"What makes them tick?" Developing a contingency model of Entrepreneurial Risk for investment and innovation decisions.

Abstract
Taking risks is an important element of starting, developing and supporting entrepreneurial ventures. Given its centrality, knowledge is surprisingly underdeveloped in this area. Risk is commonly seen as a solely financial issue, i.e. return on investment, and measured based on the probability of receiving that return. However, other literature provides clear evidence that risk is actually far more complex. This research argues that risk is influenced by a range of situational and individual factors, which need to be considered in order to fully understand, and therefore conceptualise risk. This research also aims to advance understanding of how risk is evaluated, provide a framework for future research and develop a tool to support decision-makers. The contribution of this research is to study the entrepreneurial risk construct as it applies to SME’s, specifically considering the following issues:

1) modelling entrepreneurial risk as a multi-dimensional construct;
2) examining how specific dimensions of entrepreneurial risk affect performance, particularly focusing on innovation performance; and
3) developing a working model of the factors that moderate or mediate this relationship.

Practically, the research should support funders and investors to a better understanding of the circumstances when it is appropriate to invest in innovative ideas or processes.
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Introduction

The value of innovation to organisations, industries and nations is well established (Sood and Tellis, 2005) and particularly so the link between entrepreneurship and wealth creation (e.g. Ireland et al., 2003), with research suggesting that firms can improve their competitive advantage and improve performance by behaving more entrepreneurially (Covin et al., 2006; Dess et al., 1999; Lumpkin et al., 2003; Wang, 2008). Research also highlights that organisations offering more radical innovations tend to dominate business. Radical innovations disrupt the marketplace and re-write the rules of the game for the new marketplace (Avlonitis and Salvalou, 2007; Atuahene-Gima 2005). However, innovating is risky and the more radical the innovation the more risk and uncertainty is encountered (McDermott and O’Connor, 2002). Many businesses have organisational cultures that are focused on low risk and short term rewards, which can limit the amount of radical innovation (e.g. Dougherty and Hardy, 1996; McDermott and O’Connor, 2002). This is where entrepreneurs often step in.

Despite, the dominance of SMEs in most EU economies (Avlonitis and Salvalou, 2007), and the importance of Entrepreneurial Orientation for small businesses (e.g. Naman and Slevin, 1993; Wiklund and Shepherd, 2005), there is currently a significant gap in our understanding regarding how risk assessment by SME’s is linked to performance, particularly innovation performance. Considering the importance of innovation to the survival and growth of firms (Natarajan & Bagozzi, 1999), and the concomitant risk in these types of decisions, Forlani, Mullins and Walker (2002) noted that there is surprisingly little research in the marketing area that has examined the role of risk in terms of innovation.

Theoretical Background and Rationale

Entrepreneurship is taken to be “opportunistic activity that creates value and bears risk” and is “strongly associated with innovation” (Styles and Seymour, 2006: 127). The marketing literature presents a great deal of research examining the entrepreneurship concept. Such as Entrepreneurial Proclivity (e.g. Matsuno et al., 2002); Entrepreneurial Posture (e.g. Covin and Slevin, 1989) and the established Entrepreneurial Orientation scale (Lumpkin and Dess, 1996), which includes risk-taking as a core dimension.

Equally academics have examined the differences in how managers and entrepreneurs perceive risk (e.g. Busenitz and Barney, 1997), consistently highlighting that entrepreneurs are more likely to take risks; creating a new venture is, by its very nature, more risky a pursuit than maintaining the status quo in paid employment. However, Janney and Dess (2006) argue that it is now important for researchers to understand the source of these differences if managerial recommendations to entrepreneurs are to be useful. Looking closely at literature around the concepts and constructs associated to Entrepreneurial Risk, for instance, Risk Propensity (Wyatt, 1989; Krishnan and Azim 1997; Harrison et al., 2005; Cho and Lee, 2006; Keh, Foo and Lim, 2002); Risk aversion (Kihlstrom and Laffont, 1979); Risk taking ability (Covin & Slevin, 1991); Opportunity evaluation and risk propensity (Keh, Foo and Lim, 2002); Risk attitude (Weber et al. 2002); and Risk Proneness (Macko and Tyszka, 2009), we find that risk taking can be a positive attribute for successful entrepreneurs. However, Das and Teng’s, (1997) extensive review concluded that results seem to be weak and contradictory, leaving managers with little real insight into decision-making.
The literature offers a number of ideas as to why this might be the case. Firstly, it can be how entrepreneurial risk is measured. According to Mullins and Forlani (2005) entrepreneurial risk is captured by understanding the likelihood of loss and the magnitude of loss. Yates and Stone (1992) identify three facets; potential, significance and uncertainty of losses. Both these definitions place loss at the core of the risk construct, yet research has almost entirely focused on only one element, namely financial loss. Other losses could include issues such as ego, status, opportunity cost to current lifestyle, job security (Schine, 2003). Bird (1989) identifies five key facets of loss, including: economic, social relations, career, psychological and health, which are similar to those risks identified in consumer decisions (Sharma, 2009). These insights suggest that it is more than just a financial trade off. As past studies only measured financial risk and negated other potential risks as described above could be one explanation of the ambiguous outcomes when attempting to determine relationships between entrepreneurial risk and performance. Weber et al. (2002) attempted to develop a multi-dimensional view of risk, but this was not specific to entrepreneurial risk. Therefore this research, seeks to take an explicit look at entrepreneurial risk.

The second issue relates to whether entrepreneurial risk is in fact a curvilinear or bell-shaped phenomenon, i.e. too much risk seeking behaviour is just reckless and too little keeps entrepreneurs within their own comfort zone. Typically the literature represents entrepreneurs as mere risk takers, but this is more akin to work on sensation-seeking behaviour (Jackson and Maraun, 1996), rather than people who are developing new ideas based on sound business development. Sahlman (1997: 105) argues that "One of the great myths about entrepreneurs is that they are risk seekers". For instance, Townsend et al.(2010) found that confidence in one's ability to succeed is a predictor of new venture start-up, which supports the risk reducing theory (Sahlman's, 1997). Inevitably some people also start businesses without fully recognising the risks involved (Simon, Houghton and Aquito, 1999; Forbes, 2005) and are over confident (Forbes, 2005). Timmins and Spinelli (2009) state that “it is the fit that matters” between the entrepreneur and the level of risk exposure (p167). An inaccurate assessment of risks can effect situations where an organisation has insufficient or over allocated capital at the outset and little chance of delivering success (Hayward, Shepherd and Griffin, 2006). Somewhere between risk taking and risk avoidance lies an optimal point of managed risk. Previous research does not generally measure for optimal risk in different settings. Research generally takes the linear approach that more risk taking is better. The current authors take the view that this linear approach is not fully capturing the entrepreneurial risk construct and potentially leading to further ambiguity.

Finally, environmental, personal and situational factors must all play their part to moderate and mediate entrepreneurial risk. The third potential area of inconsistency is that research has tended to ignore factors that may well moderate or mediate the relationship between risk and performance. Researchers suggest that risk scenarios are highly person-situation-stimulus specific. For example, Churchill and Lewis (1983:p4) highlight that failure can be linked to the fact that ‘…owners cannot accept the demands the business places on their time, finances and energy’. Other research outlines that the environment in which decisions are made influences the decision, such as the influence of group dynamics (Lafollette and Belohlav, 1982). The work of Timmons and Spinelli (2009) also highlights an assumption that is often made in entrepreneurship literature: that all new venture creation activities share similar levels of risk. By their nature, high growth ventures are more difficult to develop than simple sole trader ventures. Sole trader ventures generally require less capital and resources, whereas high growth start-ups require external funding to pursue long-term capital growth. The characteristics of the entrepreneur are also influential. Potential issues include: self efficacy (Wyatt, 1989); the history of decisions (Dickson and Giglierano, 1986), gender
(Hudgens and Fatkin, 1984; Byrnes et al, 1999) and even testosterone levels (White et al. 2006) could impact risk. It is also possible that the stage the organisation is at has an impact on risk assessment. As organisations change the nature of decisions will also change (Churchill and Lewis, 1983). Churchill and Lewis (1983) identify five stages of business growth, and whilst their model has its critics (e.g. Levie and Lichtenstein, 2010), extensive use of the model has been made by practitioners and regional development agencies in the UK under the Forum 21 branded model (Forum 21ltd.). Within each stage different decisions and conditions exist, and it is also likely that entrepreneurial risk is influenced by these stage changes. Given that EO research has largely focused on established stable organisations, isolating the different stages of growth should provide a new insight into how entrepreneurial risk develops as organisations grow.

Finally, relatively ignored by literature on entrepreneurial risk is notion of multiple plausible outcomes or a portfolio theory (Kaplan and Garrick, 1981), whereby an individual weighs up a range of options. Past research sees risk as a discrete and singular issue, based on a single set of circumstance. We see risk as having a broader context where risk decisions are determined through a more holistic assessment of broader context, i.e. changing the options available could lead to vastly different decisions.

**Proposed Methodology**

This paper presents the first phase of a long term study that will seek to explore and validate research conducted on the phenomenon of entrepreneurial risk. In particular we will explore the relationship between entrepreneurial risk and innovation, with the intended outcome of developing a composite theoretical framework of risk and a prototype measurement tool for risk.

Weber et al. (2002) provides a useful starting point of the array of frameworks within the literature. Theoretical and methodological perspectives included; Financial portfolio theory (Dickson and Giglierano, 1986); Equilibrium theory (Kihlstrom and Lafont, 1979); Prospect theory (Kahneman and Tversky, 1979); and Cognitive theory (Palich and Bagby, 1995). The research proposed revisits these theoretical frameworks, and in the light of new evidence considers their 'content' validity for our Entrepreneurial Risk construct.

The exploratory study will draw on the help of a number of key regional partners, to generate the data for the research, making it a collaborative, co-produced project, with sponsors involved in the 'journey' of research and encouraged to take part in the research design.

Firstly, we will develop a research framework to scrutinize investment and other entrepreneurial decisions from the viewpoints of three key stakeholders: entrepreneurs; funders; and support agencies. Next we will use in-depth interviews to identify and examine twenty three-way relationships, so that we can understand the interactions and views taken by each one. Examining all three views for a single interaction will enable us to develop a stronger understanding of the issues and the differences in the viewpoints. We also intend to include additional interviews collated through networking events, to generate a wider perspective on some of the issues arising from the key new venture creation relationships studied.

**Results/Conclusions**

Taking risks is an important element of starting, developing and supporting entrepreneurial ventures that requires more in-depth and contextualised understanding. Initial findings from the in-depth interviews will be presented at the conference, focusing on advancing understanding of how risk is evaluated, providing a framework for future research and offering suggestions for a tool to support decision-makers. The findings will add impact by
offering a more comprehensive understanding of risk and how it should be measured, creating a framework for analysing risks and improving decision making.

References


