

EMPIRICAL EVIDENCE BETWEEN CORPORATE ENTREPRENEURIAL ORIENTATION AND PERFORMANCE: A PERSPECTIVE OF MULTIDIMENSIONAL CONSTRUCT

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Based on the multidimensional construct, we proposed a mode of entrepreneurial orientation and firm performance in a sample of Taiwanese SME firms. Using survey data from 267 firms, we reached the following conclusions in this paper: (1) Innovativeness positively affects firm performance. (2) Proactiveness is positively related to firm performance. (3) Risk-taking is positively related to firm performance. Overall, the entrepreneurial orientation is positively related to the firm's performance.

Keywords: *entrepreneurship orientation; innovativeness; proactiveness; ³ risk-taking; performance*

1. Introduction

The dimensions of EO usually show high intercorrelations with one another. Therefore, most studies combined these dimension into one single factor. (Bhuiyan, Menguc, & Bell, 2005; Richard, Barnett, Dwyer, & Chadwick, 2004; Naman & Slevin, 1993; Walter, Auer, & Ritter, 2006; Wiklund & Shepherd, 2003). However, other theoretical work has proposed a contingency framework for exploring the relationship between EO and organizational performance and suggested the usefulness of considering EO (innovativeness, proactiveness, and risk taking) as a multidimensional construct (Lumpkin and Dess, 1996) rather than as a uni-dimensional construct. The basic premise underlying these arguments is each sub-dimension of entrepreneurial orientation may have a different relationship with key outcome variables, such as firm performance (Lumpkin & Dess, 2001).

We examine three multi-dimensions of entrepreneurial orientation (EO). We draw on prior theory and empirical research into these components of EO, as well as examples from business practice, to provide a rationale and justification for exploring two related research questions. We aim to explore the independence of the innovativeness, proactiveness and risk-taking; and their relationship to firm performance.

In an environment of rapid change and shortened product and business model lifecycles, future profit streams from existing operations are uncertain and businesses need to constantly seek out new opportunities. Therefore, firms may benefit from adopting an EO. Thus, conceptual

arguments suggest EO leads to higher performance (Rauch, Wiklund, Lumpkin & Frese, 2009; Ireland, Hitt & Simmon, 2003).

2. Literature Review and Hypotheses

2.1 Entrepreneurship Orientation (EO)

An entrepreneurial firm is one engaging in product-market innovation (Schumpeter, 1934; Cole, 1946); undertakes somewhat risky ventures (Collins & Moore, 1970; Miller & Friesen, 1978), and is the first to come up with “proactive” innovations (Miller & Friesen 1978; Mintzberg, 1973). Miller (1983) views entrepreneurship as a composite weighting of three variables.

The dimensions of EO usually show high intercorrelations with one another, ranging from $r=.39$ to $r=.75$. Therefore, most studies combined these dimensions into one single factor (Bhuan, Menguc, & Bell, 2005; Richard, Barnett, Dwyer, & Chadwick, 2004; Naman & Slevin, 1993; Walter, Auer, & Ritter, 2006; Wiklund & Shepherd, 2003). These aggregated measures of EO are based on the assumption all three sub-dimensions equally contribute to the overall level of a firm’s entrepreneurial orientation in all situations.

Stam & Elfring (2008) viewed entrepreneurial orientation as the simultaneous display of innovativeness, proactiveness, and risk taking and thus focus on the performance implications of a firm’s overall entrepreneurial posture. Earlier theoretical work proposed a contingency framework for exploring the relationship between EO and organizational performance and suggested the usefulness of considering EO (autonomy, innovativeness, risk taking, proactiveness and competitive aggressiveness) as a multidimensional construct (Lumpkin and Dess, 1996).

However, a growing body of literature suggests each of these three sub-dimensions may uniquely contribute to the entrepreneurial nature of a firm (Lumpkin & Dess, 1996). The basic premise underlying these arguments is each sub-dimension of entrepreneurial orientation may have a different relationship with key outcome variables, such as firm performance (Lumpkin & Dess, 2001). For example, risk taking has been shown to possess a curvilinear relationship with performance (Begley & Boyd, 1987) while innovation and performance have shown a positive linear relationship (Shane, 1993). EO or certain dimensions thereof may differ across countries (Knight, 1997; Thomas & Mueller, 2000). The relationship between EO and performance is still an open question.

2.2 The Multi-dimensional Construct of EO

Miller (1983) stated an entrepreneurial firm was one that “engages in product market innovation, undertakes somewhat risky ventures and is first to come up with ‘proactive’ innovations, beating competitors to the punch”. Building on prior literature and Miller’s definition, scholars (Miles and Arnold, 1991; Morris and Paul, 1987; Smart and Conant, 1994) have used the term “entrepreneurial orientation” to describe a fairly consistent set of related activities or processes. Miller (1983) definition can be broken down into three dimensions-innovativeness, risk taking, and proactiveness.

Dess & Lumpkin (1996) proposed two extra dimensions critical to the EO concept, namely, competitive aggressiveness and autonomy. Here, we define an entrepreneurial orientation as the processes, structures, and behaviors of firms characterized by innovativeness, proactiveness, and risk taking (Covin & Slevin, 1989; Miller, 1983). Knight (1997) & Thomas & Mueller (2000)

have indicated EO or certain dimensions thereof may differ across countries.

Innovativeness Innovativeness refers to a firm's efforts to find new opportunities and novel solutions. It involves creativity and experimentation, resulting in new products, new services, or improved technological processes. However, in today's climate of rapid change, effectively producing, assimilating, and exploiting innovations can be an important avenue for achieving competitive advantages.

Innovations come in many different forms. Technological innovativeness chiefly consists of research and engineering efforts aimed at developing new products and processes. Product-market innovativeness includes market research, product design and innovations in advertising and promotion. Administrative innovativeness refers to novelty in management systems, control techniques, and organizational structure.

Innovativeness reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative processes, possibly resulting in new products, services or technological processes (Lumpkin & Dess, 1996). The invention or recognition of innovative concepts could be an individual activity, simultaneously; it could be a collective achievement (Van de Ven, 1986). Thus, organizations frequently accumulated, codified and stored individual knowledge by various means (in manuals, databases, patents, etc.) for collective purposes for current and future use.

For strategic managers of entrepreneurial firms, however, successfully developing and adopting new innovations can generate competitive advantages and provide a major source of firm growth (Hitt, Hoskisson, & Kim, 1997).

Proactiveness Venkatraman (1989a) defined proactiveness as "seeking new opportunities which may or may not be related to the present line of operations, introduction of new products and brands ahead of competition, strategically eliminating operations which are in the mature or declining stages of life cycle" (Miller and Friesen, 1978).

Many researchers pointed out searching for related messages, information, and opportunity automatically would be a key point to entrepreneurial success (Ardichvili, Cardozo, & Ray, 2003). Venkatraman (1989a) proposed proactiveness could be the process of pursuing future developments and entrepreneurial activities. Some market leaders, to maintain their position, pay more than the other competitors, such as R&D costs and higher budget on promotion campaigns. In contrast, market followers save on costs and hassles compared with market leaders.

Proactiveness and passiveness are two ends of the continuum of proactiveness (Lumpkin & Dess, 1996). Passiveness means the indifference and inability shown when facing market opportunities. Proactiveness includes initiative endeavor and applying existing advantages to shape the environment and respond to the competitive challenges (Chen & Hambrick, 1995). In sum, autonomy, pursuit of opportunities, and willingness to face challenges are necessary factors in entrepreneurial orientation (Covin & Slevin, 1989; Miller, 1983).

Risk-taking Baird & Thomas (1985) defined risk taking as "venturing into the unknown; committing a relatively large portion of assets; borrowing heavily". For unknown risky actions, uncertainties and risks are generated, such as personal risks, social risks and psychological risks (Gasse, 1982). Miller & Friesen (1978) defined it as the degree to which managers are willing to make large and risky resource commitments. In making decisions and taking action without certain knowledge of probable outcomes, some undertakings may also involve making substantial resource commitments in the process of venturing forward (Dess & Lumpkin, 2005).

Many researchers proposed ideas for measuring risk taking (Brockhous, 1982). Brockhous suggested the indicators include risk inclination, which refers to the positive ratio produced from a risky situation. Within the risky behavior model, risk taking is divided into two categories: risk perception, risk preferences, and risk propensity. Among them, risk preference can further be explained as the desire to avoid or pursue risks. Other indicators include how the risk-taking issues begin to be recognized.

Firm Performance However, even some firms that are strong in only a few aspects of EO can be very successful (Lumpkin & Dess, 2001). Performance is a multidimensional concept and the relationship between EO and performance may depend on the indicators used to assess performance. A common distinction is between financial and nonfinancial measures. Nonfinancial measures include goals such as satisfaction and global success ratings made by owners or business managers.

Financial measures include assessments of factors such as sales growth and return on investments (Smith, 1976). In terms of financial performance, studies can rely on self-reported or archival data collected from secondary sources. Self-reported data may offer greater opportunities for testing multiple dimensions of performance, such as comparisons with competitors (Wiklund & Shepherd, 2005). It appears reasonable to assume the relationship should be higher for EO and financial performance than for EO and nonfinancial performance (Rauch, et al., 2009). Their study results clearly show businesses are likely to benefit from pursuing an EO.

However, the magnitude of the relationship seems to vary across studies. Some studies have found businesses adopting a strong EO perform much better than firms not adopting an EO (Covin & Slevin, 1986; Hult, Snow, & Kandemir, 2003; Lee et al., 2001; Wiklund & Shepherd, 2003), other studies reported lower correlations between EO and performance (Dimitratos, Lioukas, & Carter, 2004; Lumpkin & Dess, 2001; Zahra, 1991) or were even unable to find a significant relationship between EO and performance (Covin et al., 1994; George, Wood, & Khan, 2001). Summarizing the above discussions, a hypothesis is made accordingly.

Hypothesis 1: Corporate entrepreneurial orientation is associated with firm performance.

Hypothesis 1-1: Innovativeness is positively associated with firm performance.

Hypothesis 1-2: Proactiveness is positively associated with firm performance.

Hypothesis 1-3: Risk-taking is positively associated with firm performance.

3. Methodology

3.1 Sample Selection and Research Setting

The sample used in this study was collected from Small-to-Medium Sized Enterprises (SMEs). To avoid micro-sized firms (1-4 employees), the size range of firms in this study was between 5 and 500 employees. Consistent with previous studies on entrepreneurial orientation, surveys were addressed to either the owner or general manager of each organization. All these firms have been in business for at least 5 years. Therefore, they had all survived the most critical years for small firms (Pickle & Abrahamson, 1976) and their business practices presumably approximated those of established firms rather than new ventures (Covin & Slevin, 1989).

Further, we also collected measures of firm performance for the one-year period after

collecting the data on the independent variables. We mailed the survey to 1,200 founders or presidents of Taiwan's SME firms in China, and received 299 responses, for a response rate of 24.91%. We excluded 32 incomplete responses, resulting in a total of 267 responses. The average firm age among the respondent firms was 12 years, and the average number of employees was 42. The educational level of the founder or manager was mainly college or university graduate level (173 respondents, 64.8%). Their average sales in 2008 were from 0.9 to 2.1 million.

3.2 Measures

The most widely utilized operationalization of EO in both the entrepreneurship and strategic management literature was developed by Covin & Slevin (1989), based on the earlier work of Khandwalla (1977) and Miller & Freiesen (1982). Besides, we also use Harman's one-factor test to examine common method various (Podsakoff & Organ, 1986). There is no significant common method various.

Innovativeness. Covin & Slevin (1989) 3-item scale was adopted to measure innovativeness. The scale in Chinese was originally in English. We used translation and back-translation (Brislin, 1980), which was done independently by two Chinese bilingual academics. We then gave the English and Chinese versions of the questionnaires to yet another four Chinese academics to check whether the Chinese version was accurate. Respondent were asked to rate on 5-point Likert type scale (1= strongly disagree, 5= strongly agree): (1) In general, the top managers of my firm strongly emphasize R&D, technological leadership, and innovation. (2) Many new lines of products or services had been marketed in the past 5 years. (3) Changes in product or service lines were usually quite dramatic. The coefficient alpha was .987.

Proactiveness. Covin & Slevin's (1989) 3-item scale was adapted to measure innovativeness. Respondents were asked to rate on 5-point Likert type scale (1= strongly disagree, 5= strongly agree): (1) in dealing with its competitors, my firm typically initiates actions which competitors then respond to. (2) Is very often the first business to introduce new products or services, administrative techniques, operating technologies, etc. (3) typically adopts a very competitive, 'undo-the-competitors' posture. The coefficient alpha was .987.

Risk-taking. Covin & Slevin (1989) 3-item scale was adapted to measure innovativeness. Respondent were asked to rate on a 5-point Likert type scale (1= strongly disagree, 5= strongly agree): (1) In general, the top managers of my firm have a strong proclivity toward high-risk projects (with chances of very high returns). (2) In general, the top managers of my firm believe, owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives. (3) When confronted with decision-making situations involving uncertainty, my firm typically adopts a bold, aggressive posture to maximize the probability of exploiting potential opportunities. The coefficient alpha was .987.

Firm Performance. We will collect our measure of revenue through a follow-up survey sent to each CEO one year after the original data collection. We will ask each CEO to identify the percentage of sales for the past year driven by the sales of products or services released in that year. Firm performance was measured by the three 5-point Likert-scales: (1) On average, your growth in sales is better you're your competitors in the past three years; (2) On average, your growth in profit is better your than competitors in the past three years;(3) You have more patents, new products and services in the past three years. The Cronbach's alpha was .916.

4. Results

Using multiple regression techniques, we set out to test the hypothesized relationships. It is expected to identify the effect of EO as an independent variable of firm performance. There is no serious multicollinearity among dependent and independent variables in this sample. Table 1 provides the descriptive statistics, correlations, and scale reliabilities for the variables in the study. The standard deviation of each variable is above 0.5. Further, our constructs were conceptually related and could be expected to be associated in a substantive way.

Table 1
Descriptive Statistics, Correlations, and Reliabilities

	Mean	S.D	1	2	3	4
1. Innovativeness	3.95	.642	(.987)			
2. Proactiveness	3.22	.534	.327**	(.987)		
3. Risk-taking	3.94	.572	.468**	.416**	(.971)	
4. Performance	3.79	.520	.621**	.449**	.657**	(.916)

^a n=267. Internal reliabilities (alpha coefficients) for the overall constructs are given in parentheses on diagonal.
*p<.05, **p <.01, ***p<.001

Table 2 shows the regression results. The results show hypothesis 1 was supported. It was a positive and strong predictor of the firm performance in terms of innovativeness [$\beta=.375$, $p<.001$]. As previous EO literature indicates, our results also confirmed entrepreneurial orientation was effective for firm performance.

Table 2
Regression Results of Entrepreneurial Orientation to Performance

Dependent variable →		Performance
Independent variable ↓	β	
Innovativeness		.375***
Proactiveness		.152**
Risk-taking		.418***
F		118.944***
R ²		.576
Adjusted R ²		.571

a. Dependent variable: performance *p<.05, **p<.01, ***p<.001

Hypothesis 2, stating proactiveness is positively associated with performance, was also supported [$\beta = .152, p < .05$]. Similarly, Hypothesis 3, stating risk-taking is positively associated with performance, was supported [$\beta = .418, p < .001$].

5. Discussion and Conclusions

The formulation of the EO model and the original empirical tests were mainly done in the North American context (Covin & Slevin, 1989; Lumpkin & Dess, 1996; Miller, 1983). Clarifying the extent to which these results replicate or not across a wide set of countries may not only contribute to future EO research but more generally to theorizing about entrepreneurship because it helps in establishing the boundary conditions of theories (Rauch, Wiklund, Lumpkin, & Frese, 2009).

This study has provided important insights into the different relationships between the three dimensions of entrepreneurial orientation and firm performance. Our findings suggest, for entrepreneurial firms to maximize their overall performance, they should match their level of innovativeness, proactiveness, and risk-taking with the characteristics of the external environment. The overall entrepreneurial orientation is positively related to firm performance. This finding agrees with the research results from Wiklund (2000), Covin & Covin (1990) and Lumpkin & Dess (2001).

The finding of innovation's positive linkage to firm performance is an insightful implication for SMEs. Innovation might help SMEs develop new markets, such as new market opportunities in China. It also increases profitability, for example, shifting the products with lower profit margins to China. Meanwhile, innovation helps SMEs prolong the product-life-cycle of mature/declining products or services. In an earlier stage, SMEs mainly focus on gaining cheaper resources.

Most of the Taiwanese SMEs in China are manufacturers, and most are OEM manufacturers and components suppliers. Comparatively, the profit margins are smaller for them. Sometimes, companies have to fight for orders by cutting prices. Therefore, cost issues are critical factors for these Taiwanese SMEs. Besides, for Taiwanese SMEs to compete in an unfamiliar environment, especially in a transitional country like China, over aggressive tactics might lead to retaliation from local competitors. One of the Taiwanese SMEs owner said "keeping a low-profile is the best policy in China. If you are doing too well, sometimes, your competitors will falsely accuse you of something, such as tax evasion. In the end, you might be proven to be innocent; however, all the hassles will cause you great difficulty."

The other finding concerns the significance of proactiveness in entrepreneurial orientation on firm performance. New market opportunities and new product or service lines are the optimistic outcomes of being proactive. Unlike large enterprises, SMEs must have foresight and always be prepared for future changes. Therefore, SMEs should consider ways to demonstrate proactiveness, and then they can overcome challenges and difficulties when expanding their business.

6. References

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