

Stream 3

Stream Title

Entrepreneurship, Start-Ups and Small Business

AUTHORS

Nicholas Fong

Dr. Rachel Wolfgramm

Dr. Deborah Shepherd

Department of Management and International Business, University of Auckland, New Zealand

Email: nfon015@aucklanduni.ac.nz

r.wolfgramm@auckland.ac.nz

d.shepherd@auckland.ac.nz

TITLE: Ecopreneurs as change agents; opportunities, innovations and motivations

ABSTRACT: Sustainability imperatives underpin a shift in focus towards creating economies that balance people, planet and profit, a transition which it is argued that ecopreneurs help foster. This paper offers an extensive survey of current literature in ecopreneurship. The review highlights important links to the field of entrepreneurship, identifies a gap in empirical research and outlines a study in progress that investigates the motivations, opportunities, and innovations of ecopreneurs. Our research contributes a greater understanding of how this group of environmental entrepreneurs operate as both change agents and a critical resource in dealing with sustainability concerns. Based on our findings, we aim to develop a conceptual framework designed to highlight the drivers that underpin this new breed of ecopreneurs.

Keywords: ecopreneurship, motivations, innovations, sustainability, change agents

Introduction

The rise in ecological modernisation has prompted researchers to look into reform within the current economic system. This focus has brought about renewed interest in successful ecopreneurs such as Elon Musk, JB Straubel, Martin Eberhard, Ian Wright, and Marc Tarpenning, co-founders of Tesla Motors and Anita Roddick of the Body Shop (Isaak, 2010).

Specifically, the term ‘ecopreneurship’ combines ‘ecological’ (environmental) and ‘entrepreneurship’ and has emerged as a subset of entrepreneurial studies. As such, Schumpeterian economics and the role of entrepreneurial innovation in the ‘process of creative destruction’ underpin analysis in this field. In the Schumpeterian view, entrepreneurs are viewed as individuals who use innovation to initiate change by actively creating new opportunities and pursuing them in the market. Schumpeter’s (1934) ‘process of creative destruction’ views entrepreneurs as actors who stimulate fundamental changes in society through disequilibrating forces. They do this through discovering new technologies, markets, processes and organisational forms thus enabling societal transformation (Ogbor, 2000). These points are of key relevance to ecopreneurship particularly as ecopreneurs are viewed as change agents able to overhaul conventional business through injecting innovative pro-environmental products and processes into production functions. In doing so, arguably, ecopreneurs generate successive waves of wealth creation; however, wealth is viewed in a holistic way. For example, ecopreneurs are often viewed as actors who challenge the status quo effecting and enacting pro-environmental innovations and creating sustainable business models (Schaltegger, 2010).

However, the lack of clarity in ecopreneurship has led to unclear distinctions between similar forms of entrepreneurship such as, sustainable, social and environmental entrepreneurship. Table 1 illustrates definitions offered by various authors and presents diverse views of ecopreneurship.

Literature: Ecopreneurial Typologies

Throughout the ecopreneurial literature, authors often label ecopreneurs as change agents (Anderson, 1998; Keogh & Polansky, 1998; Pastakia, 1998; Walley et al, 2010) able to shift commerce towards a path of sustainability (Cohen & Winn, 2007). Their ethically derived motivations indicate the potential of their role in fostering pro-environmental change (Cohen and Winn, 2007).

However, as motivations for ecopreneurship can be multi-faceted, individual actors have different goals and motivations (Keogh & Polansky, 1998). On this point, we note that a common occurrence in the ecopreneurial literature is the development of typologies that focus on individual motivations. For example, Walley et al's (2010) typology is based on the assumption that entrepreneurs shape functions that are influenced by economic and social structures that surround them and by doing so they influence these structures (Giddens, 1984). This typology highlights structural factors consisting of 'hard' influences including, regulation and compliance, and personal influences that consist of 'soft' structural influences such as, family, friends and past experiences. The personal orientation axis is influenced by what constitutes a green business. The structural orientation axis represents entrepreneurs with profit maximising goals but who run a green business whereas the sustainability orientation represents those who combine economic, green and social/ethical motives. Four types of ecopreneurs are identified: ad hoc, ethical mavericks, visionary champions, and innovative opportunists (see table 2).

On the other hand, Linnanens' (2010) typology of ecopreneurs classifies them into two criteria: the desire to change the world and improve quality of life and the environment (high, low) and the desire to make money (high, low). From this, he proposes four different types of ecopreneurs: self-employer, non-profit business, opportunist, a successful idealist (see table 2). Similarly, Schaltegger (2010) develops a positioning matrix of ecopreneurship based on environmental influences within markets. He argues that companies need to influence markets by increasing market share or through influencing competitors and other market actors to adopt environmental solutions. Schaltegger (2010) also uses two dimensions for his typology. One is based on the person's goals and their focus on the market effect of their business using a spectrum which includes 'alternative science' to 'eco-niche' and mass market, whilst the other focusses on the priority given to environmental issues as a business which ranges from low to high. Three main types of ecopreneurs are then formed: ecopreneurs, bioneers, and alternative actors (see table 2).

These different typologies indicate that not all ecopreneurs are similar which suggests that ecopreneurs may also have different motivations for running eco-businesses. For example, Kirkwood

and Walton's (2010) study highlights that New Zealand ecopreneurs start their own eco-businesses based on five factors: their green values, gaps in the market, making a living, independence and passion. Another study of New Zealand ecopreneurs by de Bruin and Lewis (2010) shows that businesses may in fact not be market orientated but may operate on market fringes, be a part of a niche market, or be in the mass market. This study also reveals that green entrepreneurs can have more than one driver. For example, they may be responding to their own personal concerns (individual); environmental business opportunities (firm); or responding to collective needs (social). With an emphasis on green business, this framework captures the growth of micro-businesses, their environmental responses, chronological development and the dynamic evolutionary nature of ecopreneurship. Other aims of the study include providing an alternative to the one-dimensional nature of typologies (for example, Schaltegger, 2010; Linnanen, 2010; Walley et al., 2010), to break down a tendency to focus on dominant behaviour and single characteristics at a firm level (de Bruin & Lewis, 2010).

Freimann et al's., (2010) study of German start-ups investigates opportunities for adopting sustainable business practices in new business ventures. They identify three different ecological orientation categories: eco-dedicated entrepreneurs, eco-open entrepreneurs, and eco-reluctant entrepreneurs (see table 2).

Generally, in reviewing these typologies, we notice a strong overlap of focus on the individual's desire develop environmentally ethical businesses and improve the world over a pure profit maximisation orientation.

However, these typologies are often based on little empirical research and often present ecopreneurs and ecopreneurship in a static manner (de Bruin & Lewis, 2010; Gibbs, 2009). In addition, from the Kirkwood and Walton (2010) study, we know little about how ecopreneurs make sense of their business in relation to sustainable entrepreneurship and what really drives them to operate ecopreneurial businesses. Like in conventional entrepreneurship literature, there is a focus on the individual's history, background and psychological characteristics which is important but we argue

further research is needed to investigate why, when and where ecopreneurs are able to discover opportunities when others cannot (Gibbs, 2009).

Further to this, our review of literature has shown that there is little empirical research that examines the motivations of these types of entrepreneurs. In this context, calls for further research into what drives ecopreneurs (Cato et al., 2008) and how they actually differ from general entrepreneur has emerged (Gibbs, 2009). Although, we will not be looking to compare and contrast the two groups, in this study we contribute to understanding ecopreneurship by examining concomitant literature on entrepreneurship motivation.

Push-Pull Factors

In particular, we focus on analysis of push and pull factors (Alstete, 2002; Segal et al., 2005). We note push factors are often characterised by negative connotations that push people into pursuing a business idea such as problems with employers, need for flexible work and living conditions, unemployment, the glass ceiling effect and redundancy. Alternatively, pull factors are internal and relate to personal choices in starting businesses such as seeing a gap in the market, desire for higher levels of autonomy, doing fulfilling work, and/or a drive for wealth and power (Alstete, 2002). Push and pull factors have been similarly categorised in other studies such as Mallon and Cohen's (2001) study of women entrepreneurs, where they used 'entrepreneur's-in-waiting' and 'change triggered by dissatisfaction and disillusionment with the organisation' as strong motivators. Entrepreneurs were similar to 'pull' factors as they wanted to be more autonomous, independent and to be their own boss. Whilst dissatisfaction triggers were seen as 'push' motivators, women tend to leave due to feelings of disillusionment or frustration and unhappiness at their work. Interestingly, those motivated by pull factors tended to be more successful than those motivated by push factors (Amit & Muller, 1995) which is significant as ecopreneurs are found to be influenced more by pull factors (Kirkwood & Walton., 2010).

Other researcher also supports push pull factors and identifies four key entrepreneurial motivation drivers: independence, monetary, work related, and family related (refer to table 3 for a summary) (Carter et al., 2003; Kirkwood, 2009; DeMartino & Barbato, 2003).

Firstly, the desire for independence is seen as a major pull factor that underpins the choice to become an entrepreneur (Amit & Muller, 1995; Alstete, 2002; Cato et al., 2008; Shane et al., 1991; Kirkwood, 2009) and an ecopreneur (Cato et al., 2008; Kirkwood & Walton, 2010). The desire to be autonomous is significant. For example, studies on women and gender comparisons argue the need for independence is one of the top ranking motivators for becoming an entrepreneur and there is little difference between genders. Shane et al.,'s (1991) study on entrepreneurs from Britain, New Zealand, and Norway, found that entrepreneurs rated highly being in control of their own time, more flexibility for personal and family life, and having the freedom to work in their own way as high motivational factors in becoming an entrepreneur. Alstete (2002) also found that many participants believed entrepreneurship would bring greater flexibility than traditional workplaces but also more opportunity for creativity and greater control over their professional careers. The findings in Kirkwood and Walton's (2010) study on ecopreneur's motivational factors mirrors previous entrepreneurial studies (Alstete, 2002; Marlow, 1997; Shane et al., 1991) where independence, control and being their own boss was found to an important motivator.

Secondly, monetary motivation is also classed as a pull factor (Alstete, 2002). Although not all people are motivated solely by financial reward, it has been found that it is an important factor for entrepreneurs but is lower compared to other factors (Amit et al., 2001; Choi & Gray, 2008; Kirkwood, 2004) such as independence (Alstete, 2002; DeMartino & Barbato, 2003; Hessels *et al.*, 2008). However, the potential to increase personal wealth remains a strong motivator (Carter et al., 2003; McClelland et al., 2005). For example, in a study of prospective entrepreneurs, some of the participants perceived entrepreneurship as a way to achieve financial freedom and early retirement (Astete, 2002). A study comparing entrepreneurs and non-entrepreneur's, amongst the entrepreneurs, self-actualisation was rated the highest motivator, followed by wealth, emulating role models, innovation and independence (Carter et al., 2003). Ecopreneurs also show similarities in terms of

monetary wealth but this is not always the main reason to pursue ecopreneurial businesses (Allen & Malin, 2008; Kirkwood & Walton, 2010) as owners are also concerned and interested in environmental and social issues compared to creating economic success (Allen & Malin, 2008; Masurel, 2007; Rodgers, 2010).

Thirdly, work related motivations for becoming an entrepreneur are often push factors which include work dissatisfaction which can motivate people to leave their jobs and become entrepreneurs. Studies have reported that more people are transitioning towards entrepreneurship due to demanding, frustrating and inflexible work environments (DeMartino & Barbato, 2003; Winn, 2004). That corporations or work cultures are perceived as impersonal and not adhering to satisfying professional goals (Buttner & Moore, 1997) also matters. As a result of dissatisfaction at work (Mitchell, 2004; Kirkwood, 2009), such as 'not being taken seriously or 'not given enough or trusted with responsibility', people tend to look for autonomy in the realms of self-employment and entrepreneurship (Marlow, 1997). However, among ecopreneurs in Kirkwood and Walton's (2010) study, surprisingly job or career dissatisfaction is not a strong motivator although it is widespread among traditional entrepreneurs. This positive finding shows that more ecopreneurs are being drawn to business primarily by pull factors such as wanting to make a difference in the world.

Fourthly, family-related factors are considered important to entrepreneurs. Studies suggest that more people are motivated to become entrepreneurs in order to balance work and family (Brush, 1992; DeMartino & Barnett, 2003). Kirkwood's (2009) study on motivational factors in becoming entrepreneurs found those who had children were more inclined to start a new business to spend more time with their family as concern for their well-being was paramount. In this category, family related motivators tend to be more influential for women compared to men. DeMartino and Barbados' (2003) investigation on male and female MBA graduates at different stages in their career found that women were more motivated by family lifestyle factors, whereas men were driven by money and career advancement. However, Mitchell's (2004) study on 101 male and female South African entrepreneurs motivations to start their own businesses, males were more motivated by providing security for their family, where females were more inclined to become entrepreneurs to continue learning and the need

for financial survival. Again, whilst family matters were a common motivator, in terms of ecopreneurs, family motivators were relatively low (Kirkwood & Walton, 2010) compared to entrepreneurs (Kirkwood & Walton, 2010).

Current Research

Our current research investigates a number of factors relating to ecopreneurship which coincide in part with entrepreneurship. These include, market failure and ecopreneurial opportunity discovery.

The process of discovering new opportunities (Shane, 2003; Shane & Venkataraman, 2000) which can help contribute to solving environmental problems is central to ecopreneurship. Opportunities can emerge in many forms as societies have different views and beliefs of the value of certain resources if they have the possibility to turn into something new (Kirzner, 1997).

Importantly, traditional theory from environmental economics suggests that market failures in the economic system have led to businesses promoting environmentally degrading behaviour which in turn leads to vast negative externalities (Cropper & Oates, 1992; Tietenberg & Lewis, 2009). Whilst policy focussing on regulatory intervention has been used as a leading solution to address environmental market failures, policy itself does not inform us of how entrepreneurs can or are helping to solve environmental problems (Dean & McMullen, 2007).

In addition, there has been little literature on how entrepreneurs exploit opportunities as a result of relevant environmental market failures to decrease environmental degradation, although there have been attempts (Cohen & Winn, 2007; Dean & McMullen, 2007; York & Venkataraman, 2010). Much of the entrepreneurship literature has focused on addressing traditional market failure as a way to discover and exploit market opportunities (Kirzner, 1978; Shane & Venkataraman, 2000; Eckhardt & Shane, 2003) over addressing environmental issues directly as exploring relevant environmental market failures.

However, Anderson and Leal (1997) discuss how approaching environmental issues with free markets can assist entrepreneurs resolve these problems. Cohen and Winn (2007) suggest that four types of market imperfections contribute towards environmental degradation and can create opportunities for entrepreneurs. As an emerging model for sustainable entrepreneurship such

imperfections can lead to innovative technologies, business models, and entrepreneurial rents. Similarly, Dean & McMullen (2007) explain how market failures can represent opportunities while simultaneously reducing environmental degrading economic behaviour and generating profits. The theory of market failure illustrates the concept of ecopreneurship and displays the barriers to overcome and can suggest where opportunities can be found (Dean & McMullen, 2007).

We also note that although there are many market forces, actors and stakeholders - such as public goods, externalities, monopoly power, and government intervention, inefficient firms, and pricing mechanism (Cohen & Winn, 2007; Dean & McMullen, 2007), our research focus' primarily on motivations and opportunity discovery wherein opportunities arise from new information and imperfectly distributed information.

Similarly, Kirkwood and Walton (2010) found that half of their participant's motivations for starting an ecopreneurial business were due to seeing market imperfections and gaps in markets as opportunities. Perfect information implies that both the buyer and seller have the same information whereas in reality, information distribution is never perfect, as individuals can possess different information. This asymmetrical information is a major contributor towards market failure (Akerlof, 1970) and a main driver of entrepreneurial opportunities (Cohen & Winn, 2007; Dean & McMullen, 2007; Kirzner, 1973; Sarasvathy et al, 2010; Venkataraman, 1997).

In the case of imperfect information, entrepreneurs who take advantage of asymmetrical information are seen to more likely engage in opportunity discovery where they can leverage information advantages and complementary resources (Cohen & Winn, 2007; Venkataraman, 1997). Dean and McMullen (2007) divide the nature of imperfect information into two categories. The first corresponds to knowledge that producers have about supply and demand conditions. The second refers to knowledge that customers possess regarding the nature of the product or service attributes.

Producer focused knowledge

Dean and McMullen (2007) emphasise that information is not evenly distributed across producers within an economy (Dean & McMullen, 2007). Changes in factors, for example, technologies, social

and demographic trends and political landscapes or regulation, can alter competitive environments as disparate interpretations of new information can create market gaps. Entrepreneurial opportunity can be in the form of unmet demand or underutilisation of products or services.

Also, by knowing the mind-sets of consumers which indicate a growing concern for environmental degradation, entrepreneurs can capitalise on new trends and demands. This gives ecopreneurs the opportunity to discover and implement new products and services that are less environmentally damaging (Dean & McMullen, 2007) and to find consumers willing to pay for these products, for example, organic food. Therefore when entrepreneurs discover imperfect information that relates to the nature of demand and supply, this can produce opportunities for ecopreneurial action that may not be known to other parties.

Customer-focused information

Imperfect information can come from the customer's lack of knowledge of product or service attributes. Asymmetrical information between the buyer and seller can create market inefficiencies and failure. The seller tends to have better knowledge than the buyer which results in market failure since the seller can use it at the expense of the other (Akerlof, 1970). Often, if the seller withholds important information can lead to the buyer ending up with a less suitable substitute. This lack of knowledge on the environmental impacts of products, services or methods prevents consumers from purchasing products that are environmentally friendly. The inadequate information of the environmental effects prevents the demand for environmentally superior offerings in the market system as the consumer is not able to express their purchasing value. This creates consumer uncertainty and therefore fails to enhance environmental performance (Dean & McMullen, 2007). By taking advantage of this imperfect information and informing consumers of environmental attributes of products and services, entrepreneurs are able to capture opportunities in order to enhance environmental purchasing behaviour and create economic value.

Given the above, the current research project investigates; how ecopreneurs discover opportunities and exploit them, what innovation processes they use in their business to create change, the specific motivations of ecopreneurs, ecopreneurs attitudes, values, and principles towards creating a

sustainable society whilst maintaining profitability and finally approaches ecopreneurs engage to address sustainability concerns.

This research views ecopreneurship as a subset of entrepreneurship as there is an overlap with entrepreneurship studies. This study employs a qualitative methodology. The data universe includes owners of ecopreneurial businesses. Semi-structured interviews are used as a means to capture rich and in-depth data. Upon completion, all interviews will be transcribed and thematic analysis undertaken using NVivo9. A full set of results, findings and analysis will be discussed further in a forthcoming article.

Summary

Our literature survey indicates that there is renewed interest in ecopreneurship (Isaak, 1999; Keogh & Polonsky, 1998; Linnanen, 2010; Pastakia, 1998; Schaper, 2002; Schaltegger, 2010). This is driven by an actual increase in numbers of ecopreneurs, changes in lifestyles, the rise in demand for environmental products and services, recycling initiatives and shifts in consumer citizenship. Ecopreneurship is steadily growing and its growth is predicted to expand further with micro-ecopreneurs tapping into emerging niche markets (Holt, 2011).

With increasing market opportunities, an ecopreneurs motivation, attitude (Anderson, 1998) and commitments (Keogh & Polansky, 1998) towards sustainability are important as is their desire for putting the worlds needs first over profits (Linnanen, 2010) and filling market needs (Cohen & Winn, 2007) could possibly change the worlds path from ecological disaster to one that contributes to sustainable futures (Cohen & Winn, 2007). Thus the new generation of “ecopreneurs” are seen as a combination of conventional entrepreneurs with an edge on environmental awareness (Anderson, 1998). This is confirmed in studies in which ecopreneurs are viewed as important change agents (Anderson, 1998; Gibbs, 2009; Isaak, 2010; Keogh & Polonsky, 1998; Pastakia, 1998; Larson, 2000; Walley et al., 2010). Such trends in research interest make our study of ecopreneurial motivations, opportunities and innovations timely and important.

REFERENCES

- Akerlof, G. A. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *The quarterly journal of economics*, 84(3), 488-500.
- Allen, J. C., & Malin, S. (2008). Green entrepreneurship: A method for managing natural resources?. *Society and Natural Resources*, 21(9), 828-844.
- Alstete, J. W. (2002). On becoming an entrepreneur: an evolving typology. *International Journal of Entrepreneurial Behaviour & Research*, 8(4), 222-234.
- Amit, R., MacCrimmon, K. R., Zietsma, C., & Oesch, J. M. (2001). Does money matter?: Wealth attainment as the motive for initiating growth-oriented technology ventures. *Journal of Business Venturing*, 16(2), 119-143.
- Amit, R., & Muller, E. (1995). "Push" and "pull" entrepreneurship. *Journal of Small Business & Entrepreneurship*, 12(4), 64-80.
- Anderson, A. R. (1998). Cultivating the Garden of Eden: environmental entrepreneuring. *Journal of Organizational Change Management*, 11(2), 135-144.
- Anderson, T.L., & Leal, D., (1997). *Enviro-Capitalists: Doing Good while Doing Well*. Lanham, Md: Rowman and Littlefield Publishers
- Carter, N. M., Gartner, W. B., Shaver, K. G., & Gatewood, E. J. (2003). The career reasons of nascent entrepreneurs. *Journal of Business Venturing*, 18(1), 13-39.
- Cato, M. S., Arthur, L., Keenoy, T., & Smith, R. (2008). Entrepreneurial energy: associative entrepreneurship in the renewable energy sector in Wales. *International Journal of Entrepreneurial Behaviour & Research*, 14(5), 313-329.
- Choi, D. Y., & Gray, E. R. (2008). The venture development processes of "sustainable" entrepreneurs. *Management Research News*, 31(8), 558-569.
- Cohen, B., & Winn, M. I. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, 22(1), 29-49.
- Cropper, M. L., & Oates, W. E. (1992). Environmental economics: a survey. *Journal of economic literature*, 30(2), 675-740.
- Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, 22(1), 50-76.
- de Bruin, A. & Lewis, K. (2010). Green entrepreneurship in New Zealand: a micro-enterprise focus. In M, Schaper. (Ed.), *Making ecopreneurs: developing sustainable entrepreneurship* (pp. 95-108). Surrey, England: Gower Publishing Limited.

- DeMartino, R., & Barbato, R. (2003). Differences between women and men MBA entrepreneurs: exploring family flexibility and wealth creation as career motivators. *Journal of Business Venturing*, 18(6), 815-832.
- Eckhardt, J. T., & Shane, S. A. (2003). Opportunities and entrepreneurship. *Journal of management*, 29(3), 333-349.
- Larson, A. L. (2000). Sustainable innovation through an entrepreneurship lens. *Business strategy and the environment*, 9(5), 304-317.
- Linnanen., L. (2010). An insider's experiences with environmental entrepreneurship. In M, Schaper. (Ed.), *Making ecopreneurs: developing sustainable entrepreneurship* (pp. 109-124). Surrey: Gower Publishing Limited.
- Mallon, M., & Cohen, L. (2001). Time for a Change? Women's Accounts of the Move from Organizational Careers to Self-Employment. *British Journal of Management*, 12(3), 217-230.
- Marlow, S. (1997). Self-employed women—new opportunities, old challenges?. *Entrepreneurship & Regional Development*, 9(3), 199-210
- Masurel, E. (2007). Why SMEs invest in environmental measures: sustainability evidence from small and medium-sized printing firms. *Business Strategy and the Environment*, 16(3), 190-201.
- McClelland, E., Swail, J., Bell, J., & Ibbotson, P. (2005). Following the pathway of female entrepreneurs: A six-country investigation. *International Journal of Entrepreneurial Behaviour & Research*, 11(2), 84-107.
- Mitchell, B. C. (2004). Motives of entrepreneurs: A case study of South Africa. *Journal of Entrepreneurship*, 13(2), 167-183.
- Ogbor, J. O. (2000). Mythicizing and reification in entrepreneurial discourse: Ideology-critique of entrepreneurial studies. *Journal of Management Studies*, 37(5), 605-635.
- Pastakia, A. (1998). Grassroots ecopreneurs: change agents for a sustainable society. *Journal of Organizational Change Management*, 11(2), 157-173.
- Rodgers, C. (2010). Sustainable entrepreneurship in SMEs: a case study analysis. *Corporate Social Responsibility and Environmental Management*, 17(3), 125-132.
- Sarasvathy, S. D., Dew, N., Velamuri, S. R., & Venkataraman, S. (2010). Three views of entrepreneurial opportunity. In Z. J., Ács, & D. B., Audretsch, (Eds.), *Handbook of entrepreneurship research* (pp. 141-160). New York: Springer.
- Schaltegger, S. (2010). A framework and typology of ecopreneurship: Leading bioneers and environmental managers to ecopreneurship. In M. Schaper (Ed.), *Making ecopreneurs: developing sustainable entrepreneurship* (pp.75-94). Surrey: Gower Publishing Limited.

- Schaper, M. (2002). Introduction: the essence of ecopreneurship. *Greener Management International*, (38), 26-30.
- Schumpeter, J. A. (1934). *The Theory of Economic Development*. Cambridge, MA: Harvard University Press.
- Segal, G., Borgia, D., & Schoenfeld, J. (2005). The motivation to become an entrepreneur. *International journal of entrepreneurial behaviour & research*, 11(1), 42-57.
- Shane, S. A. (2003). *A general theory of entrepreneurship: The individual-opportunity nexus*. Cheltenham, UK: Edward Elgar Publishing.
- Shane, S., Kolvereid, L., & Westhead, P. (1991). An exploratory examination of the reasons leading to new firm formation across country and gender. *Journal of Business Venturing*, 6(6), 431-446.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management review*, 25(1), 217-226.
- Shepherd, D. A., & Patzelt, H. (2011). The new field of sustainable entrepreneurship: studying entrepreneurial action linking “what is to be sustained” with “what is to be developed”. *Entrepreneurship Theory and Practice*, 35(1), 137-163.
- Tietenberg, T. H., & Lewis, L. (2009). *Environmental & natural resource economics*. New York, USA; Addison-Wesley.
- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research: An editor’s perspective. *Advances in entrepreneurship, firm emergence, and growth*, 3, 119-138.
- Walley, L., Taylor, D., & Greig, K. (2010). "Beyond the visionary champion: Testing a typology of green entrepreneurs". In M, Schaper. (Ed.), *Making ecopreneurs: developing sustainable entrepreneurship* (pp.59-74. Surrey, England: Gower Publishing Limited.
- Winn, J. (2004). Entrepreneurship: not an easy path to top management for women. *Women in Management Review*, 19(3), 143-153.
- York, J. G., & Venkataraman, S. (2010). The entrepreneur–environment nexus: Uncertainty, innovation, and allocation. *Journal of Business Venturing*, 25(5), 449-463.

Table 1: Ecopreneur definitions

Cohen & Winn (2007, p. 35)	‘[Sustainable entrepreneurship is] the examination of how opportunities to bring into existence “future” goods and services are discovered, created, and exploited, by whom, and with what economic, psychological, social, and environmental consequences’.
Gibbs (2009, p. 65)	‘... those entrepreneurs who combine environmental awareness with their business activities in a drive to shift the basis of economic development towards a more environmentally friendly basis’.
Hendrickson & Tuttle (1997, p. 363)	‘Entrepreneurial activity that benefits the environment’.
Isaak (2010, p. 44)	<p>Green businesses are those that “...did not start out the way [to be green] but, once established, managers discovered the cost and innovation and marketing advantages, if not the ethical arguments, for ‘greening’ their existing enterprise’ (p.44).</p> <p>Green-green businesses are ones that are ‘...designed to be green in its processes and products from scratch, as a start-up, and, furthermore, is intended to transform socially the industrial sector in which it is located towards a model of sustainable development’.</p>
Kirkwood & Walton (2014, p. 38)	‘Entrepreneurs who found new businesses based on the principle of sustainability (based on ideas from Walley & Taylor 2002 and Issak 1998)’.
Shepherd & Patzelt (2011, p. 137)	‘Sustainable entrepreneurship is focused on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and non-economic gains to individuals, the economy, and society’.
Walley et al. (2010, p. 62)	‘... an individual founder of a new, for-profit, significantly green business. “Significantly green” is taken to mean green either by virtue of the nature of the product (for example, renewable energy), or substantially green policies and practices within the business (for example, The Body Shop)’.

Table 2: Ecopreneurial typologies

Walley et al., (2010)	<p>Ad hoc enviropreneurs - are mainly financially driven and influenced by personal networks, family and friends (soft structural drivers).</p> <p>Ethical Mavericks - ethical mavericks are influenced by friends, family, past experiences rather than vision who tend to set up alternative businesses than mainstream operations.</p> <p>Visionary champions - visionaries are transformative, sustainability orientated, with superior innovation and vision for a sustainable future.</p> <p>Innovative opportunists - , financially-orientated entrepreneur who finds gaps or niches in the market and influenced by structural drivers.</p>
Linnanen (2010).	<p>Self-employer - Low desire to make money and low desire to change the world. Generally ecopreneurs who are satisfied with cash flow enough for a reasonable living advocate nature-oriented business ideas are likely to belong in this category.</p> <p>Non-profit business - High commitment to change business practices and consumer behaviour but have low desires for high financial performance and growth.</p> <p>Opportunist - Traditional entrepreneurs who are driven by economic creation that are expanding into eco-businesses to increase profits.</p> <p>Successful idealist - High desires to improve the world and make money.</p>
Schaltegger (2010)	<p>Ecopreneurs - Those that engage with the mass market with the aim to identify market opportunities for business ideas, products and services to help solve environmental problems.</p> <p>Bioners - Suppliers that are driven by environmental invention as play a role by opening new paths for environmental development in markets. Often found medium sized niche market segments that work on environmental customer-focused products and tend to have a strong focus on research and development, especially within high-technology sectors. Their direct impact is limited as their impact of small in mass markets but commonly work with ecopreneurs to convert their inventions for commercial success.</p> <p>Alternative actors - Market goals and influence are low where the business may only be formed to support a lifestyle. The intentions and motivations is not to create large environmental effects on a large scale but to create a countercultural society to the conventional economy which is limited to a small group.</p>
Freimann et al (2010).	<p>Eco-dedicated entrepreneurs- Eco-dedicated businesses are interested in aligning their business strategy with environmental needs. Their adoption sustainable business practices were due to the opportunities presented in the market and the possibility of being competitive as an ecopreneur as a result of market developments. They also showed interest in ecological concerns, showed eco-friendly attitudes, and were aware of these in their childhood which were shown in their business venture but also acknowledged the</p>

	<p>difficulties of having an ecological business orientation in the business realm.</p> <p>Eco-open entrepreneurs - Entrepreneurs that adopt environmentally acceptable products or services to create a larger market base. They showed similar awareness of environmental issues and the need for responsible behaviour to maintain resources for the future like eco-dedicated entrepreneurs but did not did not show this completely in their business. Eco-friendly business practices were not adopted mainly because of the assumed higher costs.</p> <p>Eco-reluctant entrepreneurs - These entrepreneurs only applied environmental friendly business practices when legal requirements forced them to. They do not believe that operating with eco-friendly practices is needed and that they tend to hinder their business.</p>
--	--

Table 3: Entrepreneurial motivations

Push-Pull Theory	
Four common motivating factors in becoming an entrepreneur	Reasons for becoming an entrepreneur/ecopreneur.
Pull factors:	
Independence	<ul style="list-style-type: none"> • Desire for autonomy is a common motivator for becoming an entrepreneur. • More flexibility, opportunity and control over career • Similar findings among ecopreneurs.
Monetary	<ul style="list-style-type: none"> • Potential to increase wealth is a strong motivator • Found to be lower importance to independence factors. • Similar findings among ecopreneurs.
Push factors:	
Work related	<ul style="list-style-type: none"> • Strong motivator among traditional entrepreneurs • Dissatisfaction at work. • Inflexible work conditions. • The need for autonomy. • Not often found to be a strong motivator among ecopreneurs.
Family related	<ul style="list-style-type: none"> • Spend more time with family. • Be able to balance work life and family life. • Not often found to be a strong motivator among ecopreneurs.