadership attributes in crisis contexts.

Insert Figure 1 about here

Limitations and Future Work

Due to travel restrictions, this study relied on virtual interviews, and the study was cross sectional. Since the interviews, experiences are likely to have changed in line with updated public health measures and increased vaccination rates. A longitudinal approach would likely contribute to a holistic picture of leadership attributes in times of crisis to help with further clarification of the crisis leadership concept, future research could focus on developing a dedicated measurement instrument for crisis leadership.

Conclusion

Our study makes a key theoretical contribution by drawing on CRT (Fiedler & Garcia, 1987), which has yet to be applied within a crisis leadership discipline perspective in the HES. Our findings provide support to CRT by showing how HES leaders need to be able to draw on specific crisis leadership attributes (that act as cognitive resources) to address elevated work demands arising from crisis contexts. More importantly, our study is one of the first studies to classify these crisis leadership attributes as values-oriented and cognitive-based attributes (as per earlier discussions). This is an important distinction, which shows that leader responses to crises are shaped by values which are developed prior to the actual crisis event. The study clearly proposes a humanistic leadership in times of crisis, as opposed to other forms of leadership. Moreover, our findings on how broader HES factors influence leaders' crisis responses herald how crisis leadership necessitates the effective orchestration of internal and external stakeholder interactions.

18

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21

Table 1. Initial codes and emergent themes

Theme name	Second order coding	First order coding
Individual level: The 'self'	Positive personal attributes	Authentic and empathetic
		Ethical
		Strategic and resourceful
		Trustworthy and able to delegate
		Open in communication
	Negative personal attributes	Artificiality and narcissism
		Unethical
		Overwork
		Silo-based thinking and rigidity
Group level: The 'collective'	Positive group-level attributes/forces	Influencing through soft power
		Commitment to inclusion
	Negative group-level attributes/forces	Controlling through hard power
		Absence of diverse leadership bench
Organizational level: The 'institution'	Higher education challenges	Resource scarcity
		Competing stakeholder demands
		Funding
		Staff attrition and trust
		Leadership composition and development
	Mitigating factors	COVID-19 as a silver lining
		Stakeholder engagement

22

Figure 1. Effective leadership attributes in crisis contexts
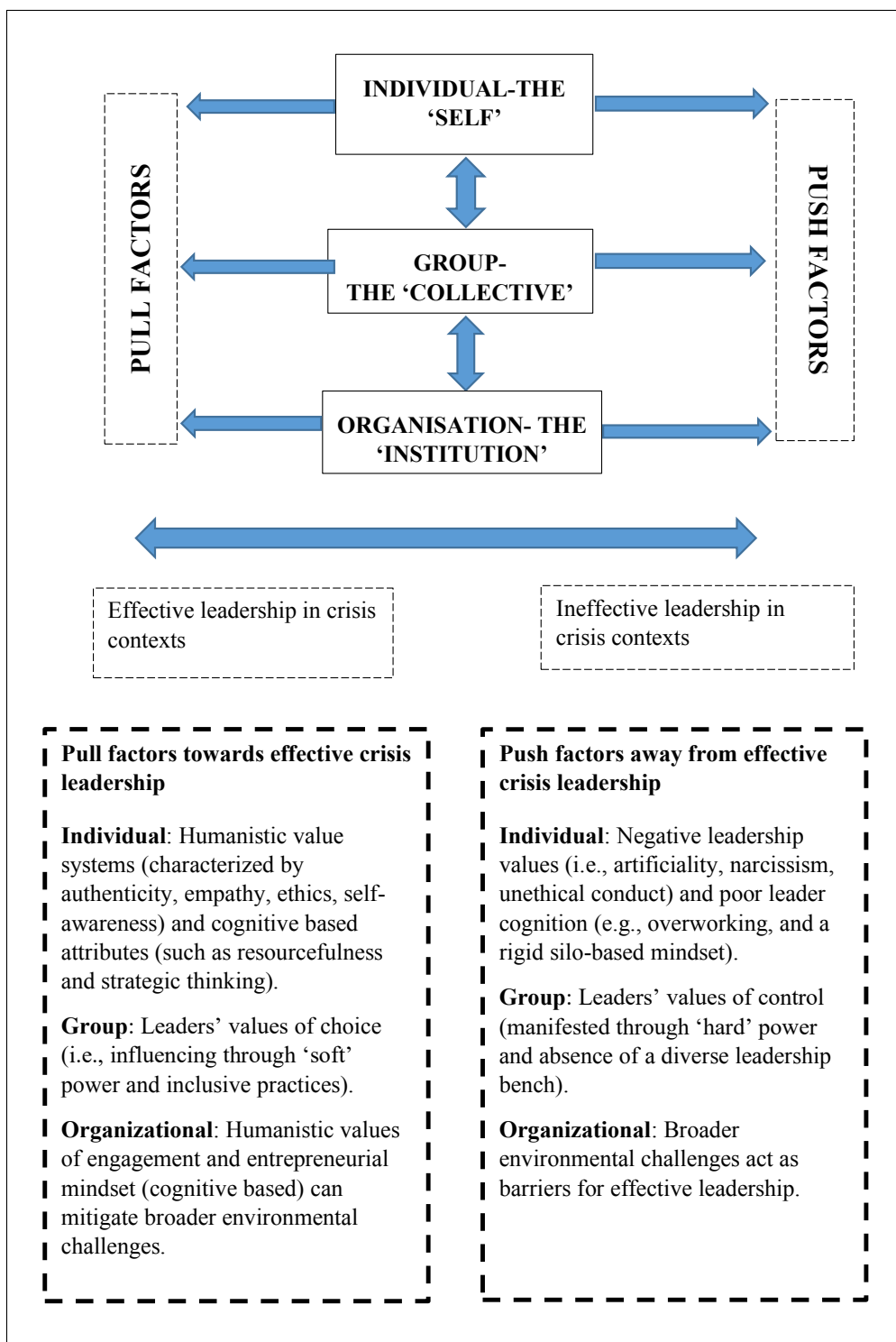
Stream 6 – Leadership, Governance and Strategy

Effective Collaboration in Collaborative Infrastructure Projects

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Effective Collaboration in Collaborative Infrastructure Projects

ABSTRACT

In infrastructure projects, effective collaboration entails aligning incentives (cooperation) and actions (coordination). Yet, while researchers have assumed that implementing collaborative contracts will enhance collaboration, practical evidence suggests this is not always the case. This study aims to explore the requirements of effective collaboration in infrastructure projects employing collaborative contracting. Using a case study methodology, we have begun data collection and initial analysis of Australian collaborative water infrastructure projects. Our emergent findings highlight that while cooperative and coordinated efforts are essential, the ability to work seamlessly together (co-working) is crucial for achieving the intended collaborative outcomes of these contracts. This emphasizes the need for robust skills and workflows to minimize work disruption and foster effective collaboration.

Keywords: Collaboration; Cooperation; Coordination; Co-working; Collaborative Contract.

Overview

In infrastructure projects, effective collaboration requires cooperation (the alignment of incentives to motivate collaboration) and coordination (the alignment of actions to enable collaboration) (Tee, Davies, & Whyte, 2019). Despite the theoretical benefits of collaborative contracts—designed to foster collaboration by enhancing cooperation and coordination among contracting parties, such as clients and contractors (Gulati, Wohlgezogen, & Zhelyazkov, 2012)—practical evidence suggests that collaboration often fails in these projects, especially in the construction phase. The reasons behind this may be that the anticipated benefits of cooperation and coordination are not always realized (Kretschmer & Vanneste, 2017). However, our observations show that even with cooperative and coordinated efforts, achieving effective collaboration remains a challenge. Therefore, this study aims to investigate the practical implementation of collaborative contracts in infrastructure projects to understand why the intended collaborative behaviours supported by these contracts often fail to materialize during the construction phase. This research enriches the existing body of knowledge by providing deeper insights into the multifaceted nature of collaboration in collaborative infrastructure construction projects, thereby informing better project management practices and outcomes.

Current Understanding

Collaboration, coordination, and cooperation are fundamental to inter-organizational relationships, such as alliances (Castañer & Oliveira, 2020). Research on promoting collaboration has often focused on either the link between contracts and cooperation (Wang, Chen, Fu, & Zhang, 2017) or contracts and coordination (Oliveira & Lumineau, 2017). However, some studies have explored the synergy between these three elements and contracts from different perspectives (Gibbons, Grieder, Herz, & Zehnder, 2023; Gulati et al., 2012; Kretschmer & Vanneste, 2017; Li, Liu, Wang, & Casady, 2024). Gulati et al. (2012) proposed that collaboration results from the combination of coordination and cooperation among alliance partners. Kretschmer and Vanneste (2017) examine collaboration challenges in strategic alliances and find that solutions depend on whether the root cause is a misalignment of actions (coordination) or incentives (cooperation). Focusing on alliancing, both studies emphasized the need for goal alignment and value appropriation while reflecting the tension between private and common interests in inter-organizational relationships.

Researchers have also looked at the role of contracts in enhancing collaboration, cooperation, and coordination (af Hällström & Rönndahl, 2024; Gibbons et al., 2023; Li et al., 2024). Gibbons et al. (2023) discovered that contractual agreements based on broad principles, rather than specific rules, lead to higher performance, especially following unexpected changes. These principle-based agreements address clarity issues and facilitate efficient adaptation, although they face difficulties in aligning price expectations. Similarly, Li et al. (2024) in their investigation of public-private partnership (PPP) projects, emphasized that contracts help mitigate opportunism, enhance cooperation, and foster collaboration through mechanisms of control, coordination, and adaptation. Finally, af Hällström and Rönndahl (2024) performed a systematic review of existing literature and established a hierarchical relationship among collaboration, cooperation, and coordination. They determined that coordination is the fundamental element upon which cooperation and, eventually, collaboration are developed. The information sharing involved in coordination facilitates project-wide communication necessary for cooperation and fosters the transparency and honesty required for successful collaboration.

Research Question

Despite the findings identified in the literature, real-world evidence shows that collaborative practices, even when supported by cooperative and coordinated efforts, frequently fall short under collaborative contracts. This study seeks to address this discrepancy by examining the practical application of collaborative contracts in infrastructure projects, aiming to uncover why the anticipated collaborative behaviours often do not emerge during the construction phase. Therefore, we seek to answer one central question: 'What are the effective collaboration requirements in infrastructure projects that employ collaborative contracting?'

Research Approach

The research methods are structured into four distinct phases, each aimed at uncovering the factors contributing to effective collaboration under collaborative contracts during the construction phase of infrastructure projects. Following foundational work on understanding existing research limitations, the process proceeds with the following:

(1) Research Design and Sampling Method: This phase includes the selection of interviews as the initial part of our case study and the use of the snowball sampling method to identify practitioners.

(2) Data Collection: The first author conducted semi-structured interviews with practitioners engaged in Australian infrastructure projects, such as water and transport, that utilize collaborative contracts. Initial interviews provided a preliminary understanding of the research field. Then, to address our research question, we focused on 27 interviews related explicitly to projects operating under NEC4 collaborative contracts within the water sector. These projects were chosen because they consistently use NEC4 contracts, unlike other sectors that employ a variety of collaborative contracts. For a more focused approach to data collection and analysis, this research investigates collaboration between clients and contractors among all organizations involved in the contract. The 27 interviews included 11 directors and senior managers, who are pivotal in managing the flow of critical information and decision-making within their respective areas of expertise. The remaining 16 interviews were with middle managers who regularly reported their progress to these directors and senior managers.

In addition to these interviews, further interviews with commercial managers involved in implementing NEC4 contracts in Australian infrastructure projects are planned to gain their perspectives on how these contracts enhance collaboration among contracting parties, such as clients and contractors. Additionally, the contract itself will be analysed to understand how its terms and clauses influence collaboration. Observations within a single Australian water company will also be conducted to identify the underlying factors affecting collaboration.

(3) Data Analysis: In pursuit of a structured analysis, the first author, under the supervision of the second two authors, utilized NVivo for coding the data, exporting a data table for further analysis. The analysis began with open coding, assigning interview excerpts to broad themes, such as 'communication,' 'information management,' and 'culture.' This constant comparison and sensemaking against the literature, along with discussions between the authors, helped shape a dynamic representation of the data. As patterns emerged, the data was synthesized into first-order concepts and then aggregated into emerging second-order themes. The interviews largely converged on identifying the underlying factors impacting collaboration between contracting parties. Ultimately, the narratives were distilled into three main themes: 'cooperation,' 'coordination,' and 'co-working,' representing the third-order abstraction of the analysis. This was the result of just one part of our initial analysis of the first round of interviews and initial review of the NEC4 suite of contracts. We are planning to fully analyse the upcoming interviews, the NEC4 contracts, and the observation data.

(4) Validation and Triangulation: To finalize our research and validate our findings, we plan to send a final case summary to our participants for further verification and to ensure our interpretations align with their insights (member check). We will also use triangulation to ensure the validity of our findings.

Findings

The emergent findings to date are discussed in this section, and further findings will be presented at the conference in Dec 2024 as the research proceeds. According to interview analysis results, while cooperation and coordination are fundamental to effective collaboration, co-working is also crucial. Further, our initial review of NEC4 contracts reveals that, besides these three major components of

collaboration, the contract structure itself can hinder collaboration. To present our findings, we focus on the collaborative settings between client and contractor, where each party navigates the complexities of collaboration under collaborative contracts.

Collaboration Components

Cooperation: The literature highlights cooperation as essential for effective collaboration, with collaborative contracts serving as a crucial facilitator. Our data confirms this, as interviewees frequently mentioned factors associated with cooperation. For instance, a recurring theme is the need to motivate stakeholders by clearly communicating the benefits of collaborative efforts. This emphasis on 'selling the why' and outlining the tangible outcomes helps align individual motivations with project goals. One senior program director from the contractor organization stressed the necessity of engaging team members by demonstrating the personal and professional benefits of their involvement. This highlights that cooperation is not just about working together but ensuring that all parties are genuinely invested in the collaborative process.

Coordination: Coordination between project activities is another critical component identified in both the literature and our data. Effective coordination ensures that different work packages are aligned, and safety is maintained. Our interviewees provided examples of how poor coordination can lead to significant delays, cost overruns, and safety incidents. For instance, a contract management director from the client organization recounted a recent safety issue that occurred due to inadequate coordination between different contractors, resulting in claims and delays in the whole project. This incident underscores the importance of regular, structured collaboration meetings on-site to ensure all teams are aware of each other's activities and the potential impacts of their work on others. This proactive approach to coordination helps identify and mitigate risks early, thus fostering a safer and more efficient working environment.

Co-working: Beyond cooperation and coordination, our findings reveal that co-working—the ability to work seamlessly together—is vital for fully realizing the benefits of collaborative contracts. This theme emerged as interviewees highlighted the need for effective planning and execution of collaborative efforts. For instance, while meetings and forums are essential for collaboration, there is a growing concern about 'over-collaboration.' This refers to excessive meetings and discussions that can

lead to inefficiencies. Instead, there is a call for more strategic and effective collaboration, where meetings are purposeful, actions are followed up rigorously, and processes are adhered to strictly. This approach ensures that collaboration is not just a series of meetings but a well-integrated effort towards achieving project goals.

Contract Structure

Our initial contract review suggests that the structure of the NEC4 contracts may cause issues in achieving effective collaboration between contracting parties. These contracts are bespoke, allowing parties to modify clauses, which can undermine collaboration and create problems in claim and dispute management during the construction phase. Consequently, after experiencing failed collaboration, parties may become sceptical about these contracts, despite their initial intention to support collaboration. Therefore, effectively managing these contracts significantly enhances collaboration and reaping the benefits they provide.

Contribution and Limitations

Our study contributes to the project management literature by identifying the underlying factors influencing collaboration under collaborative contracts, specifically in water infrastructure projects during construction. The emerging findings suggest that a balanced approach is necessary for collaborative contracts to be genuinely effective. This approach should include motivating stakeholders, ensuring structured and proactive coordination, and planning for efficient collaboration along with effective contract management. As data collection and analysis continue, these themes will be further explored to provide a comprehensive understanding of the factors influencing collaboration under collaborative contracts.

These findings deepen our understanding of how collaborative dynamics operate in real-world settings and provide a theoretical basis for improving collaboration practices. However, our study focuses on only water infrastructure projects using NEC4 contracts. We recommend that future research explore and compare different collaborative contracts in other sectors, such as transport and energy, to determine if the findings are consistent or if sector-specific differences exist, thereby broadening the applicability and robustness of the current research.

Implications

The findings from this research have significant implications for leaders in infrastructure projects, including project managers, contractors, clients, policymakers, and commercial managers. By understanding and implementing the skills and workflows that minimize work disruption, leaders can foster a more collaborative environment that enhances efficiency, reduces conflicts, and improves project outcomes. Strategic leaders can align team efforts, improve communication, and design contracts to promote cooperation and coordination, ensuring smoother project execution and reduced risk of disputes. Ultimately, these insights empower leaders to drive better project outcomes and higher satisfaction levels with project results.

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05. Entrepreneurship and SMEs

A Sociometric Analysis of Connectivity and Inclusion in an Aotearoa, New Zealand Entrepreneurial Support Ecosystem

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05. Entrepreneurship and SMEs

Sociometric Analysis of Connectivity and Inclusion in an Aotearoa, New Zealand Entrepreneurial Support Ecosystem

ABSTRACT:

This research explores connectivity and inclusivity in a small city entrepreneurial support ecosystem in New Zealand. Small business ownership has been shown to increase intergenerational wealth, making it an effective means of reducing wealth inequality, especially among marginalized populations. However, groups such as Māori, Pasifika, and migrant populations are under-represented in small business ownership. Using a sociometric network analysis, this study examines relationships between n=40 entrepreneurial support organizations (ESOs) in Dunedin. The research aims to identify how these ESOs are interconnected and how they serve diverse demographics. Results highlight the structure of Dunedin's ESO subsystem and the differential impact of support services. The study suggests strategies to develop inclusive entrepreneurial ecosystems, contributing to reducing wealth inequality in New Zealand.

Keywords: "entrepreneurial ecosystem," "entrepreneurial support organizations," "inclusive entrepreneurship"

Overview

Entrepreneurial Support Organizations (ESOs), those organizations whose mission it is to foster, develop, and grow entrepreneurship, play an important role in the function of the wider entrepreneurial ecosystem. ESO services include providing knowledge, connections, and advice - vital resources for founders building new ventures (Bergman, 2021). However, there are important questions about how accessible and impactful these services are for founders, and if they are providing the kinds of resources founders are actually seeking (Hruskova, Mason & Herzog, 2022). These questions become even more salient when applying an equity lens to the issue, with recent empirical research highlighting the differential impacts of ESO services on founders were dependent on characteristics such as age, ethnicity, and gender (Clayton, 2024). While these services are understood to be a vital component of the ecosystem, little is known in Aotearoa | New Zealand about how accessible they are to diverse founders, and how the ESOs themselves are connected to one another as a sub-system. Using a sociometric network analysis, this study employs an equity lens to examine the connections between the n=40 entrepreneurial support organizations in Ōtepoti | Dunedin, a small city in Southern Aotearoa | New Zealand, focusing on both issues of access and influence in this small but well-connected entrepreneurial ecosystem.

2

Current understanding
Entrepreneurial Support Organizations as a Component of Inclusive Entrepreneurial Ecosystems

Small business ownership has been shown to increase intergenerational wealth in marginalized populations, an effective means of reducing wealth inequality over time (Klein, 2017). However, marginalized populations in Aotearoa | New Zealand –including Māori, Pasifika, and migrant populations – are under-represented in small business ownership in New Zealand (Small Business Council, 2019). New Zealand is facing its highest-ever levels of income and wealth inequality (Rashbrooke, 2015), creating entrenched poverty and negative downstream health effects such as higher rates of suicide, homelessness, and infant mortality (Truesdale & Jencks, 2016). One way to support a reversal of these trends is through inclusive entrepreneurship programmes and policies. More than being a purely economic pursuit, entrepreneurship in the 21st century is considered a societal phenomenon, highlighting the socio-political nature of an "everyday" entrepreneurship occurring in multiple contexts (Stayaert & Katz, 2004; p 180). Thus, supporting entrepreneurship in marginalized groups is both addressing the economic inequalities present in New Zealand and engaging with the socio-political context that makes such support a necessity in the first place.

Entrepreneurial ecosystems are defined as "those economic, social, institutional and all other important factors that interactively influence the creation, discovery and exploitation of entrepreneurial opportunities (Qian, Acs, & Stough, 2013; p. 561)." Well established models of entrepreneurial ecosystems include intersecting dimensions of policy, culture, markets, human capital, finance, and support (Isenberg, 2010). This study focused on the subsystem of "support" within the larger multi-dimensional entrepreneurial ecosystem construct, in the form of networks of Entrepreneurial Support Organizations (ESOs). Common forms include accelerators, incubators, maker spaces, and co-working spaces. These organizations are proliferating, and Bergman and McMullen (2022) advocate for a relational approach to studying ESOs by understanding them as a part of a broader context, or network, suggesting that researchers collaborate and experiment *with* ESOs to deepen knowledge in this area. Following this suggestion, we partnered with Startup Dunedin for this research, a local university-community ESO interested in understanding A. how they fit into the broader ecosystem and B. their own impact in supporting diverse entrepreneurs. Startup Dunedin's leadership supported the development of the research questions, the formation of the name generator instrument, and the sensemaking exercises during analysis.

Research question

Viewing the entrepreneurial support ecosystem through an equity lens, this study has two aims.
1. The create a sociocentric map of the entrepreneurial support organizations (ESOs) in Dunedin's entrepreneurial ecosystem to understand the nature and structure of these services as an entrepreneurial

3

subsystem. 2.To develop an understanding of the types of support services available to Dunedin's diverse entrepreneurs, and who is receiving these services. To achieve these aims, this study asks the following questions: What is the structure of Dunedin's ESO subsystem? How are the ESO's in Dunedin's EE interrelated? What are the ESOs doing, and who are they serving?

Research approach

This study uses sociometric, or whole-network, analysis. Two reviews of entrepreneurial ecosystem literature (Alvedalen & Boschma, 2017; Cavallo, Ghezzi & Balocco, 2019) propose future research pathways based on gaps in the current literature base noting that while entrepreneurial ecosystems are understood to be dynamic connected systems, there is insufficient research on them using system dynamics or network analysis methodologies. Cavallo, Ghezzi & Balocco (2019) recognize that the extreme complexity of whole networks makes them difficult to analyse, and that studying interactions within representative sub-systems of an entrepreneurial ecosystem would yield new information to better understand the larger system. In response to these calls for more research that uses network analysis to understand the structure and relationships between actors in an entrepreneurial ecosystem, this study uses sociometric network analysis, a relational methodology, to map the connections between entrepreneurial support organizations, a sub-system of the larger entrepreneurial ecosystem.

Data Collection

Ōtepoti, Aotearoa (Dunedin, New Zealand) is a city of 126,000 with clear municipal boundaries. In this small footprint, the city contains a research university, regional government, strong IT infrastructure, and a long history of venture creation. Within that geography, our sampling frame consists of organizations both for profit and not for profit who include in their purpose the mandate to support or train aspiring entrepreneurs through structured activities. This research was approved by the ██████████ ████ Ethics Committee. All participants completed informed consent procedures prior to participation in the survey and provided their consent via a digital assent online. Participants could choose to remain anonymous or to be named in the research. Only those who consented to participate are included in this study.

Researchers created an initial list of potential participants based on their existing knowledge and key informant interviews which resulted in a list of n=40 ESOs. During this process the researchers had a preference for Type I error, in an effort to ensure no possible organizations were left out of the subsequent name generator. Our data collection instrument was an online Social Network Analysis name generator survey data created with Qualtrics software and included five sections covering: 1. ESO services and characteristics, 2. ESO client populations 3. Familiarity with other ESOs 4. Nature of relationships with other ESOs 5. Key organizations and people. These questions captured the following information: A. Which other entrepreneurship supporting organizations each participant had a connection with, and the strength of those connections B. What each organization provided to entrepreneurs and C. The degree of

4

ethnic, gender, and socio-economic diversity represented in each organization's clientele. The survey link was distributed to participants via email.

In our data collection period, researchers sent the survey to participants in waves. The first wave included all organizations on our initial list. Participating ESOs were asked to add in any organization or person that they thought was missing. We incorporated organizations listed in the first wave of responses into the second wave of the survey, sent out to those newly named organizations. After the second wave, there were no new organizations suggested, and the research team deemed that the data collection process was complete.

Analysis

The data collection process yielded a sampling frame of n=40 ESO's that met our inclusion and boundary specification criteria. We received completed surveys from n=26 of these organizations, a response rate of 65%. The results of the survey were used to create a. a set of descriptive statistics to provide an overview of the characteristics of the organizations and b. adjacency matrices for further analysis using UCINet software. These matrices identified a total of 344 weighted, directed connections between the 40 organizations included in the name generator instrument.

The initial visualization of 344 connections included all kinds of relationships between organizations. To better understand the nature of the network, we looked more closely at what we termed "productive relationships" or those relationships that demonstrated having worked together on the familiarity question of data collection instrument: 3= "We have worked with them before," 4= "We have an ongoing relationship," or 5= "We are formal partners." This created the following network visualization: Figure 1:
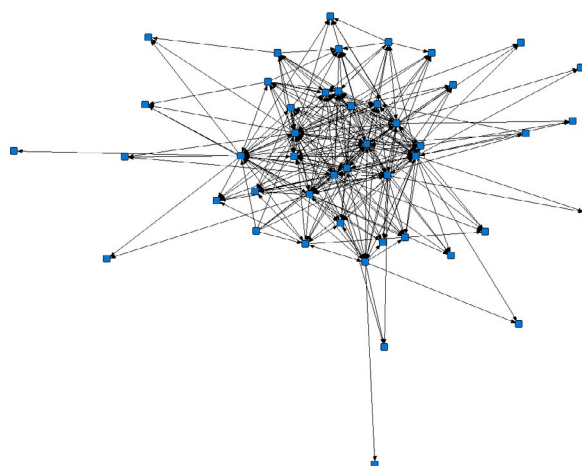
Directed, valued graph of all ESOs demonstrating productive relationships (rating 3+ on relationship question)

5

The centralized structure of this network was readily apparent and led the research team to run a core: periphery analysis to understand which organizations formed the core of the network, shown here:
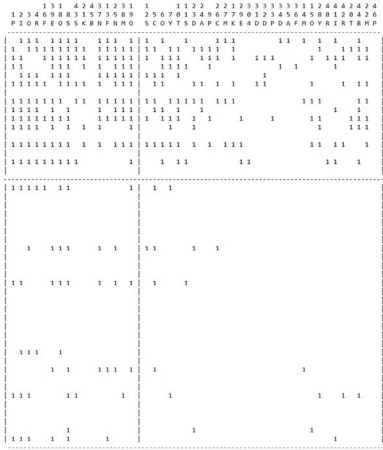
Figure 2: Core/Periphery Analysis of Dunedin's ESO subsystem

After isolating the core organizations, we were able to look at how they related to one another, and who these organizations were serving.
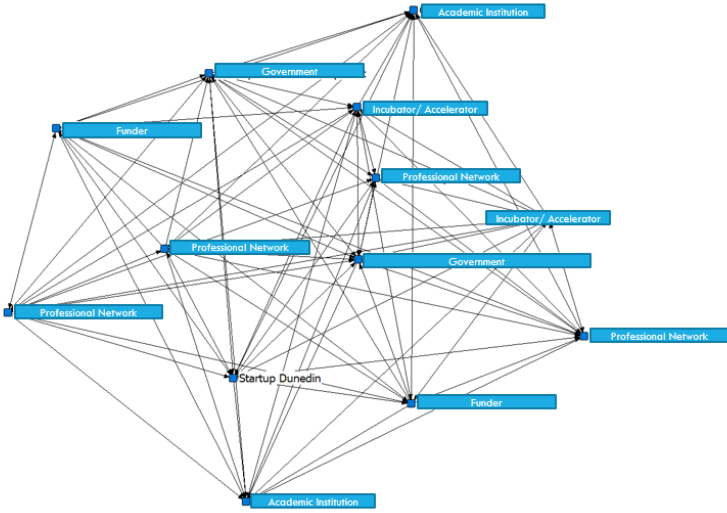
Figure 3: Network of ESO identified as core organizations

6

Amongst these core organizations, we then analysed for influence using Eigenvector Centrality. This provided us with a set of highly influential organizations within the network.

Highest Eigenvalues of Organizations in Subsystem Core	
Organization Type	Eigen **Value**
Incubator / Accelerator	0.237
Incubator /Accelerator	0.280
Prof. Association	0.270
Network	0.217
Incubator/Accelerator	0.282
Funder	0.257
Network	0.243
Public Organization	0.254

Table 1:Results from Analysis of Eigenvector Centrality

Following this analysis, we returned to the descriptive variables for each of the organizations, which included size, services, sector, and client population to better understand which organizations in the core had the most influence in the larger network.

Findings

There were several initial findings relating to this analysis. First, there was a strong inter-sectoral collaboration in the network. Public, private, non-profit, and Kaupapa Māori organizations were all represented within the core of the network. Secondly, and somewhat surprisingly, the connectedness and level of influence of an organization on the network did not seem to be correlated with either budget size or number of employees. While the number of organizations and nature of this methodology do not support establishing causality, this observation suggests that other factors may be determining which organizations have influence. Third, two by-Māori for-Māori organizations are strongly connected in the network core, demonstrating an ability to connect to power networks in this system. While this set of findings demonstrates a positive potential of this network to support inclusive practices in entrepreneurship, there were also aspects for further consideration.

Not all demographic segments were being served fully by the existing organizations in the network. Working class populations in particular have limited support, especially if Māori-led organizations are not included in the analysis. This suggests that supporting business starts in low-to-moderate-income households has been delegated to Māori-serving institutions rather than being

7

understood as an ecosystem wide responsibility. Additionally, specialized support for business development in both Pasifika and Refugee/Migrant populations was lacking. Finally, there was a marked absence of connection to capital access for small businesses, that is non-scalable or non-tech focused businesses. This poses a problem, as not all business ideas end up being investible and will still need capital to grow. Finally, there were a high number of non-engaged periphery organizations with just one connection to the core. Some of these organizations served specific populations, such as Asian owned businesses or food-based businesses and will have specialized knowledge of benefit to the ecosystem.

Contribution and Limitations

Contribution

The gaps in support services for smaller, less scalable ventures as well as gaps in serving minority demographics poses an issue of equity of access and lack of inclusion in this entrepreneurial ecosystem (EE). This can be problematic, as Neumeyer (2018) concludes that while much lit on EE's focuses on supporting the development of high growth ventures, the survival and lifestyle firms are actually important to the success of the high growth firms and should also be considered in EE creation; "forming a sort of symbiotic relationship (p. 477)." Further, Cohen (2006) suggests that weakness in components of an EE can have impacts across the entire system. As such it is vital to understand how to ESO's are operation *in relation to one another* in order to assess the health of the system as a whole.

Limitations

During the process of creating our initial organizational roster to inform the social network analysis data collection instrument, our preference for Type I error resulted in an initial name roster that included some organizations who were not primarily focussed on providing entrepreneurship support. We allowed for these organizations to remain on the instrument, in case any of them were non-traditional providers of services. However, it had the unintended effect of showing a lower organizational response rate of 65%. While an 80% or higher response rate would be ideal, 60%-70% response rates have been shown to be sufficient (Cronin, 2016), particularly when assessing measures of centrality and influence (Borgatti, Carley, and Krackhardt, 2006).

Secondly, the research team adopted a complex systems lens in this work and asserts that the connections displayed between ESOs in the study are a simplified snapshot of an intricate, dynamic network rather than a true representation of reality. Thus, while this data offers a useful way to engage with the concept of an entrepreneurial ecosystem, this data is most useful as an illustration of how similar networks are structured and may operate. As actors in this system learn from this research and knowledge informs changes their behaviour, the nature of their connections may also change. A longitudinal approach to this

8

research, with multiple applications of the SNA instrument would provide useful data to understand how this process occurs and to what degree participation in this kind of research can guide behaviour.

Implications

There are two main implications of this study. The first relates to the community-engaged methods used to carry out the study, and the other relates to the development of inclusive entrepreneurial ecosystems. The community-engaged process of instrument-creation, data collection, and sensemaking is an example of how researchers and Entrepreneurial Support Organizations can co-create knowledge about the larger service blueprint of their city, leading to strategic decision making around future programmes and partnerships. Secondly, this study highlights the importance of a systems approach to the development of inclusive services to support diverse entrepreneurs. The ESO network in this research shows characteristics of a well-developed structure and strong connectivity across all sectors to a well-connected core. Even so, there are still large gaps in service for specific populations, in this case Pasifika, refugee/migrant, and low-to-moderate income founders. Each organization on its own, or working only with its direct connections, would not be able to identify these gaps. However, using a systems approach to ecosystem development, the network as a whole has the opportunity to respond collectively with shared responsibility to develop a web of services supporting new ventures by founders from all walks of life.

9

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10

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11

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Systems of Innovation: A Case Study on Artificial Intelligence and the Internet of Things (AIOT) in the Illawarra Region

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Systems of Innovation: A Case Study on Artificial Intelligence and the Internet of Things (AIOT) in the Illawarra Region

ABSTRACT: Systems of innovation play a pivotal role in the emergence of new technologies. This paper investigates the identification of a technology system defined as "AIOT" incorporating artificial intelligence and internet of things emerging technologies. With federal government initiatives to define specific corridor hubs of technology excellence in Australia, the Illawarra regional area has been earmarked to specialize in a technology system that has been narrowly defined as AIOT. This paper presents the interplay of different stakeholders, and the inroads made into satisfying the emergence of a technology system since 2023, where new start-ups, supported by large transnational players, gives life to a new industry in Australia with international reach. The focus of the paper is in better understanding the innovation process at a meso-to-macro context, and provides recommendations for a successful multi-level socio-technical transition.

Keywords: systems of innovation, technology systems, case study, artificial intelligence (AI), internet of things (IOT), Illawarra

INTRODUCTION

AIOT can be defined as the combination of "artificial intelligence" (AI) and the "internet of things" (IOT). One might consider IOT as the "digital nervous system" while AI is the "brain of a system" (Marr, 2019). In other words, IOT is the physical infrastructure and assets deployed across an interconnected network, while AI is the logical flow of interactions that happen in order to achieve a task using data collected and analysed in different modalities (historical, real-time or near real-time). When humans are involved with AIOT within a given context (i.e., structure), the AIOT application can be considered a socio-technical system, even if it is "fully automated" in the eyes of the observer and there is seemingly little or no human intervention.

The global AIOT market was valued at USD 15 billion in 2021 and expected to reach USD 144 billion by 2028 (Brand Essence Research, 2023). While North America dominates the growth of global AIOT, followed by Europe, it is the Asia Pacific market which is considered to show the fastest growth in the coming years, with China, Japan and South Korea predicted to be the biggest markets in that region (Brand Essence Research, 2023).

AIOT technologies are not a singular technology but a suite of technologies, often integrated or working side-by-side each other to offer a systems solution. AIOT is synonymous with business transformation, digital transformation, automation, innovation, smart cities, supply chains, radio-frequency identification (RFID), QR codes/ barcodes, biometrics and vision systems, industrial digital twins, analytics, seamless connectivity, systems integration and more.

Current industries for which AIOT has been suggested as a good fit are: smart cities and infrastructure, healthcare innovations, agriculture, retail and ecommerce, transportation and logistics, energy and utilities, education, banking and finance, entertainment and media, manufacturing, environmental monitoring, personal insights and solutions (Bretzfield, 2024). The current contexts in which AIOT is deployed include: smart retail, drone traffic monitoring, office buildings, fleet management and autonomous vehicles, autonomous delivery robots, among many other examples (Marr, 2019).

Specific use cases for AIOT include: people/object detection, people/object count, dwell and loitering monitoring, abandoned objects detection, object localisation, object classification and segmentation, object velocity, people/object search by attributes, vehicle recognition and search, vehicle attributes, number plate recognition, person attributes, social distancing (face mask detection/ social distance monitoring), motion analysis (detection and tracking), video analysis (emotion and mood), behaviour analysis and tracking, posture recognition and analysis, heat map analysis, traffic flow optimization, intrusion and proximity detection, hazard detection, safety gear detection, animal detection and monitoring, video synopsis and personalisation, event triggers and real-time alerts (Visual Cortex, 2024b).

These use cases are possible through the adoption of different technological systems components in the form of hardware and software in an AIOT solution including: industrial routers, workplace sensors, environmental sensors i.e., moisture, water levels, temperature, humidity, leakage and magnetic contact, lights, and pressure, industrial gateways, cameras, edge devices, cybersecurity solutions, 4G connectivity, and Bluetooth (Visual Cortex, 2024a; Madison Technologies, 2024a, IOTSense, 2024). The value proposition for AIOT includes: "that it helps to improve decision-making processes, data management, human-machine interaction and analytics operation with technologies like IoT Data as a Service (IoTDaaS). IoT creates the data, and AI analyses them to provide meaningful insights and, accordingly, the desired behaviour or action necessary to enhance efficiency and productivity" (Brand Essence Research, 2023).

The business impact that AIOT will have across sectors is generally considered to be five-fold: (1) enhanced data analysis and decision-making, (2) improved efficiency and automation; (3) advanced personalisation in consumer markets, (4) enhanced predictive capabilities, and (5) improved security (Bretzfield, 2024).

SYSTEMS OF INNOVATION

The systems of innovation framework arose as a requirement to go beyond "individuals", and even beyond the "firm" in the study of innovation, inclusive of institutions and other organisational actors. What matters are not the individual actors but the interrelationship between the actors and their assemblage in moving toward the satisfaction of a common goal (Malerba, 2004). Leydesdorff (2001)

thus asks some pertinent questions, such as, "How can systems of innovation be delineated? How can the complex dynamics of such systems be understood? How is the (potentially random) variation guided by previously codified expectations? How can explorative variation be increased in otherwise 'locked-in' trajectories of technological regimes or paradigms?" To an extent these questions are addressed conceptually by Carlsson et al. (2002). According to Leydesdorff (2001), systems of innovation have become central to "shifting the research agenda" asking "what does history mean in relation to (envisaged?) future options? How can the system itself be informed reflexively with respect to its self-organizing capacities?" (Leydesdorff 1995, p. 296).

METHODOLOGY

Media Analysis

After an initial search on the terms "AIOT" and the geographic area "Illawarra" it became evident that little had been published in the local media (e.g., Illawarra Mercury). Specific searches on "Wollongong", "Shellharbour", and "Kiama" were conducted and these also demonstrated even less reporting by the media on progress related to AIOT.

Among the most dominant voices on the specific search term "AIOT" in the Illawarra, included: "The University of Wollongong" and "Visual Cortex", apart from mentions related to specific projects. Among these sporadic project mentions were by:

- NVIDIA who partners with The University of Wollongong on enhanced vision system solutions (Barthélemy, Chong and Chan, 2023);
- Securing Antarctica's Environmental Feature (SAEF) as related to hydrology and microclimate modelling (ARCSAEF, 2023);
- A DFAT-sponsored agricultural project between Vietnam and The University of Wollongong related to technology-led solutions for sugar cane harvesting (Quantri, 2023);
- An Australian Steel Institute initiative to monitor the health and safety of construction workers through wearable sensors (Australian Steel Institute, 2024); and
- Several renewable energy scouting projects related to wind turbines (EnergyCo, 2024).

The most dominant themes found through numerous searches are presented in Diagram 1 as recorded in the FACTIVA database (Dow Jones, 2024).

Diagram 1. FACTIVA Keywords on Variant Searches of "AIOT" and "Illawarra"

Search A: "Artificial Intelligence" and "Illawarra" (209 articles retrieved)

Search B: "IOT" and "Illawarra" (31 articles retrieved)

Search C: "AIOT" and "Illawarra" (6 articles retrieved)
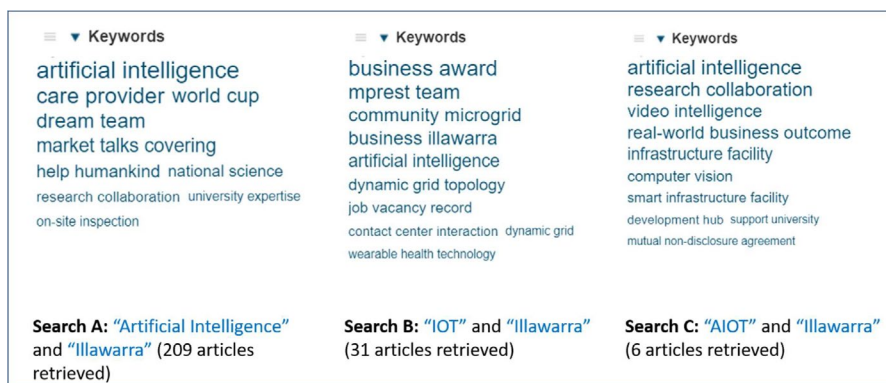
Further searches were conducted on AIOT synonymous terms with respect to the Illawarra regions, such as: "vision systems", "video analytics", "sensors", "edge computing", "digital twin", "QR code", "OCR", "RFID" in addition to the broader terms "clean energy", "business transformation", "innovation", "smart city", and "supply chain". Industry reports were returned by the FACTIVA search and these results were excluded from the analysis because some of the documents were thousands of words long and simply reporting on the general financial performance of some of the larger companies in the region without direct allusion to AIOT. In sum total, the broader search in FACTIVA yielded 2,228 articles that were analysed using Leximancer, a text mining software that can be used to analyse the content of collections of textual documents (Leximancer, 2024). Figure 1 presents a concept map analysis based on targeted searches using the Factiva database.

The concept map is extremely revealing in terms of the emphasis in the media-related literature with respect to AIOT and the Illawarra. The most dominant themes returned by Leximancer included: "project", "Australia", "Illawarra", "customers", "business"/"company", "safety", "cost" and "financial" "performance" in a given period. There is a clear acknowledgement that the "Illawarra" "supports" "work" toward technological advancement at local workplaces and "business" customers, and indeed is able to work successfully with the rest of the "world" (e.g. EasyAgile, ScalaPay, Accelo etc) (InvestWollongong, 2024). The "Australian" projects where AIOT has already featured are mainly related to "large"-scale "technology" systems (LTS), such as in "mining" (e.g., Rio Tinto in Western Australia); where there is "development" in "critical" "infrastructure"; and where there is an obvious need (i.e., "supply" and "demand"). Importantly, "future" industries where AIOT will play a role is likely to be in "renewable" "energy" sources in order to achieve compliance with "emissions", in addition to "green" initiatives in adherence to "government"-mandated targets. The "potential" "risks" are considered "significant" in terms of "operations" and the "value" to the "market". Companies such as "BHP", from herein BlueScope (renamed in 2003), are considering AIOT solutions (e.g., industrial digital twin) for the health and safety of their teams through wearable sensors and the like (Australian Steel Institute, 2024).

General "operations" "interests" included: greater "productivity" while "lowering" "costs" and "rates" were "higher" in any given "tax" "year".

Figure 1. Concept Map Analysis of "AIOT" and "Illawarra"-Related Searches in FACTIVA
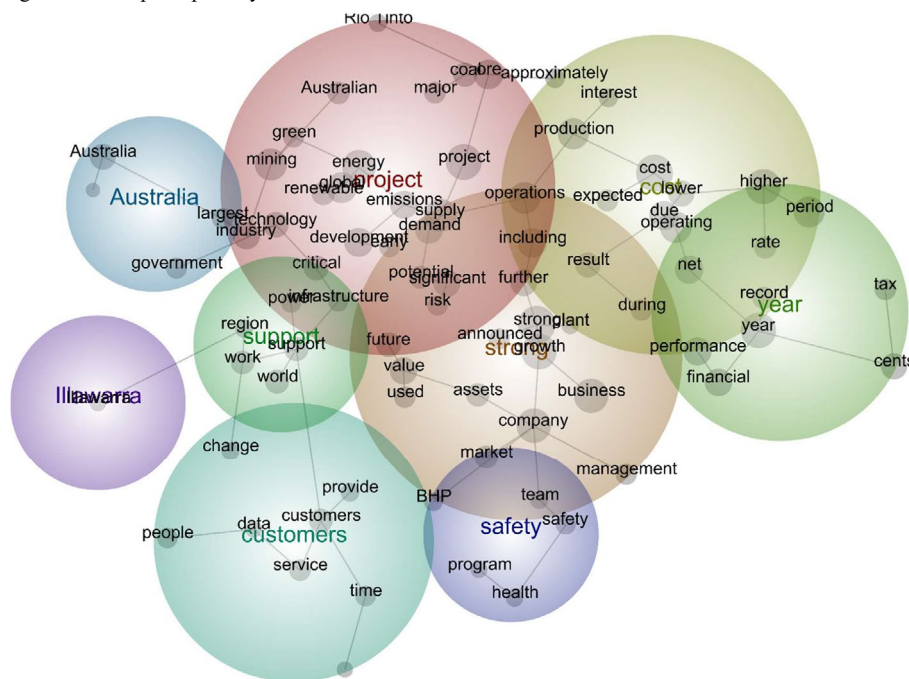
THE EMERGENT ECOSYSTEM

An ecosystem is a network of organisations made up of multiple stakeholder types, coming together in order to cooperatively, or in competition with one another, deliver a specific service. James F. Moore is credited with the idea of a "business ecosystem" in 1993.

Emergent ecosystems have not as yet fully formed. They are characterised by an incomplete network to deliver a service offering to the market, and not yet inclusive of all stakeholder types (including users as participants). In an emergent ecosystem, interlinkages are forming but do not as yet have established protocols to maintain relational continuity and long-term stability and success.

Looking at AIOT as an emerging technology in the region of the Illawarra, it is characterised by typical patterns in nascent ecosystems. There is no doubt that the industry globally will emerge to be a dominant trend, but whether it finds roots in the Illawarra will depend on a number of factors:

(1)   greater government multi-million-dollar investment;

(2) greater local industry awareness through collaborative opportunities to share success stories and demonstrable reusable patterns and designs;

(3) start-up grants to propel development of the technological AIOT componentry toward manufacture, and not just consulting services in response to projects that are mainly based on systems integration;

(4) skills development within The University of Wollongong, and TAFE Wollongong which will require changes to curricula, inclusive of instructor training; and

(5) a clear transition plan from the traditional sectors in the region to one based on services and green initiatives.

Diagram 2 presents a list of stakeholder types in the emergent ecosystem, and Table 1 provides a list of key players identified in the media analysis.

Diagram 2: Emergent Stakeholder Types in the AIOT Ecosystem in the Illawarra Region
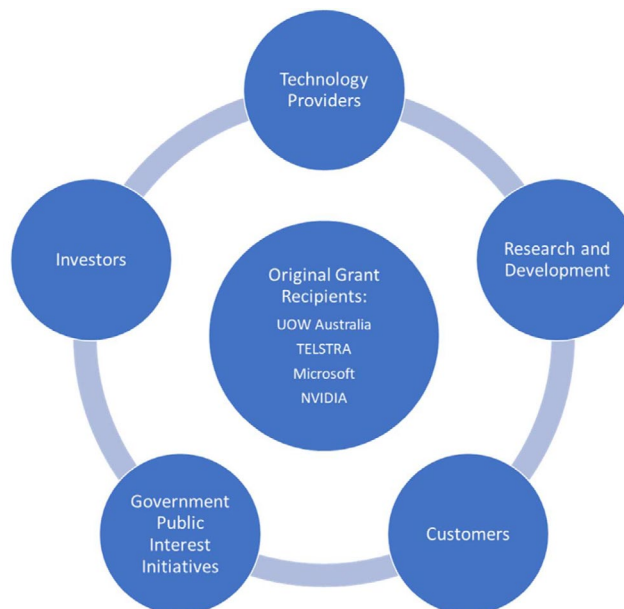
According to Brand Essence Research (2023), AIOT adoption is characterised by:

(1) high value assets;

(2) large volumes of operations data; and

(3) processes reliant on hundreds, if not thousands, of parameters.

Table 1: A Comprehensive List of Stakeholders Identified in the Media Analysis

Original Grant Recipients The University of Wollongong TELSTRA (quiet) NVIDIA Microsoft	**Research Organisations** SAEF (Securing Antarctica's Environmental Feature) Hanoi University of Science and Technology Hong Duc University SMART Infrastructure Facility (UOW) The Steel Research Hub (UOW) Australian Steel Institute
Government Public Interest Initiatives **Sectors** Energy (e.g., wind) Mining Transportation (e.g., ports) Raw Materials Government (e.g., local councils)	**Potential Investment Opportunities** EnergyCo – seeking renewable energy zones (REZ), transformative clean energy initiatives Envision Group – related to smart wind turbines
Technology Players/ System Integrators Vision Cortex (Illawarra) Madison Technologies (QLD, NSW etc) **National Players/ Service Providers** TELSTRA Australia Post Supply chain and Logistics **Technology Players/ Global Footprint** NVIDIA Microsoft CISCO	**Customer and Projects** **Large Business Customers** Bluescope (e.g., Digital twin project to optimise target objectives) Rio Tinto (e.g., WA links) **Medium Size Customers** Local Councils (e.g., Wollongong Council for the detection of contaminants in recyclables and stormwater blockages known as culverts) **Small Size Customers** Agriculture (e.g., post-harvest degradation in silos; iOyster to de-risk oyster farming) Care Providers (e.g., Aged Care Facilities) Surf Life Saving Clubs (e.g., drones shark warnings) **End-Users** Patients (e.g., wearables for heart monitoring) Women (e.g., iMove safety project) Drivers (e.g., road congestion) Construction workers (e.g., safety) Animals (e.g., environmental monitoring)

DISCUSSION: TOWARD A REGIONAL INNOVATION SYSTEM

There is no doubt that the Illawarra has found it difficult to alter course since its deeply rooted establishment and heavy dependency on metallurgy (Wilson, 1981). In 1977, just six companies in the Illawarra, employed "more than one third of the region's total (male and female) employed workforce" (Wilson, 1981).

In 2016, the Illawarra had 293,494 people living in its catchment with a median age of 39 (ABS, 2016). In 2021 the ABS reported that that number had grown to 313,842 with a median age of 40. The Illawarra has an ageing population and this has workforce implications.

In February 2022, the Australian Government (AG) determined that about 228,000 people were employed in the Illawarra South Coast Employment Region. Five industries accounted for 53% of employment in the region with the highest being (1) Health Care and Social Assistance, (2) Education and Training, (3) Retail Trade, (4) Public Administration and Safety, and (5) Professional, Scientific and Technical Services (i.e., scientific research, architecture and engineering, computer system design, legal and accounting services, advertising and market research, veterinary services, professional photography), the latter category constituting less than 19,000 employees. The Information Media and Telecommunications industry was the fifth lowest employer in the region with less than 4,500 employed persons in that industry. It should be noted, that the median age of health care workers was 46 in 2022 and about 53% of these workers were employed part-time.

There were initiatives as far back as 1996 to develop a "technology park" at The University of Wollongong. Organisations like Telstar, Nortel Networks, Andrew Corporation, CommScope, NEC, Andersen Consulting, and WSD call centre services were co-located on the Eastern part of the main campus. The technology park then needed to shift to make room for a growing university campus at UOW, as significant growth was experienced for some of the park's big customers that required more floorspace. As a result, in 2012 there was talk of positioning Wollongong as Australia's equivalent to Silicon Valley (ITWire, 2012). The idea for the innovation campus was soon born, and a major construction occurred in 2008 inviting commercial partners and small businesses to get on board in the new facilities (iC, 2024). iAccelerate (2024a) was established in 2016 and has recently launched five new programs to power regional innovation (iAccelerate, 2024b).

Its natural setting has definitely attracted more people over time, particularly since COVID hit dense urban areas hard in inner Sydney. Last year it was even reported that "tech clusters" would bring it closer to that Silicon Valley-like reality (Dudley-Nicholson, 2023). In the study undertaken by the CSIRO and the Tech Council of Australia, 96 "tech clusters" were identified, 4 "super clusters" mapped to Sydney, Melbourne, Brisbane and Canberra corridors. While the "tech hubs" would be located in Australia's urban centres, Wollongong was granted a "regional niche cluster" to specialise in web design, telecommunications, graphic design and software applications (Dudley-Nicholson, 2023). This regional niche cluster has everything to do with AIOT and the emergence of a regional innovation system.

Although there are no signs of consortiums forming just yet, there are early signs that people are working hard to create a multistakeholder network. Testament to this is the whole of business approach in the AIOT Hub, inclusive of Visual Cortex, The University of Wollongong, and NVIDIA who have been particularly spotlighted throughout the grant lifetime. Business Illawarra (2021) has specifically tried to

offer resources to citizens with respect to the decentralisation of work and the Illawarra. Wollongong City Council has also called for initiatives to support small businesses start.

RECOMMENDATIONS

The former SMART Infrastructure Facility director Pascal Perez, was quoted at the beginning o the AIOT hub grant saying: "What VisualCortex is trying to do is brave: At the moment, most of the video analytics market develops around vertical integration; and bespoke – if not ad-hoc – solutions for specific sectors, or even sub-sectors. That means we're going to see a lot of redundancies in terms of the deployment of all these single-use-case computer vision tools and the fees that end-users will have to pay. So, we need a transversal approach, which VisualCortex is bringing to bear with its industry-agnostic platform". While the web pages of Visual Cortex are set up in to welcome potential growth beyond bespoke solutions, the "regional niche hub" in the Illawarra needs time take root and to further develop. At the moment, the regional hub is serving local small, to medium and large business with sporadic pilot solutions or one-off digital transformation applications. What is hoped is a sustainable tech cluster, as identified by the Australian Government, that sees local organisations as technology providers through multi-level hops "beyond Wollongong", and even "beyond Australia" supply chain meshed network. To date, the AIOT initiatives that are international in nature that grant participants are leading, are sporadic pilots with a lack of reusable patterns that are scalable in terms of design.

There are a number of preliminary recommendations that have come from this report. These include:

- bigger demonstrator pilot projects in mainstream logistics and transportation, especially shipping given the local Port Kembla dock
- revisiting the nature of the mutual non-disclosure agreement (NDA) forged between the major players of the AIOT hub
- leveraging the power of Telstra and Microsoft in a way that brings to light the capabilities of AIOT in the local area, and nationally
- an educational push to raise more awareness about AIOT through the local media, inclusive of radio, television and newspaper
- the creation of an AIOT regional consortium (or consortia) beyond business Illawarra
- more iAccelerate seed grants to propel AIOT start-ups in the region
- more NSW/national Australian Government grant funding
- to welcome additional players to the AIOT hub from the government, inclusive of agencies such as Data61, CSIRO, Digital Transformation Agency, and other Digital Health initiatives given the ageing population in the Illawarra
- establishing not just local and national supply chain networks, but international across vertical segments in the end-to-end delivery of services

CONCLUSION AND NEXT STEPS

Finally, it needs to be recognised that all local efforts have instantaneously also national and international reach. This is positive and negative. On the one hand, it means local technology providers that sprout up can pitch their solutions and have international customers. On the other hand, competitors to players in the Illawarra's ecosystem can be discovered in other regional hubs in Australia, and beyond its shores, thus competing for business. The Illawarra needs to be effectively remapped on a global landscape, not just local to Australia. We also need designs that have been based on successful use cases, where enterprise architectures have been contributed toward successful patterns that can be applied to more than one case. All the Councils in the Illawarra need to share their information through a knowledge exchange to map out supply chains through firstly, established supplier and customer lists that can be further mapped in a geographic information system to denote overlaps, network hops in the supply chain, and global reach. This recommendation is highly sensitive and some data sharing rights will need to be determined between local business and governments.

We need better international exposure and to learn how to market ourselves to international touchpoints. "We love the Gong" campaigns only go so far, as do the lush landscapes and beautiful ocean and escarpment. What is the new slogan that will get the world thinking about Wollongong? How might that slogan emphasise the regions multicultural links and remain authentic to is local historical and cultural context, and yet adopt a view forward of AIOT and business transformation. What in essence is the value proposition of our place? How might that be transferred to the ethos of our connections.

There is no doubt that seizing the opportunity to have large scale technical systems as demonstrator projects will really allow people to see the Illawarra's capacity and capabilities. These are strategic decisions made by the federal, state and local governments to invest in clean initiatives and renewable energy sources, among other public interest projects related to digital health and wellbeing, transportation and more. The potential to integrate AIOT solutions on new infrastructure with a skilled workforce is something that can be a future hope.

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01: Human Resource Management

Effective Conflict Resolution and Negotiation Techniques in Managing Staff During Technological and Process Change: An Interpretivist Approach

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01: Human Resource Management

Effective Conflict Resolution and Negotiation Techniques in Managing Staff During Technological and Process Change: An Interpretivist Approach

ABSTRACT: *Conflict resolution and negotiation techniques are critical for managing staff during technological and process changes. While conflict in change is a known potential barrier to effective change management, effective conflict resolution techniques used during organisational change see less empirical data. There is a lack of empirical research on the effectiveness of these techniques in working environments. In today's fast-paced and ever-changing business environment, technological advancements and process changes are becoming increasingly common in working environments. Such changes often carry significant challenges, including employee resistance and team member conflicts, degrading organisational outputs, negatively impacting employee emotional well-being, decreasing employee retention, organisational performance and financial sustainability.*

Keywords: change management, negotiation, conflict resolution, employee retention, employee wellbeing.

OVERVIEW

The modern business environment requires firms to embrace change in response to technological advancements, which significantly influence organisational processes (Wren, 2020). Specifically, firms are under intense pressure to embrace change processes to sustain operations and remain competitive (Burgess & Connell). These changes often carry significant challenges, including employee resistance and team member conflicts (Flores et al., 2018). Effective employee management during the change process requires comprehensive conflict management approaches that can address specific organisational needs to make the change process succeed (Raines, 2023).

Conflict resolution and negotiation techniques are critical for managing staff during technological and process change (Edwards, 2018). Several conflict management approaches have been proposed in the literature, including mediation and negotiation techniques (Tappen et al., 2017), agile approaches (Mishra et al., 2021), reframing (Blackman et al., 2022), mediation (Simosi et al., 2021), collective bargaining (Visser, 2016) and interest-based bargaining (Carlton, 2017). While there is comprehensive literature on conflict resolution approaches to organisational change, the majority of the studies provide anecdotal evidence, limiting understanding of the effectiveness of these approaches in organisational settings.

The research focuses on effective conflict resolution approaches for multinationals operating in developed economies, as these business environments are synonymous with rapid technological changes. Effective conflict management for multinationals is critical to mitigate employee resistance and dissatisfaction at the workplace, promoting organisational productivity (Tappen et al., 2017). Team collaboration and leadership are highly emphasised in modern organisations (Raines, 2023). Thus, team-level conflicts are a prevalent phenomenon influenced by team characteristics and

01: Human Resource Management

situation-specific circumstances associated with management pressure or expectations during change (Ciric et al., 2019). Adopting an effective conflict resolution approach that addresses rising conflicts is critical to promoting team productivity.

The research aims to fill the gap on the limitations in understanding the approaches in effectiveness of these conflict resolution and negotiation techniques in organisational settings. By identifying the most effective conflict resolution and negotiation techniques for managing staff during technological and process change is ideally beneficial for multinational change management organisations and human resource practitioners to implement in the workplace. The research ascertains the contribution of best practice management tools in determining the most effective conflict resolution and negotiation techniques for such scenarios to minimise risks in reducing organisational performance. This research also contributes to the future of impact of management research on organisations.

LITERATURE REVIEW

In line with Mak and Thomas (2022), a scoping literature review was adopted to conduct this research. Scoping review employs iterative and systematic approaches to evaluate emerging literature on change management and conflict resolution techniques. Based on this approach, four defined steps were developed to search, collate and evaluate relevant change management and conflict resolution studies.

Challenges associated with technological and process change

The change process deviates from normal organisational processes, often resulting in conflict or disagreements between management and employees. Burgess and Connell (2020) argue that employees' emotional reactions to technological change, including fear, uncertainty, and stress, significantly impact their performance and well-being. Workers may fear job loss or increased workload from such changes (Soomro & Ahmad, 2022). Despite the prevalence of technological advancements and process changes in the workplace, employee resistance, dissatisfaction indices, and incivility among team members have increased (Blackman et al., 2022). The results verified strikes in several enterprises or reduced employee output, especially during and after post-pandemic COVID-19 (Matthewman & Huppatz, 2020). Such effects have degraded organisational outputs, negatively impacting employee emotional wellbeing, leading to decreasing employee retention, organisational performance and financial sustainability. Conflict emerges from excluding employees' perspectives

01: Human Resource Management

from an organisation's decision-making when implementing new processes (Burgess & Connell, 2020). In exploring the challenges facing implementing new green building technologies in production and construction companies in the United States, Darko et al. (2017) found that employees' perceptions of unfairness and limited involvement in decision-making while adopting these changes intensify their resistance to these effects. Darko et al. (2017) suggest that inadequate training may worsen such situations, especially where employees lack the technical or operational skills to implement such changes.

Conflict Resolution and Negotiation Techniques

The literature presents collaborative and interest-based bargaining as suitable methods for managing change when organisations adopt new technologies or processes. According to Carlton (2017), interest-based bargaining helps enhance effective communication and trust between employees and their leaders when implementing new changes. This approach is effective when integrated with definite ground rules and problem-solving mechanisms that solidify its relationship with employees during the establishment.

Interest-based bargaining is effective when a conflict resolution process considers fairness and different interests. Visser's (2016) coverage of the impact of collective bargaining during the Great Recession proves that this method ensures fairness and considers the interests of most workers; each employee enjoys a share in new technological changes. However, the author notes that collective bargaining swallows employees' finite interests, leading to dissatisfaction. Traditional methods such as mediation and negotiation have been commonly used, however, the author confirm their popularity has diminished. Research conducted by Al-Ali et al. (2017) indicates that most organisations in the developed countries setting have embraced general mediation and negotiation techniques by hiring neutral parties and striking compromises that may fulfil employee concerns during change implementation. Moreover, the researchers note that such efforts have been effective in ensuring that both parties were assured of their trust after implementing technical or process changes.

Reframing has been identified as one of the most common resolution approaches in modern organisations. Blackman et al. (2022) argue that managers and executive staff mainly adjust the goals and applicability of such implementations to suit employee concerns. The adjustments mainly suit employee fears and elements affiliated with resistance to change. Firms embrace reframing to increase employee participation in adopting new changes to upgrade their morale. This approach helps to

01: Human Resource Management

increase the willingness of workers to match such changes to the company's mission and overall objectives.

Impact of best practice management tools

Carman et al. (2019) emphasise the power of the sixth step in Kotter's 8-step change model in addressing employee conflicts during adopting changes. The authors argue that the negotiating actions should be geared toward empowering employees to act on the goals of the embraced effects. This approach involves communicating effectively to workers the significance of proposed changes and committing to supporting them with enough resources to facilitate their implementation of the change.

Persuading employees to understand that the new changes will benefit the organisation and solve their interests. Due to the complexities associated with organisational change, Kotter's 8-step change model often fails to address social and cognitive dimensions that influence employee behaviour (Laig & Abocejo, 2021). In addition, this model requires significant resources and time to be effective, deterring even resource-rich firms from embracing it (Sittrop & Crosthwaite, 2021).

Agile methodologies have proven crucial tools for empowering conflict resolution and negotiation techniques in managing staff acceptance while implementing new technologies or processes (Leavy, 2015). According to Mishra et al. (2021), the effectiveness of these approaches is pronounced when the iterative and incremental approach is embraced. The resolution and negotiation approaches may then be conveyed to workers in iterations based on their responses after every step. This mechanism gradually wins the acceptability of employees once suitably implemented. Balaban and Đurašković (2021) confirm that such advances may be effective when the sub-goals are communicated to workers properly and transparently.

Barriers associated with implementing conflict resolution approaches

There are several barriers to conflict resolution and negotiation mechanisms. Tappen et al. (2017) study identifies power imbalance as the significant issue when workers feel they are being side-lined in decision-making during change implementation. Employees may fear negative dynamism in their work routines or job roles and hence resist the changes to defend their interests. Khokhar & Akhlaq (2022) note that communication breakdowns are a major barrier during change. Changes in technology or processes can create confusion and misunderstandings among employees, particularly if they are not adequately informed or trained. The authors identified this problem primarily emanates from a lack of transparency and employees irregularly receiving updates on the

progress of adjustments. Cultural differences also influence employee expectations and preferences during decision-making (Wren, 2022). Some workers with deviant interests may fight the new changes without considering their positive outcomes (Khokhar & Akhlaq, 2022). These barriers often compromise the impact of conflict and resolution techniques employed.

Industry Root Causes

Technology industries experience rapid changes, influenced by stiff competition and faster innovation. Exclusionary control of new technologies is limited to patenting regulations, which competitors often circumvent to produce a similar product from a different formulation that does not violate the rights of the original patentee according to Errida and Lotfi (2021). This means continuous innovation is one of the most effective ways to sustain competitive advantage, which produces new technologies faster than the expiry of exclusionary privileges and develops alternate processes of creating the already patented technologies to bar competitors and avoid expensive and protracted litigation. Such a dynamic environment is prone to conflicts associated with meeting organisational deadlines, yet management also needs to prevent these conflicts from affecting employee productivity, a crucial ingredient to developing new technologies it actively seeks. It is important to understand conflict resolution techniques are used by these organisations to manage disagreements and remain competitive. It is also crucial to evaluate leadership approaches suitable for such demanding work environments, which ensures proactive dispute resolution to maintain optimal employee productivity (Raines, 2023).

METHODOLOGY

The research used mixed methods to investigate the research question. The design allows researchers to employ deductive and inductive thinking and multiple methods to investigate one problem by analysing different data types (Sekaran & Bougie, 2016). However, the flexibility of using different approaches increases the complexity of mixed methods design, which has to be addressed before the research commences (Schoonenboom & Johnson, 2017). The approach was grounded on the argument that research context exists in a social world dominated by human interactions. Various principles of interpretivism guided this research. The guiding philosophical design for investigating the phenomena was primarily tailored to address the context of the research question.

01: Human Resource Management

The Research Question

"What conflict resolution and negotiation techniques are most effective in managing staff during
technological and process change in working environments
and what factors contribute to their success?"

The research question followed the paradigmatic framework of reconstruction and interpretivism (Collis & Hussey, 2021). The research question focuses on the organisational context primarily focuses on multinational change management organisations that supply their consultative change management services to large multinational organisations.

The interpretivist research approach generates a rich and deep understanding of the problem being investigated (Collis & Hussey, 2021). The mixed methods approach integrated qualitative and quantitative methods primarily in data analysis. Following evaluation of the research approach and research methodology, the study identified five research objectives: to investigate the concept and sources of conflict within organisations, to examine the role of communication in conflict management, to identify common conflict resolution techniques used by organisations during the change process, to explore the circumstances under which different conflict resolution techniques are used and to investigate the most common conflict resolution techniques organisations use during the change process.

Mixed Methods

After evaluating various research techniques, mixed methods framework was selected to conduct this research. Qualitative data was collected using open-ended and probing interview questions. Quantitative data aimed to examine participants' attitudes on the frequency of conflict at various levels of organisations and provide feedback on organisations' common conflict resolution techniques.

The mixed methods approach integrated qualitative and quantitative methods, whereas, quantitative methods were selected primarily for data analysis with a mix of probability and non-probability sampling methods. Data collection method was primary in nature, qualitative semi-structured thematic research method, being identified and measured constitutes a sufficient method to collect data for the research (Collis & Hussey, 2021). Mixed methods offered extensive room for comparisons and ascertainment of relationships and patterns. One of the strengths of mixed method design is its suitability and appropriateness in providing insights into research questions that solely qualitative or quantitative approaches cannot directly answer (Collis & Hussey, 2021). The design

allows researchers to employ deductive and inductive thinking and multiple methods to investigate one problem by analysing different data types (Sekaran & Bougie, 2016). The qualitative method used was semi-structured interviews. The quantitative strategy involved analysing numerical data applying several statistical techniques. The top ten Change Management consultation organisations were identified as the target audience for the research. The qualitative mechanism explores participants' subjective experiences, opinions, and meanings (Halcomb, 2018). The data collected was descriptive and narrative in nature. The researcher used the principle of sequentiality to test based on individual cases (Gichuru, 2017). The interviews were recorded, after which the researcher applied sequential analysis to order texts. Individual spoken units were interpreted in a sequence with no definitive order, after which the researcher formed a theory based on implicit happenings.

Sampling

Applying instruments of a mix of probability and non-probability sampling methods, the researcher began with the sampling process by defining the target participants. Qualifying factors included elements in the sample frame, geographic location, and time needed to complete data collection. Within the sample frame, elements such as work experience, seniority, and influence were the priority considerations for the expected sample. Stratified random sampling was then used to identify participants with shared attributes that would significantly contribute to investigating the research problem (Collis & Hussey, 2021). The sample identification process began by identifying top consulting firms and managers in senior positions. The researcher conducted further segregation by assessing the experience level, areas of expertise, and expected contribution to the research. After the process, approaches to purposive sampling, judgment sampling, was used to identify participants.

Ten participants were selected for the research through the purposive sampling technique. Purposive sampling ensured the samples included individuals who had experienced conflict during technological or process change and those who had not experienced conflict for comparison. Essentially, this sampling approach involved selecting participants based on the characteristics needed in the sample (Campbell et al., 2020). The researcher sought to collect unique, country-specific perspectives crucial in analysing common issues. Cross-continent data collection gave the research a global perspective and augmented findings at a theoretical level.

The researcher selected a semi-structured approach based on direct communication with experts in the field. Expert interviews were an appropriate approach to data collection because industry experts' knowledge provides invaluable insight into the design and implementation of

01: Human Resource Management

solutions from the position of experience. They have worked in the industry for a considerable time, giving them a monopoly of knowledge on industry trends. The primary objective of these discussions was to gather information without developing any theory in advance. The researcher gained knowledge through recursive dialogue with the consultants.

The key principle considered in this research was to examine consultants' own accounts and opinions faithfully while being cognisant of the researcher's reflexive influence in interpreting collected data. Secondary data collection was also a vital instrument in this research. Secondary data was collected in the field of conflict resolution and change management. Rigorous studies that linked conflict resolution and change management were of particular interest to the researcher. The researcher reasoned that using primary and secondary data was essential to explore shared attributes and enhance research reproducibility (Collis & Hussey, 2021). Since the field of conflict management is subject to rapid change, only studies conducted within nine years were considered relevant to the present research. Exploring secondary data also informed planning areas and mechanisms of collecting primary data. It is a judgmental mechanism, relying on the researcher's judgment in identifying the most suitable participants (Campbell et al., 2020). This approach extended opportunities for flexibility with data cleaning and resorting to re-selecting new samples that were more appropriate and relevant to the research objectives and aligned with the research design.

Data Analysis Technique

A hybrid qualitative and quantitative data analysis system has been selected as appropriate for this research (Barker, 2018a). Primary data will be reduced into themes following the principles of ground theory. An inductive coding scheme has been chosen to identify patterns in data collected without the researcher having a predefined theory or set of units of code. This decision was appropriate because the researcher realised the field of investigation was relatively new in the literature, preventing biases in research method decision making.

Data collected was analysed using descriptive statistics due to the demographic nature of the research. Descriptive statistics involves summarising and organising different features of a data set (Kaliyadan & Kulkarni, 2019). This approach applies to qualitative and quantitative research. Descriptive statistics summarises and describes the data collected, such as calculating means, standard deviations, frequencies, and percentages. It helped ascertain the correlations between qualitative and qualitative data (Kaliyadan & Kulkarni, 2019).

01: Human Resource Management

Inferential statistics involved conclusions about the collected data (Kaliyadan & Kulkarni, 2019). It goes beyond descriptive statistics, involving comprehensive interpretation and understanding of the analysed data. This approach involved testing the study's assumptions and expounding on the relationship between dependent and independent variables using regression analysis (Kaliyadan & Kulkarni, 2019). Regression analysis analysed the relationship between dependent and independent variables (Skiera et al., 2021). A linear regression analysis was applied to the current research. It examined the relationship between the working experience and the effectiveness of the implemented conflict resolution and negotiation techniques (Collis & Hussey, 2021). Conflict resolution and negotiation effectiveness were the dependent variables, while working experience was the independent variable. Subsequently, data collected via interviews were analysed through content analysis following the principles of grounded theory. Transcripts were compared, reflected, and rephrased to guide the formation of a framework structure. The first reduction approach involved first-order coding of transcribed interviews. This research utilised open, axial, and selective coding schemes for precise analysis (Rosenthal, 2018). The process began with open coding, assigning categories to primary data collected (interviews). These categories were descriptive and formulated to share attributes similar to those of the text. Before the coding process, the researcher read the material several times to identify key similarities in words and themes, a process that was instrumental in formulating categories. The codes were then grouped, followed by an analysis of their relationship. The researcher analysed texts line for the line when conducting sequential microanalysis to develop accurate provisional codes.

Axial coding followed the open coding scheme to help identify the relationship between categories (Vollstedt & Rezat, 2019). The researcher conducted this process using a coding paradigm where context, actions, interactions, and consequences were identified to reduce the quantity of the collected data. According to Vollstedt and Rezat (2019), one of the aims of axial coding was to raise primary data to a higher level to connect it to more than one case. In this line, data was subjected to further refinement to reveal circumstances that resulted in conflict, the foundations of conflict, mechanisms of mitigating it, and the outcome of these strategies.

Selective coding followed axial coding to integrate categories that had been developed. Data was grouped into major themes connected to several concepts of the studied phenomena to deduce the broader significance. These themes form the foundations of several networks of categories that derive meaning from the themes' central position. Since selective and axial coding share some attributes

(Vollstedt & Rezat, 2019). The researcher summarised the themes into first and second orders to clarify the second analysis stage (Hübner et al., 2016). First-order themes shared four attributes, while second-order themes shared more than four characteristics. The researcher then developed a structured order analysis to understand the data and develop a theory. The researcher compared the relationship between first and second-order themes for nesting and overlaps, after which the researcher developed the final themes for theory development.

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FINDINGS

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According to secondary data, studies on team conflicts propose conflict resolution approaches that may mitigate rising disagreements. However, team conflict management approaches have been recommended as an integrative part of team management, and no specific mechanisms or conflict approaches are preferred within teams (Gren & Lenberg, 2018). Emphasis has been placed on conflict resolution as a mediator of general team productivity (Leavy, 2015), with no direction on change-specific factors that may create friction and best resolution approaches in such scenarios.

The Common Approaches to Conflict Resolution

One of the objectives of this research was to identify how frequently various conflict resolution techniques were used. In light of the participants' experience in the field, a general overview was important to understand techniques that were more effective than others, influencing industry-wide adoption. Most participants viewed agile approaches as the most frequently used conflict resolution technique because they were flexible and adaptable to situational changes, reframing and interest-based bargaining followed in that order, as indicated in Table 1. Agile approaches offered collaboration mechanisms for identifying the problem and coming up with solutions within the groups of conflicting parties, which was the preferred approach (Ciric, et al., 2019). It involves what one participant described as iterative problem-solving, where the source of a conflict was identified and broken down into manageable solutions.

One key issue this approach identifies was recognising the difference between conflict and dispute. The level of personal investment in the conflict can then be assessed to extract key differences between conflicting parties.

01: Human Resource Management

Table 1: Frequency of Conflict Management Techniques

Rankings in order of frequency use of Conflict Management Techniques				
Participant	Collective bargaining	Interest-based bargaining	Mediation and negotiation	Reframing	Agile approaches
1	5	3	5	2	1
2	5	2	4	3	1
3	5	3	4	2	1
4	4	2	5	1	3
5	4	3	5	1	2
6	4	3	5	2	1
7	5	3	4	2	1
8	3	4	5	2	1
9	4	2	5	1	3
10	4	2	5	1	3
Total Rankings	**43**	**27**	**47**	**17**	**17**

Conception of Organisation Conflict

Organisational conflict comes in many forms depending on various factors. Preliminary questions sought to understand participants' opinions on organisational conflict, its sources, and frequency of occurrence at various organisational levels. Understanding the theories that underpin organisational conflict and the practical setting was critical in assessing the justification of particular resolution strategies. Based on the responses, conflict occurs at three levels within organisations as presented in Table 2.

Table 2: Perceptions of Organisation Conflict

Individual level	Differences between people on subjective conduct
Operational level	Disagreements between groups or teams on project priorities
Management level	Disagreements between groups and immediate supervisors or upper management

The research then sought to explore the nature of these differences or sources of conflict. The majority of participants argued that differences associated with organisational change occurred due to misinterpretation or poor communication between management and employees. Future uncertainties, job security, and responsibility changes triggered organisational conflicts that came with the change process. The research then sought to explore the nature of these differences or sources of conflict, illustrated in Figure 1. Differences in team priorities occur at a group level where members disagree on the best way to handle project deliverables or undertake individual responsibilities (Wren, 2020). Disagreement in group strategies occurs when groups cannot find a consensus on the best approaches to a problem (Gren & Lenberg 2018). Participants had different opinions on one source of conflict and differences in perspectives (Wren, 2020). On the one hand, some participants argued it stemmed from

employee individual characteristics, influenced by culture and socialisation (Leavy, 2015). On the other hand, some participants stated that differences in perspectives were associated with organisational operational activities and hierarchies (Simosi, et al., 2021). For instance, employees at different levels of organisational hierarchy were more likely to disagree than those within the same hierarchy. According to the analysis.

The majority of participants argued that differences associated with organisational change occurred due to misinterpretation or poor communication between management and employees. Organisation conflicts that came with the change process were triggered by future uncertainties, job security, and responsibility changes.

Figure 1: Sources of Conflict from findings
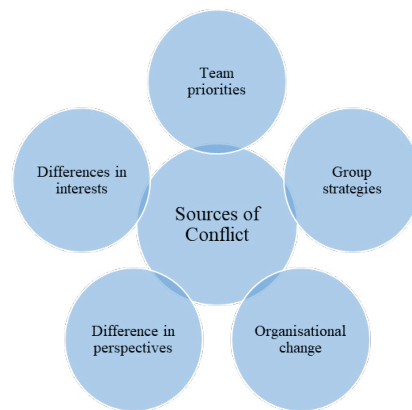
Conflict Resolution and Effectiveness

Participants reported that different conflict resolution approaches were helpful in specific circumstances, which were categorised into four key themes:

Collaboration and Negotiation

The collective bargaining approach is useful in negotiations with external stakeholders representing employees or essential organisational stakeholders (Garnero, 2020). Participants reported that collective and interest-based bargaining were used interchangeably during conflict resolution. When parties negotiate for better conditions in a deal or to address a particular concern, each stakeholder is cognisant of core interests (Leavy, 2015). The heart of interest-based bargaining relies on the use of the word 'if' during negotiations according to Hourani (2009), triggering instant response.

01: Human Resource Management

Neutrality

There are circumstances where preliminary roundtable negotiations have failed to produce positive results. Despite multiple attempts to find a solution, parties insist on the original ground (Michael et al., 2012). Mediation and negotiation techniques become essential in this scenario to disentangle the strong positions. The mediator becomes the central point of communication (Raines, 2023). Participants also reported that interest-based bargaining is essential when exploring options parties were willing to give up for a resolution to be reached.

Adaptability and Collaboration

Agile and reframing approaches to conflict resolution offer valuable tools to help parties resolve conflicts. Most responses suggest these were the best approaches to solving individual and operational-level conflicts. One participant noted that reframing requires a shift in perspectives and priorities to solve a problem, using imagination. It means the willingness to change opinions on a particular subject and adopt a new one to solve a problem (Gren, 2017). Proponents of agile argue that such shifts require prior training on flexibility and adaptability (Leavy, 2015), which makes it easier to drop rigid opinions (Gren & Lenberg, 2018). Effective conflict management is a critical antecedent of quality relationships between various stakeholders. A conflict management technique must effectively mitigate the adverse impact of a conflict. However, Iyiola and Rjoub (2020) argue that the effectiveness of conflict resolution techniques is contingent on selecting the right approach that matches the conflicting situation. Agile and reframing were the most effective approaches to resolving change management conflict because they foster learning instead of needs and interests (Raza & Standing, 2010). The researcher identified these four themes as factors contributing to the success of conflict resolution and negotiation techniques, supporting the research question of the research.

Limitations

Initially, the timeframe to complete the research provided strong indications the due milestones would complete the research activities. However, delays caused postponements of the research activities. Despite the challenge, consistency in monitoring and updating the research provided assurances. Sample size was limited due to time constraints. The lack of empirical research on the effectiveness of conflict resolution and negotiation techniques limited the research to conclude most effective approaches in effectiveness that fits all working environment, due to the complexity of human emotions, culture and fast pace changes in technological processes. Opportunities for delimitations were swiftly managed, such as replacing one participant with another through referrals,

as identifying the participants was a limitation in the early stages of data collection, and prevent bias in research method decision making.

"Executives must use imagination to resolve conflict and disputes" – Participant 10

CONCLUSION

The current research establishes that conflict resolution techniques have specific use cases, and no approach has all the mechanisms or procedures to quell dispute situations. This challenge can be attributed to conflict theory, which posits that disputes often originate from competing for limited resources, resulting in group inequalities (Brief et al., 2005). Regardless of the circumstances and power dynamics, conflict resolution involves compromises prioritising the overall goal over subjective interests that parties live without. In making this assertion, the researcher was aware that such an argument overtly oversimplifies the nature and factors involved in a conflict.

While there is extensive literature on conflict management in management literature, studies on conflict resolution techniques are underexplored. It is crucial to evaluate leadership approaches suitable for such demanding work environments to ensure proactive dispute resolution to maintain optimal employee productivity (Raines, 2023). Management literature provides general conflict resolution guidelines supported by various theories, but a clear structure on the operations of various techniques remains unclear. This research relied on literature synthesis to find connections between techniques and procedures. This research met the five research objectives and answered the research questions on what conflict resolution and negotiation techniques are most effective in managing staff during technological and process change in working environments, resulting in identifying several effective negotiation and conflict resolution techniques: Collective bargaining, Interest-based bargaining, Mediation and Negotiation, Reframing and Agile approaches, while identifying the factors contributing to their success, the researcher linked Collaboration and Negotiation, Neutrality, Adaptability and Collaboration as factors contributing to the success of conflict resolution and negotiation techniques in managing staff during technological and process change in working environments.

Moreover, the relationship between organisational change and conflict management was adequately explored, but conflict techniques remain unclear. The research identified the gap in empirical approaches and the limitations in understanding the effectiveness of these conflict resolution

01: Human Resource Management

and negotiation techniques in organisational settings. Consequently, the research paves the way for future research opportunities on effective approaches to study working environments from human resource management, communication, international diplomatic relations and litigation practices, to continue monitoring success factors in these effective approaches. This research contributes to the impact of management research on organisations and the future of management research, whereas, organisations, change management and human resource consultants may use the research's findings to inform best practices in change management and overcome potential barriers and challenge in the workplace. Future research should consider expanding the procedures of empirical approaches to investigate human emotions, communication, leadership, conflict resolution and negotiation techniques' effectiveness in mitigating employee resistance and conflicts, degrading organisational outputs, impacting employee emotional well-being, decreasing employee retention, and sustaining organisational performance and profitability.

01: Human Resource Management

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Identified positions: What are they and why do we have them?

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Identified positions: What are they and why do we have them?

ABSTRACT: *Identified positions is a loose term used in both the private and public sector in Queensland to describe a targeted position. Specifically, a position that is targeted at Aboriginal and or Torres Strait Islander peoples. These positions are also known as affirmative action, which promotes equality. You may have seen them advertised, 'Program Officer (Identified). So, what are these positions and why do we have them? This paper will briefly explore the term identified positions and why we have them?*

Keywords:

Indigenous: Aboriginal and or Torres Strait Islander peoples

Identified: is a term used in recruitment to identify that the position/s is targeted only to Aboriginal and or Torres Strait Islander peoples.

Colonial load: load place onto Indigenous peoples

Professional position: any employment held by an Aboriginal and or Torres Strait Islander peoples

Overview:

Before I begin, as part of my culture, I will introduce myself, tell you a little about who I am and where my family is from. I reflect on my Aboriginal practice to introduce myself and my community, and the importance of these protocols in the research context.

I am a proud Koori woman, from the Wiradjuri Nation, through my mother and Grandparents, and Middle-Eastern, Jewish Australian on my Father's side. We are Burns (Maternal Grandfather) and Moran (Maternal Grandmother). I was born in Muloobinba (Newcastle, New South Wales), but moved to Queensland and grew up in Winnam (Wynnum), on Quandamooka Country (Moreton Bay).

This paper briefly explores the question: what are identified positions in Queensland and why do we have them? This paper draws on my current research as a PhD student who is undertaking a critical review of 'Identified Positions' through the voices and experiences of Indigenous peoples working in professional positions, while this research is in the early stages and in the middle of data collection there have been some interesting themes emerging. It is important to acknowledge and recognise that the use of this term will be within the parameters of Queensland only as this research does not touch on the other States, and at a Federal level, the term has a different meaning.

One of the key themes that has emerged from this research, is the understanding of what an identified position are: So why do we have 'identified positions', are they for closing the gap to address inequities, or for cultural expertise, and knowledge or are they simply a box-ticking exercise designed to meet hiring metrics. Some would say yes, others would say that they are designed to meet inequities and others are don't now they even exist!

Current understanding:

Simply put, according to the Queensland Human Rights Commission (2020) 'identified positions', being in accordance with the *Anti-Discrimination Act 1991 (Qld) s.25*, is generally understood to mean an employer identified position to be filled with only a person that holds that particular attribute, such as race.

Employers in Queensland, Australia commonly use the term 'identified position', when advertising a position such as 'program officer (identified) with a reference within the job ad to section 25 of the *Anti-Discrimination Act 1991 (Qld)*, this is also referred to as 'affirmed positions' but not usually advertised as that. The term identified is generally used to signify that the role is for an Aboriginal and or Torres Strait Islander person. It is interesting to note that the term 'identified position' is not explicitly referred to

within the *Anti-Discrimination Act 1991 (Qld)* but is defined as a genuine occupational requirement for a position to be filled only by a person with that particular skill set, such as race, (Anti-Discrimination Act 1991 (Qld) s.25). This terminology has been picked up by the private sector following, policies developed by State Government that uses this terminology. To date, there is little to any evidence identifying the origin of the term identified.

Research question:

What are 'identified positions' and why do we have them? The goal of this paper is to start discussion and raise awareness for those who are not familiar with 'identified positions', while also touching on the different perspectives of why they exist.

Research approach:

As this paper is draws on a research topic around the experiences of Indigenous peoples in professional positions, it also draws on the same research design. That being literature, both grey and academic and Indigenous knowledges as a framework, specifically Indigenous standpoint. Moreton-Robinson, (2000) and Rigney, (1999) who articulate that there is more than just one interpretation and world view. Additionally, I draw on my cultural practices such as how I conduct myself as a Wiradjuri woman. *Yindyamarra,* is the practice of Wiradjuri philosophy, it is our way of being know and doing. It is shared respect, being polite and gentle and doing thigs slowly. Its shared knowledge and engaging in *Windangadurinya* deep listening (Grant & Rudder, 2005; Lyons, 2022; Morris, Groom, Schuberg, Atkinson, Atkinson, & Ungunmerr-Baumann 2022).

The method used is Research Topic Yarning sessions. Drawing on Bessarb & Ng'andu's (2010) its important to acknowledge there a different types or styles of yarns, such as social, collaborative, therapeutic and research topic yarns (pp. 40-41). Bessarab and Ng'andu articulates research yarning enables both the participant and researcher to journey together on the topic of interest that is relevant to the research. (Bessarb & Ng'andu, 2010, p.38).

The data we are drawing from derives from the current research on the experiences of Indigenous peoples in professional employment, noting that it is still the early stages the data collection and a thorough analysis is still to occur.

Findings:

In these initial stages of data collections some themes emerge from the PhD research such as the different understandings as to what an identified position is, on a personal level it is still inconclusive as there is still more data to be analysed and collected. However, this paper sort to explore what an 'identified position' is in Queensland and why do we have them. To answer this question on a legislative level, it is simply a term that has been coined and stuck, in reference to the *Anti-Discrimination Act 1991(Qld) s25* definition as a genuine occupational requirement for a position to be filled only by a person with that particular skill set, such as race.

It is also important to note that due to the Federal Government using the same term 'identified' but different meaning in accordance with their policies, such as an Identified position refers to the job role. Candidates must understand the issues affecting Aboriginal and Torres Strait Islander peoples and proven culturally appropriate engagement and communication skills, as such these vacancies are open to everyone. The term affirmative measure used in Federal Government in accordance with the special measures under subsection 8(1) *of the Racial Discrimination Act 1975.* is the term used within Federal Government to fill vacancies that are only open to Aboriginal and/or Torres Strait Islander peoples.

With the same term being used at a State and Federal level that hold different meanings, there is no wonder why there is confusion as to what an identified position is. This coupled with some organisations advising that positions are being identified to meet targets or framing it as closing the gap to address inequities, with the experiences of some Indigenous peoples believing that the positions were to add value and provide cultural contributions (Steel, 2017).

In this early stage of data collection there has also been an interesting collaboration with the literature and the yarning sessions being conducted, specifically around participants not feeling valued or contributing. This was identified by Lahn (2018) who interviewed a total of 34 Aboriginal and or Torres Strait Islander participants, made up of current and former Australian Public Services (APS) employees. The research wanted to identify why the APS could not retain Indigenous employees, so Lahn explored their experiences. The paper identified that Indigenous employment participants expertise on Indigenous matters was not sort supporting the notion that positions are filled for the governments targets.

This leads us back to the question of what are 'identified positions' and why do we have them? One could argue that the legislations is clear, that it is race related requiring knowledge and experiences arguing that the positions are to provide meaningful contributions at a cultural level, while also closing the gap and addressing inequities, however unfortunately legislation is grey and interpretive meaning that at times it is used for meeting targets. So, I put the question to you, if you are considering having an identified position, what is the position and why do you want it in your organisation?

Contribution and Limitations:

This research is limited to Queensland, therefore there is scope for research to be done in other States and Territories. This paper's purpose was to discuss what identified positions are and unpack the different understandings as why they exist, building from the current research which provides the platform for Indigenous professionals to share their experiences and voices in professional roles. With the emerging themes from that research which included the need to discuss and understand what identified positions are, there will be future discussion around what the literature identified against the experiences of Indigenous peoples in professional positions, such as how to address the interpretations and imbalance around meeting targets and providing cultural knowledge and input. This too is a fine line; Consideration needs to be made not to impede on work and create unnecessary cultural load. Bargallie (2020) discussed the burden of having to continually educate others about culture, and their differences. One could argue that without that kind of work being recognised, it falls to cultural load with having to consistently educate non-Indigenous staff.

Implications:

The purpose of this paper is to draw focus on the terminology of 'identified positions' and gain a deeper understanding of its meaning at both a legislative level and personal level. This paper will assist industry with what identified positions are, given the impetus for more education in this area. This not only benefits industry but the Community, through education, understanding and action there can be no confusion as to what an identified position is and why they are advertising them; We all have a part to play.

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05. Entrepreneurship and SMEs

Technological Advancements and Their Impact on Marketing Strategies of SMEs in Qatar

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Technological Advancements and Their Impact on Marketing Strategies of SMEs in Qatar

ABSTRACT: *This study investigates the impact of technological innovations on marketing strategies of small and medium enterprises (SMEs) in Qatar from 2014-2024. This research explores how digital tools like social media, CRM systems and data analytics have revolutionised marketing practices among SMEs by expanding market reach, raising brand recognition and optimizing efficiency in marketing strategies. This study highlights key drivers and barriers of technological adoption, including market competition, customer demand and supportive government policies; along with barriers such as financial constraints or technical expertise shortages. Through an exhaustive examination of empirical evidence and case studies from various industries, this research highlights how technology plays an integral part in increasing SME competitiveness and realizing higher returns on investments. Additionally, this study explores the future potential of emerging technologies like AI, IoT and blockchain for SME marketing, along with their implications and challenges. Policy and regulatory aspects are explored, emphasizing the necessity of government support in expediting technological adoption. This research concludes with practical recommendations for SMEs looking to reap the rewards of digital transformation, and encourages further study of socio-cultural factors impacting technological adoption. As such, this research offers invaluable insight for businesspeople, policymakers, researchers interested in Qatari culture as an environment in which technology plays an increasingly vital role.*

Keywords: technological advancement, SMEs, marketing, Qatar.

INTRODUCTION

In the last decade, technology has been evolving so rapidly that it practically changed the way businesses operate across the globe. The e-surge, proliferation of smartphones, artificial intelligence, and integration of the Internet of Things have all witnessed a new epoch of connectivity and data-driven decision-making (Attaran, 2023; Chen & Ho, 2021). The impact of these technological advancements has been huge in pretty much all sectors, such as marketing, wherein this change from traditional to digital has helped businesses reach and engage with their customers in the most effective and efficient manner possible. This has been important for SMEs since they always have limited resources and may face high competition from large firms (Amoah et al., 2023; Gao et al., 2023). Hence, the application of digital technologies in marketing has truly levelled the playing field for SMEs and created new opportunities for their growth and innovation.

SMEs are an important part of the Qatari national economy and contribute to employment, innovation, and diversification of the economy (Oxford Business Group, 2017). The country's highest-ranking officials see the SME sector as an important element and have implemented several measures as part of its development framework relating to the digital infrastructure and popularizing the intake of

technology among them (Callen et al., 2014). The Government, in line with the Qatar National Vision 2030, is striving to create a knowledge-based economy in which SMEs will be empowered to realize competitive gain from the use of technology (Kularatne et al., 2024). Although there is a high possibility of diverse benefits accruing, it has been hard for most SMEs to quickly adopt and integrate new technologies in their marketing strategies. Understanding the influence of improved technologies on such businesses may be very important in coming up with appropriate designs of support mechanisms and policies (Alhitmi et al., 2023; Fernandez & Ali, 2015).

Marketing function is very essential to SMEs as it directly influences their ultimate ability to attract customers, raise brand awareness, and drive sales. In a fast-paced technological environment, digital marketing is increasingly becoming the alternative to many traditional methods of marketing (Dumitriu et al., 2019; Jadhav et al., 2023). In general, digital marketing encompasses the use of tools such as social media marketing, search engine optimization, content marketing, email marketing, and online advertising. It is with these tools and platforms that SMEs can attain more audience reach, engage with the customers in real time, and better measure campaign effectiveness (Kingsnorth, 2022; Taiminen & Karjaluoto, 2015). A digital marketing strategy, therefore, will be a game-changer for SMEs in Qatar to compete effectively in both the local and global markets.

The primary objective of the literature review is to explore how technological advancements in the past decade have influenced the marketing strategies of SMEs in Qatar. It attempts to develop a comprehensive understanding of the present state of knowledge in the field by analyzing the use of different digital tools and platforms in marketing practices. It identifies the major themes and findings of previous research on aspects such as drivers and barriers to technology adoption, impacts on marketing performances, and the role of government and institutional support. these insights, the review seeks to delineate the opportunities and challenges facing Qatari SMEs in the information age and will guide practitioners and policymakers.

Furthermore, by identifying gaps in the existing literature, the review helps to suggest a future line of inquiry. The dynamism associated with technological change creates a situation where academic inquiry should be continuous regarding the new developments and what they portend for humanity. It is ultimately expected to contribute to a more nuanced understanding of the relationship that technology seems to have with marketing for SMEs. This approach has facilitated capturing the multifaceted technological impacts on modern-day marketing. Geographically, this study will narrow down to Qatar, a country with a national development strategy that aims to work towards technological advancement and economic diversification. What follows are studies done within this period of 2014-2024 that provide relevant insights for the current period, thereby detailing context-specific recommendations for local SMEs and policymakers.

CONCEPTUAL FRAMEWORK

Definition of Key Terms

Small and Medium Enterprises (SMEs)

SMEs are enterprises that have a limited number of employees, and revenue when compared to their larger counterparts (Montanari & Kocollari, 2020). SME definitions vary within countries/industries but are generally within specific threshold limits set by the regulatory bodies. The definition of SMEs in Qatar is either based on the number of employees or its annual turnover, as defined by the country's Ministry of Commerce and Industry. SMEs are key players in economic growth, with their employment opportunities, creation of innovation, and volumes of GDP contribution being considerable (The Peninsula, 2018). Quite a few of them, however, show agility and adaptability, and can respond promptly to changes in their respective markets. Many of them adopt new technology, but are often restricted in their growth as well as competitive capabilities due to resource constraints (Bongini et al., 2021).

Technological Advancements

The meaning of the term 'technological advancement' is the development or application of new technology to improve or completely transform any process, product, or service (Chin et al., 2023). Rightly so, technological innovation refers to new digital marketing tools, AI, the Internet of Things, blockchain, and analytics on data. These have disrupted many business functions, including marketing, by moving fast in enabling efficiency in operations, data-driven decision-making, and effective customer relationships (Gandomi & Haider, 2015; Sundu et al., 2022). However, the speed at which technology changes has been much faster in the past decade and is equally offering challenges and opportunities for SMEs.

Digital Marketing

Digital marketing is an umbrella term for all marketing activities on electronic platforms and the internet. It uses the help of digital channels like search engines, social media, email, and sites and other connected, relevant online platforms to promote prospects among their existing and potential consumers (Kannan & Li, 2017). Digital marketing includes marketing strategy techniques like SEO, content marketing, social media marketing, pay-per-click (PPC) advertising, and email marketing. These tools assist businesses in gaining more audiences, engaging customers in real time, and being able to assess their campaign in terms of return and effect through the data analytics (Stephen, 2016). Digital marketing provides more such cost-effective and scalable solutions for SMEs, enabling them to derive better results from their marketing campaigns and, in turn, compete more effectively in the market (Jadhav et al., 2023).

Theoretical Models

Diffusion of Innovation Theory

The theory of the Diffusion of Innovations by Everett Rogers explains, at a high level, how, why, and at what rate new ideas and technologies spread through cultures. The theory categorizes adopters as

innovators, early adopters, early majority, late majority, and laggards (Rogers et al., 2014). It brings in the issues of communication channels, social systems, and time into focus during the process of adoption. The relevance of this theory would resonate with most SMEs in determining the different stages through which various technologies are likely to be adopted within the company, and what dynamics are involved in the rate at which they are adopted (Greenhalgh et al., 2004). The theory comes very handy in the case of explaining how SMEs in Qatar accept digital marketing tools and any other emerging technological trend.

Technology Accetance Model (TAM)

The Technology Acceptance Model, developed by Fred Davis himself, is tailored to explain and predict how users accept new technologies. This model proposes the two primary factors that drive the acceptance and usage of innovation: perceived usefulness (the degree of which a person believes that using a particular system would enhance their job performance) and perceived ease of use (the degree of person believes that using a particular system would be free from effort) (Davis & Granić, 2024). TAM contributes to the understanding of the involvement of some factors that affect SMEs' ability to adopt and integrate digital marketing technologies. It highly focuses on user perceptions and can systematically guide strategies to enhance SME employee technology adoption (Awa et al., 2015; Nazir & Khan, 2024).

Resource-Based View (RBV)

Resource-Based View is a strategic management framework that uses a firm's ability to acquire, develop, and leverage value, rarity, inimitability, and non-substitutability of resources towards sustainable competitive advantage (Madhani, 2010). Therefore, RBV within the SME sector accentuates the importance of internal resources: technological capabilities, human skills, and organizational processes toward competitive advantage (Lukovszki et al., 2021). Applied to digital marketing, RBV suggests that SMEs should derive competitive advantage when their technological resources are employed to enhance their marketing performance for strong customer relations and differentiation in value propositions (El Nemar et al., 2022). This underlying theoretical model underpins the strategic importance of technology in relation to SME success.

TECHNOLOGICAL ADOPTION IN SME'S MARKETING

Drivers of Technological Adoption

Over the last decade, market competition has been a key driver of technological adoption among SMEs in Qatar. Since SMEs have been operating in a fast-changing market, they have become increasingly invested in their technological input in digital marketing (Elsharnouby et al., 2024). There is also evidence that businesses within advanced marketing technologies enhance their marketplace reach, customer engagement, and overall operational efficiency (Al Halbusi et al., 2022). Not only this, firms at the local level have also raised the bar, and this has exerted a lot of competitive pressure on Qatari SMEs to invest

in digital platforms to hold on to their share of the market and continue growing in an environment that is becoming more dynamic (Dana et al., 2021).

Customer demand has also played a large role in pushing the adoption of technology among SMEs in Qatar. The change in preference toward online, e-commerce, and digital modes of communication has electrified the need for operations to be conducted with digital marketing frameworks implemented (Al Jaber & Katsioloudes, 2021). Other researchers have noted that such businesses risk losing their customers to the more tech-savvy competitors if they fail to embrace the new fad of consumer attitude (Allagui, 2019). Thus, SMEs have also adopted technologies such as social media marketing, search engine optimization, and email marketing to meet their customer needs and improve their service delivery.

The policy of governments and government support has also been the foundation of technological adoption for Qatari SMEs. Initiatives like the Qatar National Vision 2030 and other government-backed digital-solution schemes have paved the way in developing functional and regulatory frameworks to support technology adoption into business operations. It is in this regard that the government, through its commitment to transforming the economy into knowledge-based one, has created innovation hubs, economic incentives, and training not only to SMEs but also to other organizations with intentions to embrace and utilize digital marketing tools (Qatar Development Bank, 2021).

Barriers to Technological Adoption

Though there are definite benefits, advancing technology for SMEs in Qatar still has several challenges. Financial constraints happen to be one of the major hurdles, since, for the most part, SMEs have to operate under very small budgets that bound investing in new technologies (Mehrez, 2019). The high costs related to purchasing, implementing, and maintaining digital marketing tools can be overpowering to most small businesses (Haron, 2016). In most cases, the financial limitation has the result of SMEs lagging technological adoption behind larger firms.

Another strong barrier is the ability among SMEs to be technical. Most of these small business owners and employees are without proper skills and knowledge to effectively use the technologies underlying digital marketing. Expertise shortages in skills such as this lead to barriers in leveraging the full potentials of technological advances by most SMEs in business. A disadvantage of this technical expertise is that there will be full potential use of those digital tools that will lower the level of digital impact further (Al-Housani et al., 2023).

Resistance to change is described as one of the biggest roadblocks toward embracing technologies into digital marketing that many industries are facing today, and the same stands for the SMEs in Qatar. Organizational inertia or a general partiality towards traditional marketing methods at the firm level could be critical challenges for the adoption of new technologies of any kind. Some business owners and managers may not be believers in how effective digital marketing tools are, or they may not want to interfere with current ways of doing things (Kebaili et al., 2015). This requires a change of culture within the organization, which is hard to reach.

Strategies for Overcoming Barriers

Through research, some strategies have been suggested and also put in place. Awareness and capacity creation need to be carried out since the SME owner and the workforce need to have the skills to be able to take and implement the digital marketing technologies. The government, educational institutions, and industry associations in Qatar have not been left behind in the race, also developing a series of training programs and workshops on the above (Qatar Development Bank, 2021). This is envisioned to narrow the existing gap in skills necessary for this new age, enabling the enterprises to fully tap into the dynamic ecosystems of digital tools at their disposal.

Other facilitators include availability of funding sources and financial incentives. In this regard, the Qatari government, through agencies such as the Qatar Development Bank, has initiated several programs funding and grants that aim to have the SMEs subsidize the cost of going digital. Such financial incentives allow for a decrease in the considerable cost burden that emanates from acquiring and implementing new technologies, thus are a real enabler for more SMEs to invest in digital marketing tools (Qatar Development Bank, 2021).

Adoption of technology is not easy without an enabling environment fostered by government and institutional supported programs. Policies to create innovation within the environment and to provide infrastructure and regulatory support are important for encouraging SMEs to adopt digital marketing technologies. The collaborative efforts of government bodies, the private sector, and international partners have provided enabling innovation hubs and digital ecosystems that would support technological adoption by SMEs (Al-Khalifa et al., 2021; Ben Hassen, 2022). In addition, there is a general environment created for technological innovation and adoption.

IMPACT OF TECHNOLOGY ON SME'S MARKETING STRATEGIES IN QATAR

Digital Marketing Tools

As mentioned, the millennium era has already shifted and molded the nature of marketing strategies that the SMEs have in Qatar for the past decade. These have become the SMEs' lifeline to higher brand exposure and customer interaction. Social media sites like Facebook, Instagram, and Twitter have increasingly become functional, low-cost avenues for small businesses toward accessing a wide target market. This is because it will be relevant to the advertisement and access to consumers in a real-time basis. Research by Mohamed (2020) also reveals that social media marketing has resulted in brand promotion and customer loyalty to Qatari SMEs. In social media platforms, these SMEs could create and share content around the target markets, something that has really helped herein in strong relationship building and community experience for the brand.

Another very useful tool for digital marketing among SMEs in Qatar is search engine optimization (Saleem et al., 2023). SMEs can achieve improved visibility and, therefore, develop an organic traffic pull

by optimizing their sites for search engines. As the research has indicated, good SEO policies are more beneficial while ranking high on Search Engine Results Pages (SERPs), which have a direct influence on attracting potential buyers. For example, a study in this domain illustrates the improved ranking nature of search engine results on SERPs as an influence for better possible customer attraction. This fact has particularly helped small businesses that operate with very little to no marketing budget as SEO has been a very cost-effective technique that can boost up a web presence and drive traffic to websites. The infusion of SEO practices within the marketing strategies made them capable of playing their roles among Qatari SMEs (Saleem et al., 2023).

Email marketing and automation have also been major strategies for Qatari SMEs. The use of automated email campaigns allows businesses to be able to offer their customers personalized messages, which can improve customer engagement and loyalty. According to Bedda (2023), SMEs in Qatar adopted email marketing strategy to report targeted messages, promotional offers, and follow-up effective interaction toward improved customer retention processes. The automation tools have, therefore, made the marketing process more efficient, and it becomes easy for SMEs to manage customer relations in the execution of marketing campaigns.

Customer Relationship Management (CRM)

The use of CRM in the country has been a game-changer for the SMEs. The use of the system helps the business to keep and manage its interaction with its current and potential clients in an organized way, streamlining the processes hence increasing profitability. It centralizes the customer data, thus enabling the SMEs to be equipped accordingly with information on the behaviors and preferences of the respective customers, hence allowing the SMEs to use personalized, effective marketing strategies. In fact, according to Bedda (2023), CRM adoption has birthed improved customer engagement and retention among those Qatari SMEs. Such systems facilitated the businesses in tracing how customers interact with them, thereby identifying the sales opportunities that matched this interaction, to enhance customer satisfaction and loyalty.

For example, Qatari SMEs using CRM systems have put more emphasis on improved client engagement and retention. CRM data has made it possible for businesses to segment a customer base and tailor marketing efforts in ways that speak to the customer groups based on specific customer needs and preferences. A personal touch has been proven to be responsible for impressively high customer retention rates (Al-Buainain, 2024). Furthermore, CRM systems support better communication with the customers, which allows SMEs to respond quickly to queries, solve problems even faster, and maintain high standards of customer service. Now, for SMEs in Qatar, the ability to build and grow sustainable customer relationships has become a competitive advantage (Al-Buainain, 2024).

Big Data and Market Research

05. Entrepreneurship and SMEs

The use of big data and analytics has revolutionized market research in addition to SMEs strategic decision-making within Qatar (AL-Shboul, 2023). Business Intelligence provides in-depth information on market trends, customers' behavior, and competitive dynamics by analyzing enormous data volumes. Elsharnouby et al. (2024) have further argued that big data analytics, among other things, help SMEs to be in a position to make more informed decisions, better their marketing approach, and indicate high growth areas. Data-driven insights help the business understand its customers, forecast the forthcoming market trends, and help them design the marketing approach according to the changing demand. In such an analytical approach, Qatari SMEs have geared their approach towards becoming responsive in an already volatile business context.

Moreover, Qatari SMEs have been using personalized marketing-based data insights. Businesses can make targeted and personalized campaigns based on data analytics usage, which fits individual customers. Personalization at the right rate has been found to optimize customer responses and, eventually, the customers' intentions to purchase products (Pappas et al., 2017). For instance, SMEs can use data to segment their target audience, identify high-value customers, and offer them extremely relevant content or product offers that provide solutions to specific customer needs (Al-Buainain, 2024). This very nature of personalization extends beyond the efficiency of the marketing campaign to customer relations and loyalty.

IMPACT OF TECHNOLOGY ON SME'S MARKETING PERFORMANCE IN QATAR

Market Reach and Expansion

Technological changes have increased the market reach of SMEs in Qatar, now tapping into global markets that were previously impossible, partly owing to the increasing online presence of a good number of SMEs. The increased development of numerous digital platforms has granted SMEs new opportunities to reach out to their customers even beyond their local markets. According to Al-Buainain (2024), for instance, several Qatari SMEs have been able to use digital marketing tools such as a website, social media, and an e-commerce platform to display their products and services for a global market. This increased their market reach, diversifying different customer bases they had and reducing the risks of dependence on a local market.

Cross-border e-commerce has evolved to become a critical channel through which SMEs of Qatar can access international markets. Those SMEs, by using relevant digital technologies, perform sales transactions with customers across the globe, thus overcoming traditional business issues of geographical distance and high logistical costs. The findings from the research of Jamous et al. (2022) state that Qatari SMEs involved in cross-border e-commerce have had enormous growth in sales and market share. To rise to meet the demand from all over the world, selling products online gave these businesses the opportunity to do so. Then they improvised their competitiveness and added value, which results in scaling their businesses.

Brand Awareness and Reputation

Adjusting to the online brand strategies has continued to play a major role in the increase of brand awareness and brand reputation for SMEs in Qatar. In fact, the introduction of digital marketing tools such as social media, content marketing, influencer collaboration has made a remarkable position in the promotion of the brand for SMEs. It has been revealed that a strong online presence increases brand awareness and visibility significantly (Mohamed, 2020). Since SMEs keep engaging with customers constantly through the digital touchpoints, it allows them to increase the customer loyalty and develop a strong identity for the brands (Zayyan, 2019).

Most recently, social media had been an important cog in driving the way a brand is perceived by the consumers. The interactivity of social media makes SMEs communicate and talk to their specific audiences, and this can be done at the time of instances through instant responses, in addition to bettering their online reputation. The research made by Fetais et al. (2022) mentions that a study proving that social media engagement enhances brand perception and further customer loyalty. This potential has enabled SMEs in Qatar to enhance their brand image, build consumer trust, and be in the lead in tough markets by making use of social media.

Marketing and ROI

Cost efficiency of the campaigns has seriously benefited the SMEs in Qatar to get better marketing efficiency and return on investment (ROI). Hence, the pay-per-click (PPC), email, and social media digital marketing tools make quite an ideal, low-cost, scalable alternative to traditional marketing. According to Bedda (2023), cost is actually reduced as the SMEs in Qatar increase their outreach in terms of the audience reached through digital marketing strategies. Therefore, it is going to be very beneficial to small and medium-scale enterprises operating under very squeezed up budgets, hence maximizing the gains obtained through spending on marketing.

Digital analytics tools have notably made it easy for businesses to measure and analyze ROI, more so for SMEs. This often gives SMEs comprehensive insights into the results of their marketing campaigns in order to track such key metrics as the rate of conversion, cost of acquiring customers, and customer lifetime value. According to Al-Minhas (2018), marketing ROI provides the possibility of measurement and analysis toward better decisions using data by Qatari SMEs, in order to optimize marketing activity, which is direct towards effective resource allocation, thereby developing better marketing outcomes and business performance.

CHALLENGES AND FUTURE DIRECTION

The emergence of technologies such as Artificial Intelligence, the Internet of Things, and blockchain presents opportunities for SMEs in Qatar to transform their marketing strategies. AI offers data analysis and personalized marketing, while IoT allows for interactive customer experiences and blockchain

enhances transparency and trust in transactions. However, these technologies come with high implementation costs and require substantial investment in training and human development.

The government plays a crucial role in supporting SMEs by providing financial and educational resources, as well as promoting digital literacy and innovation. However, challenges such as data privacy, cybersecurity, and intellectual property rights remain. A multi-stakeholder approach between the government, industry stakeholders, and regulatory bodies could address these issues.

Research gaps remain, particularly regarding the long-term impacts on SME performance and sustainability due to emerging technologies. Longitudinal studies are needed to understand the sustained impact of these technologies on different industries within the SME sector. Understanding socio-cultural factors and gender and diversity's role in technology adoption is also essential for future support programs.

CONCLUSION

In summary, this review highlighted the immense influence that technological innovations had on small and medium enterprises' marketing strategies in Qatar over the past 10 years. Key findings include an expanded market reach and enhanced brand recognition enabled by digital marketing tools; adoption of customer relationship management (CRM) systems to promote increased customer engagement; and using data analytics for smarter marketing decisions. These advancements have been driven by market competition, customer demand and supportive government policies; while barriers like financial limitations or technical expertise remain. As these findings indicate for Qatari SMEs, their practical implications can be considerable: adopting digital tools and investing in technology could bring improved marketing efficiency, higher returns on investments and enhanced competitiveness. Underlying this development are technologies such as artificial intelligence (AI), internet of things (IoT), and blockchain which hold immense promise to revolutionize SME marketing - providing both opportunities and challenges. Supportive policies and ongoing research will play a vital role in helping SMEs effectively harness technological innovations for maximum benefit.

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Stream 1. Human Resource Management

Knowledge and human resources management enhance green supply chain management and circular economy performance

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Stream 1. Human Resource Management

Knowledge and human resources management enhance green supply chain management and circular economy performance

ABSTRACT: *Through a survey administered to around 800 environmentally certified organizations and using partial least squares structural equation modelling, this paper studies how the green supply chain management integrates sustainable environmental processes within the traditional supply chain.) This study is based on the knowledge-based theory and provides an original perspective of both circular economy and circular economy. The study explores the interconnectedness between knowledge management, green human resource management and green supply chain management and assesses their effects on organisational performance and the diffusion of the circular economy. The results highlight the importance of these linkages together with the crucial role of the circular economy context. This study thus proved that internal commitment and efforts, organizations are conditioned by external forces.*

1. INTRODUCTION

The circular economy (CE) has become an important strategy used to tackle some of the today's main challenges (Ormazabal et al., 2016). Scholars, practitioners and policymakers are increasingly focusing on climate change, resource consumption and other environmental issues (Prieto-Sandoval, 2018b; Rincón-Moreno et al., 2021; Scarpellini et al., 2019). By exploiting the features of the CE such as value optimization, life extension, resource efficiency, etc., society is moving toward more sustainable production and consumption patterns. However, despite the tools promoted by the European Commission, there is little synergy with the circular economy (Ormazabal et al., 2018; Marrucci et al., 2019).

Among the different concepts that compose the CE (Prieto-Sandoval et al., 2018a), one of the most structured is the green supply chain management (GSCM). Thanks to its synergies with purchasing management, GSCM has been recognised both among practitioners and scholars as an appropriate strategy to foster new CE opportunities (Genovese et al., 2017). At organisational level, GSCM enables organizations to manage environmental issues while creating a green culture that goes beyond the confines of an organization. By internalizing a lifecycle management perspective within its processes (Bianchi et al., 2022), organizations are able to develop a more holistic approach aimed at extending value optimization throughout the supply chain.

However, in order to significantly contribute to the diffusion of the CE, organizations need to strengthen the relationship between the various actors involved in the supply chain. Given the cross-disciplinary perspective that characterizes GSCM and the complexity of CE linkages (Prieto-Sandoval et al., 2019), new dimensions should be investigated in order to make systematic multilevel changes across and within organizations.

Stream 1. Human Resource Management

Despite the strong focus on GSCM, only recently have scholars started to frame it within a CE perspective (Fahimnia et al., 2015).

Following an interdisciplinary approach, the linkages between GSCM and firms' green performance have been investigated exstensily (Daddi et al., 2021;). However, due to the complexity of sustainability and CE concepts, governance and management perspectives have earned more and more attention (Ormazabal and Sarriegi, 2014; Scarpellini et al., 2020a).

Although scholars have proved the contribution of GSCM to CE, a more in-depth investigation is needed (Liu et al., 2018). In particular, the human perspective has rarely been taken into account in the analysis. In fact, even though scholars have confirmed the positive linkages between green human resource management (GHRM) and CE, GHRM has not been in-depth studied in relation with GSCM.

Intra-organisational perspectives on GSCM such as supplier selection, green innovation (Bag et al., 2018), etc., have been explored in terms of their crucial role in the transition towards CE. Through the intra-departmental and inter-supplier collaboration, organizations can lead the transition towards CE and greener supply chains (Khan et al., 2020a). In the connection between GHRM and CE, organisational capabilities and knowledge play a pivotal role (Marrucci et al., 2022a). Knowledge management has also been considered important in the development of GSCM, however, as far as we know, no studies have merged all these concepts together. In fact, to date, there are no studies that link GSCM, the CE, GHRM and knowledge management.

In this research, we address the research gap related to the impact of GHRM and knowledge management on GSCM and on organizational performance. We frame our study within knowledge-based theory without limiting the analysis to environmental performance, but testing the influence on CE implementation, economic performance and environmental reputation.

We conducted a survey to around 800 environmentally certified organizations. We selected organizations with a certified environmental management system (EMS) given that although GSCM is not directly mentioned in the requirements of the main standards such as ISO 14001 and EMAS (Marrucci and Daddi, 2022), it is a crucial step in obtaining certification (Daddi et al., 2016).

We, thus, empirically evaluated the influence of knowledge management and adoption of GHRM practices on GSCM and increased performance of organizations using partial least squares structural equation modelling (PLS-SEM). However, although we aimed to evaluate the link between GSCM and CE, it is also possible that the diffusion of the CE might be conditioned by other reasons that cannot be managed directly by organisations. We, thus, investigated the moderating role of the "circular environment" by testing its influence on the relationship between GSCM and organizational performance. Lastly, using a hierarchical component model (HCM), we analysed the operationalization of our variables in-depth.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

2.1. Knowledge-Based Theory

Although not in the fundamental study on organizational theory and GSCM by Sarkis et al. (2011), knowledge-based theory has been used by scholars within the framework of GSCM. According to Grant

Stream 1. Human Resource Management

(1996), managing knowledge more efficiently enables organizations to increase their performance. By using and storing internal knowledge, competencies, and capabilities, firms increase their survival opportunities, growth and success. Although the debate on defining knowledge is still conflicting, scholars have made a clear division between tacit and explicit knowledge. Tacit knowledge can be defined as the knowledge, skills, and abilities an individual gains through experience which is often difficult to quantify or pass on from one person to another through verbal or written communication. Instead, explicit knowledge is any information that can be documented, stored and shared with others.

The study by Schoenherr et al. (2014) is a milestone in the literature on knowledge management in supply chains. The authors stated that "*the supply chain's knowledge management capability manifests itself in both explicit and tacit knowledge, with the latter being influenced more strongly*". In addition, "*both explicit and tacit knowledge influence supply chain performance, the latter exerts a significantly greater impact than the former*". Organizations need to explore new knowledge and/or exploit existing knowledge to achieve a competitive advantage or integrate green practices within the supply chain. Following a knowledge-based view, Aboelmaged et al. (2023) confirmed that knowledge management positively influence the environmental performance of an organization. Baresel-Bofinger et al. (2011) identified green knowledge as an important driver for the implementation of GSCM practices. This was confirmed by Chatzoudes and Chatzoglou (2023) who classified green knowledge management and internal environment management as antecedents of GSCM.

Knowledge management has also been investigated from other perspectives. Scarpellini et al. (2020b) highlighted the crucial role of knowledge management process in the relationship between corporate sustainable performance and absorptive capacity, also recognizing it as a promising pathway for future research and claiming that the implementation of the CE can be considered as an eco-innovation strategy. We thus targeted the relationship between knowledge management, GSCM and CE implementation.

Although knowledge is mainly divided into tacit and explicit or internal and external, knowledge transfer can follow different cycles. The Meyer and Zack model (Meyer and Zack, 1996) is one of the most comprehensive explanations of the key aspects included in the knowledge management model. The main source of its power stems from its all-encompassing approach to handling information, which displays an exceptional level of flexibility when it comes to accommodating knowledge-oriented material. The Meyer and Zack knowledge management cycle is divided into five steps. Acquisition of data or information; Refinement, i.e., cleaning or standardizing acquired information; Storage connects the upstream stages of acquisition and refinement with the downstream stages of knowledge generation; Distribution explains how the knowledge is distributed to the final user; and Use where the preceding value-added steps are evaluated. Following this approach, we expand the academic literature on knowledge management and GSCM by formulating our first hypothesis (see Figure 1).

> *HP1. A greater knowledge management capacity leads to a higher level of GSCM within an organization.*

2.2. Green Human Resource Management

Renwick et al. (2013) defines GHRM as "*the set of strategies and activities that would encourage a green behaviour of organisations employees to boost a more sustainable and environmentally friendly workplace and overall organisation*". This set of practices has been divided by Renwick et al. (2016) into six different dimensions: Attracting, i.e., attract talented and qualified employees thanks to the green performance of the organization; Selecting, i.e., integrate environmental obligations or include ecological skills as a distinguishing feature in the job description; Training/development, i.e., a type of training related to important environmental topics, which supports employees in the integration of environmental issues within the performance of the organization; Involvement/engagement, i.e., increase employee involvement in green initiatives and raise awareness of environmental issues; Performance management, i.e., management and measurement of employee performance related to environmental aspects; Rewarding, i.e., recognizing the contribution of employees in the enhancement of a more eco-friendly organization.

Academics have always recognized the crucial part performed by human resources in organizational performance. As suggested by Rizzi et al. (2022), there is a strong nexus between GSCM and GHRM since they both affect the management of knowledge, skills and abilities. Thanks to this convergence, scholars have focused on investigating the nexus between these two topics. Sometimes, the focus is on specific GHRM practices such as training (Stefanelli et al., 2020), involvement (Singh and Gupta, 2016), etc., however organizational performance has also been highlighted (Longoni et al. 2018).

Despite the attention on GSCM, the CE has rarely been studied in relation with GHRM (Marrucci et al., 2021). Since GSCM can be seen as a CE practice, or even as a specific CE business model (Shashi et al., 2021; Centobelli et al., 2021), our study fully embraces the research agenda suggested by Balkumar et al. (2023).

In order to extend the academic contribution and to shed light on the human contribution to GSCM implementation, we formulated our second hypothesis (see Figure 1).

> *HP2. A greater diffusion of GHRM practices within an organization leads to a higher level of GSCM.*

2.3. Green Supply Chain Management

The most common definition of GSCM is provided by Srivastava (2007), i.e., "*integrating environmental thinking into supply-chain management*". From a practical perspective, GSCM can be applied following different strategies both within the organizational internal processes and outside the organizational boundaries. From an academic perspective, this has led to a strong heterogeneity in terms of constructs and variables. In order to grasp all the facets of GSCM, but at the same be able to measure it, scholars have mainly converted GSCM practices into specific measurable items. However, GSCM practices can also be divided according to the typology, i.e., operational (e.g., reverse logistics, eco-design, etc.) and governance (e.g., environmental cooperation, green purchasing, etc.) practices (Green Jr., 2012).

Several studies have investigated the role of GSCM in improving performance. For instance, Daddi et al. 2021 highlighted the influence of GSCM capabilities on environmental, eco-innovation performance and market competitiveness.

Although the effects of GSCM on environmental and economic performance have been widely investigated by different studies, little attention has been paid to the nexus with CE implementations and the environmental reputation of organizations. A more in-depth investigation is needed, without limiting the analysis to green supplier selection, but extending it to the overall GSCM sphere where circular purchasing is one of the many practices adopted by the organizations. Thus, to further expand the literature on GSCM and organizational performance, but at the same time, specifically focus on CE and environmental reputation, we formulated our third hypothesis (see Figure 1).

HP3. A higher level of GSCM enhances the organizational performance.

The academic literature has identified different drivers, barriers to and benefits of GSCM (Rajeev et al., 2017). The decision to adopt GSCM practices may depend on internal and external factors. Choudhary and Sangwan (2022) suggested that instrumental and normative pressures substantially uncover collaborative strategies to GSCM. Through environmental cooperation, organizations can share solutions aimed at reducing the environmental impact of the supply chain, as well as overcome barriers and boost GSCM. In fact, Maaz et al. (2022) showed that strategic orientation, resource commitment and strategic emphasis have a strong direct impact on GSCM practices. Moreover, Testa and Iraldo (2016) suggested that GSCM practices is strongly complementary with other advanced management practices, and that it contributes to improved environmental performance. This trend is also confirmed in the analysis of the role of GSCM in the transition towards a CE. According to Gani et al., (2023) to cope with dynamic shifts, managers and decision makers need to take initiative for collaboration among the suppliers. These results are confirmed by Bag et al. (2022) who reported that both green innovation and GSCM are significantly related to the building of circular dynamic capability.

However, the relationship between GSCM and CE might nevertheless be influenced by external factors that are beyond the control of firms (Khan et al., 2020b). Several variables such as technological change and innovations and the unpredictability of clients' or competitors' actions can influence the CE development. In fact, the focus of consumers on CE (market commitment), the pressures exerted by policymakers and competitors (competitive intensity) and the support provided by technology (technological support) may all influence the transition towards a CE. We, thus, formulated our fourth and last hypothesis aimed at investigating the moderation role of the circular environment (see Figure 1).

HP4. A circular environment moderates the relationship between GSCM and organizational performance.

Insert Figure 1 about here

3. METHODOLOGY

3.1. Data collection

To test our proposed hypotheses, we collected data through an online survey that was active for two months. The data collection was in fact a sequential process wherein, firstly, we acquired a list (containing email addresses) of EMAS-certified companies through the EMAS register. Although ISO14001 is more common than EMAS, we focused on EMAS-certified companies because the EMAS includes almost all NACE

sectors and is recognized as an important tool for CE implementation (Marrucci et al., 2019). Emails were sent to 3580 EMAS-certified companies to request their participation in the online survey and after one month reminder emails were also sent. In total, 1082 responses were received. However, our priority was data quality and thus rigid criteria were followed. We thus deleted incomplete responses and retained 819 responses in the final sample. It is worth noting that our sample size was not only sufficient, but also larger than other articles on EMAS (Heras-Saizarbitoria et al., 2020). Our sample also ensured a reliable representation of the overall EMAS-registered organisations (see Table 1).

Insert Table 1 about here

3.2. Constructs and measures

We proposed and operationalized a hierarchical component model (HCM) that contained first-order and second-order constructs (Sarstedt et al., 2019) (see Figure 2). The second-order construct of knowledge management (KM) was based on four first-order constructs. i.e., acquisition (KM-AC), refinement and storage (KM-RS), distribution (KM-DI), and use (KM-US). Overall, KM was measured with twenty items adapted from previous studies (Camisón and Forés, 2010; Delmas et al., 2011; Flatten et al., 2011). The respondents were thus asked in the online survey to rate on a 5-point Likert scale whether they agreed or disagreed with the given statements.

The second-order construct of green human resource management (GHRM) was based on four first-order constructs namely, recruitment criteria (GHRM-RC), training and development (GHRM-TD), performance management (GHRM-PM), and reward system (GHRM-RS). Overall, GHRM was measured with sixteen items adapted from previous studies (Masri and Jaaron, 2017; Saeed et al., 2019). The respondents were thus asked in the online survey to rate on a 5-point Likert scale whether they agreed or disagreed with the given statements.

The second-order construct of green supply chain management (GSCM) was based on two first-order constructs namely, governance aspects (GSCM-GA) and operational aspects (GSCM-OA). Overall, GSCM was measured with seven items adapted from previous studies (Daddi et al., 2021; Todaro et al., 2019). The respondents were thus asked in the online survey to rate on a 5-point Likert scale whether they agreed or disagreed with the given statements.

The second-order construct of the circular environment (CEN) was based on three first-order constructs namely, market turbulence (CEN-MT), technology turbulence (CEN-TT), and competitive intensity (CEN-CI). Overall, CEN was measured with eight items adapted from previous studies (Khan et al., 2020a). The respondents were thus asked in the online survey to rate on a 5-point Likert scale whether they agreed or disagreed with the given statements.

The second-order construct of organizational performance (OP) was based on three first-order constructs namely, circular performance (OP-CP), environmental performance (OP-EP), and economic performance (OP-EC). Overall, OP was measured with sixteen items adapted from previous studies (Daddi et al., 2019; Khan et al., 2020a). The respondents were thus asked in the online survey to rate on a 5-point Likert scale whether they agreed or disagreed with the given statements.

Stream 1. Human Resource Management

Insert Figure 2 about here

3.3. Data analysis

The data collected were analysed through PLS-SEM with SmartPLS 4 software (Ringle et al., 2022). Instead of the repeated indicators approach, the embedded two-stage approach (mode B) was followed to measure our proposed HCM (Becker et al., 2012). The literature shows that the repeated indicator approach is easy to apply but causes issues in HCM (Sarstedt et al., 2019). In other words, the R2 value turns to one by default and consequentially the path coefficient to zero or non-significant. Contrarily, the embedded two-stage approach yields clearer results (Ringle et al., 2012). PLS-SEM is usually examined and interpreted in two steps, that is, first the measurement model is assessed and then the structural model (Chin, 2010). We used the default settings of SmartPLS 4 software. All the rules and conditions were followed while conducting and reporting the data analysis (Chin, 2010; Hair et al., 2019).

4. RESULTS

4.1. Measurement model

The measurement model was checked in accordance with the prescribed rules and conditions (Hair et al., 2019), thus whether the indicator loadings, Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) of constructs were under the threshold values and whether there was any discriminant validity issue. All the indicator loadings, excluding one GSCM-GA indicator and two OP-CP indicators, ranged from 0.545 to 0.922 (see Table 1). The literature suggests also retaining indicators with loading values as low as 0.400 if the AVE of that construct is above 0.500 (Hair et al., 2011). The AVE of GSCM-GA and OP-CP were initially below 0.500. However, after deleting one GSCM-GA indicator and two OP-CP indicators, the AVE of all the constructs ranged from 0.538 to 0.818 (see Table 2).

Insert Table 2 about here

The literature posits that both Cronbach's alpha and CR are valid measures, however the former is arguably less precise than the latter measure (Hair et al., 2019). Nonetheless, Cronbach's alpha and CR values of all the constructs ranged from 0.604 to 0.885 and 0.790 to 0.929, respectively (see Table 1). The significance and relevance of weights of the first-order constructs (i.e., constructs acting as formative indicators for second-order constructs in our proposed HCM) were also checked using the function of bootstrapping (Khan et al., 2021). Our proposed HCM also easily passed this criterion since the t-Values of those weights were much higher than 1.96 (see Table 1). The literature further posits that discriminant validity can be checked against two criteria named the Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio of Correlations (HTMT) criterion. However, the latter criterion is more reliable and thus should be reported (Hair et al., 2019). We found no discriminant validity issue using the two criteria, but we have reported only the HTMT criterion (see Table 3).

Insert Table 3 about here

4.2. Structural model

The structural model was checked in accordance with the prescribed rules and conditions (Hair et al., 2019), i.e., the variance inflation factor (VIF), predictive power and relevancy, and model fit indices. No serious

concern regarding multicollinearity was found since the VIF values of all constructs were below 3.0 (Hair et al., 2019). In addition, no serious concern regarding the common method bias was found since the VIF values of all constructs were below 3.3 in both scenarios, that is, with and without the inclusion of a random variable (Kock, 2015). The R2 and Q2 values were checked to determine the predictive power and relevancy of the model, respecely. The R2 values for GSCM and OP were 0.469 and 0.360, respectively. The Q2 values of GSCM and OP were 0.458 and 0.345 respectively. The model fitness was checked in terms of SRMR and NFI values, which were 0.043 and 0.933 (Hair et al., 2017).

The bootstrapping function was used with the recommended settings of SmartPLS 4 and thereby the path coefficients and t-Values were checked. The direct effects of knowledge management (KM) and green human resource management (GHRM) on green supply chain management (GSCM) showed values of 0.514 (p<0.001) and 0.234 (p<0.001), respectively. Hence, hypothesis 1 and hypothesis 2 seem to be supported empirically (see Table 3). The direct effect of green supply chain management (GSCM) on organizational performance (OP) has a value of 0.408 (p<0.001). The moderating effect of the circular environment (CEN) on the relationship between green supply chain management (GSCM) and organizational performance (OP) was 0.066 (p<0.05). Hence, hypothesis 3 and hypothesis 4 seem to be supported empirically (see Table 4).

Insert Table 4 about here

Insert Figure 3 and 4 about here

5. DISCUSSION

Our paper contributes to various fields in the literature. First, it contributes to the debate on the influence of GHRM on GSCM. A second more theoretical contribution is in the field of knowledge-based management theory, which has been rarely investigated in a study on GSCM. Lastly, since we used a sample of EMAS registered companies, the results, thus, contribute to the literature on EMSs.

As shown in Table 3, the results confirm the hypotheses of our research. All independent variables were positively and significantly linked with the dependent variables. The first hypothesis suggests that companies with a higher capacity to manage competencies, skills and abilities are more effective in managing their supply chains according to sustainable criteria. As described in Table 1, the items used to measure knowledge management were not aimed at measuring the "green knowledge" of the company, but above all the general management of the company. This positive relation is interesting because it demonstrates how the management of knowledge in appropriate ways (even without a focus on green management) favours the achievement of environmental management objectives. Other studies have studied the relation between general management capabilities and environmental management, such as the studies on the relation between dynamic capabilities (usually not focused on green capabilities) and environmental performance (see for instance Khan et al., 2021). From a different perspective, GHRM already includes a "green behaviour" of the organization, thus the confirmation of the second hypothesis was "more expected". In particular, the second hypothesis confirms that the green management of human resources through activities such as recruitment, training, performance management and rewarding systems

positively influence the green management of the supply chain. This was more expected because if a company decides to adopt green criteria in their human resources management, then these employees will be more effective in the management of supply chain sustainability issues.

Third, our model confirms the positive relation between GSCM and firm performance already observed in the literature (Daddi et al., 2021). To study this relation, we adopted an approach that considers a very comprehensive performance variable that includes organisational (e.g., items such as "We are adopting a life cycle management approach") as well as operational (e.g., "water consumption reduction") practices. In addition, it includes items that refer to three aspects of the performance: circular, environmental, and economic performance, which represents a novelty compared to other studies.

Managers are very interested in seeking initiatives aimed at improving organisational performance. The improvement of economic performance means higher competition on the market. The improvement of environmental and circular performance again contributes to the increase in reputation of the firm and to the cost reduction and, even only indirectly, to a higher market competitiveness. Too often small and medium enterprises (as were the majority of our sample) plan the improvement of environmental and circular performance in a non-systematic way. In other words, they focus more on achieving the goals rather than on the leverages that should be activated in order to obtain them. Managers should bear in mind that these leverages can be linked to how they manage knowledge in their company, the consideration of green issues in human resources management and the environmental management of their supply-chain. Good management of these aspects could lead to better environmental performance obtaining thus a higher visibility on the market.

For our sample we used a group of EMAS registered organisations, who have to demonstrate a continuous improvement in performance which needs to be verified by an external verifier. Our study provides insights into EMAS verifiers in terms of an "indirect" assessment of the improvement of performance. EMAS verifiers need to go beyond the mere comparison of quantitative performance indicators over consecutive years. They should also consider the intangible benefits of actions aimed at implementing GHRM approaches in certified companies because these actions will allow the company to achieve tangible benefits in the following years).

Policy makers are responsible for improving the quality of the environment that is affected by the environmental performance. Similarly, they aim to implement circular economy principles as well as the economic development of the territories they administer. Our results suggest that to achieve those objectives, policy initiatives such as incentives, regulatory relief or detaxation, should focus on encouraging companies to increase knowledge management or adopt GHRM and GSCM initiatives.

However, the most important contribution of our study is related to the role played by the circular environment. While Khan et al. (2021) recognised its positive role in the development of a circular economy, Marrucci et al., (2022b) denied this relationship claiming that the level of adoption of the CE depends exclusively on internal factors, rather than external forces. Our study recognises the importance of the pressures exerted by customers, governments, and the competitive intensity in relation to the CE. These

contrasting results need to be further investigated since the topic is crucial not only from an academic perspective, but above all from a practical and technical perspective.

Institutional and stakeholders' pressures significantly contribute to the adoption of GHRM (Marrucci et al., 2023). Our results highlight that the EU and other national governments and entities should increase nudging environmental initiatives within the framework of a CE. At the same time, organizations need to pay attention both to customers' needs and requests and to competitors' actions. Developing dynamic capabilities and absorptive capacities, which are both strongly connected to GHRM and GSCM, may also help organizations. In fact, sensing, seizing, and reconfiguring capabilities and their underlying organizational routines significantly facilitate the implementation of the CE (Marrucci et al., 2022c).

By boosting knowledge management and GHRM among employees, organizations should be able to foster environmental cooperation both internally and externally. Regardless of the specific GSCM practice adopted, collaboration and alliances are crucial for the development of the CE.

6. CONCLUSIONS

This study sheds light on the role of GSCM in the quest towards a circular economy and offers some directions for future research, however as with any empirical investigation, it has some limitations.

Firstly, our sample relates specifically to a group of EMAS registered organisations, which thus represents a particular community of organisations. The fact that they have an environmental certification could influence the results and risk limiting the extension of our findings to non-registered companies. Further research could thus include different sample types. A second possible limitation refers to the need for a more precise contribution in the field of knowledge-based management literature. Since we focused on an aggregated version of the theory, future research could separately identify the contribution of tacit and explicit knowledge.

Thirdly, although we used an HCM, we did not consider individual GSCM practices, but focused again on the aggregated version. The same approach was used for measuring the circular economy. In contrast, all the main green human resources management practices were taken into account. Future studies could investigate in-depth both individual GSCM practices and circular economy phases for a more detailed comprehension of the relationship between these different scenarios.

The fact that, from a geographical point of view, we covered all the EU Member States, is at the same time both a strength and a weakness. In fact, on the one hand, we provide a more holistic overview, on the other we were unable to examine specific nuances that may characterize individual contexts both in terms of the of the diffusion circular economy and the adoption of the GSCM practices. Lastly, despite all the attention placed on the survey design, we based our results on self-reported contributions, which means that social desirability bias might have affected our results. Future studies could use empirical data to overcome this issue.

Stream 1. Human Resource Management

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Stream 1. Human Resource Management

Table 1: Sample Description

Characteristic	Description	N	%
Member State	*Austria*	30	3.66
	Belgium	23	2.81
	Cyprus	8	0.98
	Germany	216	26.37
	Greece	8	0.98
	Italy	311	37.97
	Poland	16	1.95
	Portugal	15	1.83
	Spain	160	19.54
	Other	32	3.91
NACE Code	*A - Agriculture, forestry, and fishing*	16	1.95
	B - Mining and quarrying	9	1.09
	C - Manufacturing	295	36.02
	D - Electricity, gas, steam, and air conditioning supply	58	7.08
	E - Water supply; sewerage; waste management and remediation activities	113	13.79
	F - Construction	18	2.20
	G - Wholesale and retail trade; repair of motor vehicles and motorcycles	9	1.09
	H - Transporting and storage	28	3.73
	I - Accommodation and food service activities	25	3.05
	J - Information and communication	9	1.09
	M - Professional, scientific, and technical activities	31	3.78
	N - Administrative and support service activities	21	2.56
	O - Public administration and defense; compulsory social security	57	6.96
	P - Education	20	2.44
	Q - Human health and social work activities	45	5.50
	R - Arts, entertainment, and recreation	10	1.22

Stream 1. Human Resource Management

	S - Other services activities	43	5.24
	Other (K, L, U)	12	1.47
Employees	*< 10*	53	6.47
	11 - 50	198	24.18
	51 - 250	251	30.65
	> 250	317	38.71
Turnover	*< €2,000,000*	115	14.04
	€2,000,000 - €10,000,000	191	23.32
	€10,000,000 - €50,000,000	202	24.66
	> €50,000,000	311	37.97
Year of EMAS Registration	*1993-1999*	86	10.50
	2000-2009	330	40.29
	2010-2020	403	49.21
ISO 14001	*No*	118	14.41
	Yes	701	85.59
ISO 9001	*No*	300	36.63
	Yes	519	63.37

Table 2: Reliability and Validity of Measurement Model

Second-Order Constructs	First-Order Constructs	Item Code	Items	Loadings	Cronbach's Alpha	CR	AVE
Knowledge Management (KM) VIF = 2.144	Acquisition (KM-AC) Weights = 0.297 t-Value = 29.739 VIF = 2.352	KM-AC1	*"Our organization quickly recognizes shifts in our market"*	0.827	0.814	0.873	0.583
		KM-AC2	*"Our organization quickly understands new opportunities to serve our clients"*	0.865			
		KM-AC3	*"Our organization has the capacity to assimilate new technologies and innovations that are useful or have proven potential"*	0.827			
		KM-AC4	*"Our employees attend training courses, trade fairs, and meetings"*	0.665			
		KM-AC5	*"Our organization conducts R&D activities to try out new ideas and knowledge"*	0.599			
	Refinement and Storage (KM-RS) Weights = 0.281 t-Value = 30.911 VIF = 2.692	KM-RS1	*"Our organization quickly recognizes the applicability of new knowledge to our business"*	0.842	0.842	0.888	0.616
		KM-RS2	*"Our organization constantly considers how to better exploit knowledge (e.g., lessons learned processes)"*	0.763			
		KM-RS3	*"Newly acquired knowledge is documented and shared within our organization"*	0.839			
		KM-RS4	*"Processes (e.g., phase-gate-process, SOPs, etc.) for all kinds of activities are clearly known in our organization"*	0.692			

Second-Order Constructs	First-Order Constructs	Item Code	Items	Loadings	Cronbach's Alpha	CR	AVE
		KM-RS5	*"Our employees have the ability to structure and use the collected knowledge"*	0.778			
	Distribution (KM-DI) Weights = 0.278 t-Value = 28.830 VIF = 2.364	KM-DI1	*"Our business units and functional groups strongly interact with each other"*	0.786	0.879	0.912	0.675
		KM-DI2	*"All departments of our organization strongly interact with each other"*	0.816			
		KM-DI3	*"Ideas and concepts are communicated across the departments in our organization"*	0.872			
		KM-DI4	*"Our management emphasizes cross-departmental support to solve problems"*	0.870			
		KM-DI5	*"There is a quick information flow in our organization"*	0.760			
	Use (KM-US) Weights = 0.289 t-Value = 26.810 VIF = 2.808	KM-US1	*"Our management collaborates with companies and research institutions beyond the industry"*	0.557	0.814	0.874	0.588
		KM-US2	*"Our organization is capable of responding rapidly to competitors' actions"*	0.856			
		KM-US3	*"Our organization promptly launches innovative products/services according to new knowledge"*	0.851			

Second-Order Constructs	First-Order Constructs	Item Code	Items	Loadings	Cronbach's Alpha	CR	AVE
		KM-US4	*"Our organization regularly reconsiders technologies and adapts them in accordance with new knowledge"*	0.873			
		KM-US5	*"Our employees are able to apply new knowledge in their practical work"*	0.641			
Green Human Resource Management (GHRM) VIF = 1.726	Recruitment Criteria (GHRM-RC) Weights = 0.344 t-Value = 28.064 VIF = 1.658	GHRM-RC1	*"Our organization has incorporated "green aware" criteria in the HR staffing policy"*	0.785	0.797	0.872	0.637
		GHRM-RC2	*"In our organization, candidates are evaluated against green aspects in a job interview"*	0.904			
		GHRM-RC3	*"Our organization attracts new employees thanks to its environmental performance"*	0.571			
		GHRM-RC4	*"Our organization considers candidates' environmental concerns, motivation, and interests as selection criteria"*	0.889			
	Training and Development (GHRM-TD) Weights = 0.329 t-Value = 26.208	GHRM-TD1	*"In our organization, environmental training is offered to all the employees (including outsourced ones) on all the hierarchical levels"*	0.764	0.861	0.906	0.708
		GHRM-TD2	*"In our organization, the topics covered in environmental training sessions are suitable and current for our activities"*	0.852			

Second-Order Constructs	First-Order Constructs	Item Code	Items	Loadings	Cronbach's Alpha	CR	AVE
	VIF = 1.556	GHRM-TD3	*"Our organization assesses in which environmental aspects the employees need training"*	0.886			
		GHRM-TD4	*"Our organization assesses who needs training in environmental management"*	0.859			
	Performance Management (GHRM-PM)	GHRM-PM1	*"Our organization provides regular feedback to the employees or teams to achieve environmental goals or improve their environmental performance"*	0.765	0.795	0.861	0.557
	Weights = 0.375 t-Value = 30.024 VIF = 2.103	GHRM-PM2	*"Our organization incorporates corporate environmental management objectives and targets with the performance evaluation system"*	0.816			
		GHRM-PM3	*"Our organization establishes green targets, objectives, and duties for each employee"*	0.796			
		GHRM-PM4	*"In our organization, managers have established goals to attain green targets incorporated in periodic evaluations"*	0.778			
		GHRM-PM5	*"In our organization, environmental incidents are constantly assessed and recorded"*	0.545			
	Reward System (GHRM-RS)	GHRM-RS1	*"Our organization offers non-monetary or monetary rewards based on environmental achievements"*	0.854	0.761	0.862	0.676

Second-Order Constructs	First-Order Constructs	Item Code	Items	Loadings	Cronbach's Alpha	CR	AVE
	Weights = 0.225	GHRM-RS2	*"In our organization, environmental performance is recognized publicly"*	0.837			
	t-Value = 18.045						
	VIF = 1.320	GHRM-RS3	*"Our organization provides incentives to encourage environmentally friendly activities and behaviors"*	0.774			
Green Supply Chain Management (GSCM) VIF = 1.588	Governance Aspects (GSCM-GA) Weights = 0.623 t-Value = 30.816 VIF = 1.620	GSCM-GA1	*"Our organization actively consults suppliers and other stakeholders"*	0.758	0.604	0.790	0.557
		GSCM-GA2	*"Our organization has carried out on-site or documental audits involving suppliers and contractors"*	0.734			
		GSCM-GA3[1]	*"Our organization implements an environmental management system (EMS) to improve relations with suppliers"*	N/A[2]			
		GSCM-GA4	*"Our organization adopts green purchasing criteria in the selection of suppliers"*	0.747			
	Operational Aspects (GSCM-OA) Weights = 0.563 t-Value = 25.260 VIF = 1.438	GSCM-OA1	*"Our organization involves suppliers in the new products/services development process"*	0.664	0.695	0.833	0.627
		GSCM-OA2	*"My organization has engaged new business practices for organizing procedures on supply chain management"*	0.829			
		GSCM-OA3	*"My organization has adopted green logistics"*	0.868			

Second-Order Constructs	First-Order Constructs	Item Code	Items	Loadings	Cronbach's Alpha	CR	AVE
Circular Environment (CEN) VIF = 1.396	Market Turbulence (CEN-MT) Weights = 0.392 t-Value = 32.635 VIF = 1.849	CEN-MT1	*"Customers in our market are very receptive to circular practices"*	0.901	0.855	0.912	0.777
		CEN-MT2	*"Customers expect circular economy initiatives in our industry"*	0.914			
		CEN-MT3	*"Suppliers are very receptive to circular practices"*	0.826			
	Technology Turbulence (CEN-TT) Weights = 0.427 t-Value = 38.409 VIF = 1.539	CEN-TT1	*"Technological developments provide big opportunities for circular economy in our industry"*	0.906	0.778	0.900	0.818
		CEN-TT2	*"Many circular practices have been made possible through technological breakthroughs in our industry"*	0.903			
	Competitive Intensity (CEN-CI) Weights = 0.367 t-Value = 29.512 VIF = 1.833	CEN-CI1	*"Competition on circular economy is very intense in our industry"*	0.922	0.885	0.929	0.813
		CEN-CI2	*"Competitors have already introduced circular practices in the past years"*	0.920			
		CEN-CI3	*"Public institutions expect circular economy initiatives in our industry"*	0.862			
		OP-CP1	*"We are adopting a life cycle management approach"*	0.799	0.779	0.851	0.538

Second-Order Constructs	First-Order Constructs	Item Code	Items	Loadings	Cronbach's Alpha	CR	AVE
Organizational Performance (OP) VIF = 1.588	Circular Performance (OP-CP) Weights = 0.505 t-Value = 20.875 VIF = 1.306	OP-CP2	*"We are designing our product to be easily reused or recycled at the end-of-life"*	0.813			
		OP-CP3	*"We are minimizing the waste generation"*	0.819			
		OP-CP4	*"We are offering services to customers for repairing or refurbishing of our product"*	0.626			
		OP-CP5[1]	*"We are increasing the material and energy efficiency of our production process"*	N/A[2]			
		OP-CP6[1]	*"We are collecting back our end-of-life product or its parts for recycling or materials recovery"*	N/A[2]			
		OP-CP7	*"We are using recycled materials or excess energy in our production process"*	0.575			
	Environmental Performance (OP-EP) Weights = 0.427 t-Value = 18.307 VIF = 1.212	OP-EP1	*"Energy efficiency"*	0.742	0.839	0.882	0.555
		OP-EP2	*"Efficiency in the use of materials (e.g., chemicals, raw materials)"*	0.766			
		OP-EP3	*"Water consumption"*	0.790			
		OP-EP4	*"Waste production"*	0.739			
		OP-EP5	*"Quality/quantity of wastewater effluents"*	0.750			
		OP-EP6	*"Quality/quantity of air emissions"*	0.678			
		OP-EC1	*"Increase in turnover"*	0.712	0.793	0.882	0.716

Second-Order Constructs	First-Order Constructs	Item Code	Items	Loadings	Cronbach's Alpha	CR	AVE
	Economic	OP-EC2	*"Increase in market share of your main products"*	0.912			
	Performance (OP-EC)	OP-EC3	*"Increase in exports"*	0.899			
	Weights = 0.465						
	t-Value = 18.437						
	VIF = 1.238						

[1] *These items were deleted to achieve AVE > 0.500*

[2] *The loading of GSCM-GA3 was 0.594 while the AVE was 0.475. The loadings of OP-CP5 and OP-CP6 were respectively 0.509 and 0.582 while the AVE was 0.448*

Table 3: Discriminant Validity (HTMT Criterion)

	CEN-CI	CEN-MT	CEN-TT	GHRM-PM	GHRM-RC	GHRM-RS	GHRM-TD	GSCM-GA	GSCM-OA	KM-AC	KM-DI	KM-RS	KM-US	OP-CP	OP-EC	OP-EP
CEN-CI																
CEN-MT	0.729															

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	CEN-CI	CEN-MT	CEN-TT	GHRM-PM	GHRM-RC	GHRM-RS	GHRM-TD	GSCM-GA	GSCM-OA	KM-AC	KM-DI	KM-RS	KM-US	OP-CP	OP-EC	OP-EP
CEN-TT	0.642	0.660														
GHRM-PM	0.229	0.272	0.394													
GHRM-RC	0.308	0.387	0.481	0.751												
GHRM-RS	0.143	0.179	0.206	0.586	0.503											
GHRM-TD	0.239	0.220	0.348	0.706	0.566	0.312										
GSCM-GA	0.362	0.406	0.602	0.638	0.616	0.273	0.629									
GSCM-OA	0.347	0.446	0.504	0.509	0.439	0.254	0.384	0.626								
KM-AC	0.276	0.305	0.521	0.529	0.463	0.179	0.563	0.734	0.646							
KM-DI	0.264	0.366	0.478	0.536	0.534	0.296	0.528	0.674	0.557	0.788						

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	CEN-CI	CEN-MT	CEN-TT	GHRM-PM	GHRM-RC	GHRM-RS	GHRM-TD	GSCM-GA	GSCM-OA	KM-AC	KM-DI	KM-RS	KM-US	OP-CP	OP-EC	OP-EP
KM-RS	0.263	0.299	0.453	0.634	0.644	0.318	0.598	0.701	0.579	0.762	0.805					
KM-US	0.269	0.357	0.586	0.602	0.582	0.311	0.553	0.702	0.665	0.875	0.779	0.890				
OP-CP	0.313	0.308	0.433	0.369	0.268	0.268	0.226	0.430	0.600	0.481	0.297	0.335	0.454			
OP-EC	0.308	0.352	0.430	0.395	0.661	0.331	0.360	0.500	0.339	0.395	0.417	0.507	0.527	0.241		
OP-EP	0.188	0.282	0.366	0.344	0.321	0.170	0.268	0.358	0.417	0.307	0.324	0.388	0.362	0.360	0.336	

HTMT < 0.900 is a threshold limit for conceptually similar constructs

Table 4: Hypotheses Testing

Hypotheses	Relationships	Std Beta	Std Error	t Values	p Values	95% CI LL	95% CI UL	Findings
H1	KM → GSCM	0.514	0.033	15.381***	0.000	0.459	0.568	Supported
H2	GHRM → GSCM	0.234	0.038	6.185***	0.000	0.175	0.300	Supported
H3	GSCM → OP	0.408	0.032	12.610***	0.000	0.354	0.460	Supported
H4	CEN x GSCM → OP	0.066	0.025	2.584*	0.010	0.026	0.110	Supported

* p<0.05, ** p<0.01, *** p<0.001

Figure 1: Research Model (Hypotheses)
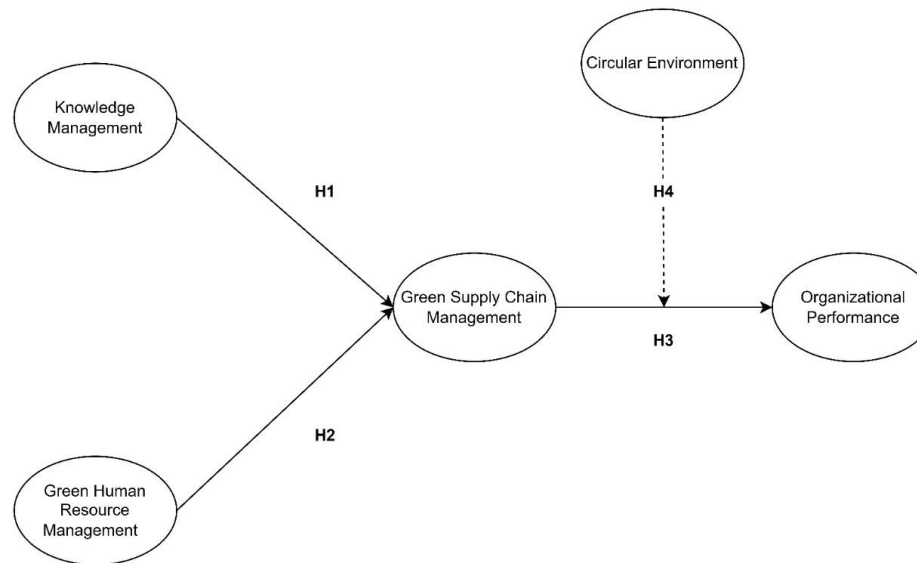
Stream 1. Human Resource Management

Figure 2: Hierarchical Measurement Model
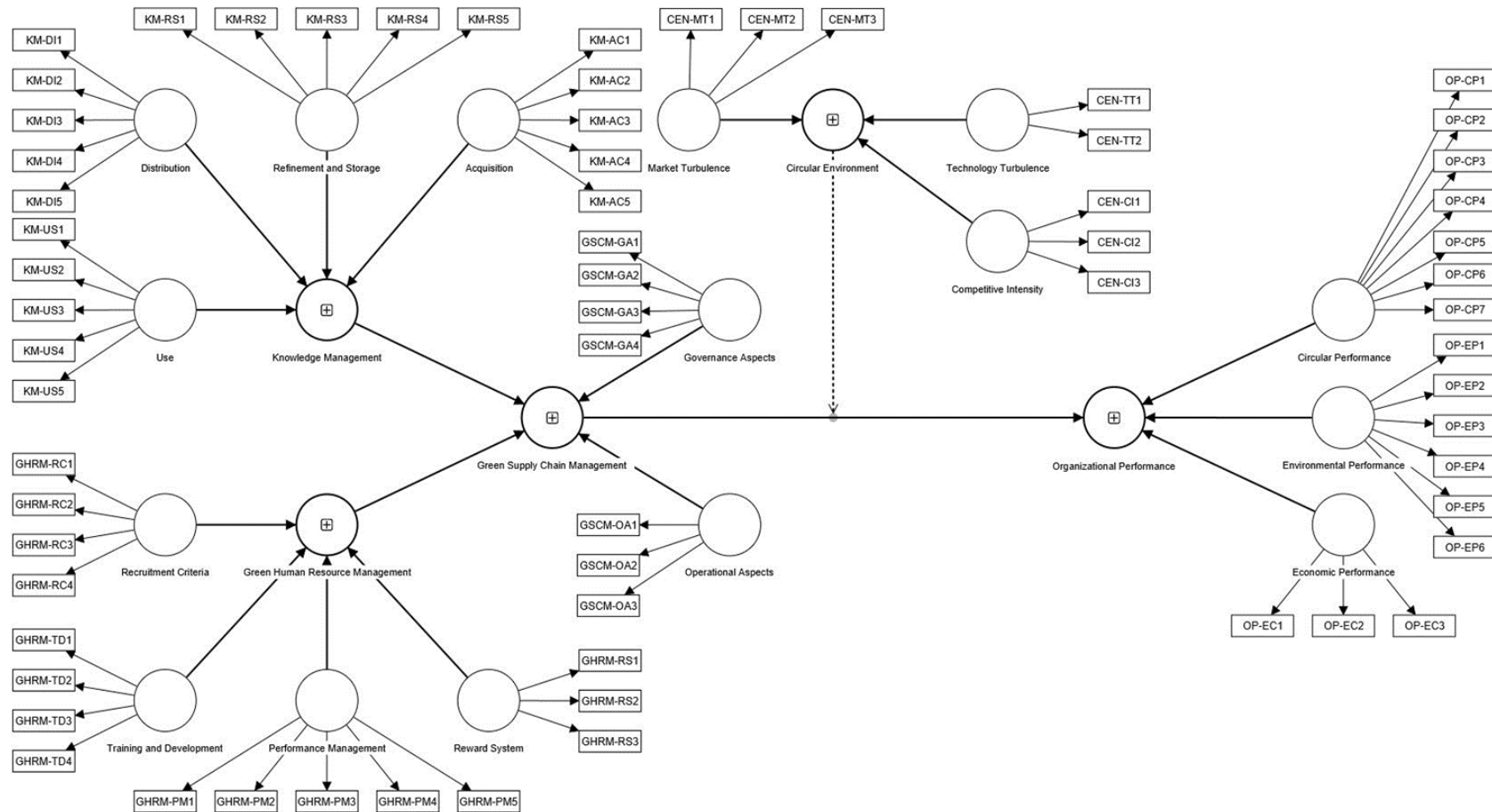
Figure 3: Summary of Findings (First Stage Measurement Model)
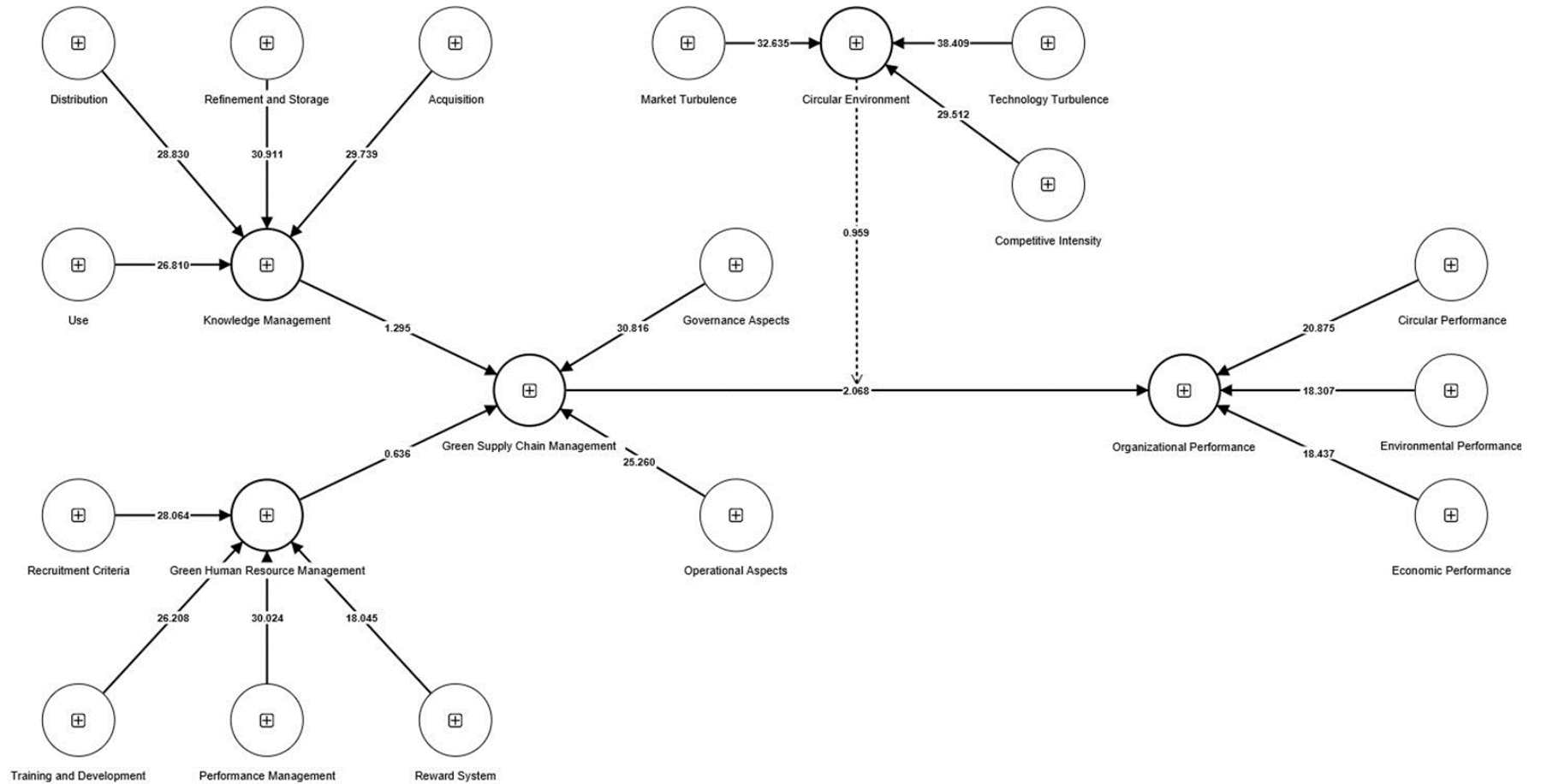
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Figure 4: Summary of Findings (Second Stage Structural Model)

Stream 1. Human Resource Management

Knowledge and human resources management enhance green supply chain management and circular economy performance

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Stream 1. Human Resource Management

Knowledge and human resources management enhance green supply chain management and circular economy performance

ABSTRACT: *Through a survey administered to around 800 environmentally certified organizations and using partial least squares structural equation modelling, this paper studies how the green supply chain management integrates sustainable environmental processes within the traditional supply chain.) This study is based on the knowledge-based theory and provides an original perspective of both circular economy and circular economy. The study explores the interconnectedness between knowledge management, green human resource management and green supply chain management and assesses their effects on organisational performance and the diffusion of the circular economy. The results highlight the importance of these linkages together with the crucial role of the circular economy context. This study thus proved that internal commitment and efforts, organizations are conditioned by external forces.*

Keywords: Sustainable Development; EMAS; ISO 14001; Purchasing; Management; Organization

1. INTRODUCTION

The circular economy (CE) has become an important strategy used to tackle some of the today's main challenges (Ormazabal et al., 2016). Scholars, practitioners and policymakers are increasingly focusing on climate change, resource consumption and other environmental issues (Prieto-Sandoval, 2018b; Rincón-Moreno et al., 2021; Scarpellini et al., 2019). By exploiting the features of the CE such as value optimization, life extension, resource efficiency, etc., society is moving toward more sustainable production and consumption patterns. However, despite the tools promoted by the European Commission, there is little synergy with the circular economy (Ormazabal et al., 2018; Marrucci et al., 2019).

Among the different concepts that compose the CE (Prieto-Sandoval et al., 2018a), one of the most structured is the green supply chain management (GSCM). Thanks to its synergies with purchasing management, GSCM has been recognised both among practitioners and scholars as an appropriate strategy to foster new CE opportunities (Genovese et al., 2017). At organisational level, GSCM enables organizations to manage environmental issues while creating a green culture that goes beyond the confines of an organization. By internalizing a lifecycle management perspective within its processes (Bianchi et al., 2022), organizations are able to develop a more holistic approach aimed at extending value optimization throughout the supply chain.

However, in order to significantly contribute to the diffusion of the CE, organizations need to strengthen the relationship between the various actors involved in the supply chain. Given the cross-disciplinary perspective that characterizes GSCM and the complexity of CE linkages (Prieto-Sandoval et al., 2019), new dimensions should be investigated in order to make systematic multilevel changes across and within organizations.

Stream 1. Human Resource Management

Despite the strong focus on GSCM, only recently have scholars started to frame it within a CE perspective (Fahimnia et al., 2015).

Following an interdisciplinary approach, the linkages between GSCM and firms' green performance have been investigated exstensily (Daddi et al., 2021;). However, due to the complexity of sustainability and CE concepts, governance and management perspectives have earned more and more attention (Ormazabal and Sarriegi, 2014; Scarpellini et al., 2020a).

Although scholars have proved the contribution of GSCM to CE, a more in-depth investigation is needed (Liu et al., 2018). In particular, the human perspective has rarely been taken into account in the analysis. In fact, even though scholars have confirmed the positive linkages between green human resource management (GHRM) and CE, GHRM has not been in-depth studied in relation with GSCM.

Intra-organisational perspectives on GSCM such as supplier selection, green innovation (Bag et al., 2018), etc., have been explored in terms of their crucial role in the transition towards CE. Through the intra-departmental and inter-supplier collaboration, organizations can lead the transition towards CE and greener supply chains (Khan et al., 2020a). In the connection between GHRM and CE, organisational capabilities and knowledge play a pivotal role (Marrucci et al., 2022a). Knowledge management has also been considered important in the development of GSCM, however, as far as we know, no studies have merged all these concepts together. In fact, to date, there are no studies that link GSCM, the CE, GHRM and knowledge management.

In this research, we address the research gap related to the impact of GHRM and knowledge management on GSCM and on organizational performance. We frame our study within knowledge-based theory without limiting the analysis to environmental performance, but testing the influence on CE implementation, economic performance and environmental reputation.

We conducted a survey to around 800 environmentally certified organizations. We selected organizations with a certified environmental management system (EMS) given that although GSCM is not directly mentioned in the requirements of the main standards such as ISO 14001 and EMAS (Marrucci and Daddi, 2022), it is a crucial step in obtaining certification (Daddi et al., 2016).

We, thus, empirically evaluated the influence of knowledge management and adoption of GHRM practices on GSCM and increased performance of organizations using partial least squares structural equation modelling (PLS-SEM). However, although we aimed to evaluate the link between GSCM and CE, it is also possible that the diffusion of the CE might be conditioned by other reasons that cannot be managed directly by organisations. We, thus, investigated the moderating role of the "circular environment" by testing its influence on the relationship between GSCM and organizational performance. Lastly, using a hierarchical component model (HCM), we analysed the operationalization of our variables in-depth.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

2.1. Knowledge-Based Theory

Although not in the fundamental study on organizational theory and GSCM by Sarkis et al. (2011), knowledge-based theory has been used by scholars within the framework of GSCM. According to Grant

Stream 1. Human Resource Management

(1996), managing knowledge more efficiently enables organizations to increase their performance. By using and storing internal knowledge, competencies, and capabilities, firms increase their survival opportunities, growth and success. Although the debate on defining knowledge is still conflicting, scholars have made a clear division between tacit and explicit knowledge. Tacit knowledge can be defined as the knowledge, skills, and abilities an individual gains through experience which is often difficult to quantify or pass on from one person to another through verbal or written communication. Instead, explicit knowledge is any information that can be documented, stored and shared with others.

The study by Schoenherr et al. (2014) is a milestone in the literature on knowledge management in supply chains. The authors stated that "*the supply chain's knowledge management capability manifests itself in both explicit and tacit knowledge, with the latter being influenced more strongly*". In addition, "*both explicit and tacit knowledge influence supply chain performance, the latter exerts a significantly greater impact than the former*". Organizations need to explore new knowledge and/or exploit existing knowledge to achieve a competitive advantage or integrate green practices within the supply chain. Following a knowledge-based view, Aboelmaged et al. (2023) confirmed that knowledge management positively influence the environmental performance of an organization. Baresel-Bofinger et al. (2011) identified green knowledge as an important driver for the implementation of GSCM practices. This was confirmed by Chatzoudes and Chatzoglou (2023) who classified green knowledge management and internal environment management as antecedents of GSCM.

Knowledge management has also been investigated from other perspectives. Scarpellini et al. (2020b) highlighted the crucial role of knowledge management process in the relationship between corporate sustainable performance and absorptive capacity, also recognizing it as a promising pathway for future research and claiming that the implementation of the CE can be considered as an eco-innovation strategy. We thus targeted the relationship between knowledge management, GSCM and CE implementation.

Although knowledge is mainly divided into tacit and explicit or internal and external, knowledge transfer can follow different cycles. The Meyer and Zack model (Meyer and Zack, 1996) is one of the most comprehensive explanations of the key aspects included in the knowledge management model. The main source of its power stems from its all-encompassing approach to handling information, which displays an exceptional level of flexibility when it comes to accommodating knowledge-oriented material. The Meyer and Zack knowledge management cycle is divided into five steps. Acquisition of data or information; Refinement, i.e., cleaning or standardizing acquired information; Storage connects the upstream stages of acquisition and refinement with the downstream stages of knowledge generation; Distribution explains how the knowledge is distributed to the final user; and Use where the preceding value-added steps are evaluated. Following this approach, we expand the academic literature on knowledge management and GSCM by formulating our first hypothesis (see Figure 1).

> *HP1. A greater knowledge management capacity leads to a higher level of GSCM within an organization.*

2.2. Green Human Resource Management

Stream 1. Human Resource Management

Renwick et al. (2013) defines GHRM as "*the set of strategies and activities that would encourage a green behaviour of organisations employees to boost a more sustainable and environmentally friendly workplace and overall organisation*". This set of practices has been divided by Renwick et al. (2016) into six different dimensions: Attracting, i.e., attract talented and qualified employees thanks to the green performance of the organization; Selecting, i.e., integrate environmental obligations or include ecological skills as a distinguishing feature in the job description; Training/development, i.e., a type of training related to important environmental topics, which supports employees in the integration of environmental issues within the performance of the organization; Involvement/engagement, i.e., increase employee involvement in green initiatives and raise awareness of environmental issues; Performance management, i.e., management and measurement of employee performance related to environmental aspects; Rewarding, i.e., recognizing the contribution of employees in the enhancement of a more eco-friendly organization.

Academics have always recognized the crucial part performed by human resources in organizational performance. As suggested by Rizzi et al. (2022), there is a strong nexus between GSCM and GHRM since they both affect the management of knowledge, skills and abilities. Thanks to this convergence, scholars have focused on investigating the nexus between these two topics. Sometimes, the focus is on specific GHRM practices such as training (Stefanelli et al., 2020), involvement (Singh and Gupta, 2016), etc., however organizational performance has also been highlighted (Longoni et al. 2018).

Despite the attention on GSCM, the CE has rarely been studied in relation with GHRM (Marrucci et al., 2021). Since GSCM can be seen as a CE practice, or even as a specific CE business model (Shashi et al., 2021; Centobelli et al., 2021), our study fully embraces the research agenda suggested by Balkumar et al. (2023).

In order to extend the academic contribution and to shed light on the human contribution to GSCM implementation, we formulated our second hypothesis (see Figure 1).

> *HP2. A greater diffusion of GHRM practices within an organization leads to a higher level of GSCM.*

2.3. Green Supply Chain Management

The most common definition of GSCM is provided by Srivastava (2007), i.e., "*integrating environmental thinking into supply-chain management*". From a practical perspective, GSCM can be applied following different strategies both within the organizational internal processes and outside the organizational boundaries. From an academic perspective, this has led to a strong heterogeneity in terms of constructs and variables. In order to grasp all the facets of GSCM, but at the same be able to measure it, scholars have mainly converted GSCM practices into specific measurable items. However, GSCM practices can also be divided according to the typology, i.e., operational (e.g., reverse logistics, eco-design, etc.) and governance (e.g., environmental cooperation, green purchasing, etc.) practices (Green Jr., 2012).

Several studies have investigated the role of GSCM in improving performance. For instance, Daddi et al. 2021 highlighted the influence of GSCM capabilities on environmental, eco-innovation performance and market competitiveness.

Although the effects of GSCM on environmental and economic performance have been widely investigated by different studies, little attention has been paid to the nexus with CE implementations and the environmental reputation of organizations. A more in-depth investigation is needed, without limiting the analysis to green supplier selection, but extending it to the overall GSCM sphere where circular purchasing is one of the many practices adopted by the organizations. Thus, to further expand the literature on GSCM and organizational performance, but at the same time, specifically focus on CE and environmental reputation, we formulated our third hypothesis (see Figure 1).

HP3. A higher level of GSCM enhances the organizational performance.

The academic literature has identified different drivers, barriers to and benefits of GSCM (Rajeev et al., 2017). The decision to adopt GSCM practices may depend on internal and external factors. Choudhary and Sangwan (2022) suggested that instrumental and normative pressures substantially uncover collaborative strategies to GSCM. Through environmental cooperation, organizations can share solutions aimed at reducing the environmental impact of the supply chain, as well as overcome barriers and boost GSCM. In fact, Maaz et al. (2022) showed that strategic orientation, resource commitment and strategic emphasis have a strong direct impact on GSCM practices. Moreover, Testa and Iraldo (2016) suggested that GSCM practices is strongly complementary with other advanced management practices, and that it contributes to improved environmental performance. This trend is also confirmed in the analysis of the role of GSCM in the transition towards a CE. According to Gani et al., (2023) to cope with dynamic shifts, managers and decision makers need to take initiative for collaboration among the suppliers. These results are confirmed by Bag et al. (2022) who reported that both green innovation and GSCM are significantly related to the building of circular dynamic capability.

However, the relationship between GSCM and CE might nevertheless be influenced by external factors that are beyond the control of firms (Khan et al., 2020b). Several variables such as technological change and innovations and the unpredictability of clients' or competitors' actions can influence the CE development. In fact, the focus of consumers on CE (market commitment), the pressures exerted by policymakers and competitors (competitive intensity) and the support provided by technology (technological support) may all influence the transition towards a CE. We, thus, formulated our fourth and last hypothesis aimed at investigating the moderation role of the circular environment (see Figure 1).

HP4. A circular environment moderates the relationship between GSCM and organizational performance.

Insert Figure 1 about here

3. METHODOLOGY

3.1. Data collection

To test our proposed hypotheses, we collected data through an online survey that was active for two months. The data collection was in fact a sequential process wherein, firstly, we acquired a list (containing email addresses) of EMAS-certified companies through the EMAS register. Although ISO14001 is more common than EMAS, we focused on EMAS-certified companies because the EMAS includes almost all NACE

sectors and is recognized as an important tool for CE implementation (Marrucci et al., 2019). Emails were sent to 3580 EMAS-certified companies to request their participation in the online survey and after one month reminder emails were also sent. In total, 1082 responses were received. However, our priority was data quality and thus rigid criteria were followed. We thus deleted incomplete responses and retained 819 responses in the final sample. It is worth noting that our sample size was not only sufficient, but also larger than other articles on EMAS (Heras-Saizarbitoria et al., 2020). Our sample also ensured a reliable representation of the overall EMAS-registered organisations (see Table 1).

Insert Table 1 about here

3.2. Constructs and measures

We proposed and operationalized a hierarchical component model (HCM) that contained first-order and second-order constructs (Sarstedt et al., 2019) (see Figure 2). The second-order construct of knowledge management (KM) was based on four first-order constructs. i.e., acquisition (KM-AC), refinement and storage (KM-RS), distribution (KM-DI), and use (KM-US). Overall, KM was measured with twenty items adapted from previous studies (Camisón and Forés, 2010; Delmas et al., 2011; Flatten et al., 2011). The respondents were thus asked in the online survey to rate on a 5-point Likert scale whether they agreed or disagreed with the given statements.

The second-order construct of green human resource management (GHRM) was based on four first-order constructs namely, recruitment criteria (GHRM-RC), training and development (GHRM-TD), performance management (GHRM-PM), and reward system (GHRM-RS). Overall, GHRM was measured with sixteen items adapted from previous studies (Masri and Jaaron, 2017; Saeed et al., 2019). The respondents were thus asked in the online survey to rate on a 5-point Likert scale whether they agreed or disagreed with the given statements.

The second-order construct of green supply chain management (GSCM) was based on two first-order constructs namely, governance aspects (GSCM-GA) and operational aspects (GSCM-OA). Overall, GSCM was measured with seven items adapted from previous studies (Daddi et al., 2021; Todaro et al., 2019). The respondents were thus asked in the online survey to rate on a 5-point Likert scale whether they agreed or disagreed with the given statements.

The second-order construct of the circular environment (CEN) was based on three first-order constructs namely, market turbulence (CEN-MT), technology turbulence (CEN-TT), and competitive intensity (CEN-CI). Overall, CEN was measured with eight items adapted from previous studies (Khan et al., 2020a). The respondents were thus asked in the online survey to rate on a 5-point Likert scale whether they agreed or disagreed with the given statements.

The second-order construct of organizational performance (OP) was based on three first-order constructs namely, circular performance (OP-CP), environmental performance (OP-EP), and economic performance (OP-EC). Overall, OP was measured with sixteen items adapted from previous studies (Daddi et al., 2019; Khan et al., 2020a). The respondents were thus asked in the online survey to rate on a 5-point Likert scale whether they agreed or disagreed with the given statements.

Stream 1. Human Resource Management

Insert Figure 2 about here

3.3. Data analysis

The data collected were analysed through PLS-SEM with SmartPLS 4 software (Ringle et al., 2022). Instead of the repeated indicators approach, the embedded two-stage approach (mode B) was followed to measure our proposed HCM (Becker et al., 2012). The literature shows that the repeated indicator approach is easy to apply but causes issues in HCM (Sarstedt et al., 2019). In other words, the R^2 value turns to one by default and consequentially the path coefficient to zero or non-significant. Contrarily, the embedded two-stage approach yields clearer results (Ringle et al., 2012). PLS-SEM is usually examined and interpreted in two steps, that is, first the measurement model is assessed and then the structural model (Chin, 2010). We used the default settings of SmartPLS 4 software. All the rules and conditions were followed while conducting and reporting the data analysis (Chin, 2010; Hair et al., 2019).

4. RESULTS

4.1. Measurement model

The measurement model was checked in accordance with the prescribed rules and conditions (Hair et al., 2019), thus whether the indicator loadings, Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) of constructs were under the threshold values and whether there was any discriminant validity issue. All the indicator loadings, excluding one GSCM-GA indicator and two OP-CP indicators, ranged from 0.545 to 0.922 (see Table 1). The literature suggests also retaining indicators with loading values as low as 0.400 if the AVE of that construct is above 0.500 (Hair et al., 2011). The AVE of GSCM-GA and OP-CP were initially below 0.500. However, after deleting one GSCM-GA indicator and two OP-CP indicators, the AVE of all the constructs ranged from 0.538 to 0.818 (see Table 2).

Insert Table 2 about here

The literature posits that both Cronbach's alpha and CR are valid measures, however the former is arguably less precise than the latter measure (Hair et al., 2019). Nonetheless, Cronbach's alpha and CR values of all the constructs ranged from 0.604 to 0.885 and 0.790 to 0.929, respectively (see Table 1). The significance and relevance of weights of the first-order constructs (i.e., constructs acting as formative indicators for second-order constructs in our proposed HCM) were also checked using the function of bootstrapping (Khan et al., 2021). Our proposed HCM also easily passed this criterion since the t-Values of those weights were much higher than 1.96 (see Table 1). The literature further posits that discriminant validity can be checked against two criteria named the Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio of Correlations (HTMT) criterion. However, the latter criterion is more reliable and thus should be reported (Hair et al., 2019). We found no discriminant validity issue using the two criteria, but we have reported only the HTMT criterion (see Table 3).

Insert Table 3 about here

4.2. Structural model

The structural model was checked in accordance with the prescribed rules and conditions (Hair et al., 2019), i.e., the variance inflation factor (VIF), predictive power and relevancy, and model fit indices. No serious

concern regarding multicollinearity was found since the VIF values of all constructs were below 3.0 (Hair et al., 2019). In addition, no serious concern regarding the common method bias was found since the VIF values of all constructs were below 3.3 in both scenarios, that is, with and without the inclusion of a random variable (Kock, 2015). The R^2 and Q^2 values were checked to determine the predictive power and relevancy of the model, respectely. The R^2 values for GSCM and OP were 0.469 and 0.360, respectively. The Q^2 values of GSCM and OP were 0.458 and 0.345 respectively. The model fitness was checked in terms of SRMR and NFI values, which were 0.043 and 0.933 (Hair et al., 2017).

The bootstrapping function was used with the recommended settings of SmartPLS 4 and thereby the path coefficients and t-Values were checked. The direct effects of knowledge management (KM) and green human resource management (GHRM) on green supply chain management (GSCM) showed values of 0.514 ($p < 0.001$) and 0.234 ($p < 0.001$), respectively. Hence, hypothesis 1 and hypothesis 2 seem to be supported empirically (see Table 3). The direct effect of green supply chain management (GSCM) on organizational performance (OP) has a value of 0.408 ($p < 0.001$). The moderating effect of the circular environment (CEN) on the relationship between green supply chain management (GSCM) and organizational performance (OP) was 0.066 ($p < 0.05$). Hence, hypothesis 3 and hypothesis 4 seem to be supported empirically (see Table 4).

<center>Insert Table 4 about here</center>

<center>Insert Figure 3 and 4 about here</center>

<center>**5. DISCUSSION**</center>

Our paper contributes to various fields in the literature. First, it contributes to the debate on the influence of GHRM on GSCM. A second more theoretical contribution is in the field of knowledge-based management theory, which has been rarely investigated in a study on GSCM. Lastly, since we used a sample of EMAS registered companies, the results, thus, contribute to the literature on EMSs.

As shown in Table 3, the results confirm the hypotheses of our research. All independent variables were positively and significantly linked with the dependent variables. The first hypothesis suggests that companies with a higher capacity to manage competencies, skills and abilities are more effective in managing their supply chains according to sustainable criteria. As described in Table 1, the items used to measure knowledge management were not aimed at measuring the "green knowledge" of the company, but above all the general management of the company. This positive relation is interesting because it demonstrates how the management of knowledge in appropriate ways (even without a focus on green management) favours the achievement of environmental management objectives. Other studies have studied the relation between general management capabilities and environmental management, such as the studies on the relation between dynamic capabilities (usually not focused on green capabilities) and environmental performance (see for instance Khan et al., 2021). From a different perspective, GHRM already includes a "green behaviour" of the organization, thus the confirmation of the second hypothesis was "more expected". In particular, the second hypothesis confirms that the green management of human resources through activities such as recruitment, training, performance management and rewarding systems

positively influence the green management of the supply chain. This was more expected because if a company decides to adopt green criteria in their human resources management, then these employees will be more effective in the management of supply chain sustainability issues.

Third, our model confirms the positive relation between GSCM and firm performance already observed in the literature (Daddi et al., 2021). To study this relation, we adopted an approach that considers a very comprehensive performance variable that includes organisational (e.g., items such as "We are adopting a life cycle management approach") as well as operational (e.g., "water consumption reduction") practices. In addition, it includes items that refer to three aspects of the performance: circular, environmental, and economic performance, which represents a novelty compared to other studies.

Managers are very interested in seeking initiatives aimed at improving organisational performance. The improvement of economic performance means higher competition on the market. The improvement of environmental and circular performance again contributes to the increase in reputation of the firm and to the cost reduction and, even only indirectly, to a higher market competitiveness. Too often small and medium enterprises (as were the majority of our sample) plan the improvement of environmental and circular performance in a non-systematic way. In other words, they focus more on achieving the goals rather than on the leverages that should be activated in order to obtain them. Managers should bear in mind that these leverages can be linked to how they manage knowledge in their company, the consideration of green issues in human resources management and the environmental management of their supply-chain. Good management of these aspects could lead to better environmental performance obtaining thus a higher visibility on the market.

For our sample we used a group of EMAS registered organisations, who have to demonstrate a continuous improvement in performance which needs to be verified by an external verifier. Our study provides insights into EMAS verifiers in terms of an "indirect" assessment of the improvement of performance. EMAS verifiers need to go beyond the mere comparison of quantitative performance indicators over consecutive years. They should also consider the intangible benefits of actions aimed at implementing GHRM approaches in certified companies because these actions will allow the company to achieve tangible benefits in the following years).

Policy makers are responsible for improving the quality of the environment that is affected by the environmental performance. Similarly, they aim to implement circular economy principles as well as the economic development of the territories they administer. Our results suggest that to achieve those objectives, policy initiatives such as incentives, regulatory relief or detaxation, should focus on encouraging companies to increase knowledge management or adopt GHRM and GSCM initiatives.

However, the most important contribution of our study is related to the role played by the circular environment. While Khan et al. (2021) recognised its positive role in the development of a circular economy, Marrucci et al., (2022b) denied this relationship claiming that the level of adoption of the CE depends exclusively on internal factors, rather than external forces. Our study recognises the importance of the pressures exerted by customers, governments, and the competitive intensity in relation to the CE. These

contrasting results need to be further investigated since the topic is crucial not only from an academic perspective, but above all from a practical and technical perspective.

Institutional and stakeholders' pressures significantly contribute to the adoption of GHRM (Marrucci et al., 2023). Our results highlight that the EU and other national governments and entities should increase nudging environmental initiatives within the framework of a CE. At the same time, organizations need to pay attention both to customers' needs and requests and to competitors' actions. Developing dynamic capabilities and absorptive capacities, which are both strongly connected to GHRM and GSCM, may also help organizations. In fact, sensing, seizing, and reconfiguring capabilities and their underlying organizational routines significantly facilitate the implementation of the CE (Marrucci et al., 2022c).

By boosting knowledge management and GHRM among employees, organizations should be able to foster environmental cooperation both internally and externally. Regardless of the specific GSCM practice adopted, collaboration and alliances are crucial for the development of the CE.

6. CONCLUSIONS

This study sheds light on the role of GSCM in the quest towards a circular economy and offers some directions for future research, however as with any empirical investigation, it has some limitations.

Firstly, our sample relates specifically to a group of EMAS registered organisations, which thus represents a particular community of organisations. The fact that they have an environmental certification could influence the results and risk limiting the extension of our findings to non-registered companies. Further research could thus include different sample types. A second possible limitation refers to the need for a more precise contribution in the field of knowledge-based management literature. Since we focused on an aggregated version of the theory, future research could separately identify the contribution of tacit and explicit knowledge.

Thirdly, although we used an HCM, we did not consider individual GSCM practices, but focused again on the aggregated version. The same approach was used for measuring the circular economy. In contrast, all the main green human resources management practices were taken into account. Future studies could investigate in-depth both individual GSCM practices and circular economy phases for a more detailed comprehension of the relationship between these different scenarios.

The fact that, from a geographical point of view, we covered all the EU Member States, is at the same time both a strength and a weakness. In fact, on the one hand, we provide a more holistic overview, on the other we were unable to examine specific nuances that may characterize individual contexts both in terms of the of the diffusion circular economy and the adoption of the GSCM practices. Lastly, despite all the attention placed on the survey design, we based our results on self-reported contributions, which means that social desirability bias might have affected our results. Future studies could use empirical data to overcome this issue.

Stream 1. Human Resource Management

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Stream 1. Human Resource Management

Table 1: Sample Description

Characteristic	Description	N	%
Member State	*Austria*	30	3.66
	Belgium	23	2.81
	Cyprus	8	0.98
	Germany	216	26.37
	Greece	8	0.98
	Italy	311	37.97
	Poland	16	1.95
	Portugal	15	1.83
	Spain	160	19.54
	Other	32	3.91
NACE Code	*A - Agriculture, forestry, and fishing*	16	1.95
	B - Mining and quarrying	9	1.09
	C - Manufacturing	295	36.02
	D - Electricity, gas, steam, and air conditioning supply	58	7.08
	E - Water supply; sewerage; waste management and remediation activities	113	13.79
	F - Construction	18	2.20
	G - Wholesale and retail trade; repair of motor vehicles and motorcycles	9	1.09
	H - Transporting and storage	28	3.73
	I - Accommodation and food service activities	25	3.05
	J - Information and communication	9	1.09
	M - Professional, scientific, and technical activities	31	3.78
	N - Administrative and support service activities	21	2.56
	O - Public administration and defense; compulsory social security	57	6.96
	P - Education	20	2.44
	Q - Human health and social work activities	45	5.50
	R - Arts, entertainment, and recreation	10	1.22

Stream 1. Human Resource Management

	S - Other services activities	43	5.24
	Other (K, L, U)	12	1.47
Employees	*< 10*	53	6.47
	11 - 50	198	24.18
	51 - 250	251	30.65
	> 250	317	38.71
Turnover	*< €2,000,000*	115	14.04
	€2,000,000 - €10,000,000	191	23.32
	€10,000,000 - €50,000,000	202	24.66
	> €50,000,000	311	37.97
Year of EMAS Registration	*1993-1999*	86	10.50
	2000-2009	330	40.29
	2010-2020	403	49.21
ISO 14001	*No*	118	14.41
	Yes	701	85.59
ISO 9001	*No*	300	36.63
	Yes	519	63.37

Table 2: Reliability and Validity of Measurement Model

Second-Order Constructs	First-Order Constructs	Item Code	Items	Loadings	Cronbach's Alpha	CR	AVE
Knowledge Management (KM) VIF = 2.144	Acquisition (KM-AC) Weights = 0.297 t-Value = 29.739 VIF = 2.352	KM-AC1	*"Our organization quickly recognizes shifts in our market"*	0.827	0.814	0.873	0.583
		KM-AC2	*"Our organization quickly understands new opportunities to serve our clients"*	0.865			
		KM-AC3	*"Our organization has the capacity to assimilate new technologies and innovations that are useful or have proven potential"*	0.827			
		KM-AC4	*"Our employees attend training courses, trade fairs, and meetings"*	0.665			
		KM-AC5	*"Our organization conducts R&D activities to try out new ideas and knowledge"*	0.599			
	Refinement and Storage (KM-RS) Weights = 0.281 t-Value = 30.911 VIF = 2.692	KM-RS1	*"Our organization quickly recognizes the applicability of new knowledge to our business"*	0.842	0.842	0.888	0.616
		KM-RS2	*"Our organization constantly considers how to better exploit knowledge (e.g., lessons learned processes)"*	0.763			
		KM-RS3	*"Newly acquired knowledge is documented and shared within our organization"*	0.839			
		KM-RS4	*"Processes (e.g., phase-gate-process, SOPs, etc.) for all kinds of activities are clearly known in our organization"*	0.692			

Second-Order Constructs	First-Order Constructs	Item Code	Items	Loadings	Cronbach's Alpha	CR	AVE
		KM-RS5	*"Our employees have the ability to structure and use the collected knowledge"*	0.778			
	Distribution (KM-DI) Weights = 0.278 t-Value = 28.830 VIF = 2.364	KM-DI1	*"Our business units and functional groups strongly interact with each other"*	0.786	0.879	0.912	0.675
		KM-DI2	*"All departments of our organization strongly interact with each other"*	0.816			
		KM-DI3	*"Ideas and concepts are communicated across the departments in our organization"*	0.872			
		KM-DI4	*"Our management emphasizes cross-departmental support to solve problems"*	0.870			
		KM-DI5	*"There is a quick information flow in our organization"*	0.760			
	Use (KM-US) Weights = 0.289 t-Value = 26.810 VIF = 2.808	KM-US1	*"Our management collaborates with companies and research institutions beyond the industry"*	0.557	0.814	0.874	0.588
		KM-US2	*"Our organization is capable of responding rapidly to competitors' actions"*	0.856			
		KM-US3	*"Our organization promptly launches innovative products/services according to new knowledge"*	0.851			

3. Sustainability and social issues

Mapping sustainability and governance interplay in the blue economy: A bibliometric review of contributions from Australia.

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1

3. Sustainability and social issues

Mapping sustainability and governance interplay in the blue economy: A bibliometric review of contributions from Australia.

ABSTRACT: *The sustainability and governance research regarding the ocean economy are not new. In literature, many studies have investigated governance and sustainability in the ocean economy (recently defined as the blue economy) in separate studies. However, sustainability without governance is not effective for long-term development in the blue economy. Nonetheless, there is no clear consensus on how ocean governance and sustainability are intertwined and support long-term development in the blue economy. Accordingly, this paper performed a systematic literature review to explore the relationship and status quo of the articles published on governance and sustainability in the blue economy, particularly from Australia and offer future research postulates. Being one of the leading contributors to the field, Australia published 212 journal articles in this area between 2014 and 2023, collaborating with 80 other countries. While prior research shows that sustainability and governance are highly related concepts, they created four main research themes to describe common governance and sustainability aspects for sustainable development in the blue economy. While research in this area has gained popularity in the last decade, it is still in its infancy, and the review findings offered exciting insights into extending the current understanding and provided lessons to Australia to develop a more sustainable blue economy.*

Keywords: Australia, blue economy, sustainability, governance, bibliometric review, ocean economy

INTRODUCTION

The oceans are the new frontier for the future world economy (Dwyer & Gill, 2019). Coasts and oceans provide critical resources, livelihoods, ecosystems and socio-cultural values to societies and nations (Alexander et al., 2022; Engen et al., 2021). However, increasing investments in the ocean economy can destroy the health of the ocean and the well-being of society (Miloslavich et al., 2019; Moraes, 2019; Partelow et al., 2020; Rastegar, 2022). For instance, ocean pollution, ocean degradation, ocean acidification, ocean grabbing, unequal distribution of ocean resources, injustice to coastal communities, the poor living status of small-scale fisheries and modern slavery are critical environmental and social challenges ahead to solve (Lee, Noh, Lee, & Khim, 2021; Taylor et al., 2021; van Putten et al., 2021). Hence, ensuring the sustainability of the ocean economy is critical for long-term development (Sarangi, 2022). Ocean economy is defined as all forms of economic development in the oceans (Bennett, 2022, p. 1). However, the blue economy is a recent concept that aims to ensure sustainability in the ocean economy (Voyer & van Leeuwen, 2019). It represents an ocean-based economic model that aims to promote sustainability in oceans without damaging the environment and society (Lee et al., 2021). World Bank defines the "blue economy" as "the sustainable use of ocean

2

resources for economic growth, improved livelihoods, and jobs while preserving the health of the ocean ecosystem" (World Bank, 2017, p.6). Today, the blue economy and ocean economy are interchangeably used in literature, including a range of economic sectors such as fishery, aquaculture, sea bend mining, offshore renewable energy, shipping, and other ocean services (Sarangi, 2020). The blue economy has been initiated to ensure the sustainable development of the ocean economy (Bennett, 2022). However, sustainability in the ocean economy is not a straightforward activity, and an enormous effort must be made to balance economic, environmental, and social impacts and objectives (Lee et al., 2021). In contrast, the sustainability of the ocean economy does not seem isolated from ocean governance and policy frameworks because oceans are critical common resources controlled by local, regional, and global authorities (Voyer, Benzaken, & Rambourg, 2022; Voyer et al., 2021; Voyer, Quirk, McIlgorm, & Azmi, 2018). While ocean governance is an ambiguous and contested concept, it can be defined as 'structures, processes, rules, and norms that determine how people make decisions, share power, exercise responsibility, and ensure accountability in the use and management of marine resources' (Kooiman, 2003; Campbell et al., 2016). As such, ocean governance frameworks are designed to achieve sustainable use of ocean resources and long-term development in the blue economy (Benza, 2020). Hence, the sustainability of oceans cannot be fully ensured without proper governance mechanisms (Kelly et al., 2022). Although ocean governance and sustainable practices are intertwined (Louey, 2022b), many researchers discussed ocean governance and sustainability as separate studies. Hence, there is still no clear consensus on the relationship between governance and sustainability in the blue economy. However, understanding the relationship between ocean governance and sustainability is critical for an enhanced understanding of promoting sustainability in the blue economy.

While a sustainable blue economy is a top priority in local and international agendas, many countries, regions, and international organisations play a crucial role in ensuring the sustainability of the ocean economy through various governance approaches to ensure socio-environmental sustainability. Among all the countries, Australia holds a leading position among vital contributory countries seeking to unlock the economic potential and ensure strong environmental and social sustainability in the ocean economy (Laubenstein et al., 2023). Having the third largest ocean economic

3

zones, the Australian ocean economy consists of well-established industries such as fisheries, oil and gas, marine and coastal tourism, shipping, etc. and also critical emerging industries such as offshore renewable energy, offshore aquaculture, ecosystem services and marine biotechnology (Penesis, & Whittington, 2021). Hence, this paper is positioned as a systematic review of the Australian contributions, particularly to identify the relationship between ocean governance and sustainability in the blue economy. The main objectives of this review are to determine the country's collaboration, journal distribution, common themes and underrepresented themes discussed in the literature and propose future directions to Australia based on the identified gaps for extending literature to promote stronger sustainability in the blue economy.

Interestingly, Australia has performed many reviews in the context of the ocean economy from different aspects, such as Indigenous participation in ocean governance (Lyons, Mynott, & Melbourne-Thomas, 2023), threats and opportunities in the ocean economy (Laubenstein et al., 2023), multi-purpose off-shore facilities in Australia (Aryai et al., 2021) and aquaculture ethics (Cooper et al., 2023). However, the Australian contribution towards the relationship between ocean governance and the sustainability of the blue economy has not been investigated yet. Hence, this review paper provides exciting insights into ocean governance and sustainability literature from an Australian perspective. The data for the review was retrieved from Scopus and Web of Science databases published between 2009 and 2023. Consequently, 212 papers were identified for the final review. Accordingly, a bibliometric analysis approach was adopted with the support of VOSviewer software to address the research objectives. The findings revealed that this area of research is emerging, and prior studies attempted only to scratch the surface and more room for further research for Australia to promote a sustainable blue economy.

The remainder of the paper is organized into five sections. The next section provides a methodology followed by results and analysis. The fourth section discusses the findings, and the last two sections offer the conclusion and limitations of the study.

4

METHODOLOGY

This paper is conducted as a systematic review to achieve study objectives (Brugère, Aguilar-Manjarrez, Beveridge, & Soto, 2019). The PRISMA flow diagram guides the review process (Tranfield, Denyer, & Smart, 2003). Systematic review methodology and the PRISMA approach provide a more objective method to identify eligible records for a comprehensive literature review (Priyashantha, De Alwis, & Welmilla, 2022). According to the PRISMA 2022 flow diagram, the articles are retrieved from the identified databases based on search criteria and screened according to the inclusion and exclusion criteria (Table 1). As per the first step of systematic reviews, articles for the review were identified using keywords (search terms). Since this paper aims to evaluate current knowledge of Australia's efforts on ocean governance and sustainability in the blue economy and uncover the gaps and opportunities, the most appropriate keywords were selected to collect articles using 'blue economy', 'sustainability' and 'governance' terms. The search terms were combined using 'AND' and 'OR' operatives. Scopus and Web of Science were selected in the database section process as they are the most widely used databases for systematic reviews (Lee et al., 2021; Priyashantha, Dahanayake, & Maduwanthi, 2023). In the stage of article identification, both automatic screening function and manual screening were used to screen the records based on inclusion and exclusion criteria by following the PRISMA methodology. The initial search with the keywords yielded 4226 from both databases. This search was automatically filtered based on inclusion and exclusion criteria (Table). Firstly, the search was refined to select only journal articles and received 3051 records. This search was limited to records written only in English and received 2984 records. This search was again filtered to select papers produced only from Australia, and 371 records were obtained. Finally, the search was refined to select papers published between 2009 and 2023 and received 332 records. The automatically screened records were screened manually based on title/abstract/keyword reading. In this stage, 24 duplicates and 36 irrelevant articles were removed. In the next screening level, 26 systematic reviews and 34 tangled papers that did not meet inclusion criteria were removed. Finally, 212 articles were identified to be included in the final review. The PRISMA framework for the entire data collection and selection is shown in Figure 1. The bibliometric analysis method was used to analyse the records using VOSviewer software, which is widely used in systematic reviews. Accordingly, country collaboration, journal-wise

5

article publication, co-occurrence network analysis, and co-occurrence density network analysis were performed to address the research objectives.

Figure 1: PRISMA flow diagram

Source: Authors' construction

Table 1: Articles inclusion criteria

Inclusion criterion	Details
1	Published in Scopus and Web of Science
2	Academic Journal articles
3	In English language
4	Produced by Australia
5	Published between 2009 and 2023
6	Discuss governance and sustainability in the blue economy

Source: Authors' construction

6

RESULTS AND ANALYSIS

General article characteristics

This section provides general features of the articles under review. Australia published 212 articles in 89 journals between 2014 and 2023, collaborating with 80 other countries. Table 2 summarizes the main features of the papers under review. The total citations and references for the articles were 4542 and 17098, respectively. The average number of annual publications was 21.2, and the average number of citations per article was 21.42.

Table 2: General attributes of the reviewed articles

Description	Results
Time period	2014:2023
Documents (articles)	212
Journals (Sources)	89
Number of collaborative countries with Australia	80
Total citations	4542
Average documents per year	21.2
Average citation per document	21.42
References	17098
Total keywords	1363
Papers contributed only by Australia	75

Source: Authors' creation, 2024

Publication trend

Figure 2 depicts the annual publication trend over the last ten years. Although the search period for reviewing Australian contributions to the field of sustainability and governance in the ocean economy was twenty years, starting in 2009, interestingly, the first publications were reported in 2014. However, after 2014, the number of contributions from Australia to the field gradually increased. The highest number of articles were published in the year 2022. The publication trend shows that the scholarly contributions from Australia on the ocean economy's sustainability and governance started a decade ago and have gained burgeoning scholarly attention over the years.

7

Figure 2: Year-wise publication distribution

Source: Authors' creation, 2024

Journal distribution.

The identified articles have been published in 89 journals. Figure 3 shows the distribution of publications among the journals. Frontiers in Marine Sciences is the leading journal, publishing 36 articles, followed by Marine Policy (30) and Ocean and Coastal Management Journals (12). Only 15 journals published at least three articles (Figure 4). At least two articles were published in 28 journals, and the remaining 61 journals published only one article each. Figure 4 depicts the VOSviewer Journal-wise publication network and the collaboration among journals based on citations and articles. The size of the node denotes the frequency of publications, and the links and their thickness show the collaboration and strength among connected journals based on citations (Priyashantha et al., 2023; Priyashantha et al., 2022; Van Eck & Waltman, 2014). Figure 4 shows 15 journals that published at least three articles each and the interrelationship among journals based on publications and their citation count. Figure 3 also corroborates Figure 4's findings. The journal distributions also show that Australian research in this area is still emerging.

8

Figure 3: Journal-wise articles distribution

Source: Authors' creation, 2024

Figure 4: VOSviewer journal distribution network analysis

Source: Authors' creation, 2024

9

Country Collaboration

The country-wise publication analysis shows exciting findings about the contribution from various geographical locations and how countries collaborate and depend on each other for publications and citations (Priyashantha et al., 2023). A VOSviewer map was produced to analyse the country-wise publications by limiting a minimum of 2 documents per country (Figure 5). While the sizes of nodes represent the number of publications, the lines and line thickness represent the collaboration and strength of association among countries. According to Figure 5, all papers under review were produced by Australia (212 articles), of which only 75 articles were produced solely by Australia, whereas 137 papers were produced by collaborating with 80 more countries. While 52 countries collaborated with Australia to produce a minimum of 2 papers each, the significant collaborators for the publications with Australia were the United States (50 articles), United Kingdom (38), and Canada (33), respectively. Table 4 displays the top 10 countries collaborating with Australia to produce papers under review.

Figure 5: Country collaboration for publications

Source: Authors' creation, 2024

10

Table 3: Top 10 countries collaborated with Australia to produce minimum of ten documents

Country	Collaborated articles
Australia	212
United States	50
United Kingdom	38
Canada	33
Germany	18
Malaysia	13
Spain	13
South Africa	13
Norway	12
Kenya	12
Sweden	12
New Zealand	12

Source: Authors' creation, 2024

The most common themes within the publications

This section presents the results to address the third objective of the study. While the third objective is to identify the common themes within the papers, the fourth objective aims to discover the uncommon themes that need more intellectual attention in future research. Hence, keyword occurrences were analysed using VOSviewer bibliometric software, which is extensively used in systematic review studies (Lee et al., 2021; Priyashantha et al., 2023). Accordingly, 'keyword co-occurrence network visualization' was performed to identify the most common themes and 'keyword co-occurrence density visualization' was used to provide insights into themes that are not common within the publications (Priyashantha et al., 2023; Van Eck & Waltman, 2014)

The frequency of keywords and their co-occurrence are used to identify the most common topics in the area under investigation (Priyashantha et al., 2023; Van Eck & Waltman, 2014). A higher co-occurrence denotes highly (commonly) tested keywords under investigation (Priyashantha et al., 2022). When the minimum threshold level of keywords increases, the highly frequent keywords can be identified. A total of 1363 keywords were identified within the reviewed papers, and the keyword distribution with different levels of keyword thresholds is given in Table 4. It shows that while all the keywords were tested at once, only 15 were tested 14 times. The number of keywords at the higher

11

threshold occurrence level denotes more frequent number of keywords within the publications (Priyashantha et al., 2022).

Table 4: Keyword occurrences at different threshold keyword levels

Occurrences	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Number	1363	339	182	117	88	68	54	45	35	29	25	23	20	15

Source: Authors' creation, 2024

Table 5 shows the most frequently occurring 15 keywords within the publications. Since keywords such as 'sustainability', 'blue economy' and 'governance' were included in the initial search terms, they were reported as the most frequently tested keywords within prior research. In addition, Australia has mainly attempted to examine the sustainability and governance issues around small-scale fisheries, environmental protection, climate change and food security.

Table 5: Top 15 Most frequently occurred keywords within the publication.

Keyword	Occurrence
Blue economy	35
Sustainable development	33
Governance approach	30
Sustainability	31
Fisheries	25
Marine environment	23
Climate change	23
Fishery management	21
Australia	22
Sustainable Development Goals	18
Small scale fisheries	15
Environmental Protection	15
Aquaculture	14
Human	14
Food security	13

Source: Authors' creation, 2024

In identifying the most common themes, the VOSviewer keyword co-occurrence network map was generated by limiting the minimum threshold keyword to eight to provide a more robust analysis

12

(Priyashantha et al., 2023). It is shown in Figure 6. Consequently, Figure 6 depicts 45 keywords that co-occurred at least eight times and their interrelationships.

Figure 6: VOSviewer keyword co-occurrence network Visualization

Source: Authors' creation, 2024

The size of the nodes represents the frequency of occurrences, and the thickness of the lines denotes the strength of the relationship among the keywords. The keyword clusters of different colours signify that they all are connected and discuss related topics. (Priyashantha et al., 2023; Van Eck & Waltman, 2014). Figure 5 shows that sustainability and governance in the blue economy are linked by thicker lines, indicating that they are highly related to other facets. According to Figure 5, all 45 keywords have been grouped into four clusters with 609 links and 295 link strengths. Hence, four common themes were identified based on the keyword clusters on sustainability and governance research in the blue economy.

The well-being of small-scale fisheries and food security

The dominant keyword cluster in Figure 5 is shown in red with 14 keywords. As the most traditional and leading ocean industry, many studies have examined the challenges, issues, and potential

13

opportunities in the fishery sector and approaches to securing the rights of small-scale fisheries (small island states) and ensuring seafood security and safety. The keywords included in this cluster are aquaculture, coastal zone, economic growth, economics, fish, fisheries, fishery management, food security, future prospects, Indian Ocean, livelihood, resource development, seafood, and small-scale fisheries. Recently, this sector has been extended to examine offshore aquaculture (mariculture), seafood, seaweed farming, coral reef fisheries and kelp farming. Within the prior studies, they have discussed many different facets of fishery industry and food security to examining challenges to the fisheries sector from competitive forces and decisions of other allied parties (Ayilu, Fabinyi, Barclay, & Bawa, 2023b), governing equitable and fair resources allocation among small scale fisheries specially from developing country perspective (Ayilu, Fabinyi, Barclay, & Bawa, 2023a; Ayilu et al., 2023b), attempts to close the people-policy gap for enhancing equitable mariculture development (Brugere, Troell, & Eriksson, 2021), strengthening coral reef fisheries for their livelihood (Lau, Hicks, Gurney, & Cinner, 2018), the perception of small-scale fishers, their participation and collaboration with other stakeholders (Dwyer & Gill, 2019), the impact of demographic factors on resource access, and gender balance in the sector (Murunga,2021), how to use communication to effectively solve issues in aquaculture (Condie, Alexander, Fulton, Vince, & Haward, 2023), introducing sustainability business models instead of profitability led models addressing multiple objectives (Dembek, York, & Singh, 2018) and the barriers and challenges of effective monitoring and evaluation of activities small-scale fisheries (Komul Kalidin, Mattone, & Sheaves, 2020). In addition, another facet of this cluster has examined the impact of environmental challenges on small-scale livelihoods and possible approaches to mitigate these challenges. For instance, some studies have proposed strategies to mitigate climate impacts (Alleway, Jones, Theuerkauf, & Jones, 2022) and develop climate-smart approaches to combat global Kelp forest loss (Alsuwaiyan et al., 2022). Interestingly, the investigations in this area have also been extended to identify the emerging stewardship challenges for the seafood industry and suggestions to overcome them (Blasiak et al., 2021). Accordingly, the importance of seafood for meeting nutritional needs and related security policies (Farmery et al., 2022; Farmery, White, & Allison, 2021; Harohau, Blythe, Sheaves, & Diedrich, 2020; Link, Watson, Pranovi, & Libralato, 2020), responsible fisheries

14

(Miller & Murray, 2020) seafood access (Phelan, Ross, Adhuri, & Richards, 2023) climate change impact on food security (Hobday, Bell, Cook, Gasalla, & Weng, 2015) were some aspects of focus.

Integrated sustainability-governance approaches for ocean sustainability

The second cluster, shown in green, discusses the adoption of different governance approaches towards sustainable development in the blue economy. It captures the 13 most frequent keywords: Australia, conservation management, decision making, ecosystem services, governance approach, integrated approach, marine ecosystem, marine environment, marine policy, Pacific Ocean, spatial planning, sustainability, and sustainable development, which discuss related topics. The main focus of this cluster is to investigate the approaches aiming towards sustainability in the oceans through different governance approaches such as spatial planning, marine protected areas (Banarsyadhimi, Dargusch, & Kurniawan, 2022; Belgrano et al., 2021), ecosystem services, marine policies, ecosystem conservation actions and stakeholder engagement (Gacutan et al., 2022; Kelly et al., 2020). Marine-protected areas (MPA) are significant tools for conserving and managing ocean ecosystems and biodiversity to gain human well-being (Belgrano et al., 2021). Marine spatial planning (MSP) is also an equitable resource distribution and ocean conservation approach (Gacutan et al., 2022). Stakeholder perceptions and involvement in decision-making relating to marine protected areas, conservation of natural resources and environmental protection are critical aspects that have been examined to design strategic approaches to ensure sustainability in the ocean economy (Kelly, Fleming, Mackay, García, & Pecl, 2020). Strategic ocean governance to balancing social, economic, and environmental considerations through marine special planning was proposed as a system of prioritising strategic objectives (Gacutan, Galparsoro, et al., 2022; Gacutan, Pınarbaşı, et al., 2022). Additionally, achieving SGD 14 in an equitable and just way (Haas, 2023), ecosystem-based fishery management and policies in the Indian Ocean (Karim, Techera, & Arif, 2020) and actions to promote sustainability and governance in Indian Ocean countries (Llewellyn, English, & Barnwell, 2016) were the popular aspects of the discussion.

15

Ocean environment and resource management for equitable, long-term development

Managing ocean and coastal resources and their equitable distribution is vital for a sustainable blue economy. The ten keywords included in the blue cluster are biodiversity, blue economy, conservation, economic growth, equity, marine resource, ocean, ocean governance, and two keywords for sustainable development. The key topics under this theme centred around studies that examined equitable benefit sharing among developing small islands and counties (Louey, 2022a), Zone-based equitable catch distribution on shared resources (Davis et al., 2022), coastal sustainability paradigm for coastal management (Elrick-Barr & Smith, 2022), marine biological observations and conservation management to achieve economic growth (Estes et al., 2021), proposing a framework for sustainable tourism instead of the fishery for environmental and economic benefits (Fabinyi, Gorospe, McClean, & Juinio-Meñez, 2022), eco-friendly strategic approaches such as eco-tourism (Mackay, Minunno, & Morrison, 2020), responsible fisheries securitisation in port areas and dispossession to support small-scale fisheries and coastal communities (Ayilu, 2023) and approaches of moving from business as usual to a future aligned with SDs and the UN decade of ocean science development for SD 2021 (Bax et al., 2022). In addition, it also examined biodiversity challenges in ocean resources management (Herbert-Read et al., 2022), strategic communication and decision-making (Condie et al., 2023), blue economy governance in enabling integration of policies for SD (Benzaken, Voyer, Pouponneau, & Hanich, 2022), and support for the sustainable development of marine resources (Frohlich et al., 2023).

Environmental sustainability

The fourth keyword cluster discusses the environmental issues and governance approaches to promote environmental sustainability in the oceans, as shown in yellow. The nine keywords included in this cluster are article, climate change, conservation of natural resources, coral reef, ecosystem, environmental protection, fishery, and human. However, the main topics under this theme are mainly linked to climate change, environmental protection, and coral reef management with human participation. While coral reef management has gained increased attention in this cluster, prior studies mainly investigated different aspects of coral reef management, such as gender participation in coral reef science (Ahmadia et al., 2021), climate impacts on coral reefs (Anthony et al., 2020), area-based

16

management approach for managing biodiversity outcomes in coral reef areas (Ban et al., 2023), co-management can support to transfer knowledge on coral reef fishing to mitigate social, cultural and economic barriers (Barnes, Mbaru, & Muthiga, 2019), establishing herbivore management areas and refine guidelines for MPA to enhance coral reef sustainability (Chung et al., 2019), solutions for coral reef unsustainability (Cinner et al., 2022; Cumming et al., 2023) and reef-based food systems are used to maintain both the nutrition and environmental outcomes of food systems (Golden et al., 2021). In addition, many other related studies have focused on natural resources conservation and managing climate change impacts, developing and assessing environmental governance and policy frameworks as well as improving ecosystem services, stakeholder participation in effective governance (Fudge, 2018), how ocean governance better accounts for social aspects of fisheries (Cohen et al., 2019), MSP for effective resource management (Lu, Liu, Xiang, Song, & McIlgorm, 2015), cultural ecosystem services to generate intangible economic benefits from tourism (Banarsyadhimi et al., 2022) and assessing marine biodiversity targets (Carr et al., 2020).

Under-researched areas in governance and sustainability in the blue economy

To address the fourth objective of exploring uncommon topics, this study examined the minimally researched keywords using VOSviewer density visualisation network analysis, limiting minimum keywords to seven or below occurrences (Figure 7). As shown in Figure 7, the topics in the red area are extensively researched, and the keywords in the green area show the minimally examined keywords in this area (Van Eck & Waltman, 2014). Ocean literacy and education, emerging ocean industries such as seabed mining, offshore wind farming, mariculture activities such as seaweed farming, kelp restoration, maintaining ecosystem through blue carbon, climate adaptation practices, ocean infrastructure, hazards and pollution control, conflict resolution and risk management, and ocean and ecosystem accounting, stakeholders' (Indigenous people, women, youth) involvement in governance and policy-making as well as sustainability management in the blue economy are keywords that have given least attention in the prior studies. Therefore, future researchers can further explore these uncommon areas to expand the current knowledge and promote sustainability in the blue economy.

17

Figure 7: Figure 6: VOSviewer keyword co-occurrence density visualization

Source: Authors' creation, 2024

DISCUSSION AND FUTURE AGENDA

This paper follows the bibliometric analysis approach to examine the relationship between ocean governance and sustainability in the blue economy and to address the five objectives. The VOSviewer visualisation software was used to perform analysis and derive the findings. Although many researchers have examined governance and sustainability in the blue economy as separate studies, there is a strong connection between governance and sustainability (Figure 6). The governance approaches enable the stakeholders to operate within the ocean and coastal areas and undertake just and equitable operations. Hence, ocean governance is critical for ensuring eco-friendly and social well-being-driven approaches. However, the research in this area has gained attention from Australia since a decade ago, and the publications in this area just started to begin. Hence, there is more room for further publications. Interestingly, Australia contributed to 212 publications comprising 75 sole national contributions and 137 papers collaborating with 80 countries. The leading collaborators are the United States, Canada and the United Kingdom. It reveals that while Australia is a leading contributor in this area, it is working to

18

develop the blue economy with other countries in a wider geographical area. Considering the sources of publications, the Australian contributions to this area have been published in 89 journals. However, the most popular journals to publish the papers were Frontiers in Marine Sciences, Marine Policy and Ocean and Coastal Management Journals. Considering the common themes prior researchers focused on exploring in this area, only four main categories were identified based on the VOSviewer co-occurrence network analysis map (Figure 6). The key themes still focus on the traditional fishery sectors and the barriers and issues related to small-scale fisheries, particularly from developing regions, and less attention has been given to the Australian local findings. While some considerable attention has been given to integrative approaches of linking governance and sustainability for ensuring sustainable development in the oceans through marine protected areas, marine spatial planning, ecosystem services, marine conservation programmes and stakeholder inclusion, it has just scraped the surface of the issues and plenty of room for more in-depth examinations of these aspects and potential other approaches. The third theme has been focused on coastal resource management and equitable development. Still, the blue economy is emerging, and many inequitable practices and unequal distributions of resources are observed, which challenge the sustainability of the blue economy. Hence, Australia attempted to propose policy and governance approaches to promote equitable resource allocation, access and management of shared ocean resources and ensure long-term sustainability in the oceans. Lastly, the prior papers have focused more on environmental than social sustainability by focusing more on climate change, biodiversity, natural resource conservation and management and maintaining ocean ecosystems. While these four themes are extensively discussed in prior studies, there are many more evolving topics in this area for Australia to focus on. These under-researched topics were identified from the VOSviewer co-occurrence density visualisation map (Figure 7). They included but were not limited to ocean literacy, emerging ocean industries, broader stakeholder inclusion, ocean accounting, risk assessment and monitoring and blue financing, blue carbon and integrative policy approaches for sustainability in the blue economy.

19

CONCLUSION AND IMPLICATIONS

Sustainable development in the blue economy is not a straightforward activity. It requires the continuous efforts of many different stakeholders from multiple dimensions to address ocean challenges and developments. Despite ocean governance and sustainability being critical for blue economic development, most prior studies have examined these two aspects in separate studies. Therefore, this paper conducted a bibliometric analysis of prior studies on ocean governance and sustainability, mainly conducted by Australia, to identify and visualize what has been done and what lessons to learn for future researchers. Consequently, country collaborations, journal distribution, most common research themes, and minimally researched areas within the prior research were identified using VOSviewer bibliometric visualisation software. As the last objective, avenues for future research were proposed by highlighting the gaps in the existing literature. This review contributed to the blue economy literature, particularly on sustainability in the blue economy. Also, as the authors are aware, this is the first attempt to map the relationship between governance and sustainability in the blue economy. Moreover, it mainly examined the contributions from Australia, and the findings are very valuable for Australia in developing the blue economy.

LIMITATIONS

This bibliometric review only considered peer-reviewed journal articles published in Scopus and Web of Science databases. Hence, further reviews can be undertaken to examine the governance and sustainability interplay in the blue economy as a more in-depth systematic review, including other sources of publications such as conference papers and book chapters published on other databases such as Science Direct, Emerald, Wily, Sage and Google Scholar that have not been considered in this study.

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26

3. Sustainability and social issues

Mapping sustainability and governance interplay in the blue economy: A bibliometric review of contributions from Australia.

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1

3. Sustainability and social issues

Mapping sustainability and governance interplay in the blue economy: A bibliometric review of contributions from Australia.

ABSTRACT: *The sustainability and governance research regarding the ocean economy are not new. In literature, many studies have investigated governance and sustainability in the ocean economy (recently defined as the blue economy) in separate studies. However, sustainability without governance is not effective for long-term development in the blue economy. Nonetheless, there is no clear consensus on how ocean governance and sustainability are intertwined and support long-term development in the blue economy. Accordingly, this paper performed a systematic literature review to explore the relationship and status quo of the articles published on governance and sustainability in the blue economy, particularly from Australia and offer future research postulates. Being one of the leading contributors to the field, Australia published 212 journal articles in this area between 2014 and 2023, collaborating with 80 other countries. While prior research shows that sustainability and governance are highly related concepts, they created four main research themes to describe common governance and sustainability aspects for sustainable development in the blue economy. While research in this area has gained popularity in the last decade, it is still in its infancy, and the review findings offered exciting insights into extending the current understanding and provided lessons to Australia to develop a more sustainable blue economy.*

Keywords: Australia, blue economy, sustainability, governance, bibliometric review, ocean economy

INTRODUCTION

The oceans are the new frontier for the future world economy (Dwyer & Gill, 2019). Coasts and oceans provide critical resources, livelihoods, ecosystems and socio-cultural values to societies and nations (Alexander et al., 2022; Engen et al., 2021). However, increasing investments in the ocean economy can destroy the health of the ocean and the well-being of society (Miloslavich et al., 2019; Moraes, 2019; Partelow et al., 2020; Rastegar, 2022). For instance, ocean pollution, ocean degradation, ocean acidification, ocean grabbing, unequal distribution of ocean resources, injustice to coastal communities, the poor living status of small-scale fisheries and modern slavery are critical environmental and social challenges ahead to solve (Lee, Noh, Lee, & Khim, 2021; Taylor et al., 2021; van Putten et al., 2021). Hence, ensuring the sustainability of the ocean economy is critical for long-term development (Sarangi, 2022). Ocean economy is defined as all forms of economic development in the oceans (Bennett, 2022, p. 1). However, the blue economy is a recent concept that aims to ensure sustainability in the ocean economy (Voyer & van Leeuwen, 2019). It represents an ocean-based economic model that aims to promote sustainability in oceans without damaging the environment and society (Lee et al., 2021). World Bank defines the "blue economy" as "the sustainable use of ocean

2

resources for economic growth, improved livelihoods, and jobs while preserving the health of the ocean ecosystem" (World Bank, 2017, p.6). Today, the blue economy and ocean economy are interchangeably used in literature, including a range of economic sectors such as fishery, aquaculture, sea bend mining, offshore renewable energy, shipping, and other ocean services (Sarangi, 2020). The blue economy has been initiated to ensure the sustainable development of the ocean economy (Bennett, 2022). However, sustainability in the ocean economy is not a straightforward activity, and an enormous effort must be made to balance economic, environmental, and social impacts and objectives (Lee et al., 2021). In contrast, the sustainability of the ocean economy does not seem isolated from ocean governance and policy frameworks because oceans are critical common resources controlled by local, regional, and global authorities (Voyer, Benzaken, & Rambourg, 2022; Voyer et al., 2021; Voyer, Quirk, McIlgorm, & Azmi, 2018). While ocean governance is an ambiguous and contested concept, it can be defined as 'structures, processes, rules, and norms that determine how people make decisions, share power, exercise responsibility, and ensure accountability in the use and management of marine resources' (Kooiman, 2003; Campbell et al., 2016). As such, ocean governance frameworks are designed to achieve sustainable use of ocean resources and long-term development in the blue economy (Benza, 2020). Hence, the sustainability of oceans cannot be fully ensured without proper governance mechanisms (Kelly et al., 2022). Although ocean governance and sustainable practices are intertwined (Louey, 2022b), many researchers discussed ocean governance and sustainability as separate studies. Hence, there is still no clear consensus on the relationship between governance and sustainability in the blue economy. However, understanding the relationship between ocean governance and sustainability is critical for an enhanced understanding of promoting sustainability in the blue economy.

While a sustainable blue economy is a top priority in local and international agendas, many countries, regions, and international organisations play a crucial role in ensuring the sustainability of the ocean economy through various governance approaches to ensure socio-environmental sustainability. Among all the countries, Australia holds a leading position among vital contributory countries seeking to unlock the economic potential and ensure strong environmental and social sustainability in the ocean economy (Laubenstein et al., 2023). Having the third largest ocean economic

3

zones, the Australian ocean economy consists of well-established industries such as fisheries, oil and gas, marine and coastal tourism, shipping, etc. and also critical emerging industries such as offshore renewable energy, offshore aquaculture, ecosystem services and marine biotechnology (Penesis, & Whittington, 2021). Hence, this paper is positioned as a systematic review of the Australian contributions, particularly to identify the relationship between ocean governance and sustainability in the blue economy. The main objectives of this review are to determine the country's collaboration, journal distribution, common themes and underrepresented themes discussed in the literature and propose future directions to Australia based on the identified gaps for extending literature to promote stronger sustainability in the blue economy.

Interestingly, Australia has performed many reviews in the context of the ocean economy from different aspects, such as Indigenous participation in ocean governance (Lyons, Mynott, & Melbourne-Thomas, 2023), threats and opportunities in the ocean economy (Laubenstein et al., 2023), multi-purpose off-shore facilities in Australia (Aryai et al., 2021) and aquaculture ethics (Cooper et al., 2023). However, the Australian contribution towards the relationship between ocean governance and the sustainability of the blue economy has not been investigated yet. Hence, this review paper provides exciting insights into ocean governance and sustainability literature from an Australian perspective. The data for the review was retrieved from Scopus and Web of Science databases published between 2009 and 2023. Consequently, 212 papers were identified for the final review. Accordingly, a bibliometric analysis approach was adopted with the support of VOSviewer software to address the research objectives. The findings revealed that this area of research is emerging, and prior studies attempted only to scratch the surface and more room for further research for Australia to promote a sustainable blue economy.

The remainder of the paper is organized into five sections. The next section provides a methodology followed by results and analysis. The fourth section discusses the findings, and the last two sections offer the conclusion and limitations of the study.

4

METHODOLOGY

This paper is conducted as a systematic review to achieve study objectives (Brugère, Aguilar-Manjarrez, Beveridge, & Soto, 2019). The PRISMA flow diagram guides the review process (Tranfield, Denyer, & Smart, 2003). Systematic review methodology and the PRISMA approach provide a more objective method to identify eligible records for a comprehensive literature review (Priyashantha, De Alwis, & Welmilla, 2022). According to the PRISMA 2022 flow diagram, the articles are retrieved from the identified databases based on search criteria and screened according to the inclusion and exclusion criteria (Table 1). As per the first step of systematic reviews, articles for the review were identified using keywords (search terms). Since this paper aims to evaluate current knowledge of Australia's efforts on ocean governance and sustainability in the blue economy and uncover the gaps and opportunities, the most appropriate keywords were selected to collect articles using 'blue economy', 'sustainability' and 'governance' terms. The search terms were combined using 'AND' and 'OR' operatives. Scopus and Web of Science were selected in the database section process as they are the most widely used databases for systematic reviews (Lee et al., 2021; Priyashantha, Dahanayake, & Maduwanthi, 2023). In the stage of article identification, both automatic screening function and manual screening were used to screen the records based on inclusion and exclusion criteria by following the PRISMA methodology. The initial search with the keywords yielded 4226 from both databases. This search was automatically filtered based on inclusion and exclusion criteria (Table). Firstly, the search was refined to select only journal articles and received 3051 records. This search was limited to records written only in English and received 2984 records. This search was again filtered to select papers produced only from Australia, and 371 records were obtained. Finally, the search was refined to select papers published between 2009 and 2023 and received 332 records. The automatically screened records were screened manually based on title/abstract/keyword reading. In this stage, 24 duplicates and 36 irrelevant articles were removed. In the next screening level, 26 systematic reviews and 34 tangled papers that did not meet inclusion criteria were removed. Finally, 212 articles were identified to be included in the final review. The PRISMA framework for the entire data collection and selection is shown in Figure 1. The bibliometric analysis method was used to analyse the records using VOSviewer software, which is widely used in systematic reviews. Accordingly, country collaboration, journal-wise

5

article publication, co-occurrence network analysis, and co-occurrence density network analysis were performed to address the research objectives.

Figure 1: PRISMA flow diagram

Source: Authors' construction

Table 1: Articles inclusion criteria

Inclusion criterion	Details
1	Published in Scopus and Web of Science
2	Academic Journal articles
3	In English language
4	Produced by Australia
5	Published between 2009 and 2023
6	Discuss governance and sustainability in the blue economy

Source: Authors' construction

6

RESULTS AND ANALYSIS

General article characteristics

This section provides general features of the articles under review. Australia published 212 articles in 89 journals between 2014 and 2023, collaborating with 80 other countries. Table 2 summarizes the main features of the papers under review. The total citations and references for the articles were 4542 and 17098, respectively. The average number of annual publications was 21.2, and the average number of citations per article was 21.42.

Table 2: General attributes of the reviewed articles

Description	Results
Time period	2014:2023
Documents (articles)	212
Journals (Sources)	89
Number of collaborative countries with Australia	80
Total citations	4542
Average documents per year	21.2
Average citation per document	21.42
References	17098
Total keywords	1363
Papers contributed only by Australia	75

Source: Authors' creation, 2024

Publication trend

Figure 2 depicts the annual publication trend over the last ten years. Although the search period for reviewing Australian contributions to the field of sustainability and governance in the ocean economy was twenty years, starting in 2009, interestingly, the first publications were reported in 2014. However, after 2014, the number of contributions from Australia to the field gradually increased. The highest number of articles were published in the year 2022. The publication trend shows that the scholarly contributions from Australia on the ocean economy's sustainability and governance started a decade ago and have gained burgeoning scholarly attention over the years.

7

Figure 2: Year-wise publication distribution

Year-wise publication trend

Source: Authors' creation, 2024

Journal distribution.

The identified articles have been published in 89 journals. Figure 3 shows the distribution of publications among the journals. Frontiers in Marine Sciences is the leading journal, publishing 36 articles, followed by Marine Policy (30) and Ocean and Coastal Management Journals (12). Only 15 journals published at least three articles (Figure 4). At least two articles were published in 28 journals, and the remaining 61 journals published only one article each. Figure 4 depicts the VOSviewer Journal-wise publication network and the collaboration among journals based on citations and articles. The size of the node denotes the frequency of publications, and the links and their thickness show the collaboration and strength among connected journals based on citations (Priyashantha et al., 2023; Priyashantha et al., 2022; Van Eck & Waltman, 2014). Figure 4 shows 15 journals that published at least three articles each and the interrelationship among journals based on publications and their citation count. Figure 3 also corroborates Figure 4's findings. The journal distributions also show that Australian research in this area is still emerging.

8

Figure 3: Journal-wise articles distribution

Journal-wise publication

Source: Authors' creation, 2024

Figure 4: VOSviewer journal distribution network analysis

Source: Authors' creation, 2024

9

Country Collaboration

The country-wise publication analysis shows exciting findings about the contribution from various geographical locations and how countries collaborate and depend on each other for publications and citations (Priyashantha et al., 2023). A VOSviewer map was produced to analyse the country-wise publications by limiting a minimum of 2 documents per country (Figure 5). While the sizes of nodes represent the number of publications, the lines and line thickness represent the collaboration and strength of association among countries. According to Figure 5, all papers under review were produced by Australia (212 articles), of which only 75 articles were produced solely by Australia, whereas 137 papers were produced by collaborating with 80 more countries. While 52 countries collaborated with Australia to produce a minimum of 2 papers each, the significant collaborators for the publications with Australia were the United States (50 articles), United Kingdom (38), and Canada (33), respectively. Table 4 displays the top 10 countries collaborating with Australia to produce papers under review.

Figure 5: Country collaboration for publications

Source: Authors' creation, 2024

10

Table 3: Top 10 countries collaborated with Australia to produce minimum of ten documents

Country	Collaborated articles
Australia	212
United States	50
United Kingdom	38
Canada	33
Germany	18
Malaysia	13
Spain	13
South Africa	13
Norway	12
Kenya	12
Sweden	12
New Zealand	12

Source: Authors' creation, 2024

The most common themes within the publications

This section presents the results to address the third objective of the study. While the third objective is to identify the common themes within the papers, the fourth objective aims to discover the uncommon themes that need more intellectual attention in future research. Hence, keyword occurrences were analysed using VOSviewer bibliometric software, which is extensively used in systematic review studies (Lee et al., 2021; Priyashantha et al., 2023). Accordingly, 'keyword co-occurrence network visualization' was performed to identify the most common themes and 'keyword co-occurrence density visualization' was used to provide insights into themes that are not common within the publications (Priyashantha et al., 2023; Van Eck & Waltman, 2014)

The frequency of keywords and their co-occurrence are used to identify the most common topics in the area under investigation (Priyashantha et al., 2023; Van Eck & Waltman, 2014). A higher co-occurrence denotes highly (commonly) tested keywords under investigation (Priyashantha et al., 2022). When the minimum threshold level of keywords increases, the highly frequent keywords can be identified. A total of 1363 keywords were identified within the reviewed papers, and the keyword distribution with different levels of keyword thresholds is given in Table 4. It shows that while all the keywords were tested at once, only 15 were tested 14 times. The number of keywords at the higher

11

threshold occurrence level denotes more frequent number of keywords within the publications (Priyashantha et al., 2022).

Table 4: Keyword occurrences at different threshold keyword levels

Occurrences	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Number	1363	339	182	117	88	68	54	45	35	29	25	23	20	15

Source: Authors' creation, 2024

Table 5 shows the most frequently occurring 15 keywords within the publications. Since keywords such as 'sustainability', 'blue economy' and 'governance' were included in the initial search terms, they were reported as the most frequently tested keywords within prior research. In addition, Australia has mainly attempted to examine the sustainability and governance issues around small-scale fisheries, environmental protection, climate change and food security.

Table 5: Top 15 Most frequently occurred keywords within the publication.

Keyword	Occurrence
Blue economy	35
Sustainable development	33
Governance approach	30
Sustainability	31
Fisheries	25
Marine environment	23
Climate change	23
Fishery management	21
Australia	22
Sustainable Development Goals	18
Small scale fisheries	15
Environmental Protection	15
Aquaculture	14
Human	14
Food security	13

Source: Authors' creation, 2024

In identifying the most common themes, the VOSviewer keyword co-occurrence network map was generated by limiting the minimum threshold keyword to eight to provide a more robust analysis

12

(Priyashantha et al., 2023). It is shown in Figure 6. Consequently, Figure 6 depicts 45 keywords that co-occurred at least eight times and their interrelationships.

Figure 6: VOSviewer keyword co-occurrence network Visualization

Source: Authors' creation, 2024

The size of the nodes represents the frequency of occurrences, and the thickness of the lines denotes the strength of the relationship among the keywords. The keyword clusters of different colours signify that they all are connected and discuss related topics. (Priyashantha et al., 2023; Van Eck & Waltman, 2014). Figure 5 shows that sustainability and governance in the blue economy are linked by thicker lines, indicating that they are highly related to other facets. According to Figure 5, all 45 keywords have been grouped into four clusters with 609 links and 295 link strengths. Hence, four common themes were identified based on the keyword clusters on sustainability and governance research in the blue economy.

The well-being of small-scale fisheries and food security

The dominant keyword cluster in Figure 5 is shown in red with 14 keywords. As the most traditional and leading ocean industry, many studies have examined the challenges, issues, and potential

13

opportunities in the fishery sector and approaches to securing the rights of small-scale fisheries (small island states) and ensuring seafood security and safety. The keywords included in this cluster are aquaculture, coastal zone, economic growth, economics, fish, fisheries, fishery management, food security, future prospects, Indian Ocean, livelihood, resource development, seafood, and small-scale fisheries. Recently, this sector has been extended to examine offshore aquaculture (mariculture), seafood, seaweed farming, coral reef fisheries and kelp farming. Within the prior studies, they have discussed many different facets of fishery industry and food security to examining challenges to the fisheries sector from competitive forces and decisions of other allied parties (Ayilu, Fabinyi, Barclay, & Bawa, 2023b), governing equitable and fair resources allocation among small scale fisheries specially from developing country perspective (Ayilu, Fabinyi, Barclay, & Bawa, 2023a; Ayilu et al., 2023b), attempts to close the people-policy gap for enhancing equitable mariculture development (Brugere, Troell, & Eriksson, 2021), strengthening coral reef fisheries for their livelihood (Lau, Hicks, Gurney, & Cinner, 2018), the perception of small-scale fishers, their participation and collaboration with other stakeholders (Dwyer & Gill, 2019), the impact of demographic factors on resource access, and gender balance in the sector (Murunga,2021), how to use communication to effectively solve issues in aquaculture (Condie, Alexander, Fulton, Vince, & Haward, 2023), introducing sustainability business models instead of profitability led models addressing multiple objectives (Dembek, York, & Singh, 2018) and the barriers and challenges of effective monitoring and evaluation of activities small-scale fisheries (Komul Kalidin, Mattone, & Sheaves, 2020). In addition, another facet of this cluster has examined the impact of environmental challenges on small-scale livelihoods and possible approaches to mitigate these challenges. For instance, some studies have proposed strategies to mitigate climate impacts (Alleway, Jones, Theuerkauf, & Jones, 2022) and develop climate-smart approaches to combat global Kelp forest loss (Alsuwaiyan et al., 2022). Interestingly, the investigations in this area have also been extended to identify the emerging stewardship challenges for the seafood industry and suggestions to overcome them (Blasiak et al., 2021). Accordingly, the importance of seafood for meeting nutritional needs and related security policies (Farmery et al., 2022; Farmery, White, & Allison, 2021; Harohau, Blythe, Sheaves, & Diedrich, 2020; Link, Watson, Pranovi, & Libralato, 2020), responsible fisheries

14

(Miller & Murray, 2020) seafood access (Phelan, Ross, Adhuri, & Richards, 2023) climate change impact on food security (Hobday, Bell, Cook, Gasalla, & Weng, 2015) were some aspects of focus.

Integrated sustainability-governance approaches for ocean sustainability

The second cluster, shown in green, discusses the adoption of different governance approaches towards sustainable development in the blue economy. It captures the 13 most frequent keywords: Australia, conservation management, decision making, ecosystem services, governance approach, integrated approach, marine ecosystem, marine environment, marine policy, Pacific Ocean, spatial planning, sustainability, and sustainable development, which discuss related topics. The main focus of this cluster is to investigate the approaches aiming towards sustainability in the oceans through different governance approaches such as spatial planning, marine protected areas (Banarsyadhimi, Dargusch, & Kurniawan, 2022; Belgrano et al., 2021), ecosystem services, marine policies, ecosystem conservation actions and stakeholder engagement (Gacutan et al., 2022; Kelly et al., 2020). Marine-protected areas (MPA) are significant tools for conserving and managing ocean ecosystems and biodiversity to gain human well-being (Belgrano et al., 2021). Marine spatial planning (MSP) is also an equitable resource distribution and ocean conservation approach (Gacutan et al., 2022). Stakeholder perceptions and involvement in decision-making relating to marine protected areas, conservation of natural resources and environmental protection are critical aspects that have been examined to design strategic approaches to ensure sustainability in the ocean economy (Kelly, Fleming, Mackay, García, & Pecl, 2020). Strategic ocean governance to balancing social, economic, and environmental considerations through marine special planning was proposed as a system of prioritising strategic objectives (Gacutan, Galparsoro, et al., 2022; Gacutan, Pınarbaşı, et al., 2022). Additionally, achieving SGD 14 in an equitable and just way (Haas, 2023), ecosystem-based fishery management and policies in the Indian Ocean (Karim, Techera, & Arif, 2020) and actions to promote sustainability and governance in Indian Ocean countries (Llewellyn, English, & Barnwell, 2016) were the popular aspects of the discussion.

15

Ocean environment and resource management for equitable, long-term development

Managing ocean and coastal resources and their equitable distribution is vital for a sustainable blue economy. The ten keywords included in the blue cluster are biodiversity, blue economy, conservation, economic growth, equity, marine resource, ocean, ocean governance, and two keywords for sustainable development. The key topics under this theme centred around studies that examined equitable benefit sharing among developing small islands and counties (Louey, 2022a), Zone-based equitable catch distribution on shared resources (Davis et al., 2022), coastal sustainability paradigm for coastal management (Elrick-Barr & Smith, 2022), marine biological observations and conservation management to achieve economic growth (Estes et al., 2021), proposing a framework for sustainable tourism instead of the fishery for environmental and economic benefits (Fabinyi, Gorospe, McClean, & Juinio-Meñez, 2022), eco-friendly strategic approaches such as eco-tourism (Mackay, Minunno, & Morrison, 2020), responsible fisheries securitisation in port areas and dispossession to support small-scale fisheries and coastal communities (Ayilu, 2023) and approaches of moving from business as usual to a future aligned with SDs and the UN decade of ocean science development for SD 2021 (Bax et al., 2022). In addition, it also examined biodiversity challenges in ocean resources management (Herbert-Read et al., 2022), strategic communication and decision-making (Condie et al., 2023), blue economy governance in enabling integration of policies for SD (Benzaken, Voyer, Pouponneau, & Hanich, 2022), and support for the sustainable development of marine resources (Frohlich et al., 2023).

Environmental sustainability

The fourth keyword cluster discusses the environmental issues and governance approaches to promote environmental sustainability in the oceans, as shown in yellow. The nine keywords included in this cluster are article, climate change, conservation of natural resources, coral reef, ecosystem, environmental protection, fishery, and human. However, the main topics under this theme are mainly linked to climate change, environmental protection, and coral reef management with human participation. While coral reef management has gained increased attention in this cluster, prior studies mainly investigated different aspects of coral reef management, such as gender participation in coral reef science (Ahmadia et al., 2021), climate impacts on coral reefs (Anthony et al., 2020), area-based

16

management approach for managing biodiversity outcomes in coral reef areas (Ban et al., 2023), co-management can support to transfer knowledge on coral reef fishing to mitigate social, cultural and economic barriers (Barnes, Mbaru, & Muthiga, 2019), establishing herbivore management areas and refine guidelines for MPA to enhance coral reef sustainability (Chung et al., 2019), solutions for coral reef unsustainability (Cinner et al., 2022; Cumming et al., 2023) and reef-based food systems are used to maintain both the nutrition and environmental outcomes of food systems (Golden et al., 2021). In addition, many other related studies have focused on natural resources conservation and managing climate change impacts, developing and assessing environmental governance and policy frameworks as well as improving ecosystem services, stakeholder participation in effective governance (Fudge, 2018), how ocean governance better accounts for social aspects of fisheries (Cohen et al., 2019), MSP for effective resource management (Lu, Liu, Xiang, Song, & McIlgorm, 2015), cultural ecosystem services to generate intangible economic benefits from tourism (Banarsyadhimi et al., 2022) and assessing marine biodiversity targets (Carr et al., 2020).

Under-researched areas in governance and sustainability in the blue economy

To address the fourth objective of exploring uncommon topics, this study examined the minimally researched keywords using VOSviewer density visualisation network analysis, limiting minimum keywords to seven or below occurrences (Figure 7). As shown in Figure 7, the topics in the red area are extensively researched, and the keywords in the green area show the minimally examined keywords in this area (Van Eck & Waltman, 2014). Ocean literacy and education, emerging ocean industries such as seabed mining, offshore wind farming, mariculture activities such as seaweed farming, kelp restoration, maintaining ecosystem through blue carbon, climate adaptation practices, ocean infrastructure, hazards and pollution control, conflict resolution and risk management, and ocean and ecosystem accounting, stakeholders' (Indigenous people, women, youth) involvement in governance and policy-making as well as sustainability management in the blue economy are keywords that have given least attention in the prior studies. Therefore, future researchers can further explore these uncommon areas to expand the current knowledge and promote sustainability in the blue economy.

17

Figure 7: Figure 6: VOSviewer keyword co-occurrence density visualization

Source: Authors' creation, 2024

DISCUSSION AND FUTURE AGENDA

This paper follows the bibliometric analysis approach to examine the relationship between ocean governance and sustainability in the blue economy and to address the five objectives. The VOSviewer visualisation software was used to perform analysis and derive the findings. Although many researchers have examined governance and sustainability in the blue economy as separate studies, there is a strong connection between governance and sustainability (Figure 6). The governance approaches enable the stakeholders to operate within the ocean and coastal areas and undertake just and equitable operations. Hence, ocean governance is critical for ensuring eco-friendly and social well-being-driven approaches. However, the research in this area has gained attention from Australia since a decade ago, and the publications in this area just started to begin. Hence, there is more room for further publications. Interestingly, Australia contributed to 212 publications comprising 75 sole national contributions and 137 papers collaborating with 80 countries. The leading collaborators are the United States, Canada and the United Kingdom. It reveals that while Australia is a leading contributor in this area, it is working to

18

develop the blue economy with other countries in a wider geographical area. Considering the sources of publications, the Australian contributions to this area have been published in 89 journals. However, the most popular journals to publish the papers were Frontiers in Marine Sciences, Marine Policy and Ocean and Coastal Management Journals. Considering the common themes prior researchers focused on exploring in this area, only four main categories were identified based on the VOSviewer co-occurrence network analysis map (Figure 6). The key themes still focus on the traditional fishery sectors and the barriers and issues related to small-scale fisheries, particularly from developing regions, and less attention has been given to the Australian local findings. While some considerable attention has been given to integrative approaches of linking governance and sustainability for ensuring sustainable development in the oceans through marine protected areas, marine spatial planning, ecosystem services, marine conservation programmes and stakeholder inclusion, it has just scraped the surface of the issues and plenty of room for more in-depth examinations of these aspects and potential other approaches. The third theme has been focused on coastal resource management and equitable development. Still, the blue economy is emerging, and many inequitable practices and unequal distributions of resources are observed, which challenge the sustainability of the blue economy. Hence, Australia attempted to propose policy and governance approaches to promote equitable resource allocation, access and management of shared ocean resources and ensure long-term sustainability in the oceans. Lastly, the prior papers have focused more on environmental than social sustainability by focusing more on climate change, biodiversity, natural resource conservation and management and maintaining ocean ecosystems. While these four themes are extensively discussed in prior studies, there are many more evolving topics in this area for Australia to focus on. These under-researched topics were identified from the VOSviewer co-occurrence density visualisation map (Figure 7). They included but were not limited to ocean literacy, emerging ocean industries, broader stakeholder inclusion, ocean accounting, risk assessment and monitoring and blue financing, blue carbon and integrative policy approaches for sustainability in the blue economy.

19

CONCLUSION AND IMPLICATIONS

Sustainable development in the blue economy is not a straightforward activity. It requires the continuous efforts of many different stakeholders from multiple dimensions to address ocean challenges and developments. Despite ocean governance and sustainability being critical for blue economic development, most prior studies have examined these two aspects in separate studies. Therefore, this paper conducted a bibliometric analysis of prior studies on ocean governance and sustainability, mainly conducted by Australia, to identify and visualize what has been done and what lessons to learn for future researchers. Consequently, country collaborations, journal distribution, most common research themes, and minimally researched areas within the prior research were identified using VOSviewer bibliometric visualisation software. As the last objective, avenues for future research were proposed by highlighting the gaps in the existing literature. This review contributed to the blue economy literature, particularly on sustainability in the blue economy. Also, as the authors are aware, this is the first attempt to map the relationship between governance and sustainability in the blue economy. Moreover, it mainly examined the contributions from Australia, and the findings are very valuable for Australia in developing the blue economy.

LIMITATIONS

This bibliometric review only considered peer-reviewed journal articles published in Scopus and Web of Science databases. Hence, further reviews can be undertaken to examine the governance and sustainability interplay in the blue economy as a more in-depth systematic review, including other sources of publications such as conference papers and book chapters published on other databases such as Science Direct, Emerald, Wily, Sage and Google Scholar that have not been considered in this study.

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20

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26

Conceptualizing an Innovative Supply Chain Model for Electronic Vehicles

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Conceptualizing an Innovative Supply Chain Model for Electronic Vehicles

ABSTRACT: *This study explores the innovative potential of blockchain technology in revolutionizing the supply chain of Electronic Vehicles (EVs). As the automotive industry undergoes a significant transformation towards electrification and intelligent systems, blockchain emerges as a promising solution to address challenges in data management, security, and supply chain efficiency. The paper presents a conceptual framework for integrating blockchain into various aspects of the EV supply chain, including research and development (R&D), production, sales, and services. By leveraging blockchain's key features such as decentralization, immutability, and transparency, the proposed model aims to enhance information sharing, streamline processes, and improve overall supply chain performance. The study analyzes current applications of blockchain in the automotive industry and outlines potential benefits and challenges in its widespread adoption.*

Keywords: Electronic Vehicles, supply chain, blockchain technology

1. Introduction

Electronic Vehicles (EVs) have emerged as a focal point in the global automotive industry's transformation, upgrading, and green development initiatives, garnering significant attention from both industry and academia in recent years (Sivaramkrishnan et al., 2023). The intelligent evolution of EVs is poised to enhance urban traffic efficiency, improve driver safety, and elevate the overall driving experience (Bucsan et al., 2017). Beyond their eco-friendly attributes, EVs, when integrated with intelligent transportation systems, offer effective solutions to urban traffic congestion while providing enhanced safety assurances for drivers and pedestrians alike (Nie & Farzaneh, 2021).

Concurrently, as the automotive industry undergoes a substantial transformation, data has become a pivotal driver of rapid industrial change (Zhou et al., 2022). The advent of the data era presents novel challenges for automotive data management technologies (Luckow et al., 2015). Critical issues that require urgent attention include mitigating security risks through advanced data management techniques, realizing deep value extraction through innovative data applications, and achieving comprehensive data integration across various domains through resource sharing (Bitomsky et al., 2020).

Blockchain technology, characterized by its distributed data storage architecture with multiple administrators, immutability, trustlessness, and anonymity, presents a promising alternative to traditional data management approaches (Fraga-Lamas & Fernández-Caramés, 2019). In contrast to conventional systems where data access is controlled by a limited number of administrators, blockchain technology offers advantages in addressing issues of data security, sharing, and integration (Kang et al., 2019).

Recent years have witnessed a surge in research on blockchain applications within the automotive industry. Prominent global automotive manufacturers have been actively engaging in this domain through collaborations with blockchain enterprises and consulting firms, investments in blockchain startups, and promotion of blockchain consortium formation (Li et al., 2023).

As early as March 2016, Toyota joined the R3 alliance, utilizing blockchain technology to track automotive components (Notheisen et al., 2017). In May 2018, over thirty global founding members, including BMW, Ford, General Motors, Renault, Bosch, and Volvo, jointly established a large-scale blockchain consortium - the Mobility Open Blockchain Initiative (MOBI) - aimed at exploring the potential applications of blockchain technology in the automotive and mobility sectors (Powell et al., 2021). In April 2019, Toyota established a blockchain laboratory, integrating blockchain technology into its identity verification processes.

However, in comparison to the aforementioned conventional vehicles, EVs present a significantly different system design. Consequently, the introduction of blockchain mechanisms in EVs brings about new challenges in supply chain architecture. First of all, EVs, as transportation tools primarily powered by electric motors, have a more dispersed distribution of components such as motors, batteries, and electronic controls compared to traditional fuel vehicles (Nepomnyashchiy et al., 2018). Different industries may experience disconnects in product capacity, design, and transportation due to varying customer demands. Secondly, compared to the traditional fuel vehicle industry, the three core technologies of electric vehicles - batteries, electronic controls, and motors - have a shorter development history and less development experience. Coupled with the globalization of raw material procurement and production, this increases the risk of supply chain disruptions and affects the inventory strategies of various supply chain participants (Seles et al., 2016). Thirdly, from raw materials to complete vehicle delivery, EVs involve multiple nodal enterprises and a wider chain span. The fluctuations in one node have a greater impact on the next, potentially exacerbating the bullwhip effect in the supply chain (Dolgui et al., 2018).

In this context, this paper proposes a conceptual business model for the EV supply chain within a blockchain framework, leveraging blockchain technology's capabilities for decentralized information storage and ensuring the authenticity of information during transmission. Simultaneously, with the continuous maturation and development of autonomous driving technology, intelligent vehicles are poised to become the primary direction for the EV industry's development. Consequently, from an upstream supply chain perspective, EVs require not only the traditional lithium and copper ore raw materials and component supplies of conventional vehicles but also the additional support of integrated intelligent software systems. In the midstream supply chain, EVs incorporate the research and production of autonomous driving cabins and the design of autonomous driving solutions. Downstream in the supply

chain, complementary to EVs consumption are travel services and third-party software application support. These aforementioned components of the EV supply chain, which differ from those of traditional vehicles, constitute the primary links and foundation for realizing a EV supply chain within the blockchain framework.

2. The EV Supply Chain

EVs are recommended by automobile manufacturers and research institutions as one of the primary solutions to gradually replace traditional vehicles, particularly in urban centers (Ghosh, 2020). In recent years, vehicle exhaust emissions have accounted for an increasing proportion of global emissions affecting climate change (Kim et al., 2021). Hybrid and pure electric vehicles can significantly reduce dependence on non-renewable mineral fuels such as gasoline and diesel, thereby contributing to a more environmentally friendly and cleaner environment (Ou et al., 2021).

The emerging EV market is creating opportunities for small and medium-sized enterprises (SMEs) in the global electric vehicle supply chain (Bierau et al., 2016). This is particularly evident as electric mobility necessitates new technologies, services, and business models, thereby altering traditional automotive supply chain patterns and opening doors for new participants (Davies et al., 2022). However, to successfully transition to an alternative, environmentally less harmful transportation system, supply chain challenges must be addressed. These include establishing a comprehensive network of electric vehicle charging stations to meet the power demands of the entire economy, including regional and national electric vehicle operations under operational and environmental constraints (Naor et al., 2021).

During the rapid development of EVs, environmental factors have a significant impact on sales volumes. Additionally, consumers' lack of understanding or wait-and-see attitude towards EV technology, performance, and charging convenience introduces uncertainties to the external environment, posing risks to the supply chain system. The supply chain system connects various cross-node enterprises, forming a complex, interlinked system where uncertainty at any cross-node can affect the normal operation of the entire supply chain.

3. Innovative Potential of Blockchain Technology in the Industry

The automotive industry, as a core sector driving economic development in numerous urban centers, continually explores innovative technologies (Sharma et al., 2019). Following the integration of new energy and autonomous driving technologies, blockchain has emerged as another catalyst for digital transformation and upgrading in the automotive sector (Alhajjaj et al., 2023). As a novel data structure

organization, blockchain technology has seen rapid proliferation and application in areas such as internet finance, industrial model innovation, data information sharing, and security.

Compared to traditional database systems with single-entity data management models, blockchain enables multi-entity collaborative data management. This not only addresses information trust issues but also facilitates information sharing and incentivization, thereby enhancing data management efficiency. In essence, blockchain technology, based on multi-entity collaborative management and maintenance models, is a distributed ledger technology that ensures data security, stability, and credibility (Liao et al., 2022). It can be characterized as a new application technology integrating various computer technologies including distributed storage, peer-to-peer transmission, information encryption, and credit consensus mechanisms related to data (Mezquita et al., 2022). Currently, there are three main types of blockchains: public, private, and consortium chains.
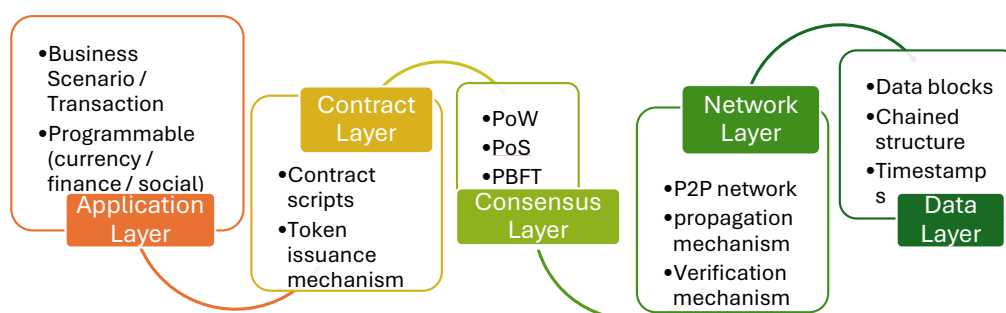
Figure 1. Blockchain System Model

The general data architecture model of blockchain technology can be divided into five layers: data layer, network layer, consensus layer, contract layer, and application layer. Each layer records specific information, and the relationships between layers are illustrated in Figure 1. The data layer stores transaction information and data; the network layer implements decentralization through peer-to-peer transmission mechanisms, with supply chain participants acting as blockchain nodes in the network, receiving rewards for successfully uploading transaction information; the consensus layer includes

agreed-upon consensus mechanisms, which are core to blockchain, ensuring data consistency and secure updates of network data states; the contract layer aims to implement decentralized application functionalities through code writing; and the application layer provides a visual interface for users to interact with the blockchain system.

4. Innovative Pathways for EV Supply Chain Systems Based on Blockchain Architecture

Based on blockchain technology, an EV supply chain under blockchain architecture is constructed as illustrated in Figure 2.
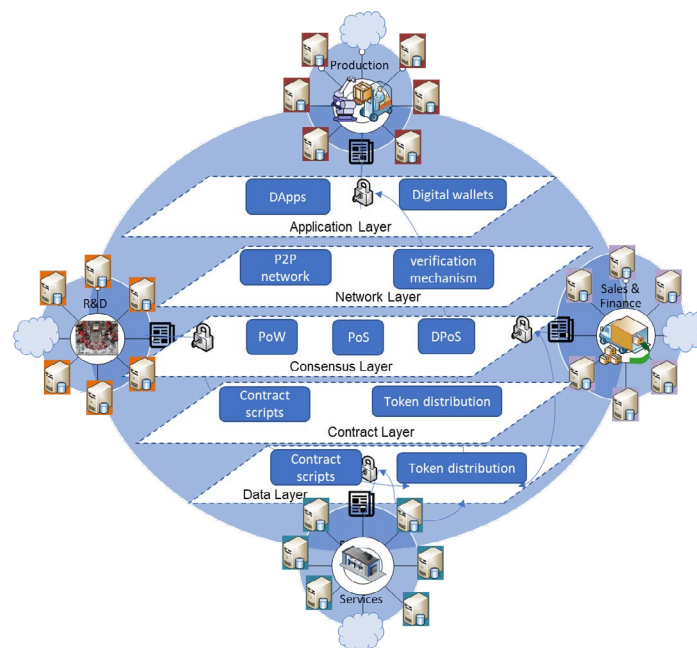
Figure 2. A Conceptual Model of EVs Supply Chain under a Blockchain Framework

4.1 The Conceptual Business Model Component for EVs R&D Under Blockchain Architecture

The business model component for EVs R&D under blockchain architecture primarily manifests in two aspects. Firstly, it leverages the blockchain platform to share, store, and record vehicle operation information during the R&D process. This facilitates the analysis of potential deficiencies or defects in vehicle use and management, leading to updates and improvements in vehicle design. Through the blockchain platform, block nodes (i.e., vehicle owners) can upload and share real-time data on vehicle appearance, technology, and driving records, supporting innovative automotive R&D. Simultaneously, block nodes can receive incentives for sharing high-quality information. Secondly, the blockchain platform assists in protecting automotive R&D patents. Blockchain technology enables free registration of

automotive industry R&D patents while perfectly resolving issues of patent technology property rights maintenance.

4.2 Conceptual Business Model Component for EVs Production Under Blockchain Architecture

The automotive manufacturing and production phase requires comprehensive attention to auto parts supply, product logistics, and warehousing. The coordinated management of information from various parties in the automotive supply chain is crucial to the quality of auto parts and vehicle performance excellence. Blockchain-based automotive manufacturing can achieve optimized dynamic management of the supply chain manufacturing process, offering an optimal solution to many production challenges in the automotive industry.

Blockchain technology addresses persistent issues in traditional automotive production management, such as substandard component quality and the use of inferior parts. All automotive production-related enterprises can utilize the blockchain platform to obtain relevant information on product usage. Through the analysis and organization of this information, they can formulate more rational production and procurement plans, achieving production coordination between different automotive companies and parts suppliers, thereby improving overall production efficiency.

4.3 The Conceptual Business Model Component for EVs Sales Under Blockchain Architecture

Automotive companies can establish a supply chain logistics management platform using blockchain technology. This platform can include intelligent warehousing, logistics, and financial systems for the automotive industry, realizing systematic management of product flow, logistics, and capital flow in automotive production and sales, promoting efficient and intelligent operation of the automotive industry supply chain.

Blockchain technology also enables efficient financial management of automotive sales. Compared to traditional automotive sales financial management, the new energy vehicle sales model under blockchain architecture can significantly shorten the processing cycle of import-export sales lists, letters of credit, and bank-related documents, based on rapid information collection and accurate sharing characteristics.

4.4 The Conceptual Business Model Component for EVs Services Under Blockchain Architecture

The EV service business model under blockchain architecture primarily encompasses four aspects: vehicle transactions, vehicle management, vehicle safety, and data information management. This

innovative approach leverages blockchain technology to enhance various facets of EV services, offering significant improvements over traditional models.

Moreover, the integration of blockchain technology into EV services presents a paradigm shift in how these services are delivered, managed, and secured. By addressing key challenges in transaction efficiency, data management, and vehicle security, this model paves the way for a more robust, transparent, and user-centric EV service ecosystem. Future research should focus on the practical implementation challenges and the scalability of these blockchain-based solutions in real-world EV service environments

5. Conclusions

This study presents an analysis of the application and research exploration of blockchain technology in the EV industry by global automotive companies and researchers. The core concepts and technical characteristics of blockchain technology have been summarized, and, through a comprehensive examination of the automotive supply chain structure, demonstrated the vast potential for business model innovation in the EV supply chain under a blockchain architecture.

Although the application of blockchain technology in the automotive industry is still in its nascent stages, numerous innovative models, products, and platforms with significant application value and broad prospects have already emerged. However, due to the limitations imposed by the relative immaturity of blockchain technology and the relatively short development history of EVs, a complete, systematized business model based on the supply chain has not yet been fully realized for the EV industry under a blockchain framework.

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9

Managerial Coaching and Readiness for Change

Grace McCarthy, Sonia Bird and Julia Milner

This study explores the relationship between managerial coaching and readiness for change and on how employee engagement mediates this relationship. Employees from all states and territories across Australia (N= 503) who reported to a manager and had experienced significant organisational change within the past 12 months participated in an online survey. Our results show that managerial coaching enhances readiness for change. Employee engagement partially mediates the positive relationship between employees' perceptions of managerial coaching and their readiness for organisational change. The practical implication, given the increased frequency of change in today's complex world, is that organisations should support leaders to foster coaching as a leadership approach with their team as this can increase readiness for change.

10

Dynamic Process of Entrepreneurship, Global Trade and National Economic Growth

Kai Du

Entrepreneurship exhibits diversity in its form, and it is increasingly necessary to examine what forms of entrepreneurship matter and in what contexts. Using the quantile regression model, this paper focuses on the interactions between new product and export entrepreneurship and the contextual settings for entrepreneurship to examine the relationship to productivity growth. Our analysis suggests that new product entrepreneurship enhances the productivity performance of less developed countries, while export entrepreneurship increases the productivity of more developed economies. We then discuss the implications of the findings for entrepreneurship policy, particularly how multilevel dynamic processes influence entrepreneurship, and the productivity growth of nations.

12

The Effect of Heterogeneous Ownership on Firm Performance in Nascent Fields

Sihong Lu, Di Fan and Timothy Bartram

To what extent the variation in firm performance can be attributed to the heterogeneity of shareholders as primary stakeholders in nascent fields? While strategic research highlights precise causal relationships between stakeholders and firm performance, scholars give less consideration to their comparative significance in a nascent field. Through variance decomposition of the financial performance of 480 publicly listed firms in China's electric vehicle sector, our results show that the effects of managerial and institutional ownership are significant. Contrary to prevailing arguments that highlight the significance of state ownership, our find that state ownership has a limited contribution to the financial performance in this nascent field. These results highlight the importance of ownership's role in shaping various performance in nascent fields.

14

Absorptive capacity and organizational resilience as antecedents for organizational innovation capability to adopt Cobots in manufacturing: A conceptual framework

Nisar Ahmed Channa, Greg Hearn and Gian Luca Casali

Prior studies have separately highlighted the importance of absorptive capacity and organizational resilience in producing desirable organizational outcomes by enhancing organizational performance and developing competitive advantage. However, there is lack of research on how these twin mechanisms affect the innovation capability of organizations. To fill these theoretical gaps, we adopted a conceptual theory building approach and developed a conceptual framework proposing a mechanism through which organizations can develop innovation capability by building both absorptive capacity and organizational resilience. The components and subcomponents which form the basis for organizational absorptive capacity, organizational resilience, and organizational innovation capability were identified from prior studies. The proposed conceptual framework has practical and timely implications for organizations in general and for manufacturing organizations in particular, because it emphasizes the importance of building both absorptive capacity and organizational resilience in developing a strong innovation capability. Without this capability, organizations will struggle to adopt Cobots and related technologies such as AI.

16

AI-Powered Smart Cities for Children with Autism: Perspectives from Parents

Arshia Kaul, Debarati Basak, Vasundhara Kaul and Suman Ananthanarayan

Technologies like AI, IoT, ML, DL, cognitive computing, and big data analytics are transforming urban life. Globally, Smart City projects aim to enhance convenience through automation of various city functions. "Smart" implies automated systems for specific tasks. Key components include smart infrastructure, governance, transportation, healthcare, education, economy, environment, industry, energy, and feedback mechanisms. The critical question is whether "smart" cities are also "inclusive." This study examines the impact of AI-enabled smart cities on children with autism spectrum disorder (ASD), a neurodevelopmental condition with social and communicative deficits and repetitive behaviors. Using the Quality Function Deployment approach, we capture parents' perspectives to identify the needs of children with ASD and the smart city features that can address these needs.

17

How healthcare professionals and their families experience and cope with work-related sacrifices

James Greenslade-yeats, Tago Mharapara, Janine Clemons, Katherine Ravenswood, Gil Kirton, Lesley Dixon and Nimbus Staniland

Scholars show increasing interest in how sacrifices made by highly dedicated workers impact the close family members of such workers. Through a qualitative study of midwives working in New Zealand's maternity care system, we explore how and why healthcare professionals and their family members experience and cope with work-related sacrifices. Our findings reveal that midwives' family units give up many aspects of a "normal life" so that midwives can fulfil their professional duties and commitments. Midwives' work-related sacrifices are shaped by a range of structural, normative, and personal factors, and their family units cope with sacrifices in three distinct ways: (1) supportive acceptance and adaptation, (2) resentful acceptance and guilt, and (3) breaking point. Our research contributes to understanding the downsides of being highly dedicated to work (e.g., answering a calling, enacting work devotion, having extreme commitment) and supports the contention that sacrifice-reliant professions and organizations have an ethical duty of care toward workers and their families.

24

Sustainable HRM: A Comprehensive Review of Antecedents, Strategies and Practices driving Tripple Bottom Line Performance

Muhammad Zia Ul Haq, Youqing Fan and Thomas Kliaukar

This review links sustainability drivers, business strategy, HRM, and the triple bottom line. We reviewed recent literature on sustainable HRM. This review includes 56 articles. We found internal and external drivers of sustainable strategies in firms, which are connected to bundles of sustainable HR practices to improve their triple-bottom-line performance. A model shows how sustainable company strategy and HR practice bundles relate. Sustainability research lacks consistency despite increased emphasis. We suggest directions for future research.

29

The complementarity of program logic and critical systems heuristics: Critical systems practice for the evaluation of Emergency Relief in Australia

Patrick McKennaThis research sought to improve the outcomes of Australia's Emergency Relief program by applying the multi-perspective multimethodological Critical Systems Thinking and Practice. Emergency Relief was designed as a short-term intervention to assist people facing a financial crisis; however, it was evident and considered problematic that many beneficiaries had an ongoing reliance on the program. Applying Program Logic revealed opportunities to improve service delivery models through staff training, referral systems, co-location, and case management. Applying Critical Systems Heuristics revealed unintended adverse consequences could result from 'payment by outcomes' commissioning and welfare conditionality. A methodological contribution to systems and evaluation literature was made by demonstrating the complementarity of Program Logic and Critical Systems Heuristics, and the strength in a multi-perspective multimethodological approach.

31

The Mediating Effect of Leader-Member Exchange and Psychological Capital on engineers' perception of their Psychosocial Safety Climate

Zack Deban, Nasim Saheli and Yvonne Brunetto

This study explores the relationship between PSC, LMX, PsyCap, and engineers' wellbeing. It addresses the complex demands and stressors engineers face, by investigating how these constructs interact within an organizational setting to influence employee wellbeing. Using Partial Least Squares structural equation modelling, data from 133 engineers show that positive PSC significantly boosts PsyCap, underscoring that organizational measures enhancing psychological health improve engineers' psychological resources and thereby enhance wellbeing. This paper highlights the importance of fostering a Psychosocial Safety Climate in engineering firms, which enhances wellbeing, thereby contributing to improved employee engagement and retention.

32

Network Marketing Organizational Process of Legitimation: Managing the Discrepancy between Internal and External Legitimacy

Fu Dai, Anthony Ng, Ian Eddie and Sarah Eyaa

This study applies cognitive dissonance theory to explain the process of changing prospective network entrepreneurs' cognition, theorizes the cognitive transforming theory, and constructs the path model of NMO legitimation to describe the network marketing organizational legitimation process. Structural equation modeling is used to test and confirm the hypotheses. The study reveals that transforming prospective network entrepreneurs' cognition is critical for a network marketing organization to manage the discrepancy between its internal and external legitimacy and legitimize its organization. This study contributes to the literature on organizational legitimacy strategies and provides a template for further studies in a similar area. Keywords Cognition, Cognitive Transforming Theory, Entrepreneur, Legitimacy

33

Psychological Safety Climate, Human Resource Practices, Employee Wellbeing of Public and Private Healthcare and Engineering Professionals

Yvonne Brunetto, Matthew Xerri, Geremy Farr-Wharton and George Kominis

This study compares the impact of psychosocial safety climate (PSC), HRM practices and the subsequent wellbeing of public and private engineers and healthcare professionals. The analysis involved Structural Equation Modelling (using AMOS) to manipulate survey data from 300 matched employees that participated in the study at two points in time one month apart.The findings indicate that the variance of PSC, HRM practices similarly explain approximately a third of their wellbeing.Two gaps in the literature are addressed. First, PSC and HRM are significant predictors of engineering and healthcare public/NFP and private professionals' wellbeing. Second, there are significant differences evident across public/NFP and private sector workplaces for PSC and HRM processes, with implications for management practices and training priorities.

34

Enhancing Organizational Resilience in Non-profit Organizations: Is Following the for-profits' Strategies a Pitfall?

Aureliu Sindila and Xueyong Zhan

This article combines insights borrowed from for-profit literature to unravel strategies uniquely tailored for enhancing the resilience of non-profit organizations (NPOs). The study advocates for effective governance structures, increased diversification and resourcefulness, and agile development as foundational elements for building resilience. Additionally, it emphasizes the importance of dynamic delegation, acknowledging its potential benefits in fostering agile decision-making while recognizing challenges for organizational cohesion. While recognizing the value of insights from for-profit literature, the study highlights the necessity of careful adaptation to ensure alignment with the mission-driven nature of NPOs. By customizing strategies, NPOs can overcome challenges, adapt to changing circumstances, and positively impact their communities, contributing to their long-term sustainability and resilience in the dynamic landscape of the NPO sector.

37

Work passion: A leadership perspective

Velina Serafimova and Denise Jepsen

Work passion represents a unique combination of characteristics that yield numerous individual and organisational benefits. Investigating passion's workplace predictors empowers organisations to foster passion supportive environments. This interview study focuses on leadership as a major influencing factor at the workplace and presents the leadership perspective that has not been previously explored. Analysis of 30 interviews revealed three main findings that extend leadership and passion literature. First, leaders are largely responsible for influencing employee work passion. Second, leaders' own work passion is highly influential and contagious but may carry certain risks for employees' well-being and work outcomes. Third, leader-employee positive interpersonal dynamics are essential to employee work passion but may cause unintentional adverse effects.

38

Work passion contagion: A multiple mediation model

Velina Serafimova and Denise Jepsen

Work passion has been recognised as beneficial to individuals and organisations, however, there is limited research on its predictors at the workplace. This research focuses on leaders' role in employee work passion. We investigate leaders' own work passion and the possibility for work passion contagion. This quantitative study explores various mechanisms that could facilitate the work passion contagion from leaders to employees. On one hand, we aim to extend the work passion and leadership literatures and contribute to the discourse on work passion transfer by studying potential mechanisms facilitating such transfer. On the other hand, we aim to provide specific insights and tangible tools for practitioners who wish to better understand work passion, experience its benefits and minimise its risks.

39

Against the Clock: Leveraging Time Perception and Delegation for Enhanced Crisis Resilience

Aureliu Sindila and Xueyong Zhan

This article explores the complex dynamics of subjective time perception, delegation, and organizational resilience during crises using a mixed-method approach with Generative AI (GenAI) and Natural Language Processing (NLP). It examines how executives manage scarce time and its effects on decision-making during crises. The study reveals that executives blend past, present, and future temporal focuses to navigate crisis situations effectively. Through qualitative interviews and quantitative analysis via NLP and GenAI, it is shown that subjective time pressures lead to urgent, sometimes less ethical decision-making, which can reduce strategic thoroughness. However, effective delegation strategies can alleviate these pressures by allowing executives to concentrate on strategic imperatives, thus improving immediate crisis responses and long-term resilience.

40

Job demand, job satisfaction, and time management: Through a gender lens

Cassandra Xiaoyi Liang, Linh Bui and Guihyun Park

Using an integrated time management measure with comprehensive understanding of the underlying processes involved, we found that job demand has an indirect positive impact on job satisfaction via time management behaviours at work. Further, moderated mediation analysis showed that gender interacted with job demand to influence both time management and job satisfaction, such that the positive mediation relationships are stronger for men than for women. Our findings shed new light and offer richer understanding as to how gender interacts with job demand and exert impact on time management at work.

41

Power Structure in New Product Development Projects: Past, Present, and Future Research Directions

Chia-Yang Chang

New product development (NPD) projects involve collaboration across various subunits within firms, such as R&D, manufacturing, marketing, and finance. This study delves into the often-overlooked political dynamics within NPD projects, examining whether power should be concentrated in specific subunits to enhance efficiency. While previous research has underemphasized organizational politics in NPD, theories like Information Processing Theory (IPT) and Resource Dependence Theory (RDT) offer conflicting views on power dynamics. IPT suggests that interdependent subunits foster democratic decision-making, whereas RDT argues that concentrated power can increase efficiency. Empirical studies largely support RDT, showing that power concentration in subunits like R&D or marketing can enhance goal achievement. This research reviews nine critical articles in NPD literature to assess the application of power theories, suggesting future directions for scholars. Findings indicate that subunits capable of managing external uncertainties, such as product innovativeness and market complexity, gain more power. Political tactics also play a role in altering power dynamics. The study proposes a new model of intraorganizational power structure in NPD projects, emphasizing the importance of capabilities, substitutability, and centrality. Balanced power structures, where subunits have equal status and interdependencies, promote higher levels of cross-functional integration. Conversely, imbalanced power structures can hinder collaboration and trigger political behaviors. This model offers a comprehensive framework for understanding power dynamics in NPD projects, highlighting the need for new measures to operationalize power structures. The study provides valuable insights for future research and practical implications for managing power dynamics in NPD projects to foster innovation and efficiency.

42

The maverick organisation: An initial practice theory analysis of the field and valued capital in a Defence organisation

Amanda Van de Paverd, Ree Jordan and Victor James Callan

Using Bourdieu's theoretical framework this paper explores how the practice of maverickism is enabled or constrained in an Australian Defence organisation context. Data was collected from 195 documents (Study 1 -secondary data) and 51 semi-structured interviews (Study 2 - across three levels of uniformed employees). Thematic analysis of both studies identified patterns in how the field and valued capital in an organisation influence the possibility of maverick behaviours that stimulate change and support organisational learning. Preliminary analyses support the Bourdieusian position that positive maverick behaviours are influenced by the social environment. At an applied level, findings reveal opportunities for organisations to embrace the maverick habitus and its dispositions to stimulate innovation, learning and improvement.

43

Protean Career Orientation and Turnover Intention: Exploring the Mediating Effect of Subjective Career Success

Hui Hui Teow, Wee Chan and Pervaiz Ahmed

Drawing on the social exchange theory, the purpose of this study was to investigate the relationship between protean career orientation (PCO) and turnover intention (TI) while examining the mediating role of subjective career success (SCS) in this relationship. A survey response from 247 working adults was used to conduct the data analysis through structural equation modelling. The results revealed that PCO did not have a significant direct relationship with TI. However, mediation analysis indicated that SCS fully mediated the relationship between PCO and TI. In other words, employees with PCO are less likely to leave the organization if they experience high levels of SCS. This study contributes to the existing body of literature by highlighting the crucial role of SCS in retaining protean-oriented employees.

44

Exploring Determinants of Competitiveness in Indian Tech start-ups: M-TISM approach

Khushnuma Wasi and Nakul Parameswar

Tech start-ups have been recognized as the primary drivers of innovation and employment creation, which in turn fuels economic growth. Tech start-ups functioning in different domains have a responsibility of ensuring that domestic knowledge and capabilities are leveraged to minimize dependence on foreign organizations. In the twenty-first century, survival and success of start-ups is becoming increasingly important on its competitiveness. The study identifies ten factors influencing competitiveness based on literature review and opinion from various experts (Tech Start-up founders, members from Incubation centres, advisors and board members in Tech Start-ups, academicians, policymakers etc.). A hierarchical model has been developed using Modified Total Interpretive Structural Modelling (M-TISM) and examined the driving and dependency power of factors at each level.

46

Too poor, too shameful, too boring": Pacific workers' responses to workplace literacy and numeracy courses in New Zealand

Betty Ofe-Grant

This qualitative study investigates Pacific workers' responses to workplace literacy and numeracy courses. Pacific peoples, among New Zealand's most vulnerable groups, grapple with low literacy and numeracy skills, significantly impacting their health, well-being, educational outcomes, and productivity. Using an indigenising approach grounded in Pacific values, Samoan Teu le va (spatial relations) and Tongan Talanoa (storytelling), the study reveals multifaceted barriers experienced by Pacific workers, including institutional racism, discriminatory trainers, limited training opportunities, and a 'user-pays' system. Outdated frameworks and offensive approaches in training courses contributed to feelings of "ma" (shame), boredom, disengagement and high withdrawal rates. Recommendations advocate for increased investment in and development opportunities for all workers, embracing holistic and culturally appropriate approaches and including Pacific trainers.

47

Well-being of Formal Leaders: A Critical and Interdisciplinary Review of Predictors Shaping Leader Well-being

Burak Oc and Kraivin Chintakananda

Holding a formal leadership role is often idealized, motivating individuals to pursue such positions for independence and success. However, leaders face significant challenges, including increased work demands and reduced well-being. This review critically examines whether formal leaders bear a well-being cost using Bronfenbrenner's (1979) ecological systems framework. We categorize predictors of leader well-being, discuss dominant theoretical frameworks, and identify gaps in the literature. Internal validity issues affecting the interpretation of research are highlighted. Our findings reveal significant validity concerns and a reliance on non-experimental designs. We offer theoretical and methodological recommendations for future research, emphasizing the need for interventions to enhance leader well-being. This review aims to be a valuable resource for leadership scholars and practitioners.

48

Double-face effect of cognitive diversity on self-organizing team creativity

Tian Wang, Rebecca Dong, Candy Ying Lu, Miles Yang and Jianhua Zhu

In today's competitive and complex industrial landscape, leveraging team diversity is crucial for maintaining a competitive edge. Diversity has gained significant attention in human resource management and managerial practice. While many organizations aim to build diverse teams, the impact of diversity on performance remains debated. This study examines the relationship between cognitive diversity and team creativity using the inputs-process-outputs (IPO) model. We developed a conceptual model to explain how cognitive diversity enhances team creativity through cognitive conflict, moderated by trust. Analyzing data from 103 three-stage longitudinal superior-subordinate pairs in China, our findings reveal: (1) an inverted U-shaped impact of cognitive diversity on team creativity, (2) cognitive conflict mediates this relationship, and (3) cognitive trust moderates the relationship. These insights offer valuable theoretical and practical implications.

50

Tailoring Work Redesign through Idiosyncratic Deals to Enhance Burnout Recovery: The Roles of Occupational Future Time Perspective and Perceived Control of Time

Rui Zhang

This paper proposes employing work redesign through idiosyncratic deals (task, career developmental, scheduling, and location flexibility i-deals) to enhance burnout recovery by incorporating the temporal perspectives of occupational future time perspective (OFTP) and perceived control of time (PCT). The roles of perceived remaining time and opportunity focus for OFTP and better time management for PCT are examined as mediators that influence the effectiveness of these i-deals in promoting burnout recovery. Additionally, the quality of supervisor-subordinate relationship is investigated as the key boundary condition that enhances OFTP and PCT. The findings highlight the importance of considering individual temporal perspectives and organizational support in designing interventions to mitigate burnout and promote long-term employee well-being.

51

Power Dynamics and Leader and Follower Identity Dynamics in Organizational Discourse

Rui Zhang

This paper proposes a research program that employs Organizational Discourse Analysis (ODA) to reveal power dynamics, identity construction, and relationality between leaders and followers through discourse interaction, focusing on the construction of discourse in the social material world. The research proposes to explore leadership through interviews, observations, and document analysis to understand how discourse shapes power dynamics and influences identity. The findings are expected to reveal how leaders and followers utilize discourse strategies to construct identities and negotiate power relations. The limitations acknowledge the role of individual linguistic sensitivity and the material world in shaping identities. The implication emphasizes ODA's contribution to leadership development by fostering a deeper understanding of identity construction through language.

54

Vision 2050: A road map for shaping impact-driven future business schools

Hafsa Ahmed and Justine Ferrer

As the landscape of business and management education evolves, international bodies such as the AACSB have already released reports highlighting the drivers of the future. There is a need to prepare future business leaders with knowledge and skills to cope with uncertainty and increasing complexities. Thus, a need to transition towards a new paradigm. This research offers insight into the future of business and management education by using tools from the discipline of future studies. By unveiling a new compass to guide the transformation of business education, this research highlights that the future story is more than degrees; it's about shaping business and management education that prioritises community, relevance, impact, and ethical technology use while empowering learners and ensuring equity

55

Talent Value and the Impact of Context on Australian Public Service Talent Management Architecture

Max Rixe

This research explores how the Australian Public Service context influences an organisation's configuration of its talent management architecture to achieve talent value. While it is often claimed that 'context matters' in talent management, there is not much empirical evidence of how it matters, particularly in its implementation. By integrating the theory of value with institutional isomorphism to explore the notion of 'talent' and 'talent management', this research considers how Australian Public Service organisations can wield their context (rather than resist it) to inform how they configure the core value processes of creation, capture, amplification, and protection into an organisational capability to achieve talent value.

56

The Blended Workforce in the Public Service: Effects on Middle Manager Well-being – Lessons learnt from Australia

Vindhya Weeratunga and Fiona Buick

Adoption of a blended workforce, comprising both permanent and non-permanent employees, has become common, driven by enhanced productivity and resource optimisation. Despite the associated challenges of this workforce model, including high turnover, knowledge gaps, and investments in ongoing recruitment and training, its impact on middle managers' well-being is understudied. We address this research gap by exploring the effects of this workforce model on middle manager well-being within the Australian Public Service (APS). We adopt a qualitative research design, conducting interviews with middle managers within one of the largest Departments in the APS. The results reveal that the restructuring of the APS workforce led to unintended consequences affecting middle managers' well-being and highlight broader implications for organisations adopting this workforce model.

58

Hybrid working dual-career couples: A proposed typology

Joanne Mutter

Dual-career couples have moved from being outliers to the dominant model of intimate relationships, and similarly, hybrid working has become the globally preferred employment option. The further blurring of the boundaries between work and home that is experienced by hybrid workers will inevitably add to the existing pressures dual-career couples face when attempting to balance between the two spheres. Drawing on dyadic interviews with 16 dual-career couples engaged in some form of hybrid working, we identified four potential identities; perpetuating traditional, life stage adopters, transitional, and enduring egalitarian. The proposed typology of hybrid working dual-career couple identities has the potential to support future research that moves away from the historic problematization of dual-careers towards facilitating dual-career success.

61

Women at the helm: identity anchors as a navigation tool in academic career progression

Iresha Donmanige, Shamika Almeida, Betty Frino and Rebekkah Middleton

Women remain underrepresented in STEM academia, especially at senior levels. Although STEM academics may be privileged due to their professional status and education, they face ongoing hurdles and marginalisation that hinder their career progression. Using a constructivist grounded theory approach, we explored how 32 women STEM academics reflect on their varied and evolving identities and their influence during career progression. We reveal four varied anchor points women STEM academics use to navigate personal and professional identities as they experience career hurdles that influence their mid- to senior-level career progression. We highlight the importance of HR managers and line managers understanding and recognising the use of anchor points by marginalised workers to better address barriers to career progression.

62

Integrating Goal Setting Theory and Self-Regulation of Emotions: Exploring the Interplay between Emotions and Goal Orientation on Performace Under Limiting Conditions

Shilpa Chingan Thottathil

This conceptual paper integrates goal-setting theory and the self-regulation of emotions. It explores how goal orientation and affective states interact to influence performance on challenging goals under limiting conditions of resource availability. Typically, employees who have a learning goal orientation and a performance approach goal orientation generally achieve better results when faced with challenging goals. However, this study investigates the boundary conditions of this relationship. The positive correlation may shift, specifically for learning goal orientation at low resource availability and performance approach goal orientation at high resource availability. In these limiting conditions of resource availability, affective states become crucial in the relationship between challenging goals and performance. Additionally, the dynamics between supervisor and employee goal orientation under these limiting conditions are also examined.

64

The Subjective Career Crafting of Working Mothers

Marian Crowley-Henry

This paper explores the subjective career crafting of mothers engaged in paid employment using interpretative phenomenological analysis. The lived/living subjectivities and performances of working mothers are considered in the normative patriarchal context where tensions exist between the roles of blending good employee and good mother. Drawing on the career crafting literature, the cognitive, emotional and behavioral career crafting of six international mothers is presented through a deep hermeneutical reading of their narratives. Their respective sense-making and internalization of career purpose, focus and meaning is unpacked within the broader, whole-life description of career as incorporating paid, unpaid and life work with both subjective and objective priorities.

65

Exploring the factors promoting social acceptance of solar energy technologies

Jane Osei, Kerry Brown and Mehran Nejati

This study evaluates the factors affecting the acceptance of solar energy technologies by analyzing findings from previous research. It identifies common influential factors, study characteristics, and theoretical perspectives. While various studies have examined social acceptance of solar and renewable energy technologies, their results are often scattered. This research consolidates these findings, highlighting the most influential factors for solar energy acceptance. Unlike other studies focused on renewables like biogas, wind, and hydropower, this study focuses on solar, using a systematic review of 46 articles published between 2013 and 2023. It addresses gaps in the literature, examining study characteristics, theories, and models. Key findings reveal that environmental and economic concerns, knowledge, information, awareness, and socio-demographic factors significantly influence renewable and solar energy acceptance.

68

Dynamic capability for innovation in the heavy industry sector

Ryan Jang, Adela McMurray, Ann-Louise Hordacre and Tim Van Erp

The heavy industry, a pivotal sector in Australia's economy, faces unique challenges that require advanced digital technologies for global competitiveness. This paper investigates how the Australian heavy industry cultivates organisational dynamic capabilities for innovation. Using a qualitative methodology, 24 semi-structured interviews with practitioners from shipbuilding, mining, and oil and gas were conducted. The analysis with NVivo 12 identified ten capabilities and 41 attributes within the domains of sensing, seizing, and reconfiguring, along with 25 interrelationships. Leadership and communication emerged as critical factors. The findings highlight that sensing (strategic foundation, knowledge management), seizing (value recognition, implementation strategies, resistance management), and reconfiguring (continuous integration, leadership, communication, cultural and skill transformation) are essential for successful innovation.

74

The role of dark Leadership triad and leader psychological capital in influencing Employee outcomes and attitudes: the mediating role of employee Psychological Capital and moderating role of leader-member exchange relationship

Saeed Loghman, Mauricio Ramirez-Perez and Maree Roche

Although previous research has identified that leadership is an important predictor of employee psychological capital (PsyCap), research has mostly focused on positive leadership approaches (e.g., authentic leadership). This study develops a novel model which investigates the relationship between the dark leadership triad (narcissism, Machiavellianism, and psychopathy), leader-member exchange relationship (LMX), employee and leader psychological capital (PsyCap), as well as the employee outcomes of mental health, unsafe behaviour, job satisfaction, and turnover intentions. The sample of this study comprises employees and managers from a major internationally-recognised mining company in Chile. This study expands the study of leadership in the context of PsyCap and extends cross-cultural PsyCap research in an industry that has been mostly neglected in dark leadership and PsyCap research.

75

Turning a blind eye: How wilful ignorance manifested in the Morrison government's management of aged care

Ann Dadich, Abby Mellick Lopes

How did the dynamics of wilful ignorance manifest under the prime ministership of Scott Morrison? Through an analysis of documents about the Morrison government's management of aged care, this article offers a response. Using Alvesson and colleagues' (2022) framework, the article illustrates how wilful ignorance manifested via the Morrison government's (in)actions. Furthermore, while it is difficult to definitively ascertain the Morrison government's will for ignorance, the analysis suggests a weak desire for change. By applying this framework to a specific microcosm, the article contributes to a nuanced and situated understanding of wilful ignorance in organisations. It also raises questions about how the political performance of wilful ignorance produces negative consequences in critical sectors, such as aged care, impeding effective governance.

77

Justice and Job Crafting: The Role of Regulatory Focus and Leader Narcissism

Gabby K.P. Choi, Raymond Loi, Stephanie W.X. Wang and Fangjian Wu

This conceptual paper suggests how justice and injustice induce employees' distinctive job crafting behaviors. Drawing on the regulatory focus theory, we propose a moderated mediation model wherein interactional justice and injustice elicit subordinates' promotion- and prevention-oriented job crafting via the mechanisms of promotion and prevention regulatory foci, with leader narcissism acting as the moderator of these relationships. This conceptual piece enriches our understanding of interactional (in)justice by examining the mechanism and boundary condition underlying its influence on employees' behavioral responses. Moreover, it contributes to the job crafting literature by introducing (in)justice as novel antecedent incorporating different motives. We also discuss the practical implications of our conceptual work.

81

The Effects of Family Involvement on Corporate Governance and Firm Performance: a study on Taiwanese Publicly Listed Companies

Nguyen Duong, Shyh-Jer Chen and Phuoc Nguyen

This study examined the relationship among family involvement, corporate governance, and firm performance using longitudinal data from 1,233 publicly listed firms in Taiwan over a 5-year period (2016-2020). The results found that family ownership and family CEO have negative effects on corporate governance effectiveness. Whereas CEO duality does not have a significant impact on corporate governance effectiveness. As anticipated, corporate governance effectiveness positively affects a firm's return on equity. However, it slightly negatively impacts the firm's market valuation, which is yet insignificant. Additionally, while family ownership negatively affects corporate governance ratings, it positively influences return on equity. This study provides more evidence on the heterogeneous effects of family involvement in relation to corporate governance effectiveness and firm performance.

82

"They don't know till they see what 'it' is not": How actors coordinate for distributed innovation in ecosystems

Xianxian Jiang, Andrew Burton-Jones and Jörgen Sandberg

In an ethnographic study, we followed an inter-state healthcare innovation ecosystem and how actors coordinate towards building a national skin cancer diagnostic imaging infrastructure. With the theoretical perspective of sensemaking, we discover that actors establish multiple, concurrent roles and channels of communication to unpack and share understandings of the on-going challenges they face in the innovation process. Furthermore, actors cope with unravelling challenges through initiating and sustaining collective problem solving using epistemic things that service as a means towards producing innovation outcomes. Our research contributes to innovation and organisation studies by, firstly, explicating coordinating for distributed innovation in ecosystems as an important research phenomenon worthy of scholarly attention, secondly, providing new knowledge regarding this phenomenon to theory and practice.

85

Say It Out Loud or Stay Silent: Consumer Effects and Mechanisms of CEO Activism

Niko Dellner

Stakeholders increasingly expect companies, and in particular the respective Chief Executive Officer (CEO), to demonstrate their values by taking a stand on sociopolitical issues, so-called CEO activism. Despite initial empirical findings on the effects of CEO activism, consumer reactions to CEO activism and the underlying mechanisms remain ambiguous. Based on an online between-subjects experiment with 256 participants, I examine how CEO activism is associated with consumers' perceptions of corporate reputation and their purchase intentions. The results show that CEO activism indeed influences consumers' perceptions of corporate reputation and their purchase intentions. Further, I find evidence that three alignment factors – consumer-company congruence, consumer-issue fit, and CEO authenticity – are crucial components in the formation of favorable consumer attitudes following CEO activism.

87

Neurodivergent Women in Leadership:Challenges, Strengths, and Strategies for Organizational Inclusion

Sugandha Deva, Debora Gottardello Susan Elaine Murphy

This study examines the leadership experiences of 27 neurodivergent women in managerial positions. Using the lens of social identity theory of leadership and gender role congruity, the findings reveal the challenges neurodivergent women face due to traditional leadership models that prioritize conformity and prototypicality over unique strengths. The lack of inclusion and workplace discrimination further hinders their career advancement. The findings advocate for organizational changes and support systems to foster a more inclusive leadership environment for neurodivergent women and a re-examination of prototypical leader behaviors. This research provides insights for further research that considers the effects of intersectionality on workplace inclusion practices for leaders and non-leaders.

89

Exploring the Role of Corporate Social Responsibility (CSR) Towards Achieving Saudi Vision 2030

Abdulaziz Alessa

Saudi companies have been engaging in CSR—nevertheless, it remains unclear whether the CSR initiatives in the Saudi banking sector will help achieve the Vision 2030 objectives. This paper investigates the alignment of CSR initiatives in the Saudi banking sector with Vision 2030 objectives, utilizing a multi-methods approach. Analysis of annual reports from ten banks (2021-2022), alongside ten interviews with CSR policymakers (eight males, two female) from June to August 2023. Document analysis identified financial donations, disability assistance, and SME support as prominent CSR areas. Interviews further revealed that the banks' CSR initiatives—focusing on social, environmental, and economic diversification and volunteer efforts. This reflects through strategic policy execution that are align with the three pillars of the Vision.

90

Integrating Lean, Green and Industry 4.0/5.0 for Improving the Performance of Manufacturing SMEs

Niranga Silva, Dilupa Nakandala and Richard Yang

The integration of Lean Manufacturing (LM), Green Manufacturing (GM), and Industry 4.0/5.0 (I4.0/I5.0) technologies offers a promising approach for enhancing the performance of manufacturing Small and Medium Enterprises (SMEs). This study addresses the mounting pressures on manufacturers to meet sustainability goals amidst evolving market demands. It proposes a conceptual framework integrating LM, GM, and I4.0/I5.0 to enhance sustainable performance (SP) in SMEs. The framework posits that LM and GM practices, when synergistically combined with I4.0/I5.0 technologies, can significantly improve economic, environmental, and social outcomes. Hypotheses regarding the mediating roles of I4.0/I5.0 and GM in the relationship between LM and SP are developed. The research highlights the necessity for SMEs to adopt a holistic approach, leveraging these integrations to navigate industrial changes and achieve sustainable growth. Future research should empirically validate the framework across diverse SME contexts to provide actionable insights for industry practitioners.

98

How Supportive Supervision Impacts Women's Careers in Patriarchal Contexts: The Mediating Role of Psychological Capital

Ashraf Farzana, Denise Jepson, Raymond Trau

In patriarchal societies, women often face discriminatory domestic and organizational norms that impede their professional advancement. Supportive supervision is anticipated to empower these women to effectively navigate the challenges posed by their family and work domains. To investigate the impact of supportive supervision on women's careers in patriarchal contexts, a time lagged dyadic study has been conducted involving professional women from the patriarchal context of Bangladesh. Survey data has been collected from 214 matched supervisor-employee dyads with the aim to investigate how supervisor support influence women's job and career outcomes in patriarchal contexts through the mediating role of psychological capital. This work-in-progress paper seeks feedback from conference attendees to make improvements in three areas: contribution, analytical model and practical implications.

100

Hidden agendas: How organizational cultures influence dark triad leader behaviors

Katrin Riisla and Dritjon Gruda

This study investigates the relationship between organizational culture and the expressions of dark triad traits (DTT) in managerial behaviors. Leaders with narcissistic, Machiavellian or psychopathic traits often display a complex mix of behaviors designed to strategically advance personal goals of power, prestige and status. Prior studies show that performance-oriented cultures may attract and enable these kinds of leaders, but we lack understanding of the kinds of environments that could deter them. Based on ratings provided by 685 trained raters of 15,000 Glassdoor job reviews across 74 companies, our findings reveal that environments heavily focused on performance can inadvertently foster these traits, leading to self-centered, manipulative and even unethical behaviors. In contrast, cultures emphasizing diversity are more effective in subduing these adverse behaviors. However, this deterrent effect is weakened when performance pressures are high, suggesting a strong link between intense performance demands and the prevalence of DTT behaviors. The research highlights the importance of balancing high-performance goals with strong diversity, equity, and inclusion principles to mitigate the negative impacts of DTT. By promoting ethical behavior and inclusivity alongside achievement, organizations can cultivate a healthier and more sustainable work environment. These findings underscore the critical role of management research in informing effective organizational strategies, helping to shape a more holistic understanding of organizational dynamics and fostering the development of healthier workplace cultures.

102

Conceptualising Inclusive Communicative Leadership for Disability Inclusion

Ann Jacob, Leila Afshari, Adela McMurray, Nuttawuth Muenjohn and Michael Muchiri

Persons with disabilities (PWDs), which hereafter will be addressed as 'the differently-abled' are an often-forgotten minority while discussing diversity and inclusion. Based on the demand noted in the current literature for leaders to be inclusive and the importance of being communicative for disability inclusion, this paper develops a new leadership concept, "Inclusive Communicative Leadership (ICL)", that is rooted in leader-employee communication. Further, this paper has developed a model from an in-depth review of literature depicting the association of the facets of ICL with four positive outcomes, 'respect, psychological empowerment, psychological safety and trust', which could be desirable for the differently-abled in workplaces. A traditional narrative review of peer reviewed articles was undertaken to develop this conceptual paper. By leveraging the role of communication for inclusion, ICL could enhance the inclusion of the differently-abled employees and sculpt organisations that value these personnels for their uniqueness.

104

Love versus Power Orientation: Collective Imagination for a Desired Future in Rural Revitalization

Haiying Lin

This study compares love versus power orientation in driving collective imagination for a desired future in rural revitalization. Building on a comparative case study of Yuan village and Puhan village in northwest of China, the study inductively develops an alternative future making process that connects imagination (cognition), inspiration (discourse), motivation, direction, action (behaviour) and stabilization. The identified mechanism and tactics enrich current perspectives on the organization for the future.

107

Exploring the referents of trust in algorithm aversion

Fatemeh Jafaralijasbi, Steven Lui, John Lai and Zhijing Zhu

Individuals often prefer decisions provided by a person to an algorithm, despite evidence showing that decisions provided by an algorithm often outperform those by a person. Algorithm aversion refers to the reluctance of individuals to rely on algorithm advices. Different from previous research on algorithm aversion, this paper (1) studies algorithm aversion as an attitude, (2) uses trust as an organizing principle for the wide range of drivers on algorithm aversion, (3) puts algorithm aversion in an organizational context. Specifically, we propose a research model to examine the mediating effect of three referents of trust - trust in AI technology, trust in organization, and trust in AI regulator – on the algorithm aversion of organizational members. We intend to test the model with four studies which include one student survey, two managerial surveys, and a scenario-based experiment with MTurk workers. This paper reports initial findings from the first study.

108

Applying punctuated equilibrium theory as a time lens for exploring HR responses to the pandemic crisis across three national contexts

John Molineux, Roslyn Cameron and Reshman Tabassum

The study aims to provide insight into the effects of time, national context, and their interplay on HRM strategy, policies and practices by three national HR professional bodies during and after the pandemic crisis. We apply punctuated equilibrium theory to investigate these responses and structural changes across two time periods and three national contexts – UK, Singapore and Australia – using a multiple case study design. Key findings evidenced major shifts in strategy, structure, power distribution, values and control systems in organisations. The study points to both convergent and divergent HR practices in each of the countries resulting from responses to their specific contexts, adding further evidence for the need to understand HR through a national contextual lens.

110

Union Voice and Campaigning, and a National Ban: The case of engineered stone

Justine Ferrer and Peter Holland

Engineered stone (ES), a popular material for kitchen benchtops since the 1990s, poses a significant health risk due to its high silica content. When cut, it releases silica dust, causing the incurable lung disease, Silicosis. The Australian trade union movement launched a groundbreaking campaign to ban the manufacture and use of ES for worker health and safety. Despite industry opposition, the campaign efforts of the CFMEU have led to a world-first ban in 2024. This paper explores the chronology of the campaign using Mobilisation Theory to identify the resources adopted and leveraged to promote collective voice to bring about change.

111

"Just in Time" to "Just in Case" – Resilience building by Women Entrepreneurs through value constellations

Kajari Mukherjee

We study resilience in women owned small businesses. Such businesses tend to be more vulnerable to exogenous jolts due to resource scarcity, wherewithal to prepare for crisis management, and comparatively narrow value-creation options. Our study conceptualizes such organisations as an entity engaged in co-production of values by many stakeholders interacting with each other, leading to a highly resilient system. The qualitative study, based in India, suggests that resilience in such organisations is driven by three atypical behaviors. Namely, through socialisation of their own gendered role with more focus on redundancy for "just-in-case" rather than only on efficiency or continuous growth; internalised bricolage behavior in resource utilisation; and feminine attributes linked to managing a co-producing approach with key stakeholders of business.

113

Humorous job ads and job attractiveness

David Cheng, Miaojia Huang, Rajiv Amarnani and Alexander Eapen

Organizations use humour in recruitment advertisements to help win the war for talent. Humour may be a usefull tool because it signals that an advertised job will be fun, low stress, and therefore attractive. However, a humourous advertisement could also inadvertently convey a lack of seriousness in HR practices. By integrating signaling and benign violation theories, we develop and test a theoretical model using two experiments. We found that funny job advertisements made the job seem less attractive due to perceptions of lower-quality HR practices, specifically job applicants viewing a humourous advertisement anticipated a lack of procedural justice and care in the organization's HR practices, which diminished the job's attractiveness.

114

A modified world café approach to identify the core components of palliative care models for underserved populations

Ann Dadich and Caroline Laurence

Despite the growing importance of palliative care, many people continue to have limited opportunities to access and use palliative care services – they include people of culturally and linguistically diverse communities, people of low socioeconomic status, and people residing in rural areas. To establish the core components of palliative care models for these underserved populations, a modified world café approach was used across two sites with 109 participants, many of whom represented health services. Participants indicated that, to promote access to and use of palliative care services among the underserved populations, palliative care models are required to demonstrate choice, appropriateness, and connectedness – they also need to be well-resourced. These findings are important because they offer the opportunity to address health inequities.

115

Myth or reality: Do sustainable practices make a hotel an employer of choice for Gen Z?

Renata Casado, Benita Hube and Doina Olaru

This research uses mixed methods to investigate if sustainable practices in hospitality make an organisation an employer of choice for Generation Z employees. Phase 1 comprised qualitative data collection and analysis (n = 12), which suggests that Gen Zs do not prioritise sustainability as a deciding factor in choosing future employers. In Phase 2, we are using choice modelling based on random utility theory (McFadden, 1974) to investigate in which scenarios individuals from different generations would choose to work for organisations that are socially and environmentally responsible. This study offers theoretical contributions to the HRM literature and practice, by providing evidence-based strategies for talent management in a context and industry framed by severe skill shortages.

118

The erosion and restoration of women's leadership identity and confidence: The role of external and internal mentors

Carol Gill, Isabel Metz and Jody Evans

A leadership identity develops through challenging leadership experiences and the integration of these experiences with the self. To counter women's underrepresentation in leadership positions, scholars have recommended that organisations use mentoring programs for women. However, if and how such programs help women's leadership identity development has received little attention. To fill this gap, we conducted 31 semi-structured interviews. Specifically, we interviewed two cohorts of women:13 women who had attended a mentor-based leadership program (mentees), and 6 women who did not (non-mentees). We triangulated our findings by interviewing 12 mentors. We found that what happens after women enter the workforce, including the presence or absence of mentoring, is pivotal in the erosion, nurturing, and restoration of women's leadership identity.

119

Understanding Food Waste within the Aged Care Sector: A Systematic Review

Paula O'Kane, Elena Piere and Miranda Mirosa

The need to reduce food waste within the aged care sector is a significant as there are environmental, social and economic impacts, but how to do this is not well understood. Through a systematic literature review we explore how food waste is understood and responded to in the aged care sector and identify the sector's unique challenges. The data demonstrates a limited but growing awareness of food waste as an issue, among both employees and management. Barriers to reduction included regulatory constraints, poor communication, and engrained practices. Enablers included effective communication, collaborative organisational culture and clear organisational food waste strategy(s). Therefore, we suggest practitioners need support to create organisational food waste strategies and to engage employees in food waste reduction activities.

121

Perceived AI Explainability and Employee Job Crafting: The Role of Ethical Climate

Tianyi Long and Ran XiaoAmid growing concerns about the opaque nature of algorithms, there is a heightened focus on Explainable Artificial Intelligence (XAI) approaches to trace human-interpretable decision processes from algorithms. However, little is known regarding how the perceptions of XAI may impact employees' initiatives to redesign their jobs. Leveraging work design theory, this study delves into how and when AI explainability impacts approach job crafting and avoidance job crafting among employees. We analyzed multi-wave survey data of 278 medical staff to examine the effects of AI explainability on approach job crafting and avoidance job crafting through dual pathways. Results indicated that AI explainability enhanced AI-oriented benefit perception and lessened AI-oriented threat perception, resulting in an increase in approach job crafting and avoidance job crafting. Furthermore, our findings also suggested that ethical climate strengthened the impacts of AI explainability on AI-oriented benefit perception and AI-oriented threat perception.

122

Factors affecting Business leaders and Board members' Work Health & Safety Governance

Yvonne Brunetto, Leigh-Ann Onnis, Ben Farr-Wharton, Aglae Hernandez Grande

There is a growing international policy agenda to promote prosocial behaviour in Australian business practices as a change in the Work Health and Safety (WHS) legislation in 2023 affecting the legal obligations of directors of boards. However, there is minimal evidence about drivers of WHS practice in business. Interview data was obtained from 43 business leaders and board directors and 6 WHS experts. The findings propose that a multi-pronged approach is required to educate and motivate business leaders and directors to shift their mindset towards prosocial WHS behaviour in line with international policy agenda and standards. The research also identified a lack of knowledge about educative and monitoring tools, especially for Board members, which future policy and implementation should address.

124

Exploring the relationship between spiritual intelligence and employee mental well-being of temporary migrant workers in Australia

Poornima Setty, Wahed Waheduzzaman and Diana Rajendran. . . . .

This paper explores the relationship between spiritual intelligence and the mental well-being of temporary migrant workers in Australia. Data were collected from 443 temporary migrants in Australia working in different organisations. Analysis using Structural Equation Modelling indicates that temporary migrant workers with a higher level of spiritual intelligence are likelier to have better mental well-being. The study also reveals that spiritual well-being mediates the relationship between spiritual intelligence and mental well-being. These findings shed light on the importance of spiritual intelligence and spiritual well-being in the mental well-being of temporary migrant workers.

126

Call Lean systems by any name, it spells the same operational wonders: Sharing a tale of two operations

Ram Roy, Nick Cordery and Phil Doran

This paper explores the application of lean techniques in business contexts, aiming to enhance understanding among managers and practitioners while emphasizing reduced waste, improved productivity, and optimal resource utilization. The study also seeks to clarify the roles of educational institutions and researchers in addressing knowledge gaps related to lean principles within the region. Conducted over 12 months, the research involved testing questionnaires and conducting interviews with key organizations. The initial findings focus on two distinct companies, ABC and XYZ, illustrating their successes and challenges in implementing lean principles. ABC deals with operational complexities such as perishable products and demand fluctuations, mitigated through 5S and lean methodologies aimed at process refinement and reducing turnover. Conversely, XYZ faces challenges managing both planned and unplanned tasks, complicated by contractor coordination and safety compliance issues, which hinder full implementation of lean practices in volatile environments. Despite varying levels of formal lean terminology adoption, both companies prioritize customer satisfaction and productivity. XYZ demonstrates stronger waste minimization efforts and potential through resource optimization, while ABC struggles with staff training gaps and the need for stable demand scenarios to optimize lean systems effectively. This research provides valuable insights into the practical application of near-lean techniques and identifies critical areas for improvement and future research in lean management.

127

The diversity of emotional intelligences: the role of job characteristics

Hélène Delerue and Virginie Moisson

Emotional intelligence (EI) has been theorized as crucial to the proper functioning of organizations. At the same time, it has been suggested that EI may vary depending on the position held due to the characteristics of the job. The objective of this paper is to understand how individuals make sense of emotional intelligence and to what extent the diversity of viewpoints can be explained by job characteristics. The applied research method is the Q technique. The results highlight three different viewpoints that vary according to certain job characteristics.

128

Unleashing the roles of the GSCM committee and monitoring on business performance: an empirical study

Abdullah Al-mamun and Mehadi Al Mamun

Businesses find it challenging to integrate green practices throughout the supply chain, even while they see the value of green supply chain management (GSCM). To extend environmental sustainability practices along the supply chain and improve business performance, this paper focuses on two different governance mechanisms such as the GSCM committee and the monitoring of the green supply chain. Based on a large panel dataset of the US S&P1500 firms from 2008-2023, this study finds a strong positive correlation between the GSCM committee, green supply chain monitoring, and firm performance. The implications of this study's results provide strategic insights into how a firm can better achieve its business goals through these two mechanisms to integrate environmental aspects in the supply chain.

129

Employees' Perception of Corporate Social Responsibility, Ethical Leadership, Scepticism toward CSR and Meaningfulness at Work

Deki Choden, Mehran Nejati, Ben Farr-Wharton and Azadeh Shafaei

This study investigated how ethical leadership influences employees' perception of Corporate Social Responsibility (CSR) and its impact on their sense of meaningfulness at work. The study also investigated the role of employees' scepticism towards CSR in evaluating CSR initiatives and how it moderated the relationship between ethical leadership and employees' perception of CSR. The study was conducted in Bhutan, where CSR is legally required but still in its early stages of implementation. The findings supported the proposed model and highlighted the importance of CSR as a source of meaningfulness at work. The study provides theoretical insights for researchers and practitioners to improve CSR and develop efficient implementation plans in Bhutanese companies, broadening the understanding of CSR beyond developed countries.

130

When Purpose Leads to Pain: The Role of Workplace Loneliness in Nursing Outcomes

Payal Anand

Workplace relationships are essential for a sense of belonging and overall well-being. Despite its significance, research on workplace loneliness remains limited. This study investigates the negative outcomes of workplace loneliness among nurses, focusing on depersonalization as an underexamined outcome. It examines the mediating role of perceptions of organizational politics and the moderating effect of high work meaningfulness on this relationship. Data were collected through surveys from private hospitals in India and analyzed statistically. Findings reveal that workplace loneliness predicts depersonalization among nurses, mediated by perceptions of politics, and intensified by high work meaningfulness. Organizations should address workplace loneliness and balance the promotion of work meaningfulness.

132

Interaction Effects of Workplace Stressors and Employee Resilience on Depersonalization and Turnover Intentions

Samina Quratulain, Aqsa Ejaz, Abdul Karim Khan and Meghna Sabharwal

Public service employees face various stressors like tight deadlines and high workloads, yet the distinction between positive and negative stressors remains underexplored. This study examines how challenge stressors, hindrance stressors, and employee resilience affect depersonalization and turnover intentions. Analyzing time-lagged data from 254 Pakistani public sector employees, the study found challenge stressors decrease depersonalization and turnover intentions, especially when employees are highly resilient and perceive higher hindrance stressors. These findings, based on the transaction theory of stress and coping and effort-justification theory, offer crucial insights into stress management and highlight the importance of resilience in designing effective interventions.

133

Influence of Leaders' Artificial Intelligence-Driven Capabilities on Business Model Innovation: The Mediating Role of Leaders' Agility

Sahadat Hossain, Mario Fernando and Shahriar Akter

Organizational leaders are challenged with traditional capabilities to meet the demands of stakeholders in an increasingly Artificial intelligence (AI)-driven environment. However, this study takes the first step to examine empirically and reports the findings on leaders' AI-driven capability and its impact on business model innovation through the mediating role of leaders' agility. A web-based survey was administered to collect data from 419 full-time employees working in the financial services industry of Bangladesh. The results uncover that AI-driven capability significantly influences business model innovation and leaders' agility. Moreover, leaders' agility partially mediates the relationship between AI-driven capability and business model innovation. The findings create implications for dynamic managerial capability theory and contemporary leadership practices in AI-driven organizations.

135

Generative artificial intelligence and universities in Australia and New Zealand

Ann Dadich and Subas Dhakal

This article considers generative artificial intelligence (gAI) in the university sector. This is achieved via a bibliometric analysis of relevant publications, a qualitative content analysis of policies from Australian and New Zealand universities, and a lexical analysis of these policies. The findings suggest that given, growing interest in 'assessment', 'academic misconduct', 'ChatGPT', and 'educational innovation', universities might harness this knowledge to continually rethink their policies on gAI. This is because of the spectrum of policy responses, with most universities adopting a moderate stance on the use of gAI. This continuum opens opportunities to track university policies and their impact on the higher education sector over time and determine whether and how policy changes reflect publications on gAI in universities.

136

Reimagining the Phenomenon of Continual Change from an Employee-Centric Perspective: A Conceptual Model

Paulette Brazzale

Change in organizations is a continual and ubiquitous phenomenon. Employees routinely face overlapping and long-running change initiatives as a regular part of their working lives. However, the organizational change literature focuses on employee responses to planned change, with continuous change positioned as an employee-led phenomenon. In this paper, I argue that continual change from an employee perspective results from multiple overlapping planned change initiatives that are the phenomenon of change at work. A theoretical model of continual organizational change from an employee perspective will be presented and discussed with recommendations for research.

139

Overcoming or removing barriers? Social entrepreneurs' hybrid strategies for navigating external financing constraints

Niko Gerlach and Deike Schlütter

Securing external financing poses a major challenge for social entrepreneurs (SEs), often due to their hybrid identity. This study explores how SEs address external financing constraints by turning their hybridity into a resource. Drawing on insights from 31 interviews with European SEs and accompanying secondary data, we identify four strategies that SEs employ to leverage their hybrid identity to raise external financing: financier-centric adaptation, outreach, persuasion and watchful waiting. We demon-strate how these strategies incorporate different approaches to removing and overcoming barriers, and explain how these differences influence direct and indirect social value creation. Our research contrib-utes to literature on SEs' resource mobilization strategies and extends social bricolage theory. This study holds several implications for SEs, financiers, and policymakers.

142

How STEM Women Achieve Objective Career Success through Networking: A Competence Signal Perspective

Lingyan Hu, Yan Liu and Zhaolong Fu

Despite many studies about women's career experiences in STEM fields, it remains hardly known how STEM women achieve career success. The lack of such knowledge may demotivate female professionals to pursue STEM career. Women are usually associated with low STEM competence, which limits their access to career-benefiting resources in the social network. As competence is invisible, people would send observable signals to convey their competence. Integrating signaling theory with networking literature, our research develops a loop model delineating how competence signal strength perceived by STEM women influences their networking strategies to achieve objective career success and how competence signal strength is reinforced. Our research adds to STEM women's career literature by highlighting the role of competence signal strength in career development.

143

The Role of Labor Market Regulations in the Relationship between High-Performance Work Systems and Organizational Performance: A Meta-Analysis

Xiaoxuan Zhai, Fang Huang and Xiaowen Tian

Integrating job demands-resources (JD-R) theory with institutional theory, this study investigates how labor market regulations affect the relationship between high-performance work systems (HPWS) and organizational performance (OP). It posits that labor market regulations influence job demands and resources, and thereby the HPWS-OP relationship. Using hierarchical linear modeling in a meta-analysis of 59,740 business entities across 25 countries from 247 sample studies available as of April 2024, it finds that stringent hiring and firing regulations limit HPWS effectiveness, while strict work hour regulations enhance it. Centralized collective bargaining provisions do not significantly moderate this relationship. This study enriches strategic human resource management theory with a contextualized framework and offers meaningful insights for managers and policymakers on HPWS deployment and legislative development.

144

A modest article about brilliant care

Ann Dadich

While the discourse on care is largely pessimistic, brilliance happens, demonstrated by instances when care exceeded expectation. To advance brilliant care scholarship, this article asks, what are the domains that enable it? Through a reflexive analysis of ten publications on brilliant care, four domains were constructed and justified – namely: a caring orientation; attentive engagement; working with and beyond the technical aspects of healthcare; and shared responsibility. This article concludes with an invitation to those who receive, deliver, manage, develop policies that are relevant to, or conduct research on health service management – namely, to consider how these domains can be improved and how they can be systematised and translated into policy and practice, without compromising their dynamic quality.

146

Unpacking the digital barriers in emerging market SMEs: Towards a process model

Michael Xiang Yao, Dan Wang and Susan Freeman

Emerging research highlights the benefits and challenges of digital transformation for small and medium-sized enterprises (SMEs). Yet, understanding the specific digital barriers and their impacts across different transformation stages, particularly in emerging markets, remains underexplored. SMEs often operate with limited resources and capabilities, complicating the integration of digital solutions compared to larger firms. This research employs a multi-case study approach, developing a process model of SMEs' digital transformation in emerging markets that unpacks three distinct stages: digital exploration, scaling, and maturity. Specifically, this model uncovers various digital barriers at different levels and stages of SMEs' digital transformation: ecosystem support at the institutional level, managerial mindset and leadership at the organizational level, and a set of digital capabilities at the employee level. This model provides crucial insights for SME owners, entrepreneurs, and policymakers on identifying and responding to digital barriers effectively throughout the digital transformation process.

150

The role of responsible leadership in alleviating poverty through decent work and employee well-being: A case of Singapore

Nik Teck Siong Chong, Carolyn Koh, Maler Ratnam and Krishnamoorthy Renganathan

This paper explores the role of responsible leadership in addressing in-work poverty through decent work and employee well-being in Singapore. Despite Singapore's economic prosperity, significant income inequality and in-work poverty persist among lower-wage workers. Through a comprehensive review of Singapore's wage policies, life-long learning programmes, income inequality metrics, and the Progressive Wage Model, the study highlights the inadequacies in current approaches and suggests that a living wage aligned with employee well-being is crucial. To reduce in-work poverty more effectively, the study proposes a conceptual model that integrates responsible leadership practices in collaboration with government initiatives to achieve Sustainable Development Goals (SDGs), emphasizing the ethical imperative and societal benefits of fair wages and supportive working conditions.

152

When East meets West: What do Chinese Employees Talk About when they Talk About Person-Organisation Fit?

Yuwei Sun and Jon Billsberry

Extant person-organisation fit (PO fit) knowledge is culture-bound as it mainly comes from studies conducted in the Western world. We enrich the PO fit literature by exploring the interpretations of PO fit in an Eastern context (China) with a qualitative study. Our preliminary findings show that in our sample Chinese employees perceive fit based on the feeling of "appropriateness" rather than the interaction between person and organisation matters. More than half of the informants in this study appeared to separate themselves psychologically from their employing organisations. This separation between the employee (person) and the employer (organisation) is rarely noted in PO fit studies conducted in the West. This study enriches PO fit theory by exploring the relevance of PO fit ideas in an Eastern context and has implications for the methods used to capture PO fit in this part of the world.

155

Multistakeholder initiatives for sustainability: How actors perceive legitimacy

Kate Arnautovic

The United Nations has advocated for collaborative approaches to achieving the Sustainable Development Goals (SDGs), particularly cross-sector partnerships as a means to mobilise coalitions of public and private actors. Multistakeholder initiatives (MSIs) are therefore a highly relevant approach for addressing sustainability challenges. However, scholars have criticised MSIs for their lack of democratic legitimacy. This qualitative study examines the Australian, New Zealand, and Pacific Islands Plastics Pact (ANZPAC), an MSI targeting plastic pollution. It analyses a rich dataset of over 50 interviews with representatives from ANZPAC and non-participating organisations to explore stakeholder perspectives of the MSI. By examining in-depth empirical evidence of actor perceptions and sensemaking, this study critically analyses and advances theoretical perspectives on legitimacy within MSIs.

156

Consumer Engagement, Empowerment, and Wellbeing in Online Mental Health Communities: An Empirical Study with Implications for Health Management

Kendall Dent, Shahriar Akter and Corinne Cortese

"Technology-mediated social platforms offer exponential opportunities for consumer interactions, leading to the emergence of online consumption communities. This paper examines Consumer Engagement (CE) in Online Mental Health Communities (OMHCs), focusing on its dimensions and outcomes. Drawing on Social Exchange Theory and Psychological Empowerment Theory, the research identifies three CE dimensions (Social Engagement, Platform Engagement, Individual Engagement) and two outcomes (Empowerment, Wellbeing). Using a positivist, quantitative approach, data from online questionnaires (n=274) analysed through PLS-SEM reveal Platform Engagement as the strongest CE dimension. CE significantly impacts Empowerment and Wellbeing, with Empowerment crucial for Wellbeing. This study contributes to the literature by highlighting the CE-Empowerment-Wellbeing nexus, offering managerial and practical implications for OMHCs, and insights into digital mental health policy in Australia. Keywords: Consumer Engagement, Empowerment, Wellbeing, Online Mental Health Communities, Digital Mental Health Services, PLS-SEM.

157

High Performance Work Systems and Employee Expedience at work: A Test of Mediating Mechanisms

Aqsa Ejaz, Osama Islam, Samina Quratulain and Delphine Lacaze

This study leverages self-determination theory to explore the psychological mechanisms that drive employees in high-performance work system (HPWS) environments to engage in expedient behaviors. We propose that HPWS increases employees' perceptions of performance pressure, which frustrates their psychological needs for autonomy, competence, and relatedness, leading to expedient behavior at work. Data collected from 256 white-collar employees across various industries in a time-lagged design reveal that perceptions of HPWS significantly increase perceptions of performance pressure. Contrary to our initial hypothesis, support was found only for the frustration of the need for autonomy in this process. The frustration of autonomy was linked to increased expedient behavior among employees. The study discusses practical implications and suggests directions for future research.

159

Visibility as the conceptual basis for improving corporate responses to modern slavery transparency legislation

Bruce Pinnington and Martijn Boersma

Reporting transparency lies at the heart of legislation to tackle modern slavery in corporate supply chains. The premise is that increased transparency will encourage more meaningful action. The reality so far is disappointing. In other contexts, weak reporting may be simply a consequence of strategic secrecy. However, factors related to the visibility of modern slavery in supply chains may contribute to poor discovery of information, thereby pre-empting questions of secrecy. Visibility is an integral component of transparency. This paper unpacks phenomenological visibility to reveal five dimensions each of which are considered in relation to action for manager, firm, and sector actors. The resulting framework enables public policy and corporate procedures to be systematically reviewed for effectiveness.

160

The Nature, Antecedents, and Outcomes of Gig Workers' Daily Motivation Profiles: A Multilevel Latent Profile Approach

Guanyu Zhang, Lixin Jiang, Lu(Lucy) Xing and Niannian Dong

The rise of the gig economy has significantly altered the landscape of work, leading to precarious employment for many individuals. Despite the growing literature, less is known about gig workers' motivations. This research represents the first step to understand the nature, predictors, and outcomes of gig workers' daily motivation profiles. With 134 Chinese gig workers across two weeks, we used a daily diary design and multilevel latent profile analysis to extract daily gig-worker motivation profiles. We found five distinct profiles: "moderately motivated", "passionate", "pragmatic", "highly motivated", and "unmotivated". Drawing on the spillover model and the work precarity framework, we found that daily family satisfaction increases the odds of membership in the "highly motivated" profile, while three precarity aspects (i.e., gig-work insecurity, perceived alienation, and gig income insufficiency) increase the odds of membership in the "pragmatic" profile. We found that the "passionate" and the "highly motivated" profiles have the most favourable outcomes – higher daily vitality and lower emotional exhaustion. Unlike previous research examining motivations in isolation, our study extends the understanding of gig workers' motivations by applying a person-centred approach and capturing its within-person and between-person variation over time.

164

Hospitality Start-up in Bangladesh: Identifying factors associated with prospective graduates' self-employment transition through entrepreneurship

Mahfuja Khatan, Damian Morgan, Jenny Panchal

Bangladesh aspires to promote economic development through industry development in sectors including tourism and hospitality. In this context, research is required to identify factors contributing to the success and failure of small and medium enterprises. A critical role here is played by prospective graduate entrepreneurs engaged in hospitality start-ups in Bangladesh. To support new lines of research inquiry, a conceptual framework is proposed here. The framework draws upon factors within the theory of planned behaviour, entrepreneurship education, employee involvement, and contextual influence (e.g., idea, business model, marketing, team, funding, and timing). To better understand the role of graduate-educated entrepreneurs in business development, a research agenda comprising quantitative and qualitative methods is outlined. The proposed research is designed to uncover success factors in hospitality entrepreneurship to inform educators and other industry development support mechanisms.

165

Building workplace inclusion in a hybrid environment: An exploratory study

Paula O'Kane, Sophie Gimblett, Dana L. Ott and Azka Ghafoor

Organisations globally have turned their attention to workplace inclusion to effectively manage workplace diversity and respond to social justice movements. However, the recent and widespread adoption of hybrid working has resulted in researchers and practitioners seeking to better understand how workplace inclusion can be built in this unique context. Using interview data from employees at a large multinational organisation headquartered in New Zealand, this research identifies key factors and inclusion-building practices and programmes applicable to the hybrid working environment. Overall, this study builds on the limited existing insights of what builds inclusion in a hybrid working environment providing guidance to practitioners.

167

Exploring the Impact of Psychosocial Safety Climate on Organisational Citizenship Behaviour: A Pathway to Enhanced Organisational Well-Being

G.G. Udaya Priyasantha Rathnayake, Anil Chandrakumara and Anura De Zoysa

This study explores the influence of Psychosocial Safety Climate (PSC) on shaping Organisational Citizenship Behaviour (OCB) and overall organisational well-being. The measures implemented by PSC, which aim to safeguard employee mental health, substantially impact employees' performance and overall well-being. Organisations prioritising PSC cultivate a culture that promotes psychological well-being, job satisfaction, and organisational commitment. These aspects collectively foster OCB, which refers to employees' voluntary participation in beneficial actions beyond their formal duties. This study employs a systematic literature review and a bibliometric analysis of 82 publications from the Scopus and Web of Science databases, spanning 2010 to 2024. A total of 1,230 keywords were examined, revealing essential themes connecting PSC. Employing social exchange theory, the study demonstrates that a robust psychosocial safety climate cultivates a supportive workplace, resulting in reciprocal positive behaviours that improve job satisfaction, organisational commitment, and psychological well-being. The proposed conceptual framework elucidates how PSC can foster OCB and enhance organisational well-being, providing essential insights to organisations seeking to prioritise a psychosocial safety climate that cultivates a more engaged, dedicated, and resilient staff.

170

Navigating Turbulence: Insights into Senior Leaders' Responses to Competitors' Misfortunes Based on Early Findings

Sachinthanee Dissanayake, Mario Fernando and Kumar Biswas

Within the dynamic landscape of business, strategic leaders grapple with a multitude of challenges, and their decisions significantly impact business outcomes. While scholarly inquiry has delved into issues such as internal organisational crises, there has been a notable oversight regarding the crises faced by competitors. However, in practice, it is evident that leaders' decisions are influenced by their competitors' misfortunes. Employing grounded theory, we investigated how leaders perceive and react to their competitors' misfortunes. Preliminary findings reveal three distinct perspectives among leaders concerning competitor failures, which subsequently shape their decisions regarding seizing opportunities arising from such adversities. This research makes a valuable contribution to the strategic leadership literature and provides practical implications for business practice.

171

Beginning Teachers' Perceptions of Mentoring, Support, and Job Demands in the First Semester of Teaching; a longitudinal qualitative investigation

Jane Gifkins, Paula Brough and Mitchell Rapper

This research's aim was to investigate the mentoring and support needs of beginning teachers across their first semester as teaching professionals. High levels of attrition in beginning teachers threatens the sustainability of education in Australia.Utilising a longitudinal qualitative enquiry, the Job Demands-Resources theory (JD-R) framed beginning teachers' perceptions of their work as job demands and job resources (mentoring and support). Participants varyingly described these as being positive and negative. Most beginning teachers reported adequate levels of mentoring and support assisting their transition into teaching. Longitudinal data showed the changes in beginning teachers' job demands and job resources needs across time. These results can be used to adjust and target the timing of and specific mentoring and support for beginning teachers.

172

"After opening the business, I completely forgot about wellbeing": Indian immigrant entrepreneurs and their wellbeing

Nadeera Ranabahu and Poh Yen Ng

Entrepreneurship can positively or negatively affect a person's wellbeing. To explore this further, we employed hedonic and eudemonic wellbeing and acculturation theories and conducted 10 semi-structured interviews with Indian immigrant entrepreneurs in New Zealand. We found that immigrant entrepreneurs' wellbeing fluctuates in parallel to their migration, settlement, and business start-up and development. They have wellbeing hopes and expectations, periods of wellbeing deterioration and restoration, and finally self-realisation that they need to manage their wellbeing. This realisation led them to define their wellbeing by combing psychological and physical dimensions with social, emotional, and spiritual wellbeing. We combine these findings with migration and entrepreneurial wellbeing literature and contribute by developing a wellbeing journey conceptual framework for future theory and practice.

173

The Hierarchical Structure of Leadership Behaviors

Peter Yih-Tong Sun, Marc Anderson, Sudong Shang and HeyIn Gang

Existing set of leadership styles has excessive redundancies both conceptually and empirically, and there is a need to determine which leadership behaviors are distinct and what their collective hierarchical structure is. We do this by conducting an extended sequential factor analysis of seven leadership styles that collectively represent the full-range of leadership behaviors – transformational, transactional, laissez-fare, servant, ethical, authentic, and instrumental. We find seven distinctive behaviors at the lowest level – transforming influence, behaving morally and ethically, non-leadership, empowering, focusing on subordinates, community engagement and facilitating learning & work outcomes – that cumulate to meaningful meta-categories. The hierarchical framework we identify is important to better understand leadership behaviors and is akin to what personality scholars have achieved through the Big-Five framework.

174

Development in the Context of Electrification and the Lithium Industry: The View of the Citizens of San Pedro de Atacama

Eduardo Ordonez-Ponce

In the context of the climate emergency, lithium is positioned as crucial to the success of a green transition. However, the citizens living where most of the lithium is located have not been consulted on their views on the industry and its impact on their development. Using the socio-environmental justice literature, this research assesses how local citizens evaluate their relationship with lithium multinationals located in the "Lithium Triangle". Results show that while most of the interviewees approve of the industry under certain conditions such as its impact on water resources and local culture, the most important variable is the economic benefits they receive, which have created tensions among community members and a social fracture.

175

Stimulating Socialization in Triads. The Impact on Partitional Ambidexterity and Relational Performance

Artur Swierczek and Natalia Szozda

This study aims to investigate the effect of socialization promoted by the logistics service provider (LSP) on partitional buyer-supplier ambidexterity and their resulting effect on triadic relational performance. The conceptual basis for our research was derived from Network Theory (NT) and complemented by the tenets of Social Capital Theory (SCT). Building on these theories, we developed a questionnaire and conducted research using a survey of 350 transitive triads. The results obtained from Hierarchical Regression Analysis (HRA) and Structural Equation Modeling (PLS-SEM) were used to test the research hypotheses. The results indicate that while the LSP-stimulated socialization has a positive effect on buyer-supplier ambidexterity, the contribution of its components (i.e., buyer socialization and supplier socialization) differs in terms of significance and strength. The findings also demonstrate that the effect of buyer-supplier ambidexterity on triadic relational performance is strong and positive. The results obtained suggest that buyer-supplier ambidexterity acts as a partial mediator between the socialization of buyer and supplier and the triadic relational performance.

180

Broadening our lens: Four theoretical perspectives on industry incubation

Gaomin Lui and Glenn Hoetker

The emergence of nascent industries involves intricate dynamics within a long period of obscurity before gaining widespread recognition. While scholars across diverse research domains have explored the evolution of firms and industries during this incubation stage, their discussions remain fragmented and dispersed regarding the mechanisms underlying industry formation. This study synthesizes varied theoretical perspectives—technology realism, economic realism, cognitive interpretivism, and social constructivism— and proposes a four-stage framework encompassing idea generation, resource allocation, social network formation, and institutional legitimacy emergence to clarify how firms navigate the industrial-level evolution. By applying those perspectives to industry incubation stages to which they have previously not been applied, this paper generates new research questions and insights for future studies.

185

Enhancing individual and organisational outcomes from hybrid working through intentional management in public sector workplaces

Judy Lundy, Uma Jogulu, Helen Taylor and Sue Williamson

This article examines opportunities and challenges to maximise beneficial organisational and employee outcomes through intentional management in Australian Public Service (APS) workplaces where hybrid working has become business as usual. It provides insights from the limited academic and practitioner literature into how intentional management can maximise benefits and counter challenges of hybrid working including through application of interpersonal connectivity work theory. The article concludes that while APS managers are incorporating an intentional approach in their management, there are opportunities for more intentionality around some aspects, particularly regarding more conscious decisions on where work is best undertaken and greater attentiveness to enhancing equitable career development opportunities.

188

Bottleneck or Not? The Ceiling Effect of Network Closure on Individual Innovative Performance

Stefan Breet, Lotte Glaser, Justin Jansen and Jan Dul

This study examines the extent to which employees in closed networks can compensate for the lack of structural access to heterogeneous knowledge and information. We introduce the "performance ceiling" concept to describe the maximum level of innovative performance that individuals can potentially achieve with a given level of network closure. Leveraging insights from the literature on necessary conditions and constraint causal mechanisms, we argue that network closure not only reduces the average individual innovative performance of employees, but also puts a cap on the maximum level of innovative performance they can potentially achieve. Our empirical analysis of a professional service firm indeed shows that closed networks serve as social straitjackets, limiting the maximum level of innovative performance employees can potentially achieve. An important implication of our study is that employees in closed networks cannot fully compensate for the lack of structural access to heterogeneous knowledge and information. We discuss the implications of our findings for the literature on social networks and innovation.

189

The use of experimental designs to examine causality in authentic leadership: A scoping review

Ann Dadich, Ling Abbott, Andrei Lux and Kevin Lowe

Authentic leadership studies are often criticised for the limited use of causally defined research designs. To advance scholarship is this area, this article presents a scoping review on the use of experimental designs to examine causality in authentic leadership. Eleven publications were identified, which presented 16 experiments that met the inclusion criteria. Generally, these experiments: tested authentic leadership as an antecedent; were conducted online; used a one-factor design; involved large samples, typically of working adults or residents; involved a manipulation check; involved the use of written vignettes to manipulate levels of authentic leadership; included counterfactual conditions; culminated with outcomes pertaining to followers; and established the causal effects of authentic leadership on the outcome(s) of interest.

190

Am I immune to leaders' Lies? The Role of Leader Narcissism and Verbal Deception on Followers' Workplace Dignity and Job Performance

Menaka Hewawaduge, Mario Fernando and Kumar Biswas

Lies can be said for different purposes in work interactions. When followers perceive their leaders are lying, followers' dignity and job performance could be impacted. We found theoretical gaps addressing (i) the effect of leaders' narcissistic behaviour on followers' workplace dignity, (ii) narcissistic leaders' tendency to lie, and (iii) the effect of leaders' lying on followers' workplace dignity by conducting a bibliometric analysis. We propose a novel conceptual framework to capture these gaps using the theoretical lenses of Leader-Member Exchange theory and Interpersonal Deception theory. The anticipated results of this research are expected to substantially contribute to strengthening transparent leader-follower dynamics and improve performance at different organisational levels by cultivating a culture anchored in dignity.

192

Policy Support and Transnational Nascent Markets: EIF's implication on Impact Investing Infrastructure

Juan González, Benjamin Le Pendeven, Guillermo Casasnovas and Celine Louche

The literature about policy support on nascent markets shows that public actors may play a fundamental role at building, governing, and legitimizing nascent markets. However, previous research focuses on national contexts and do not explore the particularities of building markets in heterogeneous environments, as is the case of transnational markets. Through a qualitative study, we investigate the actions of a public delegated organization, the European Investment Fund (EIF), in helping to shape the market of impact investing in Europe. We contribute to the literature about policy support on nascent markets by explaining the mechanisms used for building the four types of market infrastructure and by analyzing the three types of interventions that public actors carry out to adapt those mechanisms over time and geography.

194

Partner selection and strategic alliance formation in the incubation stage

Gaomin Liu

This paper asks how firms choose their alliance partners during the incubation stage of an industry life cycle. Existing research has explored firms' partnering behaviours after the technology is formally commercialized, with limited attention being put on the very early incubation stage of an industry. This research uses OECD green steel industry data from 2016 to 2024 to demonstrate how firms choose their partners under high technology uncertainty. The result fills the knowledge gap of business activities in the incubation stage, offers insights for managers to evaluate the trade-offs of suppliers' capabilities and relationships, and provides implications for policymakers to adopt regulations to support businesses in the green industry.

203

From Calling to Rest: The Mediating Role of Work-Life Enrichment in Linking Calling to Sleep Quality, and the Moderated Effect of Overtime Frequency

Amber Yun-ping Lee, Po-Chien Chang and Heng-Yu Chang

In recent years, research on the concept of calling has gained substantial attention, highlighting the various benefits of a strong sense of calling. This study aims to investigate the relationship between experiencing a calling and an individual's quality of life, specifically focusing on sleep quality. We propose that having a sense of calling contributes to one's work and extends to other life domains via work-life enrichment. By examining a sample comprising 490 employed adults, our research illustrates that the positive effects of having a calling at work transcend into personal life by fostering work-life enrichment, consequently impacting sleep quality. Our findings provide both theoretical insights and empirical evidence supporting the favorable effects of having a calling on both work and life domains. Furthermore, we shed light on the potential impediment posed by excessive overtime, which may diminish the beneficial effects of experiencing a calling.

207

Does bank-firm relationship affect ESG performance in a bank-based system?:Evidence from COVID-19 crisis period

Hideaki Sakawa, Yiuwai Wong and Naoki Watanabel

This paper examines whether bank-firm relationships promote corporate environmental, social, and governance (ESG) activities in a bank-based system. Under the recent rising trends of ESG activities, firms with main bank relationships are more likely to increase ESG activities in a bank-based financial system during the COVID-19 crisis era. Our empirical analyses reveal that firms with main bank relationships can enhance higher ESG performance during COVID-19 era in Japan. We find the robustness of our results when we only focus on firms with bank lending relationships and propensity score matching (PSM) methodology. Overall, our study provides the first evidence that ESG activities are supported for firms with main bank relationships during Covid-19 crisis era in Japan.

208

The influence of social capital on small business resilience: A research agenda

Hoang Thanh Van Vo, Sardana Islam Khan and Geoffrey Chapman

Small business resilience is a growing area of interest in the entrepreneurship research, especially after the COVID-19 pandemic. Prior literature has predominantly investigated small business resilience by focusing on one specific perspective of social capital as a key factor. However, the influence of social capital on business resilience is highly dependent on context, suggesting the need for a comprehensive framework illustrating this relationship and its implications for small businesses facing crisis situations. Adapting the resource-based view, this paper introduces a framework that incorporates several theories of social capital and the role of dynamic capabilities of small businesses. With this framework, the paper aims to provide suggestions and directions for future studies examining.

209

Unraveling the Roots of Quiet Quitting: Antecedents and Scale Development

Somayeh Bahmannia, Darren K.B., Kevin Lowe and Daan van Knippenberg

Extensive research has focused on employee disengagement, while management scholars have only recently turned their attention to quiet quitting. Consequently, the quiet quitting literature is still in its developmental stages, lacking consensus on its conceptual foundations. In this research, drawing on conservation of resource theory (COR), we conceptualize quiet quitting in the workplace, encompassing confrontation avoidance, personal well-being maintenance, and the conservation of time and energy. Leveraging our definition and drawing from COR, we subsequently develop a statistically validated measure for quiet quitting and empirically test its cognitive antecedents.

211

Exploring stakeholder configurations based on three dimensions of companies' stakeholder relations

Peter Hoffman, Yiyu Wang, Youngun Kim and Saileshsingh Gunessee

Our research investigates the engagement of companies with stakeholders. We argue that companies develop specific stakeholder configurations that are connected to their strategic and value orientations. Prior literature mostly examines stakeholder engagement for all stakeholders or focuses on a specific stakeholder. We explore what stakeholder configurations exist by looking at three dimensions of stakeholder relationships: 1) stakeholder prioritization, 2) stakeholder breadth, 3) and stakeholder engagement depth. Based on a sample of 1921 international corporations and by utilizing cluster analysis, we distinguish four dominant stakeholder configurations and classify them as a more broadly oriented managing-for-stakeholders, a more limited stakeholder focused shareholder primacy orientation, a primary stakeholder focused customer centric orientation, and a socially oriented stakeholder configuration with deeper engagement with secondary stakeholders. We discuss antecedents and consequences of different stakeholder configurations.

213

Corporate Psychopath's Exceptional Craving for Materialism, Money and Power

Clive Boddy

An online, quantitative survey was used to collect data on the psychopathy, attitudes, and corporate culture of 313 white-collar respondents residing in the UK. It has long been theorised that workplace psychopaths are motivated by power, money and control. We sought to be the first to examine evidence for this theoretical assumption in a corporate sample. Findings are those high in trait psychopathy desire money and materialism more than anyone else. Unconcerned with higher values, the psychopathic assume money brings power whereas others do not. Findings add to theory because they support and extend corporate psychopathy theory. Findings adds to knowledge because they are unique and novel, supporting the key ideas in corporate psychopathy theory that the psychopathic are more motivated to attain leadership positions than other people are, because they are driven by a craving for money, materialism, control, and the power that hierarchical status confers. To attain these ends, corporate psychopaths use politicking to make sure they are noticed. To the psychopathic, the possession of money is a facilitator of control and a demonstration of power and success which may fill the void of their emotional emptiness. The ethical implications of their presence in leadership positions are profound because of their complete immorality. One potential implication is that any organizations who wish to attract non-psychopathic leaders, should offer leadership salaries that are lower than their competitors. Corporate psychopaths are adept at reaching leadership positions and current research gives us an understanding of their motivations in doing so.

214

Artificial intelligence: Enhancing algorithmic platforms while diminishing workers' well-being

Vishit Trivedi

The explosive growth of Artificial Intelligence technologies has rendered algorithmic management even more incisive, formidable, and potent. AI and algorithmic management-driven platforms are novel work designs with significant Human Resources Management (HRM) implications. India's algorithm-driven cab-hailing industry employs 7.7 million workers, set to become 23.5 million by 2030. Traditional firms, too, increasingly utilize technology-driven platforms for rapid scaling up and cost-saving. Leveraging the Human Capital Resource (HCR) theory, I examine the HRM impact of algorithm-driven organizing by interviewing 31 cab-hailing platform workers in India. Findings assert that the brutality of technology adversely affects work control and well-being, causing job precarity and HCR depletion. Gioia's methodology for qualitative analysis provides practical recommendations for realigning HRM practices of performance management and voice.

215

Why Human Resource Management Personnel Sides with Management and Fails to Deal with Bullying to the Bullied Employee's Satisfaction

Clive Boddy

This paper contributes to understanding some of the reasons why Human Resource Management Personnel (HRMP) side with management and fail to deal with reported cases of worker bullying to the satisfaction of the bullied employees. Thirteen years of online comments (from 3rd December 2012 to 27th June 2024) totalling 2,864 comments about workplace bullying were examined to see if any commentators attributed reasons why HRMP did not deal with reported worker bullying to the satisfaction of the complainants. Results were compared to findings from a literature review. Previous analysis of comments related to HRMP has already established that no-one who reports bullying also reports satisfaction with how HRMP deal with bullying allegation. The focus of this current paper is to explore why and how this situation may have come about from HRMP's point of view.

217

Integrating Māori Values in New Zealand Commercial Fisheries: A Case Study of Moana New Zealand

Carla Houkamau and Robert Pouwhare

This paper examines how Indigenous insights can inform managerial research and how managerial research can support Indigenous managerial approaches. It highlights the value of research in understanding culturally relevant forms of management practice, focusing on commercial fisheries in New Zealand and Moana New Zealand ('Moana NZ'), the country's largest Māori-owned inshore fisheries company. Based on interviews with Moana employees, the authors analyse the company's application of the Māori value of manaakitanga (kindness, generosity, support, and mutual respect) in their business practices. The paper demonstrates how Māori values have determined Moana NZ's adoption of culturally relevant, sustainable, and holistic approaches to business, highlighting the integration of Indigenous knowledge systems, multidimensional value creation, and comprehensive well-being initiatives. This case exemplifies a trend towards more interdisciplinary and sustainability-focused management studies.

219

Employee responses to dark leadership: The role of followers' envy in knowledge-hiding dynamics

Fangping Zhao, Karen Tian, Heidi Wechtler and Judith Zhu

Knowledge hiding poses a pervasive challenge for organizations globally, demanding concerted efforts for its reduction. Existing literature underscores its heightened prevalence in organizations led by individuals with dark traits. However, the impact of diverse leadership styles and individual coping strategies introduces nuances, yielding varied outcomes. Drawing on the conservation of resources theory, this study offers an alternative explanation for employees engaging in knowledge-hiding behaviors which is caused by different envy emotions under the influence of destructive leaders. Analyzing a sample of 516 employees working for high-tech industries in China, our findings reveal that malicious envy significantly amplifies all dimensions of knowledge-hiding behaviors, while benign envy exerts a partial mitigating effect.

220

Tyranny of Women of Colour in the Academia: A Racial Literacy Perspective from Narratives

Nilufa Khanom and Tasmiha Tarafder

Women of colour face many challenges in Australian academia due to racism and tokenism. There is a lack of or inadequate research to understand ethnic minority women and their experiences in Australian academia. This research employs racial literacy as a conceptual model to identify the factors contributing to the suppression of ethnic women. Through narrative research, this study explores the experiences of two ethnic women from a South Asian background who worked in different educational settings in Australian academia. The findings reveal that the respondents experienced implicit/explicit bias, racism, bullying, micro-aggressions and marginalisation by the students, colleagues and academic supervisors. Finally, the findings of this research suggest that racial literacy has become essential in Australian academic institutions.

221

Social Implications of Industry 5.0 in Supply Chains

Wayne Ren, Vipul Jain and Mohammad Saud Khan

While Industry 4.0 has led to an increased process automation over the past decade, the human and social aspects has been inevitably ignored. Therefore, Industry 5.0 has emerged to emphasise human involvement and address social issues brought by Industry 4.0. This paper aims to systematically study the social implications of Industry 5.0 through a systematic literature review, with a focus in supply chain organisations. An industrial human needs pyramid has also been applied to allow a holistic understanding. Literature has identified the positive effects of Industry 5.0 on social dimensions however a substantial portion are conceptual or theoretical in nature. While Industry 5.0 is designed to address social challenges, more empirical evidence is required to validate its effectiveness.

222

From AI to A+: The Impact of AI Usage Intention on Academic Performance, Learning Effectiveness, and University Reputation

Gazi Farid Hossain, Amaln Haque and Md Shamirul Islam

Drawing on the social exchange theory, we examine the impact of AI usage intention on academic performance, learning effectiveness, and university reputation using structural equation modelling (SEM). A time-waved sample of 1227 completed responses was collected from full-time Australian higher education students. Results indicate that AI usage intention significantly affects academic performance and learning effectiveness. Both academic performance and learning effectiveness significantly influence a university's reputation. Additionally, AI usage intention moderates the relationship between academic performance and learning effectiveness, enhancing learning processes and outcomes. This paper contributes to the literature on AI usage in Australian higher education, revealing how academic performance, learning effectiveness, and university reputation are interrelated. We conclude with theoretical and practical implications to support AI adoption responsibly.

224

Financial Effects of Gender Diversity: Role of External Environment

Subba Yaram and Sujana Adapa

We investigate the links between board gender diversity and financial performance for a sample of 9517 companies from 84 countries for the study period 2010 to 2023. In general, the findings support the proposition that gender diversity has no financial benefits for firms. However, there is evidence that gender diversity is beneficial when external environment is highly turbulent. For the sub-period of 2020 to 2023, gender diversity has a significant positive effect on financial performance of firms. These findings are consistent with propositions relating to upper echelons theory. Further, we find evidence in support of a critical mass of female directors. Two or more female directors help realise financial benefits again during the recent covid-19 crisis and in its aftermath.

228

Revisiting the Case Method in the Age of Complexity

Helen Parker

The traditional case method in business education is scrutinised in today's complex business landscape. This review assesses the relevance of case method for teaching complexity and enhancing business students complex thinking skills. The study finds that the case method's suitability for teaching complexity remains unclear due to limited empirical research. The review reveals that augmenting the case method with simulations, modelling, collaborative student research and other low-tech approaches would appear to be beneficial. More empirical research into the case method's learning impacts and its effectiveness for teaching complexity is required.

229

When Work Passion Loots Leisure Time: Exploring the Dual-Edged Effect of Passion on Employee Time Poverty and Dehumanization Experiences

Shilpa Chingan Thottathil, Manoranjan Dhal and Kapil Verma

This quantitative study investigates the relationship between employee passion and dehumanization experiences, emphasizing the crucial role of time poverty—defined as a lack of time for leisure and personal activities. The relationship is examined at both within-person levels and between-person levels using experiential sampling methodology through a 5-day daily survey of 78 employees at a media technology services company. As per the results, employees with high harmonious passion experience less organizational and self-dehumanization due to a reduced perception of time poverty. Conversely, those with high obsessive passion experience greater dehumanization. Additionally, the research reveals that daily interactions between passion and psychological detachment significantly influence perceptions of organizational dehumanization. This study contributes to the literature on passion and dehumanization and offers insights for practitioners to reduce employees' dehumanization experiences.

230

Female Social Entrepreneurs in India and Impact of Familial Relationships

Sadaf Khurshid and Vera Mackie

This qualitative study investigates the role of middle-class families in supporting their female members within the context of India's evolving social landscape. Historically, the caste system has limited social mobility, but modern Indian society is overcoming these barriers through political and economic empowerment. By studying the Female Social Entrepreneurs in Delhi, this research explores how familial ties influence their success, shedding light on cultural evolution and changing family behaviors. These insights are crucial for the Indian government to formulate effective policies amidst ongoing socioeconomic shifts. This study contributes to understanding the dynamic interplay between middle-class growth, gender roles, and entrepreneurial support in India.

232

A multi-level, multi-actor exploration of moral market failure

Jonathan Baker

Moral markets promise to relieve social or environmental issues through exchange centered around products with enhanced sustainability credentials. However, how is it that some moral markets fail despite the hype that surrounds them? We explore the market for plant-based alt-proteins in New Zealand. Primary data, collected over two and a half years, comprise 55 interviews with 34 participants from throughout the broader market field, complemented by a wealth of secondary data. We find widespread establishment of the market failed due to a multiplicity of constraining and oppositional factors. We thus extend current studies that primarily focus on the role of mainstream market incumbents in defeating moral markets by exposing complex challenges across macro-, meso-, and micro-levels.

233

Reimagining the Workplace: Embracing an Aging Workforce, Artificial Intelligence, and Pet Robot Dogs in Innovative Workspaces

Adela McMurray, Ashokkumar Manoharan, Bruno Pereira, Ryan Jang and Dr J Irudhaya Rajesh

Considering the future of work and the challenges faced by the aging workforce, emerging technologies such as artificial intelligence (AI) and robots are promising fields that promote care, well-being, and companionship in workplaces. Using design theory, the study shows how pet robots can be adopted and interact with aging people in working environments, considering the human-robot attachment and Ethorobotics approaches. The study is based on the literature and specific cases in innovative workspaces regarding the benefits and demerits of pet robot dogs as co-workers and companionship. The study develops three propositions to embrace an aging workforce, AI, and pet robot dogs; primarily moving Industry 4.0 to Industry 5.0 that adopts a more human-centric perspective towards the smart social factory concept. These propositions inform pathways in which innovative organisations could work to offer suitable solutions for aging workers, supporting their routines and tasks with advanced technologies.

234

Excelling amidst change: Building capability during business transformation by senior entrepreneurs

Pranab Mukherjee, Ying Zhu, Subhadarsini Parida and Danny Soetanto

This study aims to explore how senior entrepreneurs navigate ongoing business transformation processes, leveraging their human and social capital, through the lens of dynamic capability theory, human capital theory, knowledge-based view theory, and social capital theory, which enhance their management skills. By integrating these theories, the study extends existing study on senior entrepreneurship, investigating the mechanisms of business transformation and capability building. It addresses the need for understanding senior entrepreneurs' capabilities, given the rise in this demographic due to global aging and increased life expectancy, yet limited empirical study in this area. Employing qualitative methods and semi-structured interviews focusing on digital transformation, cash-flow management, and adaptive leadership, the conceptual paper aims to uncover insights across industries, contributing to theoretical advancements in senior entrepreneurship, business transformation, and capability building, potentially leading to new frameworks tailored to this demographic.

240

Silent Struggle for Mature-Aged Employees: How Relational Age and Voice Behavior Shape Co-Worker Trust and Task Performance in Professional Teams

Chia-yen Chiu, Sanjeewa Perera and Valerie Caines

It is common for contemporary organizations to manage three generations in the workforce, with professionals being grouped into age-diverse teams. Yet, existing literature consistently report that older employees might not be seen as competent and trustworthy by their younger teammates, leading to their work disengagement and subsequent talent loss. To address this, we integrate the Stereotype Content Model with the Status Characteristics Theory to suggest that frequently displaying voice behavior should neutralize the potential negative impact of older workers' relational age (i.e., the age difference with their co-workers) on co-worker trust. In the main study, we adopt a round-robin design and social network approach to test our hypotheses using a sample of 199 employees from 56 professional Taiwanese work teams and found a significant moderating effect of voice behavior on co-worker trust and a significant moderated mediation effect on supervisor-rated task performance. We further conducted a supporting, vignette study and recruited 193 Australian participants through Prolific. We found that the target's relational age was negatively associated with participants' trust due to the decreased level of perceived competence about the target, and this negative relationship was neutralized under the voice condition. Our research conclusions contribute to the literature on human perceptions at workplace, managing age-diverse teams, and retaining capable older workers. We also provide important practical insights for mature-aged professionals who are motivated to build sustainable careers, and for organizations who manage age-diverse teams.

241

A Mixed Method Approach to Designing the Joyful Leadership Scale: Translating Discrete Emotion Theory into a Validated Measurement Instrument

Katie Mcintyre

Joyful leadership is a construct that draws on positive psychology and leadership research, that has recently emerged in literature. A small number of authors have considered joyful leadership in the context of the nonprofit sector. This research goes beyond the nonprofit sector, to examine joyful leadership in all sectors of Australia. Utilising a mixed method scale development process generated a reliable and validated scale measuring joyful leadership across three dimensions. This paper highlights the various stages of the mixed method scale development process used, presenting the process used and final results of the administration of the scale. The Joyful Leadership Scale demonstrated reliability and validity in excess of recommended thresholds on all dimensions. Limitations and future research opportunities are discussed.

243

The Rule of Heuristics Versus Dynamic Competitive Response

Takhaui Kamzabek and Hayot Berk Saydaliev

Previous research highlights the advantages of the corporate investment alternatives in enhancing multimarket contact, forming collusion, facilitating resource reallocation, and identifying growth opportunities. This may also promote deviating from industry norms across business units, thus enriching the competitive repertoire and improving firm performance, consistent with traditional competitive dynamics theory. We analyse a sample of S&P 1500 companies, finding that firms benefit from diversifying resource allocations away from industry norms but that there is a limited understanding of the behavioral strategies they employ. Specifically, there is evidence that such firms may follow naïve allocation to some extent, because managers rely on 1/N heuristics, which may distort the dynamics of competition. Our research explores whether firms with more units (i.e., alternatives) are responsive to multi-market competitors but continue to rely on simplistic 1/N heuristics in making allocation decisions, thereby neglecting overall industry dynamics. We demonstrate that with an increase in units, firms fail to effectively differentiate from their rivals, leading to heightened competition neglect bias. Our approach reassesses the competitive dynamics perspective, embedding a cognitive viewpoint and extending its applicability to a multi-business environment.

244

What is a Maori Entrepreneur? A Ngapuhi perspective.

Jason Rogers, Naomi Birdthistle, Kerry Bodle and Richard Laferriere

This paper is part of a larger study that answers the question, 'What is a Māori Entrepreneur?' The larger study creates a Māori entrepreneur model that identifies factors that help answer the question, and also identifies the inter-relationships between these factors. The study is a qualitative analysis using phenomenology to identify the factors, and themes within these factors. The study has two parts, the first part, an historical analysis of the stories and experiences of four Ngāpuhi entrepreneurs (19th and 20th century), the second part is the interview of existing Ngāpuhi entrepreneurs that are operating their businesses in the 21st Century. This paper shares the first part of the larger study, the historical analysis of the four Ngapuhi entrepreneurs, to answer the question 'What is a Maori Entrepreneur?

246

An Empirical Investigation of Leaders' Downward Malicious Envy in Organisations

Sabreen Kaur, Herman Tse and Nathan Eva

Accumulating research evidence demonstrates that leaders' experience of envy toward subordinates (downward envy) leads to destructive work outcomes. However, limited research has investigated when and how leaders' downward malicious envy influences destructive responses towards envied targets. Drawing upon the dual envy and social comparison research, we examine a theoretical framework exploring the implications of leaders' downward envy for interpersonal outcomes. Findings from a three-wave study (N = 180) suggest that leaders' downward malicious envy harms their affective trust in envied subordinates. This, in turn, decreases leaders' prosocial helping behaviours toward envied subordinates and subordinates' access to developmental opportunities when team cooperative goals are higher rather than lower. These findings offer significant theoretical and practical contributions to research on leader-follower relationships.

249

Analysing critical success factors of medium and large construction projects using fuzzy analytic hierarchy process

Neda Kiani Mavi, Kerry Brown, Richard Fulford and Mark Goh

This study aims to identify and prioritise a comprehensive set of success factors specifically for medium and large construction projects. Through an extensive literature review, we identified 53 key success factors, organised into 9 categories. We then used the modified logarithmic least square method within the fuzzy analytic hierarchy process (fuzzy AHP) to assign significance weights to these factors, clarifying their impact on project success. Data was collected from 28 construction project managers in Australia and New Zealand. Our findings reveal that crucial factors for successful medium and large construction projects include cost-effective work practices, competent project managers, emotional intelligence, supportive leadership, transparent procurement processes, and the use of modern automated technologies in construction.

255

The Responsible Leadership Mindset: The Influence of the Mind in the Emergence of Responsible Leadership

Alice Rickert

Leaders interpret their responsibilities differently, which complicates the management of their behavior. Responsible leadership theory explains these differences with variations in leaders' mindsets (Waldman et al., 2020). However, despite its widespread use, the concept of mindset lacks a theoretical foundation, impeding theory development, causing theoretical tensions and inconsistencies (Miska & Mendenhall, 2018). To address this issue, I draw on Crilly et al.'s (2008) model of responsible leadership and the implicit theories literature (Chiu et al., 1997; Plaks, 2017). I extend responsible leadership theory in three ways: 1) I conceptualize and theoretically ground the concept of mindsets; 2) outline mindset-constituting components and their behavioral implications, and 3) elucidate how mindsets act as causal mechanisms in the emergence of responsible leadership behavior.

258

Tale Of A Leader's Closet Decisions: Aspects From Goffman's Stigma Theory, Disclosure, And Voice

Charvi Hasmukh Shukla

As more people are coming out of the closet it is important to understand the consequences it will have on people around them in a work environment. The current body of literature lacks a clear understanding of this paradigm shift from a leader's perspective belonging to a sexual minority. To fill this gap a conceptual model is developed to establish the missing connection between disclosure of a leader's sexual orientation and its effect on employee voice practices using Goffman's stigma theory. Since trust is fundamental to the leader-follower dynamic, the relationship between the components in this model are mediated by employee's trust in the leader. The current study states testable propositions and future agendas.

259

Examining the Interpersonal Consequences of Proactive Work Behaviour: Can Proactivity Hurt Co-worker Relationships?

Candice Wray, Chien-Chung Kao and Yu-Hsuan Wang

This study investigated the dark side of proactive work behaviours (PWBs) and how interpersonal resources (i.e., political skill) can mitigate the negative consequences. We conducted a three-wave questionnaire study (N = 253) and tested hypotheses using bootstrapping path analysis. Results indicated that PWBs positively affect interpersonal trust when employees have higher political skills. Moderated mediation analysis revealed that when political skill is high, there are decreased feelings of ostracism via increased trust and knowledge. Overall, political skill proved to be a significant personal resource that buffers the negative effects of PWBs. Keywords: Proactive work behaviour, ostracism, knowledge sharing, conservation of resources.

262

System-level barriers to circular market emergence

Rico Boesch, Julia Fehrer, Paavo Ritala and Joya Kemper

The circular economy provides strategic guidance to mitigate waste and resource exploitation by creating closed-loop ecosystems. However, achieving this transition requires systemic changes and presents complex, interdependent challenges that act as significant transition barriers. Understanding the interrelated nature and mutual reinforcement of these challenges, particularly at the industry and market level, remains limited. This study adopts a perspective of markets as complex adaptive ecosystems and insights from an embedded case study of New Zealand's plastics industry to explore the underlying temporal and spatial interdependencies across economic, technical, regulatory, structural, and social challenges that affect the emergence of circular markets.

263

Expatriate Management In The New Millennium Era: A Two-Study Perspective

Charvi Hasmukh Shukla

In today's globalized business landscape, organizations rely on expatriates to navigate international markets. However, simply sending employees abroad isn't enough. Expatriate management becomes essential to ensure their success. This two-study perspective provides a review for this well-established yet fragmented research field of expatriate management from the human resource management lens in the new millennium era. Bibliometric analysis and thematic analysis have been conducted resulting into identification of the top five common keywords and six themes. Future avenues are mentioned towards the end.

265

Shared Leadership in Filmmaking: A Collaborative Approach to Creativity

Simon Minaee and Dominic Gasbarro

Research on leadership traditionally assumes that a single leader exercises managerial authority over a group. Conversely, shared leadership conceptualises leadership as a group-level phenomenon. Social Network Analysis (SNA) is well-suited for investigating leadership dynamics and patterns. Accordingly, we empirically tested how density, centrality, and leadership styles influence group creativity. We find that the centrality is approximately 0.25, and the density is about 0.75, and we report a strong negative correlation between centrality and density.
We assess the creativity, task focus, and professionalism of the groups' movies using Amabile's (1982) Consensual Assessment Technique. We confirm that creativity, task focus, and professionalism are positively and statistically related and show no statistical difference between the raters' assessment of these variables.

266

Sustainable Behaviour at Work: The Role of HRM, Goal Clarity and Commitment

Joe Cooper, Nataliya Podgorodnichenko and Fiona Edgar

The purpose of this research is to investigate the role of human resource management practices in influencing employees' sustainable behaviours. Using data from a panel sample of 854 employees working in Australian and New Zealand organisations, we tested the mediating role of goal clarity and commitment in the relationship between sustainable human resource management practices (SHRMP) and employee sustainable behaviours at work. Preliminary results indicate that an array of SHRMP have both direct and indirect (through goal clarity and commitment) effects on employee sustainable behaviours.

268

Strategic Inclusive Leadership: Making Sense of the Complexity of Diversity Management Today

Shireen Chua and Peter Sun

Today's workforce is becoming more complex. Managing such complexity is needed to reap the benefits of diversity. Approaches to diversity management have evolved. Diversity management today requires the consideration of not only the surface-level characteristics such as gender, race, ethnicity, age, and accessibility but also the deep-level characteristics of values, worldviews and lived experience. The complexity of diversity management today requires adopting an organisation-wide approach that balances managing the surface-level characteristics with developing an inclusion climate to manage the deep-level characteristics as well. This requires strategic inclusive leadership. Using a complexity lens, this paper explores leadership's role in their organisation's diversity management efforts and identifies factors that influence their agency. It proposes a three-dimensional model that for strategic inclusive leadership.

269

Outcomes of Employee Voice and Silence: A Systematic Literature Review

Ghulam Mustafa Mir, Shamika Almeida, Uraiporn Kattiyapornpong and Martin O'Brien

Employee voice and silence have gained considerable attention from the academic community in the past two decades. In this paper, we review research papers published on the direct outcome of employee voice and silence between 2010-2024 in peer-reviewed journals. The primary objective of this review paper was to examine employee voice and silence not merely as outcomes of leader characteristics, but rather to explore how they can impact employees, leaders, teams, and organisations. We have identified unexplored issues in the present literature and highlighted avenues for future research. Although research on outcomes of employee voice has seen expansion at micro level, its effect on teams, leaders, and organisations still needs more attention. The outcome of employee silence remains underexplored and offers avenues for future research.

270

How networks influence supply chain innovation through public procurement: Insights from Ghanaian public works sector

Peter Adjei-Bamfo, Hadrian Djajadikerta, Ferry Jie, Kerry Brown and Reza Kiani Mavi

The use of procurement policy to stimulate supply chain innovation outcomes has the potential to address sustainability problems. While compliance with new procurement requirements in support of sustainability, in the short-term, engenders additional production and operational costs to suppliers, these costs are often absorbed by offering such innovative products to buyers at price premiums. In the public sector settings, however, procurement managers assign high value to authority and are therefore less likely to pay such price premiums for sustainability. This situation engenders a disincentive among suppliers to bid for government-sustainable innovative contracts. Our paper explores how networks created from procurement and innovation policies facilitate supply chain innovation. We conducted an inductive analysis of interviews, modified Delphi expert responses, observations as well as archival data from the public works sector in Ghana. We find buyers' procurement strategy, driven by internal and external factors, stimulates supply network emergence. The structure of a network and its embeddedness determine suppliers' access to distinctive sustainable innovation resources essential for their innovation capacity, which mitigates costs related to their response to either incremental or new products demanded by government buyers. Implications for designing network-precise evaluation metrics in procurement that induce sustainable innovation capacity of the supply base are offered. We contribute to both innovation procurement literature in the public sector context and the literature on downstream supply chain innovation.

274

Beyond the Art in the Boardroom: How First Nations and Australian listed companies partner for the United Nations Sustainability Goals

Jacki Johnson, Paul Gollan, Mario Fernando and Catherine Moyle

There are a growing number of Australian firms who commit to Reconciliation Action Plans and partner with First Nations organisations, to help improve employment, health, justice and education outcomes.The goals are often expressed in the language of the United Nations Sustainable Development Goals. The Reconciliation Action Plans could be interpreted as the value Australian firms place on reconciliation, and the importance of integrating First Nations relationship-based approaches into western business practices. An opposing view is that Australian firms' support of First Nations interests and issues is an attempt to secure a stronger social license. This research relies on interviews, content and social network analysis to explore how Western firms partner with First Nations organisations to target specific UNSDG.

277

Leadership Styles for Integrating Emerging Technologies into Banking Operations: A Systematic Review, Synthesis, and Future Research Opportunities

Brijesh Mysore Srikanth, Amlan Haque and Sardana Islam Khan

Banking operations continuously evolve by integrating new technologies such as artificial intelligence, blockchain, and advanced cybersecurity. Using a PRISMA model, this paper reviews 41 peer reviewed papers, examining leadership styles essential for successfully integrating emerging technologies into banking sector. By synthesizing insights from these articles, this paper identifies and evaluates the impact of different leadership styles, such as transformational, transactional, situational, agile and digital leadership, on the successful adoption and management of emerging technologies. Additionally, the paper outlines opportunities for future research, focusing on developing leadership frameworks that can adapt to the rapid technological changes in banking. The findings enrich the theoretical understanding of leadership styles best suited to adopt emerging technologies and lead into the future.

278

A tale of two apps: What platforms offer and what workers want

Lutfun Nahar Lata, Andreas Pekarek and Josh Healy

The experience, management, and regulation of gig work in the platform economy has been a major focus of recent scholarship on work, HRM, and industrial relations. Overwhelmingly, this line of inquiry has been biased towards the 'Global North', raising questions about whether gig work operates the same in the 'Global South'. This paper helps fill this void by focusing on the rideshare sector in Bangladesh. Drawing on a dataset comprising interviews (n=27) and focus group research with rideshare drivers, we find that in the Bangladeshi context many rideshare drivers have come to favour the local platform, Pathao, over the multinational behemoth, Uber. We interpret and explain our evidence with respect to contrasting perspectives on 'multihoming' and 'switching'.

279

Reviewing green human resource management: A comparative analysis of western and non-western practices and cultural influences

Ruilin Lyu

This study provides a comprehensive review of the Green Human Resource Management (GHRM) literature, focusing on the dimensions that differentiate practices in Western and non-Western contexts. This study examines how cultural factors influence the adoption, implementation, and impact of GHRM strategies by developing a comprehensive model for the antecedents, consequences, and processes of GHRM. This study illustrates new insights for advancing the research and practice of GHRM, emphasizing the importance of cultural and contextual factors.

280

Exploring a plausible future of learning for Ōtautahi, Christchurch through multi-stakeholder perspectives

Hafsa Ahmed and Cheryl Doig

Nineteenth-century education models are inappropriately designed to meet the needs of the twenty-first century due to their traditional approaches, which also have an enduring legacy of colonisation. With the rise of technological innovations, changing societal demographics, and the need to address socio-economic challenges, an opportunity exists to explore an alternative future of edcuation. By focusing on Ōtautahi, Christchurch, this exploratory research assessed the feasibility of integrating cities into collaborative campuses through stakeholder engagement. It sought to investigate the potential for providing learning experiences and fostering interdisciplinary skills vital to contemporary challenges. By creating a map of the education stakeholder ecosystem for Ōtautahi, Christchurch, this research identified the barriers and enablers of change for the future of education.

281

When followers disgust toward the humble leaders: Roles of the attribution process

Fu Chen Kuo, Chia-Yen (Chad) Chiu and Nai-Wen Chi

More research has identified the adverse effects of leader humility. To determine whether a follower's negative emotion toward a humble leader, we draw on the attributional theory to identify the dyad relationship of leader humility. This research conducted a survey and collected 232 valid data to verify the research questions. We found that followers would perceive disgusted emotions to the humble leader while attributing the leader's intention as manipulation. The findings revealed the bottom-up effect of follower perception and the dark side of leader humility, which provides a nuanced perspective and considers the role of attribution in followers' emotions. It contributes to understanding the implications of leader humility for followers and leaders.

283

Towards a a Typology of Indigenous Businesses

Michelle Evans, Admiral Manganda, Dinah Hippolyte Blake and Mitchell Hibbens

While there is a growing scholarship on Indigenous entrepreneurship, there is a dearth of literature investigating how Indigenous businesses operate and frame their value propositions. This paper describes a research project to develop a typology of Indigenous business and explore their operation strategies and internal structures. We outline the multi-method design selected to develop a typology of Indigenous business and explore business strategies and structures across the typology. We present the conceptual typology of Indigenous business developed: Broker, Cultural and Open market alongside hybrid combinations. We conclude by outlining the contributions the study findings can make to practice and entrepreneurship research.

289

Creative careers and issues of gender inequity in independent filmmaking in Australia

Louise Ingersoll

The dynamics of careers in the creative industries has been the subject of much consideration across international contexts for the last twenty years given the complexity of context and the desirability of work and employment in the arts and related occupations. However, understanding the nature of agency and the interplay with structure is highly nuanced and in reality, the experiences of skilled professionals and the likelihood of a successful career over time is difficult to predict. Using qualitative data from a doctoral thesis on the sustainability of work and employment for independent filmmakers in the Australian screen industry, this research explores the issue of gender inequity and the realities of caring responsibilities for building a creative career. . . . .

290

Impediments to Developing Full Supply Chain Maps

Prakash Singh

Calls are frequently made for organisations to develop comprehensive maps of their supply chains to address myriad risks and problems that emerge within these chains. However, there are many impediments to developing such complete maps. Beyond being difficult, it is contended that the full mapping of a supply chain is impossible to achieve. Three reasons for this are proffered in this paper. Several practical suggestions for organisations to deal with this issue are presented.

292

Social value creation as care: comparing the stakeholder perspectives of beneficiaries and social entrepreneurs

Diana Lorenzo-Afable

Social value creation is central to social entrepreneurship theory and practice. However, it is currently an under-researched phenomenon, lacking scholarly consensus as to how it should be defined. The paper aims to offer definitional clarity on the social value creation phenomenon by comparing the dual and complementary perspectives of beneficiaries and social entrepreneurs as key stakeholders in social entrepreneurship It compares these perspectives using a multiple case study conducted in the context of a developing country, the Philippines. The comparison sheds light on the ethical foundation of social entrepreneurship that is predicated on how participation is exercised. Given the power imbalance between these two stakeholder groups, such a comparison is needed in critical social entrepreneurship discourse.

295

Research in Progress: AI Readiness in Action: Driving Firm Performance through IT Ambidexterity

Hatim Urabi, Jaeyoung Cho and Yiyang Bian

In the era of digital transformation, Artificial Intelligence (AI) has emerged as a cornerstone for organizational innovation and competitiveness. However, current studies have scant research on the relationship between AI Readiness and IT Ambidexterity and how they affect Firm Performance. This study will investigate AI Readiness on Firm Performance through the mediating factor of IT Ambidexterity. Survey methodology will be adopted across various industries to gather data. This research aims to provide clear evidence of the benefits of AI readiness for firms. The expected outcome will add to academic discussions through theoretical contribution and offer practical strategies for managers to leverage AI effectively, ensuring their companies thrive in challenging environments.

296

"I don't want to make this such a gender thing": The place of gender in implementing domestic violence policies

Ruth Weatherall and Mihajla Gavin

Domestic violence (DV) is now recognised as a workplace problem and businesses face the challenge of supporting victims of violence. While recent legislation offers guidance, businesses need a strong understanding of the dynamics and drivers of DV to develop effective policies. Gender inequality is a major factor in DV, and businesses must recognise the role of gender if they are to truly safeguard victims of violence at work. Our interview-based study found that case study organisations opted for a gender 'neutral' approach to implementing policies while key informants emphasised a gender 'centric' approach to policy implementation. These different approaches affect the inclusivity of the policy as well as the progress toward gender equality outcomes.

298

Valuing Phar Lap: Construction of a new classification system for collections valuation at Melbourne Museum (1995-2016)

Erica Coslor, Vanessa Pouthier and Yuval Millo

We highlight the entwined nature of classification systems and valuation in organizations, especially valuations that must aggregate multiple items pulled from various categories, such as a social impact statement or art collection. Our ethnography of monetary valuation at Museum Victoria (1995–2016), a developer of early strata-based valuation methodologies for Australian museums, examines the creation of a new classification system to support this novel project. Co-developed among museum staff, valuers and statisticians, the methodology relied on statistical sampling of taxonomical strata, creating common ground and avoiding moral issues like disparate categories aggregated together quantitatively. We theorize the separation of the initial categorization—and resulting value implications—from a later calculative step; here, attachment of different quantification methods at the categorical level allowed quantification across radically different categories, supporting monetary valuation goals. We thus highlight an exciting avenue of research when it comes to goal-directed classification projects that encompass entities with radical heterogeneity.

299

Standardising Boundaries and Factors: Enhancing Greenhouse Gas Emission Reporting in Higher Education Institutes

Aththudawe Gamachchige Komudya Chathurangi Kumari, Mudiyansege Ishara Dilhari Ranathunga, Matthew Pepper, Clayton McDowell and Anura De Zoysa

Higher education institutes (HEIs) play an instrumental role in driving greenhouse gas (GHG) emission reduction. However, due to the complex nature of the universities, significant emissions such as Scope 3 emissions are neglected in emission reporting. This paper reviews the literature on GHG emissions in HEIs. It reveals that the lack of standardisation in emission reporting in HEIs has caused problems such as differentiated boundary selection, omitting significant emission sources, and the inability to compare results among universities., The exclusion of Scope 3 emission categories is a significant missed opportunity for emission reduction. This review identifies the need for standardisation of emission reporting for HEIs with clear boundaries and definitions of emission factors and emission sources for HEIs.

300

Namal Bandaranayake, Senevi Kiridena, Kalinga Jagoda and Jonathan Parkes

Benjamin Thomas and Revadee Vyravene

Government bodies and universities are heavily invested in entrepreneurial education (EE) programs to drive innovation, with most of the effort going into program delivery whilst program outcome and impact evaluation is an afterthought. Further, there is a growing need within entrepreneurship literature to develop a greater understanding of the entrepreneurial journey from longitudinal studies. This paper presents a research framework to embed within and leverage university EE pipelines that include undergraduate and postgraduate entrepreneurship courses, start-up boot camps, accelerators and commercialisation departments. This will facilitate robust EE program outcome evaluation through the development of entrepreneurial profiles, assessment of entrepreneurial skill acquisition and longitudinal performance tracking of students/participants within these programs. The research design and preliminary findings from an Australian university are presented

302

Creating and Capturing Value in Speciality Crop Production: An Analysis of the Hazelnut Value Chain

Namal Bandaranayake, Senevi Kiridena, Kalinga Jagoda and Jonathan Parkes

This paper explores the opportunities for enhancing value creation and capture at various stages of the speciality crops value chains, using hazelnuts as a case study. Hazelnuts have seen increasing demand around the world due to their unique flavour and significant health benefits. While touted as providing substantial economic returns to those involved in the value chain, the industry also faces significant challenges. In this study, the hazelnut value chain has been mapped out based on a four-stage model of value creation, and specific initiatives for enhancing value creation and capture at each stage have been identified. These initiatives include investing in cultivar development, strengthening cooperation among stakeholders, adoption of technology, dissemination of knowledge and implementation of certain policy measures.

303

Artificial Intelligence Adoption in Small and Medium Enterprises: A Systematic Literature Review under the Lens of Absorptive Capacity Framework

Fany Indriyani, Adela McMurray, Bruno Pereira and Andreas Cebulla

This study examines the capabilities of small and medium-sized organisations (SMEs) to adopt artificial intelligence (AI) by analysing the existing literature and prominent related themes. The research classifies thirty peer-reviewed papers from reputable databases including Scopus, Web of Science, and Taylor & Francis. We employed the thematic analysis which revealed eight themes associated with SMEs' capabilities and AI adoption, namely digitalisation, technology, manufacturing, innovation, management, knowledge, decision-making, and system, utilising the four dimensions of ACAP's framework. The dimensions of acquisition and assimilation pertaining to the potential of absorptive capacity (PACAP), which includes SMEs' ability to obtain new knowledge from external sources, and realised absorptive capacity (RACAP), which encompasses companies' ability to integrate new knowledge into their daily operations.

304

The Effects of HR Strength and Intra-group Identification on Employee Performance in Bangladeshi Banks

Sardana Islam Khan, Timothy Bartram, Jillian Cavanagh and Pradeepa Dahanayake

Underpinned by social identity theory, this paper examines the role of human resource (HR) strength, social interactions with the immediate manager, and quality of relationships within their bank branch, to understand the impact on intra-group identification and employee performance. This case study used quantitative data from 436 employees of two private commercial banks in Bangladesh through structured questionnaire survey. The results were analysed using structural equation modelling in Amos-29. The findings support the hypotheses that social interactions with the immediate manager, the quality of relationships within the group and intra-group identification mediate the relationship between HR strength and employee performance. Implications are drawn for HR managers especially facing changes such as forced mergers where social identity crises could threaten performance.

305

Platform Worker Citizenship Behaviour: Insights from Ride Hailing Drivers and Customers in Indonesia

Ria Triwastuti

Drawing on Organisational Citizenship Behaviour (OCB) theory, we introduce the concept of Platform Worker Citizenship Behaviour (PWCB) as a way for platform workers to navigate their working conditions. The research draws on a qualitative study using interviews with 64 ride hailing (RH) drivers and 43 RH customers in Indonesia to gain insight into the working conditions of platform workers. The findings indicate that the working environment brought by the RH system has resulted in precarious working conditions and power imbalances for RH drivers. In order to navigate these working conditions, RH drivers as platform workers engage in PWCB in two main ways. Firstly, platform workers engage in PWCB to manage the precarious working conditions by adopting platform-compliant behaviour, such as avoiding rejecting orders and consistently maintaining long engagement hours as drivers. Secondly, to address power imbalances that constantly put their position in less powerful side, platform workers demonstrate PWCB by actively participating in the RH driver community. By exploring the lived experiences of RH drivers as platform workers, our findings provide new insights into citizenship behaviour and the power dynamics between stakeholders in the context of platform work.

306

Reducing Job Content Plateau and Job Insecurity Through Workplace Friendship and Knowledge Transfer

Yu-Ying Lu, Chien-Chung Kao, Wei-Yu Chen and Yu-Husan Wang

This research investigates the influence of workplace friendship on job content plateau and job insecurity through the lens of knowledge transfer, anchored in the conservation of resources theory framework. Using a two-wave questionnaire methodology, the study analyzed responses from 173 valid full-time employees. The results, derived from a serial mediation model, indicate a negative correlation between workplace friendship and (a) quantitative job insecurity and (b) qualitative job insecurity. This relationship is mediated by knowledge transfer, which subsequently influences the job content plateau. These findings highlight the complex role of workplace friendships in the professional sphere, especially in reducing job-related insecurities through the facilitation of knowledge exchange. The study contributes to the existing body of knowledge and provides strategic recommendations for future researchers and organizational managers, emphasizing the significance of nurturing workplace relationships to enhance employee security and knowledge sharing.

307

The veiled threat: The curse of dowry still haunts the poor women of Bangladesh

Laurel Jackson and Fazle Rabbi

Quality of life in the poor rural communities of Bangladesh depends upon the economic, social, and personal well-being of all the people who are part of the village way of life. In the continuation of a longitudinal study, we found that the entrenched usage of microloans for the payment of illegal dowry to grooms' families continues to affect community social cohesion and quality of life, increases the vulnerability of women, and exacerbates gender violence, perpetuating spousal physical, emotional sexual and socioeconomic violence against young women. A climate of fear pressures rural families to take sizable microloans to pay dowries to keep their daughters safe. The paper concludes by considering policy solutions to address this ecology of issues.

309

Applications of Machine Learning in Entrepreneurship using a Systematic Literature Review Approach

Fakhitah Ridzuan, Noor Ullah Khan and Nurzulaikha Abdullah

Entrepreneurship has become increasingly complex and dynamic, necessitating data-driven decision-making to address challenges and enhance success. The rise of big data analytics has paved the way for using machine learning (ML) as a valuable tool for entrepreneurs. However, despite the widely known advantages of ML, its usage in entrepreneurship remains limited. Therefore, this study aims to conduct a systematic literature review based on the PRISMA method to identify various ML methods and their applications in entrepreneurship. This study selected articles using two leading databases, namely Scopus and IEEE Xplore. The analysis reveals the common use of ML algorithms such as Support Vector Machine, Random Forest, Naïve Bayes, K-Nearest Neighbors, Neural Network, Decision Tree, and Linear Regression. The findings highlight the extensive use of ML in different areas of entrepreneurship, including start-ups, success factors, customer analysis, funding sources, financial aspects, and product development. This review aims to shed light on the untapped potential of ML and its significance in guiding entrepreneurs towards better-informed decisions and achieving competitive advantages.

314

Deconstructing Impact Narratives in Impact and ESG Investing

James Gordon and Israr Qureshi

Impact and ESG investing each represent two forms of sustainable finance that have sparked debate in capital markets, governments, and academia about what is, precisely, the purpose of capital in modern society. Part of the controversy stems from different discourses on the role of capital, but also on the definitional aspects around what exactly is an impact investment. In this paper, we deconstruct current narratives on impact investing and ESG in the United States to understand what impact means to different stakeholders. What we find is a diverse set of often diverging beliefs that obfuscates efforts to harmonise on one definition and produces discontent and debate on the role of capital in producing positive social, environmental, and financial impact.

315

The Impact of Different Types of Customer Mistreatment on Employees' Well-being and Attitude

Yu Wu and Markus Groth

This study investigated whether two facets of customer mistreatment, intensity of customer mistreatment and target of customer mistreatment, differently affect service workers' outcomes. Rather than treating customer mistreatment as a fairly broad and global construct, this study took a more fine-grained look at customer mistreatment by examining different facets of customer mistreatment. We manipulated the target and intensity of customer mistreatment by using video vignettes in an experimental study with 220 undergraduate students. Results reveal that the relationship between two facets of customer mistreatment and service employee's emotional exhaustion and desire for revenge is mediated by service employee's negative emotions. In addition, this mediated relationship is stronger when customer mistreatment is high-intensity and employee-targeted.

319

Exploring the relationship between Pro-social Motivation and Taking Charge Behaviour in Nurses: A moderated mediation model

Mit Chandresh Vachhrajani, Sushanta Kumar Mishra and Himanshu Rai

During Covid-19, while the nurses served the patients in the best possible way, there were instances when they refrained from taking charge of the situation. Since taking charge behaviour of the nurses was beneficial in tackling the pandemic, this study focussed on understanding what makes nurses exhibit taking charge behaviour. The present study focusses on prosocial motivation as one of the reasons as nurses with higher prosocial motivation will be more concerned about the patients than self. We further investigated the role of work engagement as a mediator, and Fear of Covid and Beneficiary Contact as moderators. Our results indicated that the positive relationship of prosocial motivation with taking charge behaviour is stronger when the fear of Covid is low.

321

Tovo ni Bula Sautu: Sustainable Land Development in Fiji

Jekope Maiono and Diane Ruwhiu

Tovo ni Bula sautu is an iTaukei, Indigenous Fijian saying that translates to sustainable living. Here we use this phrase as representative of an Indigenous framework for sustainable land development (SLD) that draws from iTaukei Indigenous systems of knowledge derived from their connection to the land and traditional forms of social organisation. This interactive paper introduces a framework for tovo ni bula sautu based on the doctoral research of the iTaukei lead author. We invite discussion on how to refine this framework and explore potential avenues for publishing this innovative approach to Sustainable Land Development (SLD).

322

Gender-Specific Differences in AI-Supported Credit Allocation to Female and Male Entrepreneurs

Lina Uebbing, Lynn Schmodde and Marius Claus Wehner

Access to credit is essential for entrepreneurs, making gender bias in the lending process a serious concern, especially for female entrepreneurs. Artificial Intelligence (AI), as a potential solution, can create a fairer credit evaluation process by reducing human biases. This study investigates female and male entrepreneurs' preferences for AI-based vs. human-based credit evaluation processes. Additionally, it examines how past discrimination experiences influence these preferences. Utilizing the Theory of Justice, we explore perceptions of fairness in different loan evaluation scenarios.

325

Cross-sector capability translation ecosystem: University-industry collaboration for grand challenges in the digital age

Zhe Cao and Martie-Louise Verreynne

University-industry collaborations are well recognised for advancing innovation and economic growth, yet how collaborations are designed to address grand challenges in the digital age remains scantly explored. There is a significant demand in practice and policy to address complex social and environmental challenges and to harness the benefits of digitalisation. Therefore, we develop a novel theoretical framework in this paper to facilitate the transformation of university-industry collaborations for grand challenges in the digital age. Drawing on grand challenges and digitalisation literatures, we suggest viewing university-industry collaborations as a cross-sector capability translation ecosystem by incorporating challenge- and ecosystem-oriented approaches to address grand challenges across sectors. Our theoretical paper contributes important insights to the university-industry collaboration literature, suggests future research areas and offers practice and policy implications.

326

Understanding Team Processes: The Role of Transition and Action Phases in Leadership Effectiveness in Extreme Team Contexts

Linda Baulecke and Jan Schmutz

Our research investigates leadership behaviour in extreme team contexts focusing on the role of transition and action phases. Specifically, we explore how directive and participative leadership behaviors impact perceived leadership effectiveness, trust in the leader, and leader ability during these phases. We employed a quasi-experimental vignette design to gather data from military and medical action team members to understand the impact of the context on leadership in such teams. Our findings will be tested in a consecutive study, conducted in-field during training and simulation scenarios of such teams to examine the generalizability and external validity. We aim to highlight the necessity of adaptable leadership styles to meet varying contextual demands, contributing significantly to leadership theory and practice in high-stakes environments.

327

Unpacking Community Resilience: Investigating key dimensions in an Indigenous community context

Monika Gupta, Preeta George and Dhirendra Mani Shukla

This study explores the case of an Indigenous community in India to unpack the dimensions of community resilience. The study's objective is to explore the constructs of community resilience, fostering survival and sustainable socio-economic development and validating these by taking the case of the Koli community in India. The study is based on primary research targeting the indigenous Koli community living around the coastal region of Western Ghats in India. Qualitative research approach, using Gioia methodology, has been used to understand the multidimensional nature of community resilience. Our findings reveal three key dimensions - community competence, social cohesion and adaptive capacity- and shows interlinkages among them. The results have a broader implication for the extant research that explores what constitutes community resilience.

329

A hybrid muti-criteria decision making approach for supplier selection in Industry 5.0 era

Anadi Gautam, Lohithaksha Maniraj Maiyar and Indira Roy

This paper proposes a supplier selection and evaluation model for the Industry 5.0 era to factor-in industry strategy, innovation, sustainability, society and government policies simultaneously. The proposed framework leverages a combination of the Entropy Weighted Method (EWM) and the CRiterion Importance Through Intercriteria Correlation (CRITIC) technique, for determining the weights of the criteria influencing the supplier selection which are separately subjected to a modified Classifiable Technique for Order Preference by Similarity to the Ideal Solution (CTOPSIS) method to classify the suppliers. The suppliers are classified as a good supplier if the supplier has been classified as good by both EWM-CTOPSIS and CRITIC-CTOPSIS methods. The framework is validated for a data set containing 20 2nd-tier suppliers of Indian Railways.

331

Gender Differences in the Impact of Organizational Justice on Citizenship Behavior and Operational Effectiveness in the Aerospace Industry

Ricardo Santa, Ataus Samad, Diego Morante and Andres Rodriguez

This study investigates the impact of organizational justice (distributive, procedural, interactional, and temporal) on organizational citizenship behavior (OCB) and operational effectiveness (OE) in the aerospace industry in Colombia. Drawing from 532 survey responses, our findings demonstrate that organizational justice significantly influences OE and fosters OCB. Notably, gender differences are evident: for males, procedural and interactional justice predict OCB, and procedural justice positively influences OE, while interactional justice has a negative impact. For females, distributive and interactional justice predict OCB, and procedural justice negatively affects OE. Temporal justice is a significant factor for both genders. These insights underscore the need for gender-specific management practices to effectively enhance OCB and OE, providing actionable insights for organizational leaders.

332

The Concept Of Future Of Work From The Standpoint Of People, Processes, And Technology

Charvi Hasmukh Shukla

The impact of rising technological advances on work settings is a topic of continuous debate. Using the People-Process-Technology (PPT) framework, this article attempts to investigate the holistic viewpoint for comprehending the Future of Work (FoW) in the twenty-first century. It turns the concepts of FoW and the PPT framework into an equation. The PRISMA approach is used to conduct a systematic review of the literature, which serves as a guide for the theme analysis from the standpoint of the PPT framework. According to the results, the Future of Work will involve several changes, such as the need for IT skills, policy modifications to accommodate new technology, the development of a human-machine symbiosis, the facilitator role of leaders, and others.

334

Fatherhood And Work-Life Balance: An Ethnographic Study From Lens Of The Divorced And Separated Men

Charvi Hasmukh Shukla

This study uses ethnographic interviews to understand the impact of a father's experience who is separated from his child and its impact on the father's work. Using the method of thematic analysis, themes are identified to build a conceptual model and provide a new perspective to this phenomenon. . . . .

335

Equality, diversity and inclusion in the aftermath of the Covid-19 pandemic: The changing dynamics of job satisfaction in the UK's research and innovation ecosystem

James Richards, Siddhartha Saxena and Kate Sang

The aim is to explore how job satisfaction defined by a range of EDI-related demographics was impacted by the Covid-19 pandemic in the UK's research and innovation (R&I) ecosystem. Findings are drawn from a quantitative survey (n=576) designed around Warr, Cook and Wall's (1979) Job Satisfaction Scale. Key findings suggest the pandemic, while encouraging employers to deploy previously resisted EDI-related flexible working practices, did not turn out to be a catalyst for wider change. Job satisfaction in the context of EDI remains highly nuanced/complex, suggesting practical solutions must be equally nuanced/complex, or there is need for wholesale changes in the organisation of work in such a pivotal part of the labour market and economy.

336

Revisiting intergenerational practice (IGP) theory: A decade on

Gaery Barbery, Natalie Reyes Bernard, Jennifer Kosiol and Anneke Fitzgerald

IGP is promoted as a vehicle for creating and managing crucial intergenerational relations and is considered an effective way to achieve a range of population-specific objectives. IGP exists within a complexity of networks and as such, has been described as ad-hoc with anecdotal descriptions lacking consistency. Several theories are used in IGP, demonstrating successful outcomes when programs explore concepts related to ageism, social isolation, and loneliness such as the importance of contact and sharing of skills. In 2014, Kuehne and Melville expressed hope for a deeper understanding of IGP from multiple theoretical perspectives and encouraged a critical discourse necessary to achieve this goal in order to better manage these programs. This article identifies that nearly a decade on, a comprehensive IGP theory has yet to be found. While a single theory maybe beneficial to IGP, no one sole IGP theory can be favoured due to its multidimensional nature. The authors aim to reignite the critical discourse calling for and suggesting how we might progress. This includes taking appropriate theoretical considerations throughout the design process; documenting, explaining and demonstrating how the use of theory has contributed to managing IGP; and developing and sharing a taxonomy of theories and frameworks with the aim to improve managing IGPs.

340

Navigating the Digital Wave: An Ethnographic Study of Sociomaterial Interactions in Public Sector Digital Transformation

Aristito Febrianto, Adina Dudau and Anna Morgan-Thomas

Public sector digitalisation has attracted scholarly interest due to its potential to transform work practices and organisational structures. Despite some progress, there remains a gap in understanding the processes behind these changes. This paper aims to uncover the interactions between humans and technology in organisational settings using sociomateriality as an ontological lens. Through ethnographic data from a five-month study in a ministry, the research examines socio-material practices during three technological phases: pre-pandemic, pandemic, and post-pandemic. The analysis shows that organisational elements like routines, roles, and spaces are inseparable from socio-material interactions. These non-material elements, often overlooked in sociomateriality studies, should be considered in future research. Keywords: sociomateriality, materiality, practice.

342

Sustainability in Action: How Repair Cafes Support Environmental and Social Well-being

Mamun Ala

This paper explores the dual impact of Repair Cafes on environmental sustainability and social well-being using data from 28 interviews with individuals who are actively engaged with the Repair Café movement. Repair Cafes are designed to encourage the repair and reuse of items and promote a culture of sustainability and self-reliance. They play a significant role in promoting a circular economy by diverting substantial amounts of waste from landfills, thus reducing the ecological footprint of the communities they serve. Repair Cafes also serve as educational platforms where individuals learn valuable repair skills. Their social dimension is equally important. These community hubs facilitate social interaction, build community bonds, and provide a venue for skill sharing across generations. Interview responses highlighted that Repair Cafes offer a cost-effective alternative to professional repair, hence offering economic benefits to economically disadvantaged populations. Promoting a repair culture also contributes to individual well-being and psychological satisfaction derived from repairing cherished items. The study underscores the critical role of Repair Cafes in empowering communities, preserving traditional skills and promoting a sense of collective responsibility towards sustainability and advocates for their wider adoption and support. This study also proposes the Community-Based Sustainability and Empowerment Theory (CBSET), which posits that community-based initiatives like Repair Cafés play a crucial role in promoting repair and reuse, thereby contributing to environmental sustainability; economic benefits; skill preservation; sharing and education; social cohesion; emotional wellbeing; and community empowerment.

343

AI and Gamification: Uncharted Possibility or Dangerous Pitfall?

Geoffrey Chapman and Stephanie Macht

The breakout of AI has been a driver of disruption in many industries, but particularly in higher education, where educators are trying to outrun the fallout of academic integrity problems and decreasing student engagement. The current tempest of generative AI has many teaching academics feeling like they need to be on overwatch, acting as a defender against improper use of AI. However, beyond the horns, there is a significant halo associated with AI, and gamification has the potential to braid the disparate strands of AI capabilities with student engagement challenges. This paper reflects on the journey so far, and explores a portal into the future, with a systematic literature review on gamification and AI, discussing the possibilities and challenges ahead.

344

Evaluating the Antifragility of Business Models in Food Delivery Logistics

George Joseph and Arun Elias

This study evaluates the Antifragile Business Model (ATLBM) in the food delivery market, with a primary focus on supply chain antifragility and business model innovation. Using a comparative case study approach, it examines the strategic responses and operational adaptations of food delivery firms during COVID-19 through secondary sources. The findings reveal that the firms Zomato and Swiggy swiftly adapted to market changes, leveraging digital payment systems and diversifying services, thus enhancing their supply chain antifragility. Conversely, Uber Eats struggled, highlighting the need for local market adaptation and financial resilience. The study underscores the significance of integrating antifragility principles into business models to enhance supply chain resilience. This research extends the Business Model Canvas by incorporating antifragility concepts, providing a valuable framework for future studies across various industries.

345

How the 'Future of Work' has changed skills requirements for management graduates since the millennium: A systematic literature review

Neeru Choudhary, Shilpa Jain and Hanoku Bathula

"Purpose – This study aims to identify and review research articles to examine the changes in the skills required of management graduates in the context of future of work. It seeks to identify the evolving nature of skill requirements for business and management graduates since the millennium. Design – This is a systematic literature review aimed at finding answers to the research question of how skill requirements for business graduates have changed. Studies from two databases, Web of Science (WoS) and EBSCO, published in peer-reviewed journals were screened. Following PRISMA guidelines for reporting, the selected papers underwent qualitative content analysis to identify and categorise evolving skills requirements. Results – A total of 52 empirical and non-empirical studies published across 35 journals were synthesised. The researchers identify and discuss the seven key skills required for management graduates to be job-ready in the rapidly changing business environment. The authors concluded that the evolution of skill requirements over the past three decades highlights a shift towards incorporating digital proficiency, global awareness, and sustainability. Implications – The literature review underscores the need for regular monitoring and revision of skills by academics and business learners to cope with the requirements of a rapidly changing work environment.
Keywords: future of work, management education, systematic literature review, competencies, higher education, job readiness.

352

Sustainable project management in Australian public projects: A dynamic capabilities perspective

Richard Hughes, Kerry Brown

This paper explores sustainable project management in Australian public infrastructure projects using the dynamic capabilities for sustainability (DCsS) framework. Through discourse analysis of organisational strategies, policies, and guidelines, combined with 30 semi-structured interviews with project professionals, we identify significant barriers in sensing, seizing, and transforming sustainable opportunities. Despite national commitments to reducing carbon emissions, the integration of sustainable practices into public projects remains limited. Our findings reveal a misalignment between policy and practice, constrained by budget limitations, lack of awareness, and insufficient contractor skills. Theoretically, this study advances the understanding of DCsS in public projects, highlighting the need for enhanced organisational capabilities to align project management practices with sustainability objectives, with implications for policy makers and project managers.

355

Engagement and Experiences of International Onshore Postgraduate Coursework Students in Distributed Learning Model

Subas Dhakal and Shahid Shahiduzzaman

The flexible teaching and learning possibilities associated with the Distributed Learning Model (DLM) have become integral to higher education in Australia. However, the issue of how International Onshore Postgraduate Coursework Students (IOPCS) experience and engage in DLM remains underexplored. This paper responds to this gap and examines the Master of Business-International (MBA-I) program offered by the University of New England Business School (UNEBS) across three different campuses. It adopts a four-tiered student engagement framework and reports on the first phase of the research, in which a focus group discussion (n=1) with six academics and semi-structured interviews with a diverse cohort of IOPCS (n=11) were carried out. The findings highlight that technological barriers, lack of professional development initiatives, and pedagogical limitations have impeded IPOCS experiences and engagement.

357

Green Strategic Orientation and Sustainable Performance: Evidence from Pakistani Manufacturing Sector

Saad Mahmood Bhatti, Zafir Khan Mohamed Makhbul, Sara Kanwal and Muhammad Zia ul Haq

The degradation of natural resources has driven businesses globally to adopt sustainable innovations to remain competitively viable and achieve sustainable performance. This study examines the effects of green entrepreneurial orientation and green market orientation on green innovation and investigates the mediating role of green innovation in the relationship between these strategic orientations and sustainable performance. Data were gathered from 326 manufacturing firms in Pakistan and analysed using the partial least squares method. The results show that green strategic orientation significantly enhance green innovation, which in turn leads to positive economic and environmental outcomes. Recommendations include promoting green strategies, providing training on eco-friendly technologies, and implementing policies with incentives or penalties to foster green business development.

358

The 'Gig Slur' in the era of platform-based economy: economic perspective versus humanistic perspective

Sonika Jha and Sriparna Basu

The gig economy and gig work have grown quickly in recent years and have drawn much attention from researchers in different fields. Because the platform mediated gig economy is a relatively new phenomenon, studies have produced a range of interesting findings; of interest here are the socio-technical issues that this work has surfaced. This reflexive thematic analysis provides a dynamic interplay between he academic, policy and the practitioner literature. It captures the essence of the 'gig' slur from the economistic and the humanistic perspective. It provides a snapshot of a range of socio-cultural, socio-economic and socio-technical issues as focused on the platform mediated gig economy, specifically studied in the context of the gig economy, gig work, and gig workers. The critical themes observed were: the digital workplace, which includes information infrastructure and digital labor that are related to the nature of gig work and the user agency; algorithmic management, which includes platform governance, performance management, information asymmetry, power asymmetry, and system manipulation; ethical design, as a relevant value set that gig workers expect from the platform, which includes trust, fairness, equality, privacy, and transparency. A reflexive thematic perspective used to rethink the relationship between gig workers and platforms, extract the socio-cultural, socio-economic and socio-technical issues noted in prior research, and discuss the underexplored aspects of the platform mediated gig economy. The results draw attention to understudied yet critically important socio-cultural, socio-economic and socio-technical issues in the gig economy that suggest short- and long-term opportunities for future research directions.

360

Indigenous social innovation and whānau-centred design within bureaucracies

Jason Mika, Xiaoliang Niu, Chellie Spiller, Jarrod Haar, Matthew Rout, John Reid and Tane Karamaina

This paper explores the Southern Initiative's (TSI) approach to addressing social and economic challenges for Māori and Pacific communities in South and West Auckland. As a social innovation unit nestled within a bureaucratic structure—Auckland Council—TSI utilises its intrapreneurial capabilities to leverage council resources for innovation, demonstrating the importance of its mana network and relational approach to management. Moving away from traditional deficit-based and Eurocentric co-design methods, TSI adopts a whānau-centred approach grounded in tikanga Māori. This placed-based, strengths-based method empowers Indigenous communities to lead the design process, which evokes cultural sensitivity and sustainable solutions. The shift addresses power imbalances in co-design and highlights the importance of Indigenous knowledge and strengths, fostering systemic change and enhancing whānau wellbeing.

364

Project Manager Attributes and the Stakeholder Relationship

Alicia Gilchrist, Caroline Hatcher and Neal Ashkanasy

This paper explores project managers' emotional intelligence after receiving training in a multidisciplinary executive education program. The project managers indicated they would use their emotional intelligence to establish and maintain, high-quality, effective interpersonal relationships with their stakeholders in a project environment. Semi-structured interviews were conducted with 13 project managers. The findings revealed that the project managers will demonstrate emotional intelligence to develop interpersonal stakeholder relationships in the future. These findings have implications for the education and recruitment of project managers.

365

Workforce Localization: A Systematic Review, Advances, and Future Research

Ali Faqihi and Heidi Wechtler

This paper systematically reviews 96 articles to investigate the complex landscape of workforce localization by exploring its antecedents, processes, and outcomes at country, organizational, and individual levels. The findings reveal intricate connections between localization and historical, cultural, and socio-economic elements, emphasizing the need for tailored policies. The intersection with decolonization narratives, gender equity considerations, and the long-term impacts on countries, organizations, and individuals are critically examined. The research sets six future research agendas, delineating avenues for deeper exploration into the evolving landscape of workforce localization.

368

Gender in and Gendering Social Exchange Theory in Leadership Research: A Problematizing Review

Karryna Madison, Nathan Eva, Helen De Cirei and Zen Goh

This problematizing review scrutinizes the role of gender within leadership research that utilizes social exchange theory, highlighting gaps and proposing future research directions to advance gender equity. Traditionally, leadership theories have reinforced outdated gender norms, marginalizing women and perpetuating stereotypes. Social exchange theory, a cornerstone of leadership research, has often been applied in a gender-neutral manner, ignoring how gender shapes leader-follower dynamics. Integrating perspectives from gender in organizations, which views gender as a stable and binary property affecting behavior and perceptions, and gendering organizations, which sees gender as an emergent feature shaped by societal norms and institutional practices, this review critically examines current leadership studies and proposes a dual approach for a deeper understanding of gender dynamics. Our review's objectives are threefold. First, we employ a problematizing review methodology to critically examine past leadership research based on social exchange theory. Second, we reexamine the literature through a gendered lens. Third, we outline future research directions that emphasize incorporating gender perspectives into social exchange theory to enhance our understanding of leader-follower dynamics. This review underscores the need to reassess social exchange theory to better reflect gender dynamics in leadership contexts, providing insights for leadership education and organizational policy.

375

Assessing Environmental Impacts of PSS Business Models from a life cycle perspective: A Morphological Approach

Hariharan Thangatur Sukumar, Jayakrishna Singu, S Navaneetha Krishnan and Krishna Kumar Balaraman

Though Product Service Systems (PSS) have been touted as environmentally friendly, not all PSS models may be so. The impact of PSS could be positive during the consumption stage, whereas it is negative in other product lifecycle stages. Hence the net impact of all lifecycle stages must be considered in ascertaining PSS models. This paper aims to holistically understand PSS, identify potentially environmentally impacting factors, and present them as dimensions and variants using systematic review and morphological analysis. A total of 13 dimensions and 44 variants were identified in the study and represented as morphological analysis framework (MAF). This MAF can help design sustainable PSS models and help in policy development for environmental sustainability in the context of the PSS business model. Research gaps in the environmental impact of PSS have been studied using this MAF and keyword co-occurrence technique of Bibliometric analysis.

376

Process Model of LMX Ambivalence: Mapping Attributions, Emotions, Coping and Outcomes of Subordinates

Alina Haider, Geoff Plimmer and Jane Bryson

High quality LMX is now recognized as a crucial mechanism through which leaders influence employees. LMX is commonly construed as a relatively stable construct that occurs on a simple continuum from positive to negative. LMX, however, can also be ambivalent. Positive and negative aspects can occur simultaneously, or there can be rapid shifts between the two. While it is known that such ambivalent relationships are harmful, even more so than purely negative relationships, the long term processual, unfolding nature of LMX ambivalence remains unstudied. Attributions and coping, as dynamic and evolving strategies across time, also remain unknown. This study therefore examines LMX ambivalence as an unfolding process among knowledge workers. It is based on 16 interviews in New Zealand and 19 interviews in India. Results show that subordinates are continually confused, make different attributions and experiment with several coping strategies, but they almost universally end up harmed, disengaged and leaving.

377

Data Breaches, Employee Well-Being and Productivity: The Australian Case

Remi Ayoko, Ryan Ko, Hai Luong and Grigori Agbas

Data breaches present a serious threat to modern organisations. In this paper, we aim to identify the nature/patterns of data breaches in Australian organisations and determine their relationship to employee well-being and productivity. Using Grounded Theory as a theoretical framework, we collected data from 65 data breach cases that occurred in Australia as featured in news articles over a period of 2021 – 2024. Our qualitative study revealed that the patterns of data breaches include intentional attacks and human errors that significantly affect stakeholders' well-being. Finally, based on the findings of the conducted study, we developed a conceptual model of the relationship between nature and patterns of data breaches, productivity and well-being.

379

Navigating Digital Sustainability in Large Firms: Top Management Perspectives

Manjari Srivastava, Satish Sinha, Laszlo Sajtos, Hanoku Bathula and Rahul Singh

Digital sustainability has recently gained significant traction in business discourse, highlighting the application of digital technologies to minimise environmental impact, promote social equity and ensure long-term economic viability. With access to more resources, large firms, well positioned to leverage these technologies, play a crucial role in advancing digital sustainability aligned with broader sustainable development goals. This research investigates how the large Indian firms would align digital sustainability with their overall strategies through a three-phased approach: (i) develop a conceptual model, (ii) undertake semi-structured interviews with a few CEOs and (iii) finally conduct a survey of a large sample of firms' top managers. The study aims to identify barriers and enablers to the widespread adoption of digital sustainability practices by businesses. In this paper, we present the conceptual model and seek feedback on our initial model and research design, contributing to the discourse on integrating sustainability into business strategies.

381

Unlocking Sustainable Success: Exploring the Positive

Rosemary Sainty

Collectively we face the largest challenge of our generation: transitioning to a more sustainable world. The emerging "ESG" (environment, social and governance) movement aims to enable this in an increasingly regulated and urgent environment. The theories and practice of Positive Psychology (PP) and Positive Organizational Scholarship (POS) are poised to make a meaningful impact on this agenda, from addressing the "S" risks of psychological health and safety to the building of positive organisations that foster resilience, wellbeing and the optimal functioning of their people. The following paper investigates the contribution that PP and POS can make to thriving organisations, in a context of organisational disruption and change. Such organisations will be well placed to tackle the sustainability agenda.

385

CEO Overconfidence Heterogeneity And Mergers And Acquisitions

Huiting Wang

This study explores the impact of CEO overconfidence, specifically control-illusion and over-optimism, on mergers and acquisitions (M&A) decisions and performance. Using data from U.S. publicly listed companies from 2001 to 2021, the research investigates whether independent directors can moderate these effects. The findings suggest that while over-optimistic CEOs tend to engage in value-destroying M&A, control-illusioned CEOs drive positive post-merger performance. Independent directors effectively moderate the negative impacts of over-optimistic CEOs but have limited influence over control-illusioned CEOs. These insights highlight the importance of understanding psychological biases in enhancing corporate governance and top management team decision-making.

391

Managing Non-Family Employees' Brand Citizenship Behaviour in Family-Owned SMEs: Investigating the Role of Family Members' Leadership Styles and Brand Psychological Ownership

Muhammad Bilal Mustafa, Mohsin Altaf and Umer Asif

This study investigated the mediating role of nonfamily employees' brand psychological ownership in the relationship between family members' brand-focused leadership styles (e.g., transformational leadership, servant brand leadership, and empowering leadership) and nonfamily employees' brand consistent behavior in service-related family SMEs. Using systematic sampling, data were obtained from 335 nonfamily workers of service SMEs. The study revealed that nonfamily employees' brand psychological ownership mediates the relationship between family members' brand oriented leadership styles, which include transformational leadership, servant leadership, empowering leadership, and nonfamily employees' brand consistent behavior. Moreover, servant leadership contributes more toward brand psychological ownership. This study added to the research on family businesses by showing the importance of internal branding in family-owned service-related SMEs. Moreover, it also highlighted the role of family members' leadership styles that focus on the brand and its importance in the development of brand psychological ownership and brand consistent behaviour of nonfamily employees. Keywords: SME, Monfamily, Brand Citizenship Behaviour

407

Corporate Social Responsibility and Green Behavior: Green Work Climate and Shared Vision Perspective

Sara Kanwal, Saad Mahmood Bhatti, Mohd Helmi Ali and Muhammad Zia ul haq

Unsustainable use of scarce natural resources and environmental degradation calls for implementation of green behaviors. This necessitates the execution of employees' workplace pro-environmental behaviors (WPEB) and its possible stimulators. This research investigates the mediating role of an organization's green climate (GOCL) between perceived CSR initiatives and employees' WPEB. It also examines the moderating impact of green shared vision (GRSV) on the link between all variables. An adapted survey questionnaire was used to collect 349 responses from employees in manufacturing organizations in Pakistan. PLS-SEM was employed for data analysis. Perceived CSR positively influenced GOCL, which further significantly affected employees' WPEB. Moreover, strong GRSV enhances the effect of GOCL on employees' WPEB. This research provides important implications for both academicians, practitioners and policy makers.

410

"First Nations Charters" in Australia's Arts and Culture Sector: A meaningful alternative to Reconciliation Action Plans, or just a rose by another name?

Rod Williams, Kate Power and Samantha Cooms

Since 2006, Reconciliation Australia has provided resources and infrastructure for organisations to develop Reconciliation Action Plans (RAPs). However, Australian arts companies have been slow to adopt RAPs, notwithstanding a new national cultural policy that prioritises First Nations stories. Following Australia's failed Indigenous Voice referendum in 2023, many Aboriginal leaders have rejected "reconciliation," calling instead for both critical examination of current practices and reinvigorated efforts towards true reconciliation and inclusion. Informed by research into discourse-based organisational change, this paper critically analyses the RAP genre, explores a leading Australian arts company's efforts to develop a First Nations Charter (instead of a RAP), and considers the extent to which the Gongan Business Model offers an opportunity to shift the foundations of an organisation.

411

Constant Connectivity and its Impact on Employee Well-being: A mediating Role of Cognitive Overload and Mobile Work Device Anxiety

Biswadeep Tamang, Aradhna Malik, Jaya Dantas and Piyush Sharma

The advent and integration of mobile information and communication technology (MICT), high-bandwidth cellular services, laptop and mobile phones have created a boundaryless workspace where employees are expected to remain constantly connected for work purpose even after-hours. This research intends to follow a mixed-methods approach. A survey method will be employed to measure the conditional direct and indirect impact of constant connectivity after work hours on employee well-being and the mediating role of cognitive overload and mobile work device anxiety. The second part of the study will be supplemented by a qualitative data through open-ended questions, and thematic analysis of the data will be done that will aim to analyze the coping mechanisms of employees during overload and anxiety.

417

Impact of time-independent working and location-independent working in blended work on employee job performance.

Sasimali Attanagoda, Saima Ahmad, Argho Bandyopadhyay and Shae Fan . . . .

The trend toward a blended work model has rapidly increased in post-COVID-19. Drawing on the Job Demands Resources (JD-R) model, this study aims to investigate how the two core features of blended working (time-independent working and location-independent working) impact employee job performance and the underlying mechanisms associated with this impact. The research data is collected through a survey of 641 employees working in blended mode in the USA. The findings revealed that time-independent working and location-independent working have positive direct effect on employee job performance and a positive indirect effect on employee job performance through wellbeing. This research provides a significant theoretical contribution in extending the JD-R theory by identifying new job resources in blended work and practical implications. Keywords: blended work; time-independent working; location-independent working; employee job performance; employee wellbeing.

420

Forecasting Start-up Pre-Money Value: A Comprehensive Approach Utilizing Machine Learning and Deep Learning Models

Minnu Pynadath, Sam Thomas and Vivek Paulose

Predicting start-up pre-money valuation is a challenging task for venture capitalists, given the multitude of influencing factors. Accurate valuation predictions are crucial for informed investment decisions. This study aims to develop machine learning and deep learning models to predict start-up pre-money valuations using a comprehensive set of value drivers. We compiled a robust dataset incorporating diverse factors such as financial metrics, market conditions, and company-specific attributes. This study analyses a sample of 5548 VC deals of Indian start-ups from various sectors, including Energy, IT/ITES, BFSI, Engineering and Construction, and Manufacturing, sourced from Venture Intelligence. Our analysis reveals that the Extreme Gradient Boosting (XGB) algorithm and Artificial Neural Network (ANN) models outperform other techniques in prediction accuracy. Additionally, our models identify the most significant variables influencing valuations, providing valuable insights for investors. This supportive mechanism enhances the decision-making process, offering a reliable tool for evaluating start-up potential.

421

The "real lives" of professional working mothers with children in their early years: A Socio-Ecological and Conservation of Resources approach

Afrouz Shoghi, Amanda Biggs and Ashlea Troth

As witnessed over many decades, this issue of disparity between genders in workforce participation remains a complex one, particularly for working mothers with young children who experience the greatest disparity in workforce participation. This paper proposes that legislation and policy alone cannot "solve" the considerable and ongoing disadvantage to mothers in engaging and remaining in the workforce. The role of theories such as the Work, Family, Community theory and Conservation of Resources theory, are presented as viable theories to better understand and address this complexity. This paper also proposes the role of work-family enrichment theory for building greater incentives and supports for addressing gendered participation in the workforce. Preliminary findings of Study 1 of this research are also presented.

424

Analysing the Sustainability of Regional Supply Chains: A Study of Business Process Outsourcing in Fiji

Yogita Swamy, Arun Elias and Mathew Pepper

During the coronavirus pandemic, while most sectors in Pacific Island countries like Fiji were struggling, Business Process Outsourcing (BPO) sector proved an exception, reporting phenomenal growth. In this context, the overall objective of this study is to holistically analyse the sustainable growth of the BPO sector in Fiji. In the supply chain literature, although the BPO sector is acknowledged as an integral part of global supply chains, studies linking regional supply chains and the BPO sector is limited. This study aims to plug this gap. Methodologically, the study employs a qualitative systems thinking approach to holistically analyse this long-term sustainability issue. Overall, this study makes a unique contribution by providing a holistic analysis of post-pandemic resilience in the Pacific region, using a systems thinking approach for understanding the sustainable growth of the BPO sector in Fiji, within the context of a robust regional supply chain. Keywords: Business process outsourcing, Flexible systems, Regional supply chain, Resilience, Systems thinking, Pacific Islands.

16

**Academic collaboration as a motivational lynchpin of management research:
An ERG perspective on group and individual impacts.**

Andrew Creed, Ambika Zutshi, Diana Rajendran, Marzena Baker, Pandula Gamage

Academic researchers are individualistic and competitive; however, collaboration proliferates because of the wider global competition among universities. This workshop facilitates insightful discussion of lynchpin motivations that may encourage or hinder academic collaboration. A specialised focus is on needs-based motivation offering opportunities for participant self-reflection, and improved management incentives maximising perceived and actual benefits from academic collaboration.

Existence-Relatedness-Growth (ERG) theory is resurgent. Notably, Shahzadi et al (2024) link communal (collaborative) values to ERG, connecting with wellbeing, welfare, and human rights. Artificial Intelligence (AI) models human needs mechanisms (including ERG) within simulation models (Yuan et al., 2024). Park et al (2024) extend research into ERG finding support for the need strength effect, confirming that, as lower-level needs are fulfilled, there is increased intensity of higher-level needs. Furthermore, the need strength effect sometimes inverses, meaning if higher-level needs are met, then the intensity of lower-level needs can increase. So, the question remains, what can produce this inverse effect, and is it linked with the frustration-regression principle in ERG?

From these perspectives and using foothold moves from competitive strategy (Upson et al., 2012; Chen et al., 2007), we propose academic collaborators express similar motivation dynamics. Chen and Miller (1994) used Vroom's (1964) expectancy-valence theory to develop the wider competitive foothold analysis described by Upson et al (2007). Furthermore, the ERG frustration-regression principle (Alderfer, 1969) apparently occurs in the foothold dynamics of Upson et al (2012). We identify connections (Fig 1) between collaboration and competition within motivation dynamics and will workshop this as potential explanation for academic collaboration behaviours.

5

Strengthening alignment of theory and methods in management studies

Bill Harley, Paul Hibbert,Tine Köhler, Paual O'Kane

We want to critically examine the correspondence between theory and methods and advance scholarly work by discussing the relationship and interaction between theorizing and the application of research methods. We have observed that investigators are too often concerned with how methods are carried out, i.e., which steps they need to follow, and which analyses they need to run when employing method X, especially when determining rigor. However, rigor in most author's (and reviewers') understanding has devolved into something of a yardstick that measures whether an author followed the same steps followed in previous work, rather than a larger evaluation of the degree to which the design and methods are in line with the actual research questions, the specific research context, and the larger epistemological background of the study (Harley & Cornelissen, 2022; Köhler, Smith, & Bhakoo, 2022). Consequently, as editors and editorial board members, we have witnessed the application of many sophisticated statistical techniques in quantitative work or templated application of a coding scheme in qualitative work, which do not in fact lend themselves to the evaluation of the research questions or hypotheses all that well. On the flipside, in some cases, we see authors make adjustments to methods for no apparent reason, other than to increase the likelihood of producing a particular outcome of their research (e.g., Cortina, Green, Keeler, & Vandenberg, 2017; Heggestad, Scheaf, Banks, Monroe Hausfeld, Tonidandel, & Williams, 2019). Both of these trends are worrisome, particularly when considering (re)emerging themes in organization studies, like time, space, and people. In this symposium, we present and discuss theoretical and methodological concerns, novel techniques, and ways forward to foster a more appropriate union of theory and method.

3

Indigenous management research, its impact and its future within ANZAM and beyond

Ella Henry, Jason Mika, Michelle Evans, Mark Jones, Admiral Manganda, Emma Olsen, Samantha Cooms, Diane Ruwhiu, Kelly Lendsay

Over 100 minutes, this symposium aims to celebrate Indigenous management research and share ideas about its impact and future within ANZAM and beyond. The ANZAM Indigenous Special Interest Group has been around since 2013 and its time to reflect on the past, present, and future direction and shape of the group for the benefit of current and future generations of Indigenous management student, scholar, and practitioner – both Indigenous and non-Indigenous.

19

From Theory to Practice: Transforming Group Work Assessment in Higher Education

Fatima Afzal, Yvette Debergue, Roksana Tumpa

This workshop addresses the challenges associated with group work assessments in higher education, offering evidence-based innovative solutions to improve fairness, effectiveness, and student engagement. The session combines presentations, interactive activities, and collaborative discussions to provide actionable insights and practical strategies, balancing information dissemination, participant engagement, and collaborative problem-solving.
It begins with a concise introduction outlining objectives and significance, followed by a research showcase presenting key findings from recent studies on group work assessments. The research showcase provides a solid foundation of evidence-based practices, ensuring that participants' learning is grounded in current scholarship. This scholarly approach is balanced with practical application through the interactive activities, allowing participants to immediately consider how to adapt and implement new strategies in their specific contexts.
Three interactive activities form the core of the workshop. ""Challenge Mapping"" involves small group discussions to identify top challenges in group work assessments, encouraging reflection and insight sharing. ""Solution Evaluation"" presents specific research-derived solutions, with participants rating their potential effectiveness using a digital polling tool and discussing applications in pairs. ""Action Planning"" focuses on translating insights into practice, with participants developing and sharing actionable steps to improve their assessment practices.
The workshop emphasises active participation, peer learning, and practical application. It concludes with a Q&A session and a summary of key points, ensuring participants leave with a clear understanding of the material and resources for further learning. Benefits for participants will include enhanced understanding of current research and best practices in group work assessments, fostering a more reflective and informed approach to assessment design. Participants will develop tailored, actionable items for immediate implementation, leading to more effective and fair group work assessments. Network building with colleagues facing similar challenges potentially leads to future collaborations and ongoing professional development opportunities. Furthermore, the workshop's collaborative nature fosters a community of practice among participants. This community can serve as a valuable resource for ongoing support, idea exchange, and collaborative problem-solving long after the workshop concludes. This workshop offers a scholarly yet practical approach to enhancing group work assessment practices. By combining evidence-based strategies with interactive learning experiences, it provides participants with the knowledge, skills, and network to make meaningful improvements in their assessment practices, ultimately benefiting both students and educators.

6

Empowering Employees in Organizations using Empathy: Applying Design Thinking Practices in the Pursuit of Cultural Change Aiding in Successful Innovation and Business Transformation

Katina Michael, Belinda Gibbons, Tim Vo, Amanda Winks, Monique Watts

The Workshop seeks to emphasize the importance of cultural change in business transformation. The role of the first phase of the design thinking process, known as "empathy", is presented as a means to address the high failure rate of information systems projects. While digital transformation targets a single aspect of a business problem, business transformation is the holistic practice that demands cultural change given large-scale fundamental changes to how a business operates. In this workshop, attendees will learn about the first phase of the design thinking process known as "empathy", before setting out on even defining a business problem or challenge. They will reflect on the inward mindset and outward mindset and be introduced to (1) a mindfulness exercise; (2) real-world cases where empathy has been applied in a personal business context, departmental, and organization-wide and the commensurate results; and (3) interventionist activities that can impact positively on organizational behaviour, leadership, and ultimately successful innovation. Participants will be asked to engage in reflective practice by considering three simple exercises that can aid in cultural change that is aligned with business transformation. These include three activities that attendees that can be used either as an individual or within a team context to empower employees through complex business transformation: (1) what's on your radar (personal-level activity); persona "internal customer" mapping (department-level activity); affinity mapping (organization-wide activity). The outward mindset is the underlying basis for empathy where the individual makes a mindful decision to consider themselves in the context of a larger team/organization, with potentially significant outcomes that spark greater collaboration and group cohesion, and through a greater degree of collaboration commensurate innovation. When people are able to become self-aware during a design process, and how they impact the other, there can be positive personal, departmental and organizational change that can increase the likelihood of successful business transformation.

8

Managing Career Tensions: Strategies for Making Tensions Productive, Not Destructive

Lisa Callagher, Bill Harley, Paul Hibbert, Tine Köhler, Paual O'Kane

As academics we typically work in large, complex organisations, in which there are numerous and sometimes competing demands for our time and energy. Moreover, as well as having a high degree of autonomy in some areas of our work, for example the topics we research, we are members of highly structured and often tightly managed bureaucracies and subject to numerous performance measures. The range of choices we have about how we structure our activities, the complex nature of the organisations we work in, and the pervasiveness of management systems can create significant tensions. Further, our academic careers are just one part of who we are and of our lives, which adds additional complexity. Examples of the kind of tensions we confront are, how can we balance our departments' need for us to do admin and teaching with our desire to maintain an active and meaningful research life? How can we reconcile the need for short-term research outputs to meet performance targets with the desire to do long-term projects which may not immediately bear fruit? How can we balance the need to undertake output-focused tasks and projects with the desire to maintain meaningful relationships with colleagues? How can we balance conventional career goals with our non-work activities and identities? We constantly must confront tensions such as these, as we attempt to build meaningful lives at work. The specific tensions we face are likely to change as we move through different phases of our careers. This workshop is intended to help scholars at all career stages, but particularly those at early- to mid-career stage, to think about ways not just to navigate these tensions, but to use them productively to explore different career pathways and grow both professionally and personally.

4

Leading in higher education: Bring your uniqueness and prepare to rise to the challenge!

Lynnaire Sheridan, Ann Rogerson, Diane Ruwhiu, Shahriar Akter, Shamika Almeida

Are you seeking to make a difference within your department, faculty, or university? It is challenging as an early to mid-career researcher to understand what leadership roles in higher education encompass, let alone perceiving that we might be a good fit. When we do take up these types of roles, we have often waited too long, which has consequences for our careers as leadership is intrinsically linked to academic progression. This workshop is designed to introduce to you a panel of higher education leaders in academic, research and EDI / Indigenous leadership. Through their stories and anecdotes, we hope that you will identify with one or more of these leaders. In the workshop you will then:

1.   Identify the skills and personality traits required for different leadership roles.

2.   Understand how your current academic activities comprise leadership

3.   Identify activities that you could, in the short to medium term, engage in to develop your leadership skill-set in preparation for formal roles

4.   Strategically plan towards leadership roles that you have identified as a strong personality and skill fit."

10

Wellbeing@Work SIG Symposium: Emerging research and an exploration of Women's Wellbeing at Work

Rebecca Mitchell, Chen-Bo Zhang, Belinda Steffan, Debora Gottardello, Helen De Cieri, Lan Snell

This symposium will a) provide an exciting developmental opportunity for HDR and ECR scholars b) showcase the world-leading and impactful research on women's wellbeing at work that is being led by research centres across Australia, Canada, and the UK and b) facilitate collaborations on exciting workplace health and wellbeing issues with the aim of fostering excellent and impactful research. Attendance will provide insights into some exciting emerging themes and projects. We aim to strengthen our understanding of the impact, mechanisms, and boundary conditions of how societal, environmental and geo-eco-political transitions influence workforce wellbeing and mental health. We hope our symposium will guide and inspire future research and practical interventions and managerial practices to enhance employee health and wellbeing.

15

Advances in Mixed Methods Research Designs and MMR Notation Systems

Roslyn Cameron, Anneke FitzgeraldThe Workshop will provide an update on Advances in Mixed Methods Research Designs and MMR Notation Systems. Topics to be covered include innovations in MMR designs that better reflect rapidly changing business contexts, complex research problems, new advances in mixing of methodologies and the new extended MMR notation system which assists in the rigorous reporting of innovative and complex MMR studies. The Workshop will provide guidance for editors, reviewers, supervisors, examiners, researchers and HDR students alike. We encourage attendance to those who utilise MMR and want to take note of the recent advances, those new to or curious about MMR, supervisors and HDR students navigating their way through MMR and reviewers and journal editors.

7

Showcase: Innovations in Management Education

Stuart Middleton, Janis Wardrop, Helen Parker, Geoff Chapman

As Universities struggle with the challenges brought about by technological change and increasing student attrition rates, it is more important than ever to develop and implement effective and engaging classroom experiences. This workshop is an opportunity to participate in a showcase of innovative teaching practices. In the workshop we will present four different teaching activities that can be adopted in 'management classrooms' across different cohorts (undergraduate, pre-experience postgraduate, to post-experience postgraduate courses). Each presentation in the showcase will include an experiential component, where participants engage 'as students in a classroom', and a 'warts and all' summary of the challenges and benefits encountered when adopting the innovation. Given our panel comprises representation from both Go8 universities and universities targeting regional, rural, and lower socioeconomic students, our workshop showcases innovations which have been implemented across student groups comprising a diverse range of learners and learning styles. Delegates who attend this workshop should come ready to engage in a range of activities that will illustrate how management concepts can be brought to life in the classroom. The session will be hands-on and engaging. Ideally, attendees will leave the session with a range of innovative practices that they will be able to adapt to their own classes. Further, attendees will build their network with other like-minded academics, fostering future collaboration and innovation in teaching practices.

14

Building on research in the classroom: Developing your impact as a management educator through scholarly journal publication

Stuart Middleton, Paul Hibbert, Martyna Sliwa, Marissa Edwards

Understanding the distinctive focus of the main management education journals is vital in enabling potential authors decide the most appropriate outlet for their manuscript. Journals in this field are characterised by different methodological, philosophical, theoretical and practical orientations and traditions. Authors are therefore more likely to find success with publishing their work if they understand the background of each journal and how they might engage with previously published work. Understanding also entails appreciation of the topics and areas where journal editors, reviewers and readers have an interest in seeing further research develop, and how work in these traditions is shaped for successful publication. This workshop will help scholars to position their work thoughtfully in the overlapping spaces occupied by the different management learning and education journals, through highlighting key success (and failure!) criteria, helping participants learn from successfully published examplar papers, and offering direct one-to-one feedback to potential authors on their draft papers or management education project ideas. To accomplish these aims, this workshop brings together editors and associate editors of four leading journals in the field of management learning and education who can help participants understand how to find the right journal for their work, how to shape their paper to maxmise their publication chances, and how to connect with researchers and readers to have impact.

11

The Future of Business: Launching the Sustainability and Responsible Management SIG

Subha Parida, Mehran Nejati, Subas Dhakal, Kerry Brown

The SRM SIG is thrilled to announce its official launch at the ANZAM conference with an exciting 'Meet and Greet' event. This workshop aims to bring together academics and professionals dedicated to advancing sustainability and responsible management in business.The session will feature networking opportunities designed to foster collaboration and idea exchange. Attendees will hear from thought leaders and practitioners who are at the forefront of implementing sustainable practices in their organizations. By attending this workshop, participants will:

• Network with like-minded professionals and academics.

• Explore opportunities for collaborative research and projects.

• Contribute to shaping the future direction of the SIG.

Whether you are already working in the field of business and sustainability nexus or are new to the arena, this event is an invaluable opportunity to connect, learn, and inspire. Join us in celebrating the launch of the SRM SIG and become a part of this exciting journey.

1

Workshop on Fostering Generative AI in The Workforce

Yiyang Bian, Mario Fernando, Ruwan Bandara, Michael Draper, Katina Michael, Lynn Sheridan, Hatim Urabi

The workshop provides a comprehensive exploration of integrating generative AI technologies into organizational settings. Participants will gain insights into the fundamental concepts of generative AI and its applications across various industries. Through interactive sessions and case study presentations, attendees will learn practical strategies for successfully implementing and managing generative AI initiatives in their respective workplaces. This workshop offers a unique opportunity for professionals, researchers, and industry practitioners to exchange knowledge, share best practices, and collaborate on harnessing the transformative potential of generative AI in the workforce.

2

Editors Panel and Round Table Discussions: General Management and Interdisciplinary Research with a Regional Focus

Cathine Collins, Vanessa Ratten, Chinmay Pattnaik, Adina Dudau

The workshop brings together editors from the Journal of Management and Organization, Asia-Pacific Journal of Management, Australian Journal of Management, and the European Management Journal. In the first section, the editors will introduce their journals and explore points of commonality and differentiation between their aims. The second section is interactive, including time for questions and answers between the panel and audience, as well as round table discussions. This interactive section will focus on how to craft the contribution of a paper, including for general management, interdisciplinary, and/or regional discussions. Round table discussions will then explore the review process, as well as how and why it is important to become involved in Editorial Boards and Associate Editor roles at all career stages.

9

Celebrating the Impact of HDR Management Research with Industry Stakeholders Outside Of Academia

Victoria Lister, Alina Haider, Inkah Fischer, Wayne Graham

Increasingly, business schools are being asked to consider how HDR research – and researchers can be better linked to industry, yet few business schools have mastered this type of collaboration or have considered how it might best be implemented. In this workshop, we showcase HDR industry collaborations that yielded outcomes for industry partners and demonstrate how such collaborations are developed, sustained and supervised. Case studies highlighting three highly successful student-industry partnerships will pave the way for discussion of the 'how tos' from the student and supervisory perspectives, including how industry-HDR collaborations can result in robust academic outcomes for both parties. The case studies will also highlight the impacts of such research on industry, all of which have been profound. The workshop, facilitated by experienced 'pracademics', will include discussions on three topics: HDR students with academic career objectives, HDR students with non-academic career objectives, and HDR supervisors. HDRs, early career academics, supervisors, directors of research and teaching and learning, heads of schools and all interested parties are encouraged to attend this 'future-forward' workshop.

12

Launch The Research Methods SIG: Current Challenges and Advances in Research Methods

Tine Köhler, Paula O'Kane, Farveh Farivar, Bill Harley, Gordon Cheung, Paul Hibbert

Join us as we launch the new Research Method SIG (RMSIG) with an expert panel, discussing some of the key challenges and advancements in research methods in the field. ANZAM attendees can engage with the existing research methods community at ANZAM and inform our future offerings as part of the RMSIG's service to ANZAM. In this panel workshop, we will discuss what constitutes a methodological contribution to our field, where research methods manuscripts can be published, and how we can make them relevant to a local (Australia and Aotearoa, New Zealand) and global audience. This session aims to bring together researchers in the methods community in ANZAM and ANZAM members interested in pursuing a scholarship in research methods or getting further training in methods. As part of the workshop, we will provide an opportunity to hear what ANZAM members would like the new SIG to focus upon and how the SIG can address current research methods development needs. This is an opportunity to hear from experts and to influence the direction of our new particular interest group.

13

Co-Designing Management Research and Industry Engagement For Impact: an Important Process for Addressing Societal Challenges

Catherine Collins, Marek Kowalkiewicz, Matthias Haeusler, Kathlyn Loseby, Anya Johnson, Helena Nguyen

The workshop brings together academics with a track record of co-designing management research and industry engagement with partner organisations. This process involves academic and industry stakeholders collaborating to problematize a phenomenon and co-design a research agenda, including research questions, methods, and strategies for utilising the resulting knowledge for industry engagement. The workshop takes a broad view of industry stakeholders, including leaders from organisations and industry bodies, as well as those representing frontline employees and the general public, such as unions and think tanks. In the first section, panel members will explain the methods they use for co-designing management research and industry engagement. A partner organisation investigator, Kathlyn Loseby, will also be on the panel to discuss her assumptions and experiences. Kathlyn brings frontline and director-level experience from her work in architecture firms, has completed her MBA (Executive), and is now the CEO of a peak industry body. The second section is interactive, featuring a panel discussion, question-and-answer sessions between the panel and audience, and round table discussions. This interactive section will focus on how co-designing management research and industry engagement is crucial for addressing societal challenges such as climate action, Industry 4.0 (including artificial intelligence), and creating a climate of care within organisations.

18

Industry Engagement and Impactful Innovation

Roba Abbas, Savvas Papagiannidis, Natalie Chapman, Jagdeep Singh, Ali Abbas, Yiyang Bian

The Industry Engagement and Impactful Innovation workshop will provide a forum for discussing and debating the opportunities and challenges associated with industry engagement in the context of innovation related research, specifically technological innovation and digital transformation. The workshop will also facilitate an exploration of the diverse forms or modes of industry engagement, including, but not limited to, contract research, collaborative research and industry focused schemes, short term projects, long term research partnerships and other academia-industry initiatives. With an emphasis on practice-based and practice-led research, and impactful industry projects, the workshop will support information and knowledge sharing toward the co-creation of an industry engagement and impactful innovation guide. It will additionally provide skills, professional development and collaborative opportunities for attendees interested in topics such as: (i) technology / digital transformation / information systems / operations management research; (ii) innovation related research more broadly; (iii) industry engagement best practice; and (iv) practice-based and practice-led research. This will be achieved by drawing on diverse experience, expertise, and project examples with the intention of shaping how industry engagement can be managed across distinct innovation contexts and projects. The workshop is also aimed at (higher degree research) students and early career researchers.

17

Don't get mad, get equity: How can we support learning equity through critiquing the assumptions academics make about student skill development and knowledges prior to starting at university?

Elizabeth Nichols, Lynnaire Sheridan, Virginia Cathro

Considering that students face significant adjustments when transitioning to university with research showing significant challenges in academic demands, living conditions, living environment, and social networks. In addition, university educators assume first-year students arrive at university with a set of skills especially the ability to communicate effectively, use technology, be organised, and work in teams to be successful at university. With tight university curricula, management scholars often 'just want to teach' disciplinary skills and knowledge. Anecdotally, however, many of us become frustrated as many first-year students don't possess the necessary skills and knowledges to arrive at the start line for their learning. While we acknowledge this current skills gap, we are also facing an emerging skills gap derived from societal level changes that are disrupting the future world of work (such as artificial intelligence). This workshop recognises the equity issues facing students as they transition to university. The workshop, then, seeks to overcome these inequalities by identifying current and emerging skills gaps before collaborating to share existing mechanisms and generate new ideas that management educators could implement to close the gap by delivering disciplinaryspecific skills and knowledges.