Entrepreneurial Orientation and Firm Performance: The Unique Impact of Innovativeness, Proactiveness, and Risk-taking

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ABSTRACT. This paper develops a theoretical model of the relationship between firm-level entrepreneurship and firm performance. This model is intended to further clarify the consequences of an ‘entrepreneurial orientation,’ paying particular attention to the differential relationship that exists between the three sub-dimensions of entrepreneurial orientation and firm performance. Included in the theoretical model are other important variables (such as organizational structure and environmental characteristics) that may impact the EO-performance relationship. Propositions are developed regarding the various configurations of the sub-dimensions of EO and organizational structure that would be most appropriate in a given environmental context. Future research may also benefit from considering the important role that organizational strategy and life cycle stage play in this model. The implications of this model for both researchers and managers are discussed.

RéSUMÉ. Cet article élabore un modèle théorique de la relation entre l’entrepreneuriat au niveau de l’organisation et le rendement de l’entreprise. Ce modèle a pour but de préciser davantage les conséquences d’une « orientation entrepreneuriale » en portant une attention particulière à la relation différentielle qui existe entre les trois sous-dimensions de l’orientation entrepreneuriale et le rendement de l’entreprise. Le modèle théorique inclut d’autres variables importantes (ex. structure organisationnelle, caractéristiques environnementales) qui peuvent avoir un impact sur la relation entre l’orientation entrepreneuriale et le rendement de l’entreprise. Des propositions sont élaborées, quant aux diverses configurations des sous-dimensions de l’orientation entrepreneuriale et l’organisation structurelle, qui seraient les plus appropriées dans un contexte environnemental précis. D’autres recherches pourraient examiner le rôle important que joue la stratégie organisationnelle et l’étape du cycle de vie dans ce modèle. L’article examine aussi les implications qu’a ce modèle pour les chercheurs et les dirigeants d’entreprise.

Introduction

The relationship between entrepreneurship and firm performance has received considerable attention in the organizational literature over the last several decades (Sandberg and Hofer, 1987; Tang et al., 2008; Todorovic and Schlosser, 2007; Wiklund and Shepherd, 2005). Specifically, scholars have theorized that the incidence of firm-level entrepreneurial behaviors will be positively associated with organizational profitability and growth (Covin, Green, and Slevin, 2006; Covin and Slevin, 1991; Ireland, Covin and Kuratko, 2009; Lumpkin and Dess, 1996). Previous studies suggest that, in certain situations, firms exhibiting high levels of an entrepreneurial orientation (EO) will achieve superior performance to those possessing low levels of EO (Keh, Nguyen, and Ng, 2007; Li et al., 2008; Zahra, 1991). Indeed, studies indicate that increases in firm performance related to EO are sustainable over long periods of time (Wiklund, 1999), but that this relationship may be contingent on the environmental context in which the firm is operating (Lumpkin and Dess, 2001; Zahra, 1993; Zahra and Covin, 1995).
Covin and Slevin (1991) offered an important contribution to the entrepreneurship literature in developing a theoretical model of the relationship between an aggregated conceptualization of entrepreneurial orientation (innovativeness, proactiveness, and risk-taking) and firm performance. However, it has been argued in the literature that future research on entrepreneurial orientation may benefit from considering innovativeness, proactiveness, and risk-taking as unique sub-dimensions of the entrepreneurial orientation construct (Kreiser, Marino, and Weaver, 2002; Lumpkin and Dess, 1996). If this is the case, then many of the relationships that constitute existing models of firm-level entrepreneurship may need to be reassessed. The three sub-dimensions of entrepreneurial orientation, which were aggregated together in earlier theoretical models, may in fact possess unique relationships with other important variables. Therefore, it is necessary that a revised model be developed to conceptualize innovativeness, proactiveness, and risk-taking as unique elements of the entrepreneurial process.

This study conceptualized entrepreneurial orientation as consisting of three unique sub-dimensions—innovativeness, proactiveness, and risk-taking—which were able to vary independently of one another in a given context. Innovativeness is embodied by a strong organizational commitment to “engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services or technological processes” (Lumpkin and Dess, 1996: 142). Risk-taking is the “degree to which managers are willing to make large and risky resource commitments—for example, those which have a reasonable chance of costly failure” (Miller and Friesen, 1978: 923). Proactiveness is an “opportunity-seeking, forward-looking perspective involving introducing new products or services ahead of the competition and acting in anticipation of future demand to create change and shape the environment” (Lumpkin and Dess, 2001: 431).

This study will examine the relationship between the three sub-dimensions of entrepreneurial orientation, environmental characteristics, organization structure, and firm performance. First, the fundamental characteristics of the entrepreneurial orientation construct will be explored. Second, we will examine the differential relationship between the sub-dimensions of EO and firm performance. Third, we will examine the moderating role that environmental characteristics and organization structure play in the EO-performance relationship. Fourth, we will examine the potential performance ramifications of different configurations of entrepreneurial orientation and organizational structure and provide a model specifying these configurations. Finally, we will discuss the implications of this theoretical model for both researchers and managers. Figure 1 displays the model of firm-level entrepreneurship that will be developed in this paper.

Theoretical Development

**The Entrepreneurial Orientation Construct**

Early research on entrepreneurial orientation posited that entrepreneurial firms tended to take more risks than other types of firms, especially when faced with conditions of uncertainty (Khandwalla, 1977; Mintzberg, 1973). Expanding on these views, several researchers operationalized the behavior of entrepreneurial firms as consisting of product-market innovation, proactiveness of decision-making, and risk-taking (Miller, 1983; Miller and Friesen, 1983). These scholars maintained that the level of entrepreneurship exhibited by a firm was the aggregate total of these three sub-dimensions. A firm that was truly “entrepreneurial” would exhibit high levels of each dimension. Covin and Slevin (1988: 218) argued that entrepreneurial orientation could best be measured by summing together
"the extent to which top managers are inclined to take business-related risks (the risk-taking dimension), to favor change and innovation in order to obtain a competitive advantage for their firm (the innovation dimension), and to compete aggressively with other firms (the proactiveness dimension)."

The theoretical model developed by Covin and Slevin (1991) depicted the relationship between entrepreneurial orientation and other important research variables, such as organizational structure and environmental conditions. Covin and Slevin aggregated the three sub-dimensions of entrepreneurial orientation (innovativeness, proactiveness, and risk-taking) together when developing their theoretical model. However, recent research suggests that the three sub-dimensions of entrepreneurial orientation may in fact have differential relationships with other important organizational variables (Kreiser, Marino, and Weaver, 2002; Lumpkin and Dess, 1996). This study will extend existing conceptualizations of entrepreneurial orientation by developing a prescriptive model of the relationship between the sub-dimensions of entrepreneurial orientation and firm performance, while also considering internal (organizational structure) and external (environmental) factors.

**The Unique Relationships Between the Sub-Dimensions of EO and Firm Performance**

The three sub-dimensions of entrepreneurial orientation have been shown to possess differential relationships with organizational performance. On the one hand, Begley and Boyd (1987) found that risk-taking had a curvilinear relationship with performance in entrepreneurial firms. Their findings suggested that entrepreneurial firms exhibiting moderate levels of risk-taking would outperform those exhibiting either very high or very low levels of risk-taking. The authors concluded that “risk-taking has a positive effect on
ROA up to a point. Beyond that point, increases in risk-taking began to exert a negative effect on ROA” (Begley and Boyd, 1987: 89).

On the other hand, previous research also suggests that high levels of innovativeness (Deshpande, Farley, and Webster, 1993; Zahra and Bogner, 2000) and proactiveness (Lumpkin and Dess, 2001; Miller and Friesen, 1983) lead to increased organizational performance. Zahra (1996: 189) contended that innovative behaviors were critical to firm survival, arguing “success in today’s competitive environment requires a company to pursue a coherent technology strategy to articulate its plans to develop, acquire, and deploy technological resources to achieve superior financial performance.” Porter (1980) posited that, in certain situations, firms could utilize proactive behaviors in order to increase their competitive positioning in relation to other firms. Lieberman and Montgomery (1988) argued that first-mover firms were able to gain significant advantages over follower firms. They defined such first-mover advantages in terms of the ability of pioneering firms to earn higher economic profits through such advantages as technological leadership and increased buyer switching costs (Lieberman and Montgomery, 1988).

The previous arguments suggest that the three sub-dimensions of entrepreneurial orientation may offer unique contributions to the overall level of a firm’s performance. For example, high levels of risk-taking are likely to be counterproductive for organizations. Theoretical arguments suggest that risk-taking will display a curvilinear relationship with performance, such that moderate levels of risk-taking will allow firms to outperform those that exhibit extreme levels of risk-taking. This may help to explain some of the mixed findings on the EO-performance relationship, such as the curvilinear relationship between EO and performance found by Tang et al. (2008). It is also expected that innovative and proactive firm behaviors will be positively associated with firm performance.

The EO-Environment-Performance Link

The external environment can be broadly defined as “the totality of physical and social factors that are taken directly into consideration in the decision-making behavior of individuals in organizations” (Duncan, 1972: 314). The relationship between the environment and strategy formation has received considerable attention in the entrepreneurship literature (Covin and Slevin, 1989; Miller and Friesen, 1983; Zahra, 1993). Specifically, the concepts of environmental dynamism and munificence have played a fundamental role in understanding the strategic decision-making process that occurs within entrepreneurial organizations (Lumpkin and Dess, 2001; Miller and Friesen, 1982; Zahra, 1996). Environmental dynamism refers to the “rate of change and innovation in an industry as well as the uncertainty or predictability of the actions of competitors and customers” (Miller and Friesen, 1983: 222). Environmental munificence refers to the availability of resources and the amount of external opportunities that are present in a specific environmental setting (Dess and Beard, 1984; Zahra, 1993).

Thus, it stands to reason that environmental characteristics will play an important role in influencing the performance level of entrepreneurial organizations (Covin and Slevin, 1991; Lumpkin and Dess, 1996). The plentiful resources and opportunities afforded to firms in munificent environments make it easier for them to implement their strategic initiatives (Dess and Beard, 1984). In such environments, the relative ease in which firms can acquire the resources necessary for the pursuit of organizational objectives and the decreased threat of competition fosters higher rates of firm survival and growth (Castrogiovanni, 1991). The constant rate of change in highly dynamic environments also creates numerous opportunities that entrepreneurial firms can exploit (Miles, Covin, and Heeley, 2000). However, the high
level of industry stability found in non-dynamic environments allows firms to minimize their costs by not having to consistently develop new and innovative products and technologies to meet changing industry conditions (Zahra and Bogner, 2000).

**Contingency Relationships: EO-Environment-Performance**

The three sub-dimensions of entrepreneurial orientation and key characteristics of the external environment may also interact with one another in order to influence firm performance (Lumpkin and Dess, 2001). Specifically, environmental attributes such as dynamism and munificence may moderate the relationship between the three sub-dimensions of EO and performance. The following section details the theoretical relationship between each of the sub-dimensions of EO, the external environment, and organizational performance.

**Innovativeness and the External Environment.** Organizations operating in dynamic environments are more likely to benefit from new product innovation than firms operating in stable environments (Miller, 1983; Miller, 1988; Zahra, 1993). According to Miller (1988: 284), “product innovation is generally more prevalent and useful in dynamic environments [...] Without innovation, firms in such settings fall behind, losing market share and sales.” Zahra (1996) found that pioneering activities and radical product technologies are more appropriate in dynamic environments than in munificent environments. Zahra and Bogner (2000: 141) found further support for this argument, indicating that dynamic environments serve to “encourage the development of radically new products and technologies in order to capture premium market segments, or preempt competitors’ entry.” Thus, it is expected that new product innovation and the use of R&D strategies will be more positively associated with firm performance in dynamic environments than in stable environments.

It is likely that firms operating in munificent environments will also be more innovative in their strategic orientation than firms operating in hostile environments. Lumpkin (1996: 46) claimed that “a munificent environment is one in which innovativeness is favored because resources are available to devote to technological development and the growth environment invites a proliferation of new products.” Zahra (1996: 197) found that munificent environments acted to encourage R&D spending within firms, since firms operating in hostile environments “may be reluctant to invest heavily in developing new technologies because hostility erodes profit margins and reduces the resources available for innovation.”

Zahra and Bogner (2000) found that the introduction of radical new products was negatively associated with ROE in hostile environments and that R&D spending was negatively associated with market share in such settings. The negative relationship between innovativeness and hostility was “consistent with theoretical expectations that intense hostility in these markets might make aggressive gambling of new ventures’ limited financial resources by offering radically innovative products a poor strategic choice” (Zahra and Bogner, 2000: 165). These theoretical arguments suggest that innovative practices will be more positively associated with firm performance in munificent environments than in hostile environments.

**Proactiveness and the External Environment.** There is also an intuitive link between the adoption of proactive firm behaviors and environmental dynamism. Since the industry conditions in a dynamic environment are subject to rapid change, firms that are proactive and actively seek out opportunities will outperform firms that are unwilling to exploit market opportunities. Dynamic environments act to create many new opportunities for firms, and proactive strategies can be effectively utilized in order to seize these opportunities and to gain a competitive advantage for the firm (Zahra, 1991).
Zahra (1996) found that dynamic environments acted to increase the evidence of pioneering activities in entrepreneurial firms, which were more uncommon in stable environments. Proactive activities benefited such a firm, since “by reaching the market first and establishing its technology as the standard, the pioneer can dictate the rules of competition” (Zahra, 1996: 193). Lumpkin and Dess (2001: 444) found that “both sales growth and profitability are positively and significantly related to a proactiveness-dynamism link.” These arguments suggest that proactive firm behaviors will be more positively associated with performance in dynamic environments than in stable environments.

Proactive behaviors will also be more strongly linked with firm performance in munificent environments. On the one hand, Miller and Friesen (1982) argued that munificent environments promote such behaviors since growing markets are characterized by a great deal of strategic opportunities. Firms that are proactive in their orientation are able to capitalize on these numerous opportunities and, thus, build a strategic advantage in relation to their competition (Lieberman and Montgomery, 1988). On the other hand, Lumpkin and Dess (2001) argued that hostile environmental conditions would force organizations to abandon proactive behaviors, in order to preserve their limited resources. Such a “conservative use of resources is antithetical to the important role of experimentation and discovery inherent in proactiveness” (Lumpkin and Dess, 2001: 437). These arguments suggest that proactive behaviors will be more positively related to firm performance in munificent environments than in hostile environments.

**Risk-taking and the External Environment.** Theoretical support suggests that dynamic environments will also result in a stronger link between organizational risk-taking and firm performance. Organizations that do not take risks in dynamic environments will lose market share and will not be able to maintain a strong industry standing relative to more aggressive competitors (Covin and Slevin, 1991; Miller, 1983). Khandwalla (1977) found a stronger relationship between organizational risk-taking and firm performance in dynamic environments. According to Khandwalla, organizations need to make bold, risky strategic decisions in order to cope with the constant state of change common in dynamic environments. These arguments suggest that organizational risk-taking will be more positively associated with firm performance in dynamic environments than in stable environments.

Risk-taking will also offer the possibility for high payoffs in munificent environments, due to heightened availability of resources in those environments. It is likely that excessively hostile environments will discourage organizations from taking risks that they consider unnecessary and that might harm firm survival (Zahra and Garvis, 2000). These arguments are consistent with prior research claiming that even risk-taking managers would be discouraged from taking large-scale risks in extremely uncertain environments since the risk-taking would likely not be as effective (Smart and Vertinsky, 1984). On the one hand, Goll and Rasheed (1997: 585) posited that the lack of resources in hostile environments would “lead firms to avoid excessive risk-taking and pay greater attention to the conservation of resources.” On the other hand, firms operating in munificent environments will be able to afford taking risks, since resources are readily available in such hospitable environments. These arguments suggest that risk-taking will be more positively associated with organizational performance in munificent environments than in hostile environments.

**The EO-Structure-Performance Link**

Organizational structures have often been conceptualized as running on a continuum from organic to mechanistic (Burns and Stalker, 1961; Thompson, 1967). On the one hand,
organic structures are typified by open channels of communication, decentralized decision-making, a lack of formal planning constraints, loose systems of control, and a high level of organizational flexibility. On the other hand, mechanistic structures are often conceptualized as possessing high levels of bureaucracy, restricted channels of communication, centralized decision-making, a formalized planning system, tight systems of control, and a constrained level of flexibility (Khandwalla, 1977; Slevin and Covin, 1990). Researchers have argued that an organization’s choice of structure will have an important impact on their ensuing level of performance (Chandler, 1962; Miles and Snow, 1978; Rumelt, 1974).

Numerous studies have argued that an organic structure positively impacts the relationship between an entrepreneurial orientation and firm performance (Covin and Slevin, 1988; Lumpkin and Dess, 1996). Covin and Slevin (1991: 18) argued that the appropriate structure for an entrepreneurial organization will “include decentralization of decision-making authority, minimal hierarchical level or structural levels, free-flowing communication channels, and closely integrated R&D, manufacturing, and marketing functions.” The empirical work on this topic has also found that organic structures, when aligned with an entrepreneurial orientation, will lead to increased levels of firm performance (Naman and Slevin, 1993; Slevin and Covin, 1990).

Covin and Slevin (1988: 219) argued that organic structures, which were “characterized by such things as flexibility in administrative relations, informality, and authority vested in situational expertise, facilitate innovation—a vital component of an entrepreneurial style.” The formalization of rules in the upper levels of mechanistic organizations may also lead to the development of hierarchical structures within the organization. Numerous studies have found that strong hierarchies act to stifle innovativeness through bureaucratic actions (Burns and Stalker, 1961; Thompson, 1967). Lumpkin and Dess (1996: 160) argued that organic structures were a key component in increasing the efficacy of innovativeness within organizations, claiming that “such an organizational environment may promote the autonomy and creativity required for innovative behavior.”

Proactive and risk-taking behaviors also will be more positively associated with firm performance when firms utilize organic structures rather than mechanistic structures. For example, Covin and Slevin (1989) posited that an organic structure allowed firms the flexibility to seize environmental opportunities through proactive behaviors. This flexibility allowed firms to exhibit a “rapid organizational response to changing external forces in unpredictable environments, while ‘mechanistic’ structures are better suited to predictable environments where rapid organizational responses are not typically required” (Covin and Slevin, 1989: 77). Khandwalla (1977) argued that the organizational flexibility inherent in organic structures enhanced the value of risk-taking within organizations. He claimed that “risk-taking managements usually seize opportunities and make commitments of resources before fully understanding what actions need to be taken. Unless management is flexible, the organization will not be able to adapt itself to the evolving situation” (Khandwalla, 1977: 18). These arguments suggest that the three sub-dimensions of entrepreneurial orientation will be more positively associated with firm performance when organizations adopt an organic structure than when they adopt a mechanistic structure.

A Theoretical Model of Entrepreneurship: Appropriate Configurations of EO and Structure

The arguments proposed in this paper can be utilized to develop several configurations of the sub-dimensions of entrepreneurial orientation and organizational structure that lead to the highest levels of performance in specific environmental contexts. Based on our
previous discussion of the external environment, there are four potential environmental situations that an organization might face: (1) Dynamic/Munificent, (2) Stable/Munificent, (3) Dynamic/Hostile, and (4) Stable/Hostile. Integrating the arguments related to innovativeness, proactiveness, risk-taking, and organizational structure suggests that there are appropriate configurations of these variables based on the four environmental contexts. Table 1 summarizes the appropriate configurations of the sub-dimensions of entrepreneurial orientation and organizational structure that should be utilized in various environmental settings.

### Table 1. Appropriate configurations of EO and structure by environment

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<th>Dynamic</th>
<th>Stable</th>
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<tr>
<td><strong>Munificent</strong></td>
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</tr>
<tr>
<td>Innovativeness:</td>
<td>Very High</td>
<td>Moderate to High</td>
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<tr>
<td>Proactiveness:</td>
<td>Very High</td>
<td>Moderate to High</td>
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<tr>
<td>Risk-taking:</td>
<td>Moderate to High</td>
<td>Moderate</td>
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<tr>
<td>Organizational Structure:</td>
<td>Organic</td>
<td>Combination</td>
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<td><strong>Hostile</strong></td>
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<tr>
<td>Innovativeness:</td>
<td>Moderate to High</td>
<td>Low</td>
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<td>Proactiveness:</td>
<td>Moderate to High</td>
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<tr>
<td>Risk-taking:</td>
<td>Moderate</td>
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<tr>
<td>Organizational Structure:</td>
<td>Combination</td>
<td>Mechanistic</td>
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</table>

A firm operating in a dynamic and munificent environment should emphasize very high levels of innovativeness and proactiveness, moderate-to-high levels of risk-taking, and should implement an organic structure. Innovativeness is enhanced in such environments due to the new opportunities created through environmental change in a dynamic environment (Zahra and Bogner, 2000) and the increased resources with which to innovate in a munificent environment (Lumpkin and Dess, 1996). Proactiveness is more beneficial because it allows firms to be first movers in responding to changing circumstances in a dynamic environment (Lumpkin and Dess, 2001) and to capture prevalent opportunities in a munificent environment (Lieberman and Montgomery, 1988). While moderate levels of risk-taking tend to be associated with the highest levels of performance in general (McClelland, 1960), risk-taking becomes a bit more useful in dynamic/munificent environments because it allows firms to improve their industry standing in a dynamic environment (Khandwalla, 1977) and because the potential problems associated with a failed risk-taking endeavor are lessened due to the availability of slack resources in a munificent environment (Goll and Rasheed, 1997). Finally, an organic structure will allow organizations the flexibility to respond to the change inherent in a dynamic environment and the resources necessary to benefit from innovativeness, proactiveness, and risk-taking in a munificent environment. As such, it is proposed that:

**Proposition One:** In dynamic and munificent environments, firms that are very high in innovativeness, very high in proactiveness, moderate-to-high in risk-taking, and whose structure is organic, will display the highest levels of firm performance.

Firms operating in either a stable/munificent environment or a dynamic/hostile environment should utilize moderate-to-high levels of innovativeness and proactiveness
and moderate levels of risk-taking. These firms should also utilize an organizational structure that is a combination of organic and mechanistic. In general, we have argued that innovativeness and proactiveness are positively associated with firm performance, and that moderate levels of risk-taking are associated with the highest levels of performance. While innovativeness and proactiveness will still likely lead to increased performance in stable/munificent and dynamic/hostile environments, the potential gains will be lessened somewhat by the lack of emerging opportunities in a stable environment (Zahra, 1996) and the lack of available resources in a hostile environment (Smart and Vertinsky, 1984). Moderate levels of risk-taking will still be the most appropriate strategy in this environment, since these behaviors will not likely be as productive as in dynamic/munificent environments and not necessarily as potentially detrimental as in stable/hostile environments. Finally, a combination of organic and mechanistic structures would be appropriate in either environmental situation. For example, the flexibility of an organic strategy would be beneficial in a changing and dynamic environment, but the extra costs associated with this flexibility would be harmful in a hostile environment. We would recommend that firms maintain at least a moderate level of flexibility, while maintaining a cost-effective structure that does not necessarily demand maximum flexibility. Based on these arguments, it is proposed that:

**Proposition Two:** In stable and munificent environments, firms that are moderate-to-high in innovativeness, moderate-to-high in proactiveness, moderate in risk-taking, and whose structure is a combination of mechanistic and organic, will display the highest levels of firm performance.

**Proposition Three:** In dynamic and hostile environments, firms that are moderate-to-high in innovativeness, moderate-to-high in proactiveness, moderate in risk-taking, and whose structure is a combination of mechanistic and organic, will display the highest levels of firm performance.

A firm operating in a stable and hostile environment should utilize low levels of innovativeness, proactiveness, and risk-taking, as well as a mechanistic structure. Innovative efforts typically will not be effective because of the lack of changing market demand and customer preferences in a stable environment (Miller, 1988) and the lack of resources with which to innovate in a hostile environment (Zahra and Bogner, 2000). Proactiveness will not represent a preferred strategic approach because first-mover advantages will be slow to develop in a non-changing, stable environment (Zahra, 1996) and due to the lack of opportunity-based incentives in a hostile environment (Lumpkin and Dess, 2001). The potential negatives associated with risk-taking will be higher because less risky alternatives will be available to firms in stable environments (Covin and Slevin, 1991) and the cost of strategic failure will be extreme in hostile environments (Zahra and Garvis, 2000). Finally, the use of a mechanistic structure will be well-suited to a stable/hostile environment because structural flexibility is not as large a concern in stable environments and centralized decision-making is more cost-effective in a hostile environment. As such, it is proposed that:

**Proposition Four:** In stable and hostile environments, firms that are low in innovativeness, low in proactiveness, low in risk-taking, and whose structure is mechanistic, will display the highest levels of firm performance.
Discussion and Conclusion

This theoretical model offers important insights regarding how organizations can utilize an entrepreneurial orientation to maximize their firms’ level of performance. These propositions offer several insights into the combination of innovative, proactive, and risk-taking behaviors that firms should display in particular environments. It is also proposed that organizational structure will moderate the relationship between the sub-dimensions of EO and firm performance. For example, a firm operating in a munificent environment should emphasize high levels of innovativeness and proactiveness, moderate levels of risk-taking, and an organic structure. Thus, managers can utilize the arguments in this paper in order to maximize firm performance according to the dominant environmental characteristics of the industry in which the firm is competing.

Further, the importance of environmental and organizational variables when analyzing the entrepreneurial orientation of firms has been highlighted by the model presented in this analysis. In contrast to other models presented examining the EO construct, the model presented in this manuscript is: 1) more comprehensive in that it simultaneously depicts the roles of organizational structure and environment and their impact on the relationship between EO and firm performance; and 2) a normative model providing prescriptive measures for varying environmental situations firms are facing. While early literature on EO suggested that firms in hostile environmental contexts should adopt an entrepreneurial posture (Covin and Slevin, 1989; Khandwalla, 1977; Miller, 1983), our arguments suggest that an EO may be most conducive to firm performance in dynamic and munificent environments. This is consistent with more recent findings suggesting that EO may be negatively related to performance in hostile environments (Zahra and Bogner, 2000; Zahra and Garvis, 2000).

This study offers prescriptive advice for organizations by suggesting that certain environmental and organizational configurations provide the optimal situation for entrepreneurial behaviors, while other specific environmental and organizational configurations are not as optimal for entrepreneurial activities. By utilizing a configurational approach, this study suggests that entrepreneurial behaviors do not always represent a sound strategy for an organization. In particular, our model suggests that entrepreneurial behaviors are not a preferred strategic approach in stable/hostile environments. In this situation, firms exhibiting more conservative, non-entrepreneurial behaviors would be expected to achieve a higher level of performance. Extending this logic, although the vast majority of previous research has assumed a positive relationship between entrepreneurial orientation and firm performance, we are suggesting that entrepreneurial behaviors will only heighten performance in particular situations.

The model developed in this paper also has several important research implications. While much of the previous research on this topic has utilized aggregated measures of entrepreneurial orientation (Covin and Slevin, 1989), it is clear that the sub-dimensions of EO may exhibit differential relationships with firm performance. Future empirical research should address the configurations of EO that lead to the highest levels of firm performance in various types of environments. This study provides important insights into the particular environmental and structural characteristics that encourage firm performance, as well as the manner in which these characteristics interact with the sub-dimensions of EO. Therefore, researchers need to be cognizant of possible environmental and organizational influences when creating models designed to test entrepreneurial behavior and firm performance.

This study suggests that the optimal levels of each dimension of EO will differ based
on an organization’s environment. Thus, rather than seeking to have the highest level of EO, an organization should seek to find the most effective configuration of its innovative, proactive and risk-taking behavior. While each of these should be present in some form, their configurational relationship is likely to differ in varying settings. Researchers are also likely to benefit from exploring the moderating impact of environmental characteristics and organizational structure when researching the topic of firm performance. While past research studies have examined the role of environmental variables as moderators of the EO-firm performance relationship (e.g. Covin and Slevin, 1989; Zahra and Covin, 1995), no models have empirically analyzed a combined model of environment, structure, and entrepreneurial orientation.

Future research should be conducted assessing the role that other important variables may hold in the theoretical model developed in this paper. For example, organizational strategy may also moderate the relationship between entrepreneurial orientation and firm performance (Covin, 1991; Dess, Lumpkin, and Covin, 1997). The majority of these studies have posited that differentiation strategies will lead to increased performance in entrepreneurial firms. Dess, Lumpkin, and Covin (1997: 681) argued that “innovative differentiation is characterized by creativity in product development, original applications of new technologies, up-to-date innovations, and quality design. Overall differentiation strategies appear to fit well in a context of entrepreneurial strategy making given the apparent similarity of purposes and means.” It is also possible that industry life cycle stage may moderate the relationship between entrepreneurial orientation and firm performance (Lumpkin and Dess, 2001). Numerous researchers have argued that entrepreneurial strategies are most effective when employed by organizations in the growth stage of an industry’s life cycle (MacMillan and Day, 1987; Sandberg and Hofer, 1987). Thus, future research aimed at determining the potential moderating influences of strategy and life cycle stage on the EO-performance relationship may help shed light on many of these important relationships. Future research should also attempt to clarify the potentially reciprocating nature of this model, as factors such as firm performance may also encourage even higher levels of the sub-dimensions of entrepreneurial orientation.

In conclusion, this paper has developed a theoretical model describing the expected relationships between the three sub-dimensions of entrepreneurial orientation, organizational structure, environmental characteristics, and firm performance. The various propositions contain important insights for both managers and researchers interested in understanding and predicting firm performance in entrepreneurial firms. It is likely that different configurations of EO and structure will lead to increased levels of performance in various environmental contexts. It is hoped that these insights will help to provide a framework for future research on this topic. Future studies aimed at determining the impact of strategy and life cycle stage, as well as other important variables, may help provide even more clarity regarding the fundamental relationship between entrepreneurial orientation and firm performance.

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