Innovativeness perspective on entrepreneurial orientation: Developing a conceptual model

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ABSTRACT  This paper proposes a model that uses risk-taking, pro-activeness, autonomy, and competitive aggressiveness to enhance and manage a firm’s innovativeness. A number of factors are suggested as possible moderators of the modelled relationships. This new perspective requires entrepreneurial orientation be considered as a five-element, multi-dimensional concept. The paper provides a potential tool for managers to build and manage innovative and entrepreneurial organisations, and calls for empirical validation of the proposed model.

Keywords: entrepreneurial strategy, entrepreneurship, innovation, intrapreneurship

INTRODUCTION

Innovation has been recognized for almost a hundred years as the basis for the growth of firms and entire economies (Maravelakis, Bilalis, Antoniadis, Jones, & Moustaki 2006; Schumpeter 2004 [1934]), has been positively related to organisational performance irrespective of an entity’s type, size, country or industries in which it operates (Camarero & Garrido 2008; Khandwalla 2006; Yeung, Lai, & Yee 2007), and is required worldwide to assist in economic recovery (OECD 2009).

Among the agreement on the relevance of innovation it can however be noted that from the strategy perspective what is at least equally important is the ability of a firm to innovate consistently over time; which indicates a firm’s innovativeness (Lumpkin & Dess 1996), and was found to be an important contributor to a firm’s sustainable competitive advantage (Camarero & Garrido 2008; Das & Joshi 2007; Hult 2002; Tajeddini, Trueman, & Larsen 2006). Research on innovativeness has mainly focused on its impact on performance outcomes (Garcia & Calantone 2002; Hult, Hurley, & Knight 2004; Salge & Vera 2009), which is important, but just as relevant is how companies influence innovativeness (Carayannis & Provance 2008; Hult et al. 2004).

Accordingly, this paper proposes a model for enhancing and managing a firm’s innovativeness through the elements of its entrepreneurial orientation.

CONCEPT OF INNOVATIVENESS

According to Subramanian and Nilakanta (1996: 633), innovativeness is ‘an enduring organizational trait’. It has been categorised by most studies as part of a firm’s culture (Auh & Menguc 2005; Calantone, Garcia, & Droge 2003; Hult, Snow, & Kandemir 2003; Hurley & Hult 1998), or strategy
(Lumpkin & Dess 1996; Subramanian & Nilakanta 1996; Tajeddini et al. 2006), and has a strategic focus. It is however a broad concept with no generally accepted definition (Garcia & Calantone 2002; Salavou 2004; Tajeddini et al. 2006), and has been conceptualised in terms of the degree of novelty or uniqueness of the product (Ali, Krapfel, & LaBahn 1995), time when such a product is adopted (Rogers 1995), or the degree to which a firm creates new products and services using accumulated knowledge from consumers, competitors and technology (Deshpande, Farley, & Webster 1993).

Over half a century ago Thompson’s (1965: 2) argued that

By innovation is meant the generation, acceptance, and implementation of new ideas, processes, products or services. Innovation therefore implies the capacity to change or adapt. An adaptive organization may not be innovative (because it does not generate many new ideas), but an innovative organization will be adaptive (because it is able to implement many new ideas).

Later, Yeung et al. (2007: 2462) stated that ‘according to Thompson (1965), innovativeness is defined as “the [successful] generation, acceptance and implementation of new ideas, processes, products and services”’. More recently, OECD and Eurostat (2005: 47) defined innovativeness as ‘the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations’. Further, according to Lumpkin and Dess (1996: 143)

firm innovativeness may take several forms. In the broadest sense, innovativeness may occur along a continuum from a simple willingness to either try a new product line or experiment with a new advertising venue, to a passionate commitment to master the latest in new products or technological advances.

Certain lack of clarity can be observed as the same sources have been used to define both innovativeness and innovation. Further, the above definitions indicate that innovativeness concerns a subject and an action. A subject may vary substantially and includes a product, idea, process. Action seems to be focused on implementation of this subject and on the acceptance of change. The discussion remains open on whether generation of the subject of innovativeness forms part of the concept, or in other words, whether the innovativeness implies that a company generates the implemented subject itself or if it may be adopted from elsewhere.
According to Tajeddini et al. (2006) innovativeness concerns a number of different types of innovation, adopted over a time. Hamel (Hamel 1998: 8) highlighted the importance of strategic innovation that enables firms to ‘reconceive the existing industry model in ways that create new value for customers, wrong-foot competitors, and produce new wealth for all stakeholders’. More recently, Markides (2006: 19) called it a business-model innovation and argued that “different kinds of innovations have different competitive effects and produce different kinds of markets”. It is logical to suggest that a firm should be able to manage different types of innovation streams that ‘simultaneously build on and extend prior products and destroy those very products that account for a firm’s historical success’ (Tushman, Anderson, & O’Reilly 1997: 4).

In conclusion, innovativeness appears as a broader concept than innovation, and ‘reflects a firm’s tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes’ (Lumpkin & Dess 1996: 142). It is suggested that from strategic perspective innovative firms should be able to manage a portfolio of different types of innovations. As such for the purpose of this paper, innovativeness indicates a firm’s capacity to generate or adopt, evaluate, select, and implement different types of innovation over time.

**DRIVERS OF INNOVATIVENESS**

In drawing the foregoing distinction between innovativeness as an inherent tendency to innovate and innovation as the act or product of innovating, innovativeness requires the firm to perpetually analyze, identify, value, and appropriately apply external information to its internal environment (Cohen & Levinthal 1990; Tushman & Anderson 1986; Yeung et al. 2007) and vice-versa. While, innovation has been positively associated with knowledge-based resources, organisational learning, managerial ties, and location of the company (Baker & Sinkula 1999; Bell 2005; Hsu 2007; Meeus, Oerlemans, & Hage 2001; Yeung et al. 2007) results of studies investigating innovativeness have been inconsistent.

For instance, Katrinli, Atabay, Gunay, Gunerli, and Aktan (2009) found a significant relationship between different leadership dimensions and a firm innovativeness, while Jaskyte’s (2004) study of non-profit organisations indicated no such relationship. Similarly, Hausman (2005) questioned the
significance of national culture on firm innovativeness, shown to be important in other studies (e.g. Gatignon, Eliashberg, & Robertson 1989). Accordingly, Hult et al’s (2004: 429) claim that ‘little is known about the drivers of innovativeness’ suggests the need for further research of this topic is warranted.

**ENTREPRENEURIAL ORIENTATION**

Entrepreneurial orientation describes how a firm approaches entrepreneurship (Lumpkin & Dess 1996). It is thus indicative of ‘the propensity of organisations to act entrepreneurially’ (Lumpkin, Wales, & Ensley 2006: N1). Early research identified the entrepreneurial firm as ‘one that engages in product-market innovation, undertakes somewhat risky ventures, and is first [italics in original] to come up with ‘proactive’ innovations, beating competitors to the punch’ (Miller 1983: 771). Lumpkin and Dess (1996: 150) however, found this approach ‘too narrowly constructed for explaining some types of entrepreneurial behavior’. Instead, they argued that an entrepreneurial firm is ‘any firm that engages in an effective combination of autonomy, innovativeness, risk-taking, pro-activeness, and competitive aggressiveness’ (Lumpkin & Dess 1996: 162).

Entrepreneurial orientation has been frequently found positively related to different aspects of a firm’s performance irrespective of its geographical location, size, and sector of operation (Caruana, Ewing, & Ramaseshan 2002; Chang, Lin, Chang, & Chen 2007; Kropp, Lindsay, & Shoham 2008; Rauch, Wiklund, Lumpkin, & Frese 2009; Wiklund 1999; Yusuf 2002).

Current debate focuses on whether entrepreneurial orientation consists of three (innovativeness, risk-taking, pro-activeness) or five elements and if the elements form a uni-dimensional or a multi-dimensional concept. Most researchers use only innovativeness, risk-taking, and pro-activeness when studying entrepreneurial orientation and treat them as a uni-dimensional variable (Rauch et al. 2009). Recently, however, Covin et al. (2006) concluded that in the light of previous research, the multidimensionality of entrepreneurial orientation should not be disputed. Also, an increasing number of authors have advocated the study of entrepreneurial orientation as a multi-dimensional variable.
where elements can vary independently (Jambulingam, Kathuria, & Doucette 2005; Lumpkin et al. 2006; Rauch et al. 2009). Accordingly, Monsen and Boss (2009) argue the choice between a uni-dimensional and multi-dimensional approach to entrepreneurial orientation might best be dictated by the specific aims of the research in question. With this in mind, the present paper considers entrepreneurial orientation as a multi-dimensional construct.

**ENTREPRENEURIAL ORIENTATION AND INNOVATIVENESS**

Irrespective of debates concerning the conceptualization of entrepreneurial orientation, it includes innovativeness. Further, like innovativeness, entrepreneurial orientation has also been argued to be part of a firm’s strategy and culture (e.g. Boojihawon, Dimitratos, & Young 2007; Hult et al. 2004; Lumpkin & Dess 1996).

In this respect, while most research has focused on examining the different outcomes of entrepreneurial orientation, and especially its relationship to different aspects of a firm’s performance, some studies have examined how entrepreneurial orientation can be related to aspects of a firm’s innovation or innovativeness. For instance, Alegre and Chiva’s (2009) study of Italian and Spanish ceramic tiles producers found a positive relationship between a firm’s entrepreneurial orientation and its innovation performance, which they operationalized as product innovation efficacy, process innovation efficacy, and innovation project efficiency; Jantunen and Hurmelinna-Laukkanen (2006) found a similar relationship in a study of 299 Finnish companies. In addition, a study of pharmaceutical companies across a number of different countries found the relationship between entrepreneurial orientation and product innovativeness was affected by national culture (Hurtado Torres, Cordon Pozo, & Senise Barrio 2007). Finally, a positive relationship between entrepreneurial orientation and a firm’s innovativeness has been reported in a Spanish study of 156 small hospitality firms (Gómez Villanueva 2007) and also in a study of 181 US large industrial companies from the Fortune 500 list (Hult et al. 2004).

These studies, however, defined entrepreneurial orientation as a unitary dimension composed of risk-taking, pro-activeness, and innovativeness. It could be argued that a positive relationship between
entrepreneurial orientation and innovativeness seems obvious when adopting a uni-dimensional concept of entrepreneurial orientation inclusive of innovativeness, where the elements co-vary.

Therefore, investigating entrepreneurial orientation at the level of its individual elements, including innovativeness, may broaden the findings. For instance, a study of 346 US Fortune 500 firms found a strong, positive relationship between company innovativeness, and its strategic posture measured as a combination of pro-activeness and risk-taking, that also form part of the entrepreneurial orientation construct (Özsomer, Calantone, & Di Benedetto 1997).

Similarly, when individual elements of entrepreneurial orientation are considered separately, findings reveal that while some may genuinely enhance firm performance others may contribute negatively to the same outcomes (Lumpkin et al. 2006). Moreover, the individual elements may be related to different aspects of performance, and such relationships may vary over time depending on a series of different variables (Jambulingam et al. 2005; Lumpkin & Dess 1996).

Accordingly, this paper suggests that adopting the multidimensional construct of entrepreneurial orientation and Lumpkin and Dess’ (1996) definition of an entrepreneurial firm as one using effectively any combination of the five elements, could reveal important information on enhancing and managing innovation in a company. Further, it seems appropriate to examine entrepreneurial orientation through its individual components as a means of enhancing and managing a firm’s innovativeness.

**INNOVATIVENESS AND OTHER ELEMENTS OF ENTREPRENEURIAL ORIENTATION**

In order to innovate and introduce new ideas, strategic actors need at least a certain freedom to act without being excessively limited by bureaucratic processes and restrictions. Research findings support this view. For example, Presaud (2005) found among 79 research and development units in different multinational companies that unit autonomy was positively related to levels of innovativeness. Further, in a study of 104 highly innovative projects, Gemunden et al. (2005: 370) argued that ‘organizational separation is significantly positively correlated with project
innovativeness’ and that such separation provides project team members with autonomy from the main organisation. In addition, the findings of Beugelsdijk’s (2008) study of 988 Dutch firms similarly indicate that levels of task autonomy are positively correlated with a firm’s innovativeness, while Das and Joshi (2007) found a positive relationship between operational autonomy and process innovativeness in 102 mid-Atlantic US firms.

Innovativeness is also linked to risk, which is associated with the introduction of novelty. It is therefore reasonable to suggest that organisations are more likely to be innovative when they allow risk-taking to occur (Das & Joshi 2007; Nystrom 1990).

In support of the above, Howell and Higgins (1990) found that leaders need to exhibit high risk-taking and innovativeness in order to become champions of technological innovation. It should be noted that Howell and Higgins (1990) considered innovativeness and risk-taking as characteristics of individuals. Fayolle et al. (2008) however, found that characteristics of individuals such as risk-taking and innovativeness can rapidly translate into firm level behaviours and elements of a firm’s entrepreneurial orientation. Moreover, according to Shalley and Gilson (2004) another way in which risk-taking may enhance innovativeness is by increasing creativity within a company. In line with these suggestions, the findings of Calantone et al. (2003) indicate a relationship between risk-taking and the speed of new product development.

Droge, Calantone, and Harmancioglu (2008) found a positive relationship between proactive firm strategy in 202 small manufacturers and their innovativeness. Tushman et al. (1997) also suggested a positive relationship between a firm’s pro-activeness and its innovativeness. While pro-activeness may seem similar to competitive aggressiveness, it is necessary to note an important difference between the two. Pro-activeness ‘refers to how a firm relates to market opportunities’ (Lumpkin & Dess 1996: 147), while ‘competitive aggressiveness refers to how firms relate to competitors’ (Lumpkin & Dess 1996: 147). Consequently, pro-activeness relates more to shaping the technology and market rules (Tushman et al. 1997) while competitive aggressiveness focuses more on competitors and reactions to their moves, frequently related to a “fast follower” approach (Lumpkin & Dess 1996). Following this
logic, a possible distinctive impact on a firm’s innovativeness appears in terms of the type of innovation. It seems that pro-activeness may result in more radical innovations while competitive aggressiveness may produce more incremental ones. Thus,

*Proposition 1: Competitive aggressiveness and pro-activeness are positively related to a firm’s innovativeness*

*Proposition 1a: Competitive aggressiveness is positively related to radical innovations.*

*Proposition 1b: Pro-activeness is positively related to incremental innovations.*

The above findings also suggest that risk-taking, autonomy, pro-activeness, and competitive aggressiveness may be positively related to a firm’s innovativeness. It is, however, necessary to ask whether such relationships hold true independently of environmental factors. A closer investigation of the literature indicates that the relationships among a firm’s innovativeness and other elements of its entrepreneurial orientation may vary depending on a range of different factors. For instance, organisational learning and knowledge-based resources have been argued to enhance innovative processes (Baker & Sinkula 1999; Hsu 2007; Meeus et al. 2001; Yeung et al. 2007). In a study of Taiwan IT companies, Hsu (2007) found organisational learning to be directly, positively related to both organisational innovativeness and human capital. Further, human capital was found to have an indirect positive effect on firm innovativeness through its network resources (Hsu 2007). Similarly, Bell (2005: 287) found that ‘locating in the industry cluster as well as centrality in the managerial tie network enhances firm innovation’. Finally, Borgelt and Falk (2007) indicate that a tension can emerge between risk-taking and innovation in firms oriented towards risk management, and that social capital can serve to release this tension. Based on these observations, it is suggested that innovativeness is a function of the capacity of a firm’s human and social capital to enable networks and organisational learning. Thus,

*Proposition 2: Human and social capital, organisational networks and learning culture will moderate the relationships among a firm’s risk-taking, autonomy, pro-activeness, competitive aggressiveness and its innovativeness. Among firms with the same level of risk-taking,
autonomy, pro-activeness, competitive aggressiveness, those with stronger human and social capital, organisational networks and learning culture will have higher innovativeness.

Calantone et al. (2003) indicate that the relationship between risk-taking and the speed of new product development is stronger in turbulent environments. Further, in a study of 141 new product development projects, Sethi and Sethi (2009: 206) found that ‘while a quality orientation improves product appropriateness, encouragement to take risk affects it adversely’. Similarly, adaptability (Tuominen, Rajala, & Möller 2004), and quality management (Santos Vijande & Alvarez Gonzalez 2008) were found to be drivers enhancing a firm’s innovativeness. Considering innovativeness in terms of both generation and implementation of innovations, it is logical to suggest that while in turbulent environments taking risks may result in generation of new innovations, a company needs to be adaptive and manage quality in order to successfully implement them. Therefore,

Proposition 3: Turbulent environments, company’s adaptability, and quality management will moderate the relationships among a firm’s risk-taking, autonomy, pro-activeness, competitive aggressiveness and its innovativeness. Among firms with the same level of risk-taking, autonomy, pro-activeness, competitive aggressiveness, those working in more turbulent environment and having greater level of adaptability and quality management will have higher innovativeness.

Markides and Anderson (2006: 129) argued that information and communication technology ‘enable firms to: reach consumers that most competitors cannot serve profitably; offer radically new value propositions to consumers that other firms cannot deliver in a cost-efficient way; and put in place value chains that no other firm could do efficiently. ICT also allows strategic innovators to scale up their business models quickly and so protect themselves from competitive attacks’.

Similarly, competencies in information and knowledge management, collaboration and communication, were found to enhance a firm’s innovativeness (Gordon & Tarafdar 2007). It is thus suggested that information and communication technology may allow for a better inflow and processing of information, communication and collaboration among different parts of a company. This may facilitate the process of a firm appropriately applying external
information to its internal environment and as a result, enhance the influence of risk-taking, autonomy, pro-activeness, and competitive aggressiveness on a firm’s innovativeness. Therefore,

Proposition 4: Information and communication technology will moderate the relationships among risk-taking, autonomy, pro-activeness, and competitive aggressiveness and a firm’s innovativeness. Among firms with the same level of risk-taking, autonomy, pro-activeness, and competitive aggressiveness, those with greater level of support for information and communication technology, will have higher innovativeness.

Entrepreneurial orientation as a firm’s strategic concept is decided upon and introduced by the firm’s managers (Tushman et al. 1997). Auh and Menguc (2005) found the diversity of top management teams was positively related to a firm’s innovativeness. Based on the above, it is logical to suggest that the relationships among a firm’s risk-taking, autonomy, pro-activeness, and competitive aggressiveness and its innovativeness will be influenced by the orientation and characteristics of its managers. Therefore,

Proposition 5: The managers’ support for innovativeness and the diversity of management team will moderate the relationships among relationships among a firm’s risk-taking, autonomy, pro-activeness, competitive aggressiveness and its innovativeness. Among firms with the same level of risk-taking, autonomy, pro-activeness, competitive aggressiveness, those with greater level of managerial support for innovativeness and diversity of management team, will have higher innovativeness.

Finally, as stated at the beginning, innovativeness is regarded as a firm’s capacity to generate or adopt, evaluate, select, and implement different types of innovation over time. In such a case, the literature suggests that different structures may be needed to generate and to implement an innovation (Tushman et al. 1997). Organisations that combine different structures required to generate and implement innovation have been called ambidextrous (Tushman et al. 1997). Moreover, Khandwalla (2006) argued that conservative and bureaucratic cultures and structures, communications problems, and administrative inflexibility are the major blocks to enterprise innovativeness. It is thus
logical to suggest that the organisational structure will influence the relationships among a firm’s risk-taking, autonomy, pro-activeness, and competitive aggressiveness and its innovativeness. Therefore,

*Proposition 6: The relationships among a firm’s risk-taking, autonomy, pro-activeness, competitive aggressiveness, and its innovativeness will be moderated by the firm’s ambidextrous structure. Firms with the same level of risk-taking, autonomy, pro-activeness, competitive aggressiveness, and using ambidextrous structures, will have higher innovativeness than those without ambidextrous structures.*

Based on the above literature review the following model is proposed, as presented on the Figure 1.

[FIGURE 1 ABOUT HERE]

The above findings suggest that a firm’s innovativeness and its risk-taking, autonomy, competitive aggressiveness, and pro-activeness may impact on its innovativeness. These relationships however appear to be subject to a series of moderating effects originating from both a firm’s internal and external environment.

**CONCLUSION AND CONTRIBUTIONS**

This paper has proposed a model of management of innovativeness in a company using the concept of entrepreneurial orientation. Based on the findings of the literature review, it is suggested that a firm’s innovativeness can be enhanced and managed by four others elements of its entrepreneurial orientation, namely, risk-taking, pro-activeness, autonomy, and competitive aggressiveness. Moreover, it is necessary to consider the possible impacts from a firm’s external and internal environments. Previous research indicates that entrepreneurial orientation has not been used before for the purpose of enhancing and managing a company’s innovativeness. In order to empirically verify this proposition, it is necessary to consider entrepreneurial orientation as a five-element, multi-dimensional concept.

Viewing entrepreneurial orientation in this manner creates a different perspective that contrasts with traditional approaches that have to date tended to view firm entrepreneurial orientation solely as a means to improving organisational performance. The present paper instead argues that it can also be employed to build and manage innovative organisations. Doing so contributes to both the theory and
practice of management in three key ways. First, a new perspective for the study of entrepreneurial orientation is established, with the need to test empirically the existence and nature of the suggested relationships. Second, considering entrepreneurial orientation as a five-element, multi-dimensional concept as originally suggested by Lumpkin and Dess (1996) can create new possibilities for employing the concept and thereby allow for more informative research. Finally, practitioners can re-visit entrepreneurial orientation as a tool for building and managing innovativeness in entrepreneurial organisations.

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Figure 1: The relationships among a firm’s risk-taking, pro-activeness, competitive aggressiveness, autonomy, and innovativeness as moderated by internal and external factors.