8. Leadership and Governance

Competitive Session

SHAPING AUSTRALIAN BOARDS FOR GREATER FINANCIAL IMPACT

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ABSTRACT

Through the lens of Resource Dependence Theory, this study examines the influence of the collective human and social capital of the board (or board capital) on firm financial performance. OLS regression analysis using data on 690 directors from the 100 most highly capitalised Australian listed companies shows that indicators of the breadth and depth of board capital are positively related to firm financial performance. Results also show that board capital has a stronger effect on performance compared to more traditional indicators of board effectiveness, namely board incentives (informed by Agency Theory) and CEO/Board power (informed by Managerial Power Theory). These findings add new insights to the literature stream that highlights the importance of board collective capability to organisational outcomes.

Key words: Board of directors, Board composition, board effectiveness, theories of

governance, leadership

INTRODUCTION

Over the past two decades, a topic of rising interest in the corporate governance field has been

that to do with how (and how much) company boards of directors, as a group, actually contribute to

firm performance. While many studies have approached this issue via a range of different theoretical

perspectives, the findings reported to date have not been able to provide conclusive evidence as to

whether board characteristics benefit firm performance, nor which characteristics may be most

influential (Finegold, Benson, & Hecht, 2007; Zahra & Pearce, 1989).

In exploring possible links between board characteristics and firm performance, there is

mounting evidence emphasising the explanatory power of board human and social capital - or *"board*

capital" – in predicting firm performance (Kim, 2005; Kor & Sundaramurthy, 2009) . However,

research on board capital remains limited, with inconsistent findings, a heavy concentration in US

domain, and a lack of consideration of the collective capital of the board. Some have suggested that

research in this domain needs to provide more insights and evidence on the relationship between

board capital and firm performance to deepen our understanding of whether, how and which aspects of board capital, contribute to firm performance (Johnson, Schnatterly, & Hill, 2013).

In this study, we seek to add additional clarity to existing findings and understandings regarding the ways in which different aspects of board human and social capital, namely the breadth and depth of capital, contribute to firm financial performance. Our central postulate – informed by Resource Dependence Theory - is that board capital (a key proxy for board ability) directly and positively affects firm financial performance. To this end, drawing on the work of Haynes and Hillman (2010), we operationalise two dimensions of board capital (its breadth and its depth) to test their relationship with firm market performance (indicated by Tobin's Q). We use a cross-sectional design with a sample of ASX top 100 companies in 2010 and employ OLS regression technique. Directorship demographics and financial data are collected and cross-checked from company annual reports, DatAnalysis Premium database, Business Who's Who in Australia, and Bloomberg Business Week.

Our study stands to make a significant contribution to the literature on boards and firm performance. It offers new and unique insights to global knowledge in board capital research by providing an examination of Australian boards in this domain. Whilst exhibiting many of the characteristics of corporate governance practices in other Anglophone regimes, Australian boards also have a number of distinct features. These include the separation between CEO and board Chair roles – which is in marked contrast to the CEO-Chair "duality" that has until recently characterised US boards, and also the relatively lower proportion of independent directors than in the US[1] (Spencer Stuart, 2010; The Australian Council of Superannuation Investors, 2012), for instance. As such, an analysis of the influence of board characteristics in the Australian context may serve to illuminate some specific aspects that are shared in common with boards elsewhere, as well as offer important points of difference to findings relating to other countries.

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[1] From Spencer Stuart's report in 2010 and ACSI's report in 2012: In 2010, 55% of S&P 500 companies have CEO-Chair duality while duality is found in only 2 companies in ASX 200 in the same year. Independent directors account for 84% of all director positions in S&P 500 whereas this number is 69.6% in ASX100, and 49% in ASX101-200.

The study is organised in four sections. The first section describes the theoretical background and hypothesis development. The research methodology is discussed in details in the second section, followed by the presentation of the descriptive and regression results in the third section. The final section contains the discussion of our findings, the possible limitations of our study, and the suggestions for future research.

THEORY AND HYPOTHESES

Resource Dependence Theory and board capital

Resource Dependence Theory acknowledges the importance of the collective human capital and social capital created in the form of knowledge, skills, and social networks that the board of directors brings to the company. Each director is a valuable resource with the expertise, skills and knowledge that they bring to the boardroom. More importantly, the director is a critical actor who creates linkages between the company and the external environment with their networks and social connections (Amy J. Hillman & Dalziel, 2003; Lester, Hillman, Zardkoohi, & Cannella, 2008).

While the concepts of human capital and social capital have been applied widely across various research domains, it is only recently that they have been taken up in the context of board research and, consequently, the volume of research in the field remains very limited (A. J. Hillman, Withers, & Collins, 2009; Kor & Sundaramurthy, 2009). The lack of a solid body of empirical research on the possible association between board capital and firm financial performance may perhaps be attributable in part to the difficulty of reliably and validly measuring the contribution of board capital to the core outcome of the firm (Johnson et al., 2013). Alternatively, it may simply be that researchers have been slow to recognise the potentially valuable impact of such capital of the board on firm financial performance. Either way, the continuing knowledge gap warrants attention.

Despite the mounting evidence of its explanatory power to organisational outcomes, the sparse prior research on the board capital – firm performance relationship is characterised by inconsistent findings and problematic methods of measurement. A few extant studies in this area provide evidence to support the contribution of proxies of board capital to firm performance. For

instance, proxies of board human capital and/or board social capital have been found to directly lead to higher firm financial performance, or indirectly increase firm financial performance through board effectiveness (Kor & Sundaramurthy, 2009; Payne, Benson, & Finegold, 2009). However, the overall findings reported in this literature are mixed at best, with some studies finding partial associations and others nil or even negative links (e.g. Mahadeo, Soobaroyen, & Hanuman, 2012). The inconsistent findings might be caused by the use of ambiguous constructs in a single proxy that leads to multiple and contradictory meanings (Johnson et al., 2013), or the isolation of board human capital from board social capital (Jackling & Johl, 2009; Kim, 2005). There is a new line of research which provides a more holistic and objective approach to conceptualise and measure directors' collective capital. It appears to offer a promising way forward here. Haynes and Hillman (2010), in their research on the relationship between board capital and organisational strategic change, propose two measures of board capital, the vertical and horizontal dimensions, or the breadth and depth of capital, and find that they place significant impacts on strategic change (Haynes & Hillman, 2010). However, it is still necessary to examine whether these two dimensions of board capital can increase firm financial performance *per se* since their impact on strategic change may or may not lead to positive financial outcomes.

Accordingly, in this study we consider board capital as a bundle both human and social capital, with two dimensions – breadth and depth, and extend the work of Haynes and Hillman (2010) by testing the impact of these two measures of capital to firm financial performance.

Board capital breadth and firm performance

Capital breadth refers to the diversity of human and social capital of the board. A board which is composed of a diversity of human and social capital can leverage a variety of perspectives, information, and resources, enhance the quality of board decision making, reduce the probability of group-think, and consequently, increase task performance effectiveness, and organisational outcomes (Adler & Kwon, 2002; Hackman, 1990). Having a wide range of human and social capital can also help the board to increase awareness of good practices throughout the organisation (Shropshire, 2010), and contribute to positive outcomes by enhancing creativity in the boardroom discussion

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through a variety of perspectives and ideas, generating cognitive task conflict, which can lead to higher board performance and firm performance (Milliken & Martins, 1996; Pelled, Eisenhardt, & Xin, 1999). The diversity of board capital is found to increase firm strategic change (Haynes & Hillman, 2010), firm internationalisation (Bingham, Eisenhardt, & Furr, 2007; Rivas, 2012), firm innovation (Wincent, Anokhin, & Ortqvist, 2010), IPOs and venture capital funding (Beckman, Burton, & O'Reilly, 2007), and ROA (He & Huang, 2011; Mahadeo et al., 2012; Nielsen & Nielsen, 2013). Thus, it can be implied from the literature on board capital breadth that diverse collective capital of the board can significantly increase corporate financial performance.

Hypothesis 1. Board capital breadth is positively related to firm financial performance.

Board capital depth and firm performance

Board capital depth refers to the embedded human and social capital relating to the firm's chief industry of operation. Industry knowledge, experience and networks can help directors to understand how their firm and industry are operated, allow them to understand the dynamics of their firm's main product market or markets, enable them to better evaluate business proposals and CEO actions, as well as provide the management team with valuable advice, information, and resources arising from their connections with other players in the focal firm's industry (Barroso, Villegas, & Perez-Calero, 2011; Kor & Sundaramurthy, 2009). Board capital depth is found to increase board effectiveness (Carpenter & Westphal, 2001), firm sales growth rate (Kor & Sundaramurthy, 2009), and firm profitability (Carrington, 1981). Thus, from prior research, it is expected that the depth – or industry embeddedness - of board capital significantly increases firm performance. As such:

Hypothesis 2. Board capital depth is positively related to firm financial performance.

METHODOLOGY

Sample and data collection

Our sample is comprised of the top 100 public companies listed on the Australian Securities Exchange (ASX) as at 2010. These firms represent over 90% of the capitalisation in the Australia

stock market. Using DatAnalysis Premium, the top 100 companies were shortlisted based on four

criteria: highest market capitalisation, trading status, Australian-based, and trusts and funds excluded.

Demographic information of total number of 808 directorships on ASX100 was then collected and

cross-checked from multiple sources, including annual reports, Australia Business Who's Who,

DatAnalysis Premium, Connect4, and Bloomberg Business Week. This information was aggregated to

firm-level data. Financial data was collected in year 2011 and 2012 to create appropriate time lags

with independent variables.

Measures

Dependent variable

We use the market-to-book ratio Tobin's Q as the indicator for firm financial performance.

Tobin's Q is considered a valid and reliable measure of financial performance and is widely used in

corporate governance research (Bohren & Strom, 2010). Approximated Tobin's Q is measured as the

ratio of the market value of equity and the book value of liability over the book value of total assets

(Chung & Pruitt, 1994). We use the two-year average values of Tobin's Q from 2011 to 2012 to avoid

possible anomalies in single year performance. Tobin's Q is then reversed (1/Q) to make a necessary

transformation to satisfy the assumptions of OLS regression models[2].

Independent variables

Capital breadth indicators – *functional diversity* and *occupational diversity* are calculated

based on Blau's diversity index, $= \sum_i^n Pi$, where P_i is the proportion of directors falling in categories *i*,

and *n* is the number of categories (Blau, 1977). The larger the Blau's index value, the greater the

board's degree of diversity. Categories for functional diversity are "insiders, business experts, support

specialist, and community influentials" (Amy J. Hillman, Cannella, & Paetzold, 2000). Occupational

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[2] Originally we run the models with the dependent variable Tobin's Q. However, the models with Tobin's Q do not satisfy the assumption of normality for error terms. We make a reverse transformation to Tobin's Q (1/Q) and the models with 1/Q passed all the regression diagnostic tests. To make it easier for readers to recognise the positive/negative effects of independent variables to Tobin's Q, we decide to include the regression results with Tobin's Q in the appendix

diversity has 14 categories (see Table 1, below). *Network diversity* is the diversity of industry sectors covered in directors' multiple directorships[3].

Capital depth indicators are industry experience and industry networks. *Industry experience* is calculated as the proportion of directors that have prior experience of the focal firm and its industry. *Industry networks* is calculated as the proportion of directorships in the focal firm's industry over the combined total number of distinct directorships held by the board.

Control variables

We add the control variables into the models on the basis of prior evidence of their potential to affect firm performance. These variables include *firm size* (log of market capitalisation) (Cannella Jr, Park, & Lee, 2008), *board size*, and two dummies for industry sectors[4] (Jackling & Johl, 2009).

We also control for the possible impact of board configurations to firm performance informed by Agency Theory and Managerial Power Theory. Board incentives to monitor under Agency Theory is operationalised by two proxies. *Board share,* as the indicator of board extrinsic incentive strength, is calculated as the percentage of shares held by all board members excluding the CEO over the total shares outstanding of the firm. *Outsider ratio* as the indicator of board intrinsic incentive strength, is calculated as the proportion of non executive directors over the board size is the indicator of board intrinsic incentive strength (Anderson & Reeb, 2004; Ezzamel & Watson, 1993; Filatotchev & Bishop, 2002). We capture the power of the CEO vis – à – vis the board and its impact on firm performance under Managerial Power Theory by two proxies: *Share ratio* – the ratio of shares held by the CEO over shares held by the board; and *Cash ratio* – the ratio of cash compensation of the CEO over the total cash compensation of all board members (Adams, 2004; Walters, Kroll, & Wright, 2008).

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[3] Network diversity is calculated based on three steps. First, the total number of distinct directorships that directors hold in 2010 is ascertained. Second, industry sectors are identified and coded accordingly for all directorships. Third, Blau's diversity index is applied to calculate network diversity with ten categories for ten industry sectors (see Table 2, below), where P_i is the proportion of directorships falling in industry sector i and n is the total number of distinct directorships that the board holds

[4] All companies are classified in to three major industry groups: (1). Materials, Industrials, and Consumer services; (2) Financials; (3) Energy, Utilities and others. Two dummies are created for the second and third industry groups. The reference group is Materials, Industrials and consumer services.

Analytic procedures

We first conduct a descriptive analysis of directors' demographics to provide an overview of the director sample in terms of their human and social capital profile. In the second part of the analysis, we apply Ordinary Least Square regression technique, with all assumptions satisfied, to test the impact of independent variables on the dependent variable based on 2 models.

RESULTS

Descriptive Analysis

Tables 1 and 2 provide an overview of the capital of all directors in our sample. Our ASX100 sample includes 690 directors holding a total of 808 directorships within ASX100 companies. Most of directors hold 1 directorship in ASX100. ASX100 boards are composed of a majority of non-executive directors, accounting for 81.56% directorships. As expected, duality is very rare in Australia governance practices (only 4 cases). Most of the directors serve in 3 categories of board functions, including "business experts", "support specialists", and "insiders". Only a small number (3.96%) of directors are "community influentials" (Table 1).

Insert Table 1 about here

Table 2 shows that most of directors have occupational backgrounds in general management, accounting, and finance (66.96%). Overall, the 690 directors in our sample hold a total of 1,770 directorships in for-profit firms, both listed and non-listed. Directors' networks are diverse across the 10 industry sectors applied, but mainly concentrated in financials, materials, industrials, and consumer discretionary sectors. Although 61% of directors have experience of the focal firm industry, only 36% have networks (directorships) within the focal firm industry sector, with most having one connection with the focal firm industry sector, although some are involved in up to five focal firm industry networks.

Insert table 2 about here

Regression Analysis

Table 3 shows the means, standard deviations and correlations among all variables used in this study. Multi-collinearity is not a significant issue, since the range of correlations is from 0.00 to 0.57, and variance inflation factors (VIFs) are less than 2. These numbers are well below the cut-off point of 0.7 for correlations and 10 for VIFs.

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Insert table 3 about here

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Table 4 presents the results for the OLS regression with 2 models. Model 1 contains only control variables. Model 2 adds in main predictors to test their effects to the dependent variable[5].

For the control effects, results for Model 1 show that all predictors in the model can explain 22% the variation of 1/Q (Table 4, Model 1: R^2 = .22, F = 7.03, p = 0.000). Industry group Financials has a significant and positive relationship with 1/Q, which implies a significantly negative relationship with Tobin's Q (Table 4, Model 1: β = 0.17, p = 0.041). This relative underperformance may reflect the lingering challenges of the Global Financial Crisis of 2007-2009, which had a disproportionately detrimental impact on finance sector firms (Henry, 2010). The significantly negative effect of firm size on 1/Q, indicating a significantly positive effect on Tobin's Q (Table 4, Model 1: β = -0.22, p = 0.017), can be interpreted through various theoretical perspectives: for instance, larger firms might have better control over external resources (Pfeffer & Salancik, 1978), or better potential opportunities to attract and retain talents (Stanford, 1980), or higher economies of scale (Thompson, 2003), which can possibly lead to higher firm performance (Orlitzky, 2001).

Board size has a significantly positive effect on 1/Q (indicating a significantly negative effect on Tobin's Q) (Table 4, Model 1: β = 0.07, p = 0.002), suggesting that shareholders and the capital market may see large boards as being less effective. This might also be amenable to an Agency Theory explanation: that is, over-sized boards may display poor quality of monitoring due to the problems of coordination and communication (Lipton & Lorsch, 1992; Yermack, 1996). Surprisingly,

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[5] Please see Table 5 in the appendix for the comparative models with Tobin's Q.

the data do not support any significant effects of indicators for board effectiveness under Agency Theory and Managerial Power Theory on firm performance.

Insert table 4 about here

The two hypotheses 1 and 2 about the positive impact of board capital breadth and depth indicators on Tobin's Q are tested in Model 2. Results show that these capital indicators can explain 16% change in 1/Q compared with Model 1. (Table 4, Model 2: ΔR^2 = .16, ΔF = 4.31, p = 0.001). For Board capital breadth, *functional diversity and occupational diversity* are found to significantly reduce 1/Q, which indicate significantly positive impacts on Tobin's Q (Table 4, Model 2: β = -0.63, p = 0.025; β = -0.64, accordingly) while *network diversity* places a positive and insignificant effect on 1/Q (negative effect on Tobin's Q) (Table 4, Model 2: β = 0.06, p =0.977). Hypothesis 1 is thus partial supported.

For Board capital depth, results show that *industry networks* negatively affects 1/Q, which indicates a positive impact on Tobin's Q, and its effect is significant (Table 4, Model 2: β = -0.65, p = 0.002) whereas the impact of *industry experience* on 1/Q is negative and insignificant (Table 4, Model 2: β = 0.03, p =0.814). Hypothesis 2 is partial supported.

In order to check whether our results are affected by possible outliers, we conduct further investigation by using different robust techniques, including the Huber's re-weighted regression method, regression with outliers adjusted to the closest non-outlier values, and regression excluding outliers. The results from OLS regression and those from these robust techniques are quite similar, showing that our findings are not strongly affected by outliers. In addition, as Tobin's Q is just one of the indicators of firm financial performance, we also run the regression models with different dependent variables, including Return on Assets (ROA) and Return on Equity (ROE) and get similar results. It enables us to draw a conclusion of the significant impacts of our predictors to not only firm market performance indicated by Tobin's Q, but also firm accounting performance, informed by ROA and ROE.

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DISCUSSION AND CONCLUSION

Understanding the collective contribution of board members to firm performance is one of the most rapidly emerging areas of research in the management studies field, not least because the role of the board director of a listed company is "a private office imbued with public responsibility" (Allen, 1992). Understanding how the board can make a difference to organisational outcomes, either for better or for worse, is critical to improving board effectiveness. For this purpose, our study reveals that whether or not the board can make a difference to firm performance depends on the breadth of board capital (functional diversity and occupational diversity) and the depth of board capital (industry networks).

In line with Resource Dependence Theory and existing research findings on the influence of capital diversity on firm-level outcomes (Golden & Zajac, 2001), our results confirm that the diversity of board functional diversity and occupational backgrounds lead to higher Tobin's Q in Australian top100 companies. As other studies suggest, the breadth of the knowledge and experience that directors accumulated across occupational backgrounds is "transferable capital", which directors are able to apply effectively to solving business problems in such a way as to increase firm financial performance (Kor & Sundaramurthy, 2009; Tuggle, Schnatterly, & Johnson, 2010). In addition, our results support Amy J. Hillman et al. (2000) proposition regarding the importance of different "resource dependence roles" that directors hold on the board. Specifically, we contribute to this line of research by finding that the diversity of board "resource dependence functions" leads to higher firm performance, as different functional groups, namely "insiders", "business experts", "support specialists", and "community influential" can provide the top management team with different critical resources, which in turns, can translate to better financial performance.

While Haynes and Hillman (2010) find that board capital depth produces less strategic change for the firm, we extend their findings by revealing that board capital depth actually results in higher firm market-to-book performance, indicated by Tobin's Q. In particular, we identify that the depth of board networks in the focal firm's industry is far more powerful in explaining the variance in Tobin's Q than board experience in the focal firm's industry. As such, firm market performance would appear

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to receive a high premium from this "less transferable capital". Having connections within the focal firm's industry can provide directors with a depth of relevant market and industry knowledge to be able to make better informed judgements about the proposals and actions of the CEO and top managers; and to be able to assist them with intra-industry channels for market insights, market sharing, and market competition reduction, which can help the company achieve higher profits with lower costs (Mizruchi, 1996).

Our findings provide no supporting evidence for Agency Theory and Managerial Power Theory postulates. It might be the case that the relationships between board incentives and CEO/Board power, and firm performance are more complex than a simple linear relation (Amy J. Hillman & Dalziel, 2003), or that these board characteristics are powerful in predicting other organisational outcomes rather than those used in this study (e.g. shareholder values, Macquarie Equities Research, 2013), or simply because our data is not sufficient to reject the null hypothesis. Further investigation is warranted here.

Like all such studies, the way in which this study is designed has limitations. First, although acknowledging the importance of context in board research, we do not locate our research model in the full range of different environmental conditions to examine how this relationship changes accordingly to changes in context. Future research might build on this research by investigating how board capital contribute to firm performance under different stages of the firm life cycle (Lynall, Golden, & Hillman, 2003), for instance. Second, while respecting time lag considerations, our study sample comprises companies and their directors in a particular corporate governance system (Australia) at a particular point in time (2010). The cross-sectional design thus constrains our understanding of possible changes in the board capital-firm performance relationship over time. A longitudinal study with a larger sample size and panel data would help to address this limitation. Likewise, the absence of comparative method means that the findings have not been tested or replicated in another governance context. Third, it is recommended that future research should examine the interactive effects of board characteristics to firm performance. It is possible that the interactions between capital breadth and depth, or between board capital and CEO/Board power, or

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between board capital and board incentives might place different effects on firm performance (Haynes & Hillman, 2010; Amy J. Hillman & Dalziel, 2003). Such possibilities also warrant empirical investigation.

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TABLES

Table 1: Directors' Directorships, Positions, Functional Diversity, and Occupational Diversity

	Freq.	%		Freq.	%
Number of directors in ASX100	**690**	**100.00**	**Occupational Background**	**690**	**100.00**
1 directorship	596	86.38	Production/Manufacturing	58	8.41
2 directorships	71	10.29	R & D/ Engineering	36	5.22
3 directorships	22	3.19	Accounting/Finance	227	32.90
4 directorships	1	0.14	General Management	235	34.06
Number of director positions in ASX100	**808**	**100.00**	Marketing/Sales	29	4.20
CEO	102	12.62	HR/Labour relations	3	0.43
Executive director	47	5.82	Legal	35	5.07
Non-executive director	659	81.56	Real estate/ Infrastructure	12	1.74
Duality	**4**	**4.00**	Distribution/Supply	1	0.14
Board function	**808**	**100.00**	IT	8	1.16
Insiders	192	23.76	Writing/Communication	3	0.43
Business expert	427	52.85	Non-profit/Public sector	16	2.32
Support specialist	157	19.43	Healthcare practitioners	12	1.74
Community influentials	32	3.96	Military/Government	15	2.17

Table 2: Board Network Diversity, and Board Experience and Networks in Focal Firm's

Industry

	Freq.	%		Freq.	%
Network diversity	**1770**	**100.00**	**Experience in focal firm's industry**	**808**	**100.00**
Energy	128	7.23	Have focal firm's industry experience	495	61.26
Materials	331	18.70	No focal firm's industry experience	313	38.74
Industrials	312	17.63	**Networks in focal firm's industry**	**808**	**100.00**
Consumer Discretionary	234	13.22	No focal firm's industry network	515	63.74
Consumer Staples	104	5.88	Have focal firm's industry network	293	36.26
Healthcare	106	5.99	1 directorship	205	25.37
Financials	438	24.75	2 directorships	61	7.55
IT	34	1.92	3 directorships	20	2.48
Telecommunication	37	2.09	4 directorships	6	0.74
Utilities	46	2.60	5 directorships	1	0.12

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Table 3: Descriptive statistics and correlation matrix[a]

	Variables	Mean	SD	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1/Q	0.81	0.32	0.13	1.66													
2	Industry2	0.16	0.37	0.00	1.00	0.22												
3	Industry3	0.21	0.41	0.00	1.00	-0.18	-0.23											
4	Firm size	9.69	0.46	9.09	11.18	0.01	0.39	0.03										
5	Board size	8.09	2.02	4.00	14.00	0.26	0.23	-0.07	0.57									
6	Board share	4.80	12.64	0.00	68.11	-0.04	-0.15	0.00	-0.18	0.11								
7	Outsider ratio	0.84	0.08	0.50	0.92	0.20	0.22	-0.16	0.15	0.01	-0.44							
8	CEO/Board share ratio	4.56	11.42	0.00	56.22	-0.17	-0.07	0.02	-0.03	-0.21	-0.14	0.06						
9	CEO/Board cash ratio	0.83	0.67	0.00	3.62	-0.03	-0.11	0.06	0.07	0.39	0.17	-0.43	-0.06					
10	Functional diversity	0.47	0.13	0.20	0.72	-0.24	-0.20	0.16	0.00	0.09	0.25	-0.47	-0.09	0.31				
11	Occupational diversity	0.62	0.13	0.22	0.83	-0.18	-0.18	0.02	0.01	0.21	0.05	-0.06	0.00	0.15	-0.03			
12	Network diversity	0.69	0.13	0.00	0.85	0.15	0.07	-0.21	0.30	0.39	-0.02	0.33	-0.22	-0.06	-0.20	0.29		
13	Industry experience	0.57	0.23	0.00	1.00	-0.02	0.28	0.10	-0.14	-0.12	0.05	-0.24	-0.01	0.10	-0.11	-0.10	-0.29	
14	Industry networks	0.29	0.19	0.00	0.80	-0.18	0.27	-0.37	-0.12	-0.12	-0.06	0.02	0.35	-0.04	-0.20	-0.07	-0.14	0.30

N = 100

[a]. Correlations above 0.20 are significant at $p < 0.05$ (2-tailed)

Table 4: OLS Regression results with dependent variable Reversed Tobin's Q (1/Q)

Reversed Tobin's Q (1/Q)	Model 1		Model 2	
	B[b]	Robust SE	B	Robust SE
Constant	1.97**	0.88	3.88***	0.97
Industry2	0.17*	0.09	0.21*	0.10
Industry3	-0.05	0.08	-0.10	0.08
Firm size	-0.22*	0.09	-0.30**	0.08
Board size	0.07***	0.02	0.08***	0.02
Board share	-0.00	0.00	-0.00	0.00
Outsider ratio	0.56	0.43	0.02	0.48
CEO/Board share ratio	0.00	0.00	0.00†	0.00
CEO/Board cash ratio	-0.02	0.01	-0.01	0.01
Board capital breadth				
Functional diversity			-0.63*	0.27
Occupational diversity			-0.64*	0.24
Network diversity			0.06	0.29
Board capital depth				
Industry experience			0.03	0.15
Industry networks			-0.65**	0.19
N	100		100	
R^2	0.22		0.37	
F	7.03***		6.22***	
R^2 change			0.16	
F change			4.31**	

[b]. Unstandardised coefficients and robust standard errors are reported

†$p < 0.1$; *$p < 0.05$; **$p < 0.01$; ***.$p < 0.001$

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APPENDIX

Table 5: OLS Regression results with dependent variable Tobin's Q

Tobin's Q	Model 1		Model 2	
	B^b	Robust SE	B	Robust SE
Constant	1.54	2.17	-6.33*	3.06
Industry2	-0.45**	0.14	-0.77*	0.31
Industry3	0.22	0.32	0.36	0.29
Firm size	0.22*	0.23	0.54*	0.25
Board size	-0.16**	0.04	-0.18**	0.05
Board share	-0.00	0.00	0.00	0.00
Outsider ratio	-0.99	1.31	1.72	1.68
CEO/Board share ratio	-0.00	0.00	-0.00*	0.00
CEO/Board cash ratio	0.04	0.01	0.00	0.02
Board capital breadth				
Functional diversity			2.11*	0.90
Occupational diversity			2.38**	0.84
Network diversity			-0.82	0.85
Board capital depth				
Industry experience			-0.57	0.60
Industry networks			2.17**	0.70
N	100		100	
R^2	0.12		0.33	
F	4.56***		2.86**	
R^2 change			0.21	
F change			5.32***	

[b]. Unstandardised coefficients and robust standard errors are reported

*$p < 0.05$; **$p < 0.01$; ***.$p < 0.001$