FIRM-LEVEL ENTREPRENEURSHIP: THE ROLE OF PROACTIVENESS, INNOVATIVENESS AND STRATEGIC RENEWAL IN THE CREATION AND EXPLORATION OF OPPORTUNITIES

PATRICK KREISER
Ohio University, College of Business
304 Copeland Hall, Athens, OH 45701
kreiser@ohio.edu

LOUIS MARINO
The University of Alabama
Culverhouse College of Commerce and Business Administration
Box 870225, Tuscaloosa, Alabama 35487

JUSTIN DAVIS
Ohio University, College of Business
310 Copeland Hall, Athens, OH 45701

ZHI TANG
Rochester Institute of Technology
E. Philip Saunders College of Business
Max Lowenthal Building, Building 12, Room 3310
107 Lomb Memorial Drive, Rochester, NY 14623-5608

CHOONWOO LEE
University of Seoul, Management Department
90 Jeonmang-dong, Dongdaemun-gu, Seoul Korea 130-743

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Recent research suggests that existing conceptualizations of firm-level entrepreneurship may not be sufficient in fully explaining the construct. The primary purpose of this study is to explore the fundamental dimensions underlying firm-level entrepreneurship and to empirically test a model depicting the hierarchical relationship between these various dimensions. It is argued that proactiveness, innovativeness and strategic renewal represent the primary dimensions of firm-level entrepreneurship. Three hypotheses are developed, specifying the role each of these three dimensions plays in the creation and exploitation of environmental opportunities. Utilizing data collected from 250 small-to-medium sized enterprises (SMEs) in South Korea, the empirical results suggest proactiveness positively impacts firms’ perceptions of environmental opportunities, and these organizations then utilize innovativeness and strategic renewal in an effort to capture these perceived opportunities. The paper concludes with a discussion of the implications of our study for managerial practice and theory building.

Keywords: Firm-level entrepreneurship; proactiveness; innovativeness; strategic renewal.
1. Introduction

Firm-level entrepreneurship provides various benefits to organizations, including increased financial performance (Keh et al., 2007; Wiklund and Shepherd, 2005), heightened levels of organizational learning (Dess et al., 2003; Zahra et al., 1999), and the development of a sustainable competitive advantage (Covin and Miles, 1999). Reflecting this fact, numerous conceptualizations and operationalizations of firm-level entrepreneurship have been offered in the literature (Burgelman, 1983; Covin and Slevin, 1989; Guth and Ginsberg, 1990; Lumpkin and Dess, 1996; Miller, 1983). Although these theories and measures have advanced the nature of research on this topic, more research is needed regarding how the process of firm-level entrepreneurship unfolds within organizations (Davidsson et al., 2001; Phan et al., 2009). For example, significant concerns exist related to the fundamental dimensions of firm-level entrepreneurship (Brown et al., 2001; Covin, et al., 2006) and the lack of integration of existing conceptualizations (Zahra et al., 1999).

In response to these concerns, the primary objectives of this study are: (1) to integrate existing conceptualizations of firm-level entrepreneurship to determine the primary dimensions of firm-level entrepreneurship and (2) to assess the nature of the relationship between the dimensions of firm-level entrepreneurship. This study proposes that the dimensions of proactiveness, innovativeness and strategic renewal are key factors in the firm-level entrepreneurial process. In our framework, we conceptually and empirically examine proactiveness as the primary factor leading to and enabling innovativeness and strategic renewal. Consistent with this conceptualization, we argue that organizations that display proactive behaviors are more likely to perceive higher levels of environmental opportunities and, as a result, utilize more innovative and strategic renewal behaviors to exploit these opportunities. Specifically, proactive firm behaviors act as a catalyst to innovativeness and strategic renewal by influencing the firm’s perceptions of environmental opportunities. These perceptions of environmental opportunities, in turn, mediate the proactiveness-innovativeness and proactiveness-strategic renewal relationships.

We begin by defining firm-level entrepreneurship and examining some of the issues that have hindered past research on the topic. We then discuss the primary existing views of firm-level entrepreneurship and the main dimensions often associated with firm-level entrepreneurship. After integrating these various viewpoints, we offer a new conceptualization of firm-level entrepreneurship consisting of three primary dimensions: proactiveness, innovativeness and strategic renewal. We then utilize data from 250 Korean small-to-medium sized enterprises (SMEs) to test a measurement scale that can be utilized to measure these three dimensions of firm-level entrepreneurship. Given that the vast majority of past studies on the topic have been conducted in a U.S. setting, one of the contributions of this study is that data was collected in an Asian market (Li et al., 2008; Tang et al., 2008). We also empirically test hypotheses assessing the hierarchical relationship between these three dimensions. We conclude by discussing the implications of our findings and the potential limitations of our study.
2. Theoretical Development

2.1. A definition of firm-level entrepreneurship

The role opportunities play in the entrepreneurial process is a key component of existing conceptualizations of firm-level entrepreneurship (Ireland et al., 2009; Lumpkin and Dess, 1996; Stevenson and Jarillo, 1990). Shane and Venkataraman (2000) offered the most widely cited definition of entrepreneurship as opportunity-based behavior, arguing that the entrepreneurial act centered primarily on the discovery, evaluation and exploitation of opportunities. Extending this logic, Ireland et al. (2009) recently defined firm-level entrepreneurship as an “organization-wide reliance on entrepreneurial behavior that purposefully and continuously rejuvenates the organization and shapes the scope of its operations through the recognition and exploitation of entrepreneurial opportunity.” Thus, firm-level entrepreneurship becomes a two-part process where firms utilize entrepreneurial behaviors to recognize/create opportunities and to exploit these existing opportunities.

2.2. Problems with existing conceptualizations

Two major impediments have plagued previous research efforts on firm-level entrepreneurship. The first impediment has been the lack of a clear consensus regarding the dimensions of the process. This is particularly salient in that a general consensus regarding the key components of the entrepreneurial act has yet to emerge (Covin and Miles, 1999). Although the importance of entrepreneurship within organizations is widely recognized, “ambiguities continue to plague attempts to define such activities. In fact, the language problem, if anything, is more acute when entrepreneurship is applied to a corporate setting” (Sharma and Chrisman, 1999). Symbolic of this ambiguity, several scholars have argued for an expanded conceptualization of firm-level entrepreneurship (Lumpkin and Dess, 1996), while other researchers desire a more parsimonious framework to describe the construct (Covin and Miles, 1999). Further magnifying this issue are conflicting theoretical (Covin et al., 2006) and empirical (Kreiser et al., 2002) findings regarding the dimensionality of firm-level entrepreneurship.

A second impediment has been the lack of integration of key conceptualizations of firm-level entrepreneurship. Although numerous conceptualizations and operationalizations of firm-level entrepreneurship are available in the literature, there has been little effort toward unifying the salient arguments from these various viewpoints to arrive at an integrated framework (Sharma and Chrisman, 1999; Zahra et al., 1999). For example, Miller (1983) and Guth and Ginsberg (1990) developed two of the most frequently cited classifications of firm-level entrepreneurship. However, few studies have attempted to integrate the various conceptualizations of firm-level entrepreneurship (Zahra et al., 1999). To address these two impediments to existing conceptualizations, it is first necessary to review the most prominent views of firm-level entrepreneurship that currently exist in the literature.
2.3. Extant views of firm-level entrepreneurship

Existing views of firm-level entrepreneurship can be grouped into three main categories: (1) Entrepreneurial Orientation, (2) Entrepreneurial Management and (3) Venturing/Strategic Renewal.

Miller (1983) argued that entrepreneurial firms exhibited three main dimensions: proactiveness, innovativeness and risk-taking. According to Miller, a firm possessing an ‘entrepreneurial’ orientation would exhibit all three dimensions. Extending Miller’s work, Covin and Slevin (1988) defined entrepreneurial orientation as “the extent to which the top managers are inclined to take business-related risks (the risk-taking dimension), to favour change and innovation to obtain a competitive advantage for their firm (the innovation dimension) and to compete aggressively with other firms (the proactiveness dimension)” (Covin and Slevin, 1988). Covin and Slevin (1991) further clarified these three dimensions of entrepreneurial orientation as consisting of risk-taking in the face of uncertainty, extensive and frequent product innovation, and a propensity to proactively compete with rivals.

A second view of firm-level entrepreneurship is entrepreneurial management (Stevenson and Jarillo, 1990). Similar to Shane and Venkataraman (2000), Stevenson and Jarillo (1990) argued that the pursuit of opportunities was the central focus of the entrepreneurial act. As such, they defined firm-level entrepreneurship as the behaviors that occur when an organization “pursues opportunity, regardless of resources currently controlled” (Stevenson and Jarillo, 1990). Brown et al. (2001) empirically tested the opportunity-based conceptualization developed by Stevenson and Jarillo (1990), as well as the entrepreneurial orientation scale developed by Miller (1983). Their findings indicated that, although the two measures partially overlapped, each addressed unique elements of the entrepreneurial act.

A third conceptualization of firm-level entrepreneurship was offered by Guth and Ginsberg (1990). They argued that the entrepreneurial act consisted of two main components: venturing and strategic renewal. Venturing was “the birth of new businesses within existing organizations” and strategic renewal referred to the “transformation of organizations through renewal of the key ideas on which they are built” (Guth and Ginsberg, 1990). This conceptualization of firm-level entrepreneurship captured the fact that organizations engaged in entrepreneurship were constantly enacting strategies aimed at finding successful new combinations of their existing resources. Zahra (1993) argued that an organization’s renewal activities primarily involved “the redefinition of a firm’s mission through the creative redeployment of resources, leading to new combinations of products and technologies” (Zahra, 1993).

2.3.1. Integrating the key conceptualizations of firm-level entrepreneurship

Each of these conceptualizations contributes a unique perspective to the study of firm-level entrepreneurship. However, rather than being viewed as competing perspectives on firm-level entrepreneurship, these theories can be viewed collectively as contributing to our understanding of entrepreneurship. From a definitional perspective, firm-level entrepreneurship
research should primarily be concerned with the manner in which organizations create and exploit environmental opportunities. Taken together, these three perspectives suggest firms utilize proactiveness in the pursuit of favorable business opportunities, innovativeness regarding the development of new products and processes, and the continuous redefinition of their activities through the process of strategic renewal to create and exploit opportunities.

The proactive creation and identification of favorable opportunities has played a key role in many conceptions of firm-level entrepreneurship (Lumpkin and Dess, 1996; Stevenson and Jarillo, 1990). This view is consistent with the definition offered by Lumpkin and Dess (2001), in which proactiveness is viewed as 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). This organizational attribute is important for entrepreneurial organizations because it enables them to not only identify future opportunities, but also to actively create opportunities that did not previously exist.

Innovativeness has been included in almost every previous framework attempting to capture the entrepreneurial act (Miller, 1983; Schollhammer, 1982). Schumpeter (1934) argued that innovation, as evidenced by the creation and development of new products and processes, was the fundamental undertaking of the entrepreneurial organization. Covin and Miles (1999) claimed that “of the various dimensions of firm-level entrepreneurial orientation identified in the literature…innovation, broadly defined, is the single common theme underlying all forms of corporate entrepreneurship” (Covin and Miles, 1999). The concept of innovativeness has been one of the most consistently and commonly applied variables across research studies on the topic of firm-level entrepreneurship.

Strategic renewal has also been recognized as an important component of firm-level entrepreneurship (Guth and Ginsberg, 1990; Lumpkin et al., 2009; Sharma and Chrisman, 1999; Zahra, 1993). The transformation of organizational ideas and strategies inherent in strategic renewal is what allows an entrepreneurial organization to alter its relationship with the external environment (Sharma and Chrisman, 1999). Guth and Ginsberg (1990) noted that the “renewal of key ideas on which organizations are built…reflects the process of firm-level entrepreneurship; renewal of key ideas requires the ability to manage transformation and discontinuous change” (Guth and Ginsberg, 1990). It is argued that these three variables (proactiveness, innovativeness, and strategic renewal) represent the primary dimensions that emerge across all three perspectives of firm-level entrepreneurship.

3. The Relationship Between the Three Dimensions of Firm-Level Entrepreneurship

Next, this study will assess the hierarchical relationship that exists between the three dimensions of firm-level entrepreneurship. We propose that the first link in the entrepreneurial process is proactiveness, which serves as a catalyst to innovative and renewal behaviors through its influence on the firm’s perceptions of environmental opportunities. Firms utilize proactive firm behaviors in an effort to increase levels of environmental opportunities, either through the proactive creation of new opportunities that did not exist
previously or through the proactive identification of future market opportunities. Firms will view higher levels of existing opportunities as a direct result of their proactive behaviors. Subsequently, these organizations will utilize innovative behaviors and the process of strategic renewal to capitalize on these opportunities. The following section will develop three hypotheses detailing our arguments concerning these expected relationships.

3.1. Proactiveness and perceptions of opportunities

According to Strategic Choice Theory (SCT), organizations possess freedom of choice when designing and implementing their organizational strategies. SCT posits that the formation and implementation of strategies at the firm-level may indeed be the greatest predictor of future organizational success (Rumelt, 1991). In the same industry, organizations are seen as playing the deciding role in shaping their competitive standing. SCT implies that organizations should regard their strategic behaviors as directly impacting the amount of opportunities that exist in their external environment. Firms will position themselves to capture future opportunities before their competitors, and will also attempt to proactively create new opportunities for their company. The strategic choices they implement will thus be perceived as being a driver of change in their operating environment (Astley and Van de Ven, 1983).

Fundamentally, organizations will perceive proactive behaviors as allowing them to change and shape their external environment (Lumpkin and Dess, 2001). Instead of being influenced by external factors, proactive firms feel they can mold their environment to shape their firm’s needs (Lumpkin and Dess, 1996). One avenue through which firms can utilize proactive behaviors to create new market opportunities is through the process of domain redefinition, which is the proactive creation of a new product-market not currently available to competing firms (Covin and Miles, 1999). Organizations that create new product markets are able to benefit from increased levels of demand, higher levels of customer loyalty and greater profitability. As such, the process of domain redefinition allows the organization to “take the competition to a new arena where its first or early mover status is hoped to create some bases for sustainable competitive advantage” (Covin and Miles, 1999). Instead of efforts to exploit external opportunities, firms that partake in domain redefinition are actively seeking to create new opportunities for themselves (Dess et al., 2003).

Another benefit of proactiveness is that it allows a firm to position itself to take advantage of future environmental changes (Lieberman and Montgomery, 1988). Firms that act proactively will better situate themselves to benefit from future market opportunities, resulting in a greater ability to engage and compete with their rivals. Firms will quickly fall behind their competitors if they do not anticipate future market changes and will have difficulty catching up strategically (McMillan, 1983). By utilizing proactive behaviors, a firm can better position itself within an industry and thus develop the basis for a sustainable competitive advantage (Covin and Miles, 1999). In particular, proactive firms are more likely to behave strategically in a manner that positions the organization to capture market opportunities competing firms have not yet recognized or capitalized upon (Covin and Miles, 1999; Dess et al., 2003).
This suggests that proactiveness can be used to create opportunities and to better position companies to take advantage of future market opportunities. In fact, most organizations will feel that they can benefit from proactive behaviors — regardless of their current industry situation. Instead, many organizations are likely to perceive themselves as being capable of creating valuable market opportunities through their proactive behaviors (Astley and Van de Ven, 1983). Proactiveness represents a driving factor in shaping a firm’s perceptions regarding the availability of opportunities in their operating environment. Organizations will view their proactive behaviors as allowing them to capture future market opportunities, and they will view their proactive behaviors as creating valuable market opportunities. Thus, firms that utilize proactive behaviors will perceive higher levels of opportunities in their external environment as a direct result of their proactive behaviors. Consistent with these arguments, it is hypothesized that:

H1: Firm proactiveness will be positively associated with levels of firm-level perceived environmental opportunities.

3.2. The mediating role of opportunity perceptions

Our previous arguments suggest that the incidence of proactive firm behaviors will result in higher levels of firm-level perceived environmental opportunities. After organizations heighten levels of perceived environmental opportunities through the use of proactive behaviors, they will utilize innovativeness and strategic renewal in an effort to take advantage of these perceived opportunities. These behaviors will result as a consequence, not an antecedent, of increased perceptions of environmental opportunities. As such, proactive firm behaviors influence levels of innovativeness and strategic renewal through their direct impact on firm-level perceptions of opportunities.

Entrepreneurial firms will utilize the processes of sustained regeneration (product innovation) and organizational rejuvenation (process innovation) to exploit the opportunities they believe have been maximized through their proactive behaviors. Sustained regeneration involves the cultures, processes and structures firms utilize to continuously introduce new products and services and enter into new markets (Covin and Miles, 1999; Dess et al., 2003). As such, it accentuates the “ongoing stream of new products and services or new market introductions intended to capitalize on latent or under-exploited market opportunities using the firm’s valued innovation-producing competencies” (Covin and Miles, 1999). By developing new products, organizations are able to exploit opportunities before their competitors. On the other hand, organizational rejuvenation is concerned with the organizational development of new processes or the altering of existing processes to capture valuable market opportunities (Covin and Miles, 1999). Through the demonstration of organizational rejuvenation, firms are able to utilize new processes and structures to capture market opportunities (Dess et al., 2003).

As firms perceive environmental opportunities to be more readily available, they will enhance their innovative practices to better position themselves to exploit and capture these opportunities. Lumpkin (1996) argued that an environment perceived as containing abundant opportunities would be “one in which innovativeness is favored because
resources are available to devote to technological development and the growth environ-
ment invites a proliferation of new products” (Lumpkin, 1996). The abundance or scarcity
of opportunities available in an environment is directly related to an organization’s gen-
eration of slack resources (Cyert and March, 1963). This generation of slack resources is
particularly important in entrepreneurial firms because it permits them to allocate a larger
amount of resources to innovative practices and the development of new strategic pro-
cesses. Thus, the availability of opportunities has been noted as a key factor in promoting
levels of innovative behavior (Starbuck, 1992). Organizations will attempt to capture
perceived market opportunities before rivals through the introduction of new and innova-
tive products and processes (Dess et al., 2003; Stopford and Baden-Fuller, 1990).

On the other hand, firms that perceive low levels of environmental opportunities will
not be willing to engage in innovative behaviors. Zahra (1996) found that opportunity-rich
environments acted to encourage R&D spending within firms and that firms operating in
opportunity-scarce environments “may be reluctant to invest heavily in developing new
technologies because hostility erodes profit margins and reduces the resources available
for innovation” (Zahra, 1996). Supporting these arguments, Zahra and Bogner (2000)
found that the introduction of radical new products was negatively associated with ROE in
opportunity-scarce environments and that R&D spending was negatively associated with
market share in such settings. Because organizations perceive higher levels of market
opportunities as a result of their proactive behaviors, they will enact innovative behaviors
to take advantage of these opportunities (Dess et al., 2003; Lumpkin, 1996). Thus, the
relationship between proactiveness and innovativeness is mediated by organizational
perceptions of environmental opportunities. It is hypothesized that:

H2: Firm-level perceptions of environmental opportunities will mediate the relationship
between proactiveness and innovativeness.

Because organizations feel they have created more abundant market opportunities
through their proactive behaviors, they will also be more likely to employ strategic renewal
activities in an effort to capitalize on these perceived opportunities. The emphasis of strategic
renewal is on allowing organizations to redefine themselves in such a way as to take
advantage of opportunities present in the external environment (Floyd and Lane, 2000). The
process of strategic renewal thus creates a situation where the “nature of rivalry with com-
petitors is altered as the firm concentrates on renewing the strategies it uses to successfully
align itself with the external environment” (Dess et al., 2003). By changing their strategies
and business models, firms engaged in strategic renewal are essentially able to change the
way they compete in a particular industry and are better positioned to exploit opportunities
(Covin and Miles, 1999; Kuratko and Audretsch, 2009). As such, strategic renewal is fre-
quently viewed as an organizational response intended to capitalize on perceived opportu-
nities available in the external environment (Floyd and Lane, 2000; Sahaym and Steensma,
2007; Teng, 2007). As the number of opportunities that the firm perceives increases, so will
the firm’s willingness to engage in strategic renewal activities (Zahra, 1993).

In contrast, firms failing to redefine and transform their strategies and business models
(that is, exhibiting a lack of strategic renewal) will not be able to make the adaptations
necessary to align themselves with a dynamic and changing environment (Covin and Miles, 1999). Organizations operating in environments they perceive as offering abundant opportunities will not be as concerned about preserving their resources, but will, instead, be intent on formulating strategies to capitalize on the numerous opportunities they perceive as being available to their firms (Castrogiovanni, 1991). Hypothesis 2 suggests organizations respond to this availability of opportunities by increasing innovative practices through either product or market development. We suggest this availability of opportunities will also be met with an alteration in strategic approach to better position the firm to capitalize on the opportunities identified. As such, we argue that companies that have increased their perceptions of opportunities through proactive behaviors will utilize strategic renewal behaviors to exploit these opportunities (Sahaym and Steensma, 2007). On the other hand, firms would not be as willing to engage in renewal activities if they did not perceive these environmental opportunities (Covin and Miles, 1999). It is hypothesized that:

H3: Firm-level perceptions of environmental opportunities will mediate the relationship between proactiveness and strategic renewal.

4. Methods

4.1. Sample

Data utilized in this study consists of a sub-sample of firms that responded to a survey conducted in 2005 by the Korea Venture Business Association and Korea Small Business Ministry, which, taken together, are equivalent to the United States Small Business Association. The larger study executed by these agencies was intended to survey firms that fit within their definition of small-to-medium sized businesses (that is, firms between one and 300 employees) in South Korea. The survey instrument employed in this study was developed in English and then translated into Korean by expert linguists. Once the translation process was completed, pilot tests were conducted to ensure the accuracy of the survey translation. After the finalized design was agreed upon, surveys were sent to the selected firms. The survey was sent to key decision makers in 10,534 of the Korean small businesses registered with these agencies.

Consistent with previous research on key decision makers within entrepreneurial organizations, surveys were addressed to and completed by either the owner or general manager of each firm (Lumpkin and Dess, 1996; Miller, 1983). The 10,534 firms that received the surveys were chosen utilizing a stratified random sampling procedure based on geographic location, firm size and industry. A total of 3,710 completed surveys were returned. The agencies provided our research team with a sample that consisted of 250 surveys. Two empirical tests were conducted to test the representative nature of the final sample. First, analysis of variance procedures were used to test for differences across the primary study variables (i.e., firm age, firm size, etc.) between the sub-sample of 250 firms and the full sample of 3,710 completed responses. Second, the same procedures were incorporated to test for differences between the sub-sample of 250 firms and the 10,534 firms which the survey was sent. No statistically significant differences were found for any
of these variables between groups. This indicates that selection bias and non-response bias did not impact the results of the study.

Table 1 displays key characteristics related to the final sample of 250 Korean SMEs. The average size of the firms was 33.9 employees and the average firm age was 6.88 years old. The sample consisted almost entirely of corporations (98% of the sample firms). The vast majority of the respondents were male (98% of the total respondents) and had a background in Engineering (71% of the respondents). The typical respondent was between 40–59 years of age, with 60 percent of the respondents being between 40–49 years of age and 25 percent being between 50–59 years of age. Almost half of the respondents (48%) held either a doctoral degree or another advanced degree (i.e., M.D.). A large majority of the respondents were both the CEO and founder of the firm (82%). In total, these characteristics suggest that the typical respondent was male, well-educated and middle-aged; possessed an Engineering background; and was both the founder and CEO of their firm. The typical firm was a corporation that had been founded within the past ten years.

4.2. Measures

4.2.1. Firm-level entrepreneurship

Survey items used to operationalize the three dimensions of firm-level entrepreneurship were drawn from several well-known measures that have been employed in past research.
on the topic. To measure proactiveness, three items were included from the original Covin and Slevin (1989) entrepreneurial orientation measure. This EO scale has been utilized in a wide variety of research settings and has exhibited high levels of reliability and validity in numerous studies (Keh et al., 2007; Rauch et al., 2009). To measure innovativeness, three items were included from this same measure. Two items were included from Lumpkin and Dess (2001), which measure a firm’s level of competitively aggressive behavior. These items were included because past research has offered inconclusive results regarding whether proactiveness and competitive aggressiveness represent the same or different constructs (Green et al., 2008). The strategic renewal construct was operationalized using four items, three of which were taken directly from the mission reformulation measure developed by (Zahra, 1993). A fourth item (“revising your business model”) was added because the research team felt the terms “business concept” and “business model” represented different aspects of the renewal process; because “business concept” deals with the nature, domain and scope of a business, and “business model” is the plan and process of conducting that business profitably.

4.2.2. Opportunity perceptions

Consistent with previous research (Covin and Slevin, 1989; Miller and Friesen, 1982), opportunity perceptions were operationalized by asking managers about their perceptions of the growth and profitability of their principle industry. A four-item measure was employed including items assessing average industry profits, the industry growth rate, the projected long-term (five years or more) industry growth rate, and the number of opportunities existing in the industry.

4.2.3. Control variables

Several control variables were included to ensure the validity of our measurement model. First, three items were included from the scale developed by Brown et al. (2001) to assess entrepreneurial management. The Cronbach’s alpha of entrepreneurial management was 0.72. Second, firm size (measured as number of employees) was included because past research has indicated a relationship between firm size and strategic behaviors in entrepreneurial organizations (Chen and Hambrick, 1995; Miles et al., 1993). The appendix includes a listing of all the survey items included in this study.

4.3. Data analysis and results

4.3.1. Test of measurement scale

To test the validity of our framework, we conducted both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) on the proactiveness, innovativeness and strategic renewal items. The purpose of EFA was to see if, after rotation, the items sufficiently loaded on each construct as expected and if the loading pattern clearly showed a three-factor structure. The purpose of CFA was to further verify the validity of such a three-factor dimensionality.
We thus randomly split the sample into two sub-samples consisting of equal numbers of firms (125 cases each). We conducted EFA for one sub-sample. We first included the three innovativeness items, five proactiveness/competitive aggressiveness items, and four strategic renewal items in the EFA. When we set the extraction number of factors to 1 with principle component method and oblique rotation, three factors were formed, with 62.54 percent variance explained. However, we found one of the items Lumpkin and Dess (2001) used to measure competitive aggressiveness (“typically adopts a very competitive, undo-the-competitors posture”) to be highly loaded on both the innovativeness factor (0.615) and the proactiveness factor (0.518). The fact the competitive aggressiveness item loaded on the proactiveness factor seems to indicate at least partial overlap between the two concepts.

Therefore, we deleted this item and applied the same EFA analysis on the remaining items. Three factors emerged again with 65.49 percent variance explained. One of the innovativeness items (“a strong emphasis on R&D and technological leadership”) was highly loaded with the proactiveness items. This particular item has provided ambiguous empirical results in the past (e.g., Brown et al., 2001). Perhaps the wording of the item to account for technological leadership (in relation to rival firms) has caused some overlap with the proactiveness variable. We therefore decided that deleting this item would mitigate any possible ambiguity in the factor analysis. We thus conducted a final EFA on the remaining ten items. With eigenvalues set equal to or greater than 1, two factors emerged with a low variance explained (58.74%). However, after analyzing the scree plot, the curve made a clear turn when the factor number was three and therefore, we set the number of factors to three. Three factors were formed with 68.54 percent variance explained. We have included the factor loadings in Table 2.

As shown in Table 2, all factor loadings are above 0.50, satisfying convergent validity testing for the three variables. No item cross-loaded with another factor by exhibiting a loading over 0.35 and the correlations between factors were lower than 0.40, indicating satisfactory discriminant validity. We conducted CFA by using the other sub-sample to further validate this dimensionality. The CFA analysis showed all factor loadings were over 0.66 with the exception of one item (“is very aggressive and intensely competitive”), which

<table>
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<tr>
<th>Table 2. Factor loadings for scale items.</th>
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<tbody>
<tr>
<td>Factor</td>
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<tr>
<td>Factor 1</td>
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<td>Factor 2</td>
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<td>Factor 3</td>
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*Note: Loadings are from Pattern Matrix.*
loaded on proactiveness at 0.43. We decided to keep it for two reasons. First, it displayed a high factor loading (0.73) on proactiveness in the EFA results. Second, when deleting this item, the reliability of proactiveness dropped from 0.76 to 0.72. We thus kept this item as part of the proactiveness variable. For the CFA analysis, the fit indices were: Chi-square = 34.77, d.f. = 28, RMSEA = 0.04, SRMR = 0.068, GFI = 0.95, AGFI = 0.90, CFI = 0.99, NFI = 0.95. The standards meet the guidelines for model fit developed by Hu and Bentler (1999). Therefore, the CFA analysis confirmed the proposed three-factor dimensionality. Using the entire sample, we found the reliability (Cronbach’s Alpha) of proactiveness, innovativeness and strategic renewal to be 0.76, 0.74 and 0.88, respectively.

4.3.2. Mediation test

The means, standard deviations, and correlations of the primary variables are presented in Table 3. As the table shows, proactiveness displays significant relationships with innovativeness (r = 0.40, p < 0.001), strategic renewal (r = 0.29, p < 0.001), and opportunity perceptions (r = 0.28, p < 0.001). Thus, the correlation matrix provides initial support for our research hypotheses. We then utilized structural equation modeling (SEM) to test our hypotheses. SEM permits the simultaneous estimation of the latent variables and their causal linkages, considering the contribution of observed variables to latent variables. Consistent with the hypotheses, we included proactiveness, opportunity perceptions, innovativeness and strategic renewal in the model, while controlling for size and entrepreneurial management. The results are presented in Fig. 1.

To verify the existence of a mediation relationship, the independent variable (proactiveness) should significantly predict the mediating variable (opportunity perceptions), and the mediating variable (opportunity perceptions) should significantly predict the dependent variable (either innovativeness and/or strategic renewal) when all the latent variables are included in one model. If the independent variable and mediating variable both significantly predict the dependent variable in this model, then a partial mediation relationship exists between those variables. If the mediating variable significantly predicts the dependent variable (but the independent variable does not significantly predict the dependent variable), then a full mediation relationship exists between those variables.

Table 3. Means, standard deviations and correlations.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Innovativeness</td>
<td>4.19</td>
<td>1.18</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2. Strategic Renewal</td>
<td>5.24</td>
<td>1.03</td>
<td>0.09</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Opportunity Perceptions</td>
<td>4.82</td>
<td>1.19</td>
<td>0.24***</td>
<td>0.33***</td>
<td>1.00</td>
<td></td>
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</tr>
<tr>
<td>4. Proactiveness</td>
<td>4.73</td>
<td>1.00</td>
<td>0.40***</td>
<td>0.29***</td>
<td>0.28***</td>
<td>1.00</td>
<td></td>
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</tr>
<tr>
<td>5. Entrepreneurial Management</td>
<td>3.99</td>
<td>1.14</td>
<td>0.18**</td>
<td>0.11</td>
<td>0.07</td>
<td>0.16**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>6. Firm Size</td>
<td>33.92</td>
<td>43.67</td>
<td>0.21***</td>
<td>-0.06</td>
<td>-0.04</td>
<td>0.06</td>
<td>-0.07</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*p < 0.05; **p < 0.01; ***p < 0.001.
Figure 1 presents the path coefficients for the key latent variables. The two control variables, firm size and entrepreneurial management, were not significantly related to either of the two dependent variables. The results indicated that proactiveness was significantly related to opportunity perceptions (path coefficient = 0.37, p < 0.05). Therefore, Hypothesis 1 was supported. Opportunity perceptions were significantly related to innovativeness (path coefficient = 0.16, p < 0.05), while proactiveness was not significantly related to innovativeness (path coefficient = 0.27, p > 0.05). Therefore, opportunity perceptions fully mediated the proactiveness-innovativeness relationship, providing support for Hypothesis 2. The SEM results also showed that opportunity perceptions (path coefficient = 0.29, p < 0.05) and proactiveness (path coefficient = 0.28, p < 0.05) were significantly related to strategic renewal. These results indicated a partial mediation of opportunity perceptions on the proactiveness-strategic renewal relationship, providing support for Hypothesis 3.

In modeling the hypothesized relationships, adding a path from proactiveness to strategic renewal (but not from proactiveness to innovativeness) provided the best model fit. This supports a partial mediation of opportunity perceptions on the proactiveness-renewal relationship, as well as a full mediation of opportunity perceptions on the proactiveness-innovativeness relationship. The fit indices were: Chi-square = 155.83, d.f. = 119, RMSEA = 0.013, SRMR = 0.035, GFI = 0.93, AGFI = 0.91, NFI = 0.93, CFI = 0.98. According to Hu and Bentler (1999), the root-mean-square error of approximation (RMSEA), which is the most sensitive index to models with misspecified factor loadings, is indicative of strong model fit when the value is lower than 0.05. Standardized root-mean-square residual (SRMR), which is the most sensitive index to models with misspecified factor covariance(s), is indicative of strong model fit when the value is lower than 0.05. The goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), normed fit index (NFI), and comparative fit index (CFI) were all higher than 0.90, suggesting strong fit for this model.

5. Discussion

Previous research on the topic of firm-level entrepreneurship has not established a clear link between the dimensions underlying firm-level entrepreneurship and the methods
entrepreneurial firms utilize to create and exploit environmental opportunities. In other words, if we assume that firm-level entrepreneurship consists of the organizational creation and exploitation of opportunities, research assessing the fundamental dimensions that allow firms to create and exploit those opportunities is still needed. To simply say a firm that was profitable last year “made more money than it lost” does not underscore the process of how that firm was actually able to achieve profitability. Likewise, to simply say an entrepreneurial firm creates and exploits opportunities does not offer much insight into the dimensions associated with the creation and exploitation of these opportunities.

This study provides insights into the manner in which organizations utilize proactiveness, innovativeness and strategic renewal to create and exploit environmental opportunities. Our results suggest a firm’s proactiveness will impact the extent to which it undertakes innovative and strategic renewal behaviors. This is consistent with the notion that proactive firms display a willingness to create opportunities and can be distinguished from other types of firms by becoming market leaders instead of followers (Zahra et al., 1999). The arguments of SCT suggest proactive firms are more likely to position themselves in situations where they perceive their organization as being able to create valuable market opportunities. The empirical results of this study suggest that entrepreneurial firms utilize proactive behaviors as a means of enhancing market opportunities and innovativeness and strategic renewal behaviors to capture these opportunities.

Given the importance of proactiveness in fostering the other dimensions of firm-level entrepreneurship, we performed post-hoc tests to assess the impact of the primary sample characteristics on proactive firm behaviors. The impact of these sample characteristics was assessed using regression analysis with proactiveness serving as the dependent variable. Having a CEO who was not the founder of the firm was negatively related to proactiveness ($B = -1.37, p < 0.01$). This suggests organizations led by founder-CEOs are more likely to behave proactively than organizations led by CEOs who did not found the company. Given that founder-CEOs tend to have more knowledge about their businesses and possess more discretion over their behaviors than do non-founder CEOs (Gomez-Mejia et al., 2001), this finding offers preliminary support that organizations led by founder-CEOs are more likely to exhibit entrepreneurial behaviors than firms that have brought in an outside CEO. The other primary sample characteristics (gender, age, education level and functional background of respondent; and age and type of company) did not possess significant relationships with proactiveness.

One of the primary contributions of this study is that it has examined the relationship between various dimensions of entrepreneurial behavior using a sample drawn from a non-Western culture. Although the application of Western management theories in other cultures is frequently challenged (Kiggundu et al., 1983; Kim and Lim, 1988), the Korean data utilized in this study supports our three research hypotheses. This provides preliminary evidence our results may be generalizable to a non-U.S. context. In addition, the current study is unique in that it examines the behaviors of SMEs in the Korean context. The vast majority of previous studies employing a Korean sample have used the Chaebol as the basic unit of analysis (Hanjoon and Berger, 2009). However, SMEs play an increasingly important role in South Korea and in economies throughout the world (Tang et al., 2008).
As such, this study offers two important benefits to future research on cross-cultural entrepreneurship. First, it offers an operationalization of firm-level entrepreneurship that can be utilized in a non-Western context. Second, it provides insights into the often-unexplored behaviors of SMEs in the Korean market.

The theoretical and empirical framework for studying firm-level entrepreneurship developed in this research offers several other important contributions. First, this framework has integrated the key elements of several commonly applied conceptualizations of firm-level entrepreneurship. Specifically, the primary arguments of three key conceptualizations of firm-level entrepreneurship were combined to provide an integrated view into the manner the entrepreneurial process exhibits itself within the organizational setting. Second, the ability of this framework to integrate these existing views has made it more comprehensive in nature, while the framework is still parsimonious enough to be easily measured. Third, the major components of this framework were empirically tested, and the results have offered preliminary support for our hypotheses when utilizing a sample of Korean SMEs. Fourth, this study has shed light into the hierarchical manner in which these three dimensions are related to one another in the creation and exploitation of environmental opportunities.

The findings of our research have practical implications for SMEs. Firm-level entrepreneurship can provide the basis for a sustainable competitive advantage (Covin and Miles, 1999) and produces other important strategic benefits for firms (Dess et al., 2003). This avenue for creating a competitive advantage is likely to be particularly relevant for SMEs because they often lack the resource endowments of their larger counterparts (Calof, 1993). Although there has been research that links a firm’s level of entrepreneurship with organizational performance (Rauch et al., 2009), there is relatively little empirical evidence that explains how SMEs can enhance their level of entrepreneurship. Based on our findings, SMEs that wish to foster a higher level of entrepreneurial activity should first concentrate on establishing a proactive strategic posture. This can be accomplished in a number of ways, including making key investments in new markets and creating a culture where the company consistently strives to act ahead of future market changes. These proactive behaviors will lead to the creation of opportunities that can be captured through innovation and strategic renewal.

There are several potential limitations of this research. First, we employed existing measurement scales to test the various dimensions of firm-level entrepreneurship. Future research aimed at determining additional scale items would help provide further support for the findings contained in this study. However, this research provides preliminary empirical support for an updated operationalization of firm-level entrepreneurship. Second, although this conceptualization of firm-level entrepreneurship has integrated several previous frameworks, it is still necessary to empirically test the discriminant and convergent validity of this framework in relation to other important conceptualizations and measures, such as those offered by Guth and Ginsberg (1990) and Stevenson and Jarillo (1990). Third, the data used in this study is cross-sectional in nature. The use of longitudinal data would provide a stronger test of the hypotheses proposed in this study and render
further clarification of the causal relationships between various dimensions of firm-level entrepreneurship.

In conclusion, this study has offered theoretical and empirical insights into the primary dimensions of firm-level entrepreneurship. It has been argued that firms utilize proactiveness, innovativeness and strategic renewal to create and exploit opportunities. Furthermore, this research has offered support for how a conceptualization of the firm-level entrepreneurial process could be operationalized and empirically tested. Three hypotheses were developed specifying the role each of these three dimensions plays in the creation and exploitation of environmental opportunities. The results suggest that proactiveness positively impacts firms’ perceptions of environmental opportunities, and these organizations then utilize innovativeness and strategic renewal in an effort to capture these opportunities. The study of firm-level entrepreneurship has played a prominent role in the organizational literature during the past several decades, and to promote future meaningful research on the topic, it is necessary for accurate and parsimonious conceptualizations and operationalizations of the entrepreneurial process to be available to researchers.

Appendix A. Survey Items

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<thead>
<tr>
<th>Innovativeness</th>
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<tr>
<td><strong>In general, the top managers of my firm favor...</strong></td>
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<tr>
<td>A strong emphasis on the marketing of tried and true products or services</td>
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<tr>
<td><strong>How many new lines of products or services has your firm marketed in the past 5 years?</strong></td>
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<tr>
<td>No new lines of products or services</td>
<td>1</td>
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<tr>
<td>Changes in product or services lines have been mostly of a minor nature</td>
<td>1</td>
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<tr>
<th>Proactiveness</th>
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<tbody>
<tr>
<td><strong>In dealing with its competitors, my firm...</strong></td>
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<tr>
<td>Typically responds to actions which competitors initiate</td>
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<td>2</td>
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<tr>
<td>Is very seldom the first business to introduce new products/services, administrative techniques, operating technologies, etc.</td>
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<td>2</td>
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<tr>
<td><strong>In general, the top managers of my firm have...</strong></td>
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<tr>
<td>A strong tendency to “follow the leader” in introducing new products or ideas</td>
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### Strategic Renewal

Indicate the extent to which your company has emphasized each of the following items.

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<tbody>
<tr>
<td>Defining your company’s mission</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
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<tr>
<td>Revising your business concept</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Revising your business model</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Redefining the industries in which your company will compete</td>
<td>1</td>
<td>2</td>
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### Opportunity Perceptions

Please circle the numbers in the following scales which best describe the attributes of your company’s principal industry:

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<tbody>
<tr>
<td>Average industry profits are very high</td>
<td>1</td>
<td>2</td>
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<td>5</td>
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<tr>
<td>The market growth rate for our industry for the last 3 years has been very rapid</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>The projected long-term (5 years or more) market growth rate for our industry indicates very rapid growth</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
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<tr>
<td>Numerous opportunities exist that our company can take advantage of</td>
<td>1</td>
<td>2</td>
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</table>

### Competitive Aggressiveness

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<tbody>
<tr>
<td>My firm makes no special effort to take business from the competition</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
</tr>
<tr>
<td><strong>In dealing with its competitors, my firm …</strong></td>
<td></td>
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<tr>
<td>Typically seeks to avoid competitive clashes, preferring a ‘live-and-let-live’ posture</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My firm is very aggressive and intensely competitive</td>
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<tr>
<td>Typically adopts a very competitive, ‘undo-the-competitors’ posture</td>
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### Entrepreneurial Management

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<tbody>
<tr>
<td>As we define our strategies, our major concern is how to best utilize the resources we control</td>
<td>1</td>
<td>2</td>
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<td>4</td>
<td>5</td>
</tr>
<tr>
<td>We limit the opportunities we pursue on the basis of our current resources</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>The resources we have significantly influence our business strategies</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
References


