

# Corporate entrepreneurship: a test of external and internal influences on managers' idea generation, risk taking, and proactiveness

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**Abstract** Because upper managers have the responsibility to set the corporate entrepreneurship agenda, their entrepreneurial characteristics matter to a firm's successful implementation of corporate entrepreneurship. This study investigated influences on the idea creation, risk taking, and proactiveness perceptions of upper managers in a random sample of 105 Thai manufacturing firms. Results indicate that these managers' idea generation was influenced by the type of product produced, the size of the company, and the extent of firm support for individual entrepreneurship. Managerial risk taking was associated with firm size and extent of support for personal entrepreneurship. Managerial proactiveness as associated only with the scope of firms' competition, firm size, organizational entrepreneurial climate and support for personal entrepreneurship. Results suggest that firm context can influence the basis for corporate entrepreneurship.

**Keywords** Corporate entrepreneurship · Innovation · Competitiveness

Corporate Entrepreneurship (CE) has long been recognized as a potentially viable means for promoting and sustaining corporate competitiveness (Covin and Miles 1999). According to Zahra (1995), CE is the sum of a company's innovation, renewal and venturing efforts. Morris and Kuratko (2002) indicate that CE represents a framework for the facilitation of ongoing change and innovation in established organizations. It provides a blueprint for coping effectively with the new competitive realities that companies encounter in the global marketplace.

Entrepreneurial organizations have been conceptualized as possessing three main characteristics: innovation, risk-taking, and proactiveness (Covin and Slevin 1991;

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Miller 1983; Miller and Friesen 1982). Innovation 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). Risk-taking is the “degree to which managers are willing to make large and risky resource commitments i.e., those which have a reasonable chance of costly failure” (Miller and Friesen 1982). 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 1996).

Conscious efforts to instill entrepreneurial practices within corporations are intended to enhance the ability of the firm to produce or acquire new products or services and manage the innovation process. Innovative efforts undertaken within a pre-existing organization come about through corporate strategy identified by the top management team (TMT). The ability to consistently and systematically create a stream of incremental and radical innovations is wholly dependent on an appropriate creative culture replete with reward systems and legitimizing processes that encourage the entrepreneurial spirit, a process called “strategic entrepreneurship” (Herbert and Brazeal 1999; Hitt et al. 2001). Following Hitt et al. (2001), this study suggests that innovation, risk-taking, and proactiveness, as an internal processes associated with CE, might be viewed as an extension of programs of employee participation that reflect the overall organization climate of entrepreneurship and the organization’s support for individual entrepreneurial orientations within the organization.

CE is not only a result of the internal climate and support of entrepreneurship orientation. Damanpour (1988: 561) indicates that all organizations innovate in response to their environments, and “studies of innovation should recognize the types of organizations operating in different environments.” Competitive context influences how organizations view their markets and configure their product development and delivery technologies in response (Pfeffer and Salancik 1978; Lengnick-Hall 1988). Over time, Mintzberg (1987) suggests, firms develop strategic patterns (i.e., streams of actions) and positions (i.e., specific competitive postures within an environment) that reflect the alignment and arrangement decisions they make. It can be expected, therefore, that employee orientations related to corporate entrepreneurship reflect differences in external opportunities and internal resource allocation (Rydz 1986).

This study argues that for a firm to establish a culture of innovation, management must exhibit the characteristics of innovators that can be taught to others. The influence of external and of internal factors on CE, i.e., idea generation, risk taking, and proactiveness by managers, have been studied primarily independently and in firms competing in established economies. This study investigates whether the influences on management entrepreneurial orientation toward risk taking, idea generation, and proactiveness, suggested by previous research, can be confirmed in firms competing in an emerging economy.

### **Corporate entrepreneurship: tool for the new paradigm**

The global economy is creating profound and substantial changes for organizations and industries throughout the world (Morris and Kuratko 2002). The rapid change

and diffusion of new technology, along with substantial competition in domestic and international markets, have placed increasing importance on firms' ability to innovate and introduce new innovations into the marketplace (Franko 1989). Dess et al. (2005) found that intensifying global competition, corporate downsizing and delayering, rapid technological progress, and many other factors have heightened the need for organizations to become more entrepreneurial in order to survive and prosper. The challenge for organizations in today's marketplace is to build competitive advantage. Continuous innovation (Hitt et al. 2001) and an ability to continually redefine the competitive playing field (Morris and Kuratko 2002) are among the skills that will define corporate performance in the global economy of the 21st century. Few firms will be exempt.

According to Hornsby et al. (1999), CE is a concept that has acquired more and more importance in the global economy. The need to pursue CE has arisen from a variety of pressing problems including: technological changes, innovations, and improvements in the marketplace (Miller and Friesen 1982), perceived weakness in the traditional methods of corporate management (Hayes and Abernathy 1980), continual downsizing of organizations seeking greater efficiency (Morris and Kuratko 2002), the loss of entrepreneurial-minded employees who are disenchanted with bureaucratic organizations (Pinchot 1985), and growing levels of international competition (Kuratko and Hodgetts 1998).

CE has been recognized as a potentially viable means for promoting and sustaining corporate competitiveness (Covin and Miles 1999). Miller (1983), Guth and Ginsberg (1990), and Lumpkin and Dess (1996) have noted that corporate entrepreneurship can be used to improve competitive positioning and transform corporations, markets, and industries as opportunities for value-creating innovation are developed and exploited. CE activities have been found to enhance a company's success by promoting product and process innovations (Burgelman 1983, 1991).

Kuratko et al. (2005: 278) note that “Upper-level managers have multiple and critical roles in CE activity. These managers are responsible for the articulation of an entrepreneurial strategic vision and instigating the emergence of a pro-entrepreneurship organizational architecture.” Further, Wakkee et al. (2008) found that coaching by managers has a direct effect on the entrepreneurial behavior of non-managerial employees.

## Hypotheses

Van de Ven (1988) uses the term ‘management of innovation’ to explain CE phenomena. A first step in describing CE is to determine the dimensions of individual entrepreneurship that translate to CE. Miller (1983) stated that there was a continual need for innovation, constructive risk-taking, and pursuit of new opportunities. Similarly, Covin and Slevin (1991) suggest CE is based on product innovation, risk-taking propensity, and proactiveness. The empirical evidence is compelling that these CE activities can improve organizational growth and profitability (Kuratko et al. 1990; Lumpkin and Dess 1996) and that their impact may increase over time (Zahra and Covin 1995). Other dimensions have been suggested by various studies but there does seem to be a consensus on these three

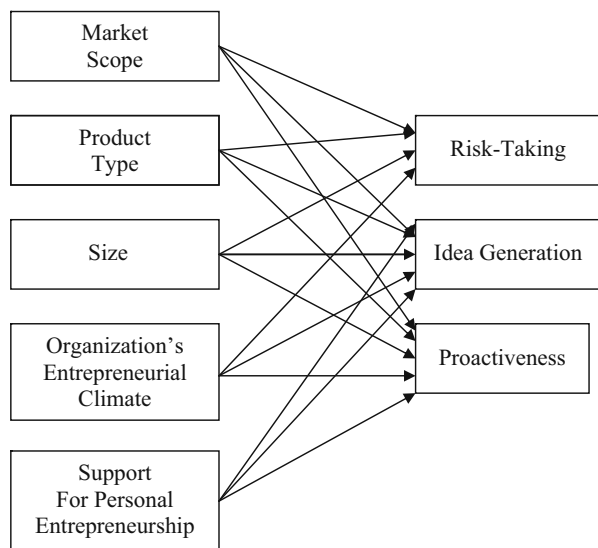
inputs (Zahra 1991). The purpose of this study is to investigate factors associated with managers in Thai manufacturing firms demonstrating the CE behaviors of risk-taking, idea-generating, and innovating, as depicted in Fig. 1.

### Market scope

Porter (1985) describes how the choice of competitive scope, or the range of a firm's activities, can play a powerful role in determining competitive advantage. Competitive advantage in one industry can be strongly enhanced by interrelationships with business units competing in related industries, if these interrelationships can actually be achieved. Interrelationships among business units are the principal means by which a diversified firm creates value, and thus provide the underpinnings for corporate strategy. Moreover, Ghoshal and Bartlett (1999), Gupta and Govindarajan (2001), and Hamel and Prahalad (1993) point out that firms seek entrepreneurial advantage by leveraging competencies globally across their business units. The choice of competitive scope is critical to competitive advantage.

Therefore, it is suggested in this study that the scope of competition, domestic only, international only, or both domestic and international, might affect the relationship among context and support and attitude. Business organizations are facing new challenges from international trade. Michie and Padayachee (1997) stated that intensified international competition and the growth of some protectionist measures among some major industrialized countries have combined to make entry into external markets difficult while at the same time pressure is brought to bear on developing countries by institutions such as World Trade Organization to open their domestic markets to imports. To survive in the global market, business organizations are required to develop new management structure.

**Fig. 1** Research model



Globalization is a major factor in creating substantial changes in organizations throughout the world. These organizations constantly face changes in markets, consumers, and competitors. Globalization and explosive growth are the key factors in effecting these challenges. As a result, organizations have been forced to rethink how they produce and deliver products and services (Kemelgor 2002). Huse et al. (2005) and Kathuria and Joshi (2007) found that a firm's competitive context, particularly competing in international markets, significantly affected firm innovation.

There is a general recognition that incremental innovations are essential in maintaining an organization's well being (Herbert and Brazeal 1999). However, true competitive advantage arises from radical innovations (Kemelgor 2002). Hence, creating and managing an organization is the challenge facing business organizations where multiple innovations can occur on a sustained basis. Chittipeddi and Wallett (1991) suggested that the organizational archetype of the future will be entrepreneurial. Firms competing in global markets will require managers who continuously generate new ideas, are willing to take risks, and are proactive in bringing innovations to market. This study portrays that CE is the ideal strategy for creating and managing these organizations in a globalized context, suggesting the following hypotheses:

- H1a: Managerial risk-taking will be positively associated with company market scope.
- H1b: Managerial new idea creation will be positively associated with company market scope.
- H1c: Managerial proactiveness will be positively associated with company market scope.

### Product market

Innovative companies tie their visions to the realities of the marketplace (Quinn 1985). Parsons (1992) indicated that innovative companies show an important characteristic of focusing on customer value rather than technological advance or clever marketing. Market knowledge is an important driver of innovativeness (Drucker 2002; Hurley and Hult 1998). Sciascia et al. (2006: 33) found that a firm's market orientation might be the most significant antecedent to corporate entrepreneurship: "managers concerned with maintaining or imbuing an entrepreneurial spirit within their company may find it appropriate to begin by examining the firm's market orientation and marketing operations." Seborá et al. (1994) found that innovative activity is affected by the type of product manufactured. Products manufactured for consumer markets are likely to differ in their requirements for innovation when compared to goods manufactured for industrial markets. In industrial markets, product innovations require the involvement of more members of the buyer's organization and take more time, reducing the incentive to innovate. Many ideas for innovations are user generated (von Hippel 1978). McCarthy and Perreault (1987:204) note: "Sometimes the buyer will design a product—and simply ask the supplier to build and deliver it at a fair price." Wind and Thomas (1980) indicate that buying is a group process in industrial markets. Industrial buyer concentration promotes the reduction of uncertainty through contracting (Williamson

1964) and reduces distribution innovation (Peter and Donnelly 1986). The close relationship and rational process suggest that industrial buyers will be more concerned with sustaining current relationships and maintaining current products than with changes in either (Webster 1978).

Attitudes toward idea generation, risk and proactiveness are suggested to differ in these two market types. Firms serving industrial markets, more disposed to standardization and cost control, see innovation as change and, therefore, as inherently riskier with less reward for such risks. These firms appear to increase performance by seeking to reduce uncertainty. They tend to be concerned with innovation that affects both the provider's and the user's operations (Mahin 1991). Due to the close, often interdependent, relationships in industrial markets, innovation tends to be more controlled, requiring more time and formal structures for approval and recognition (Webster and Wind 1972). And, due to the constant change in consumer preferences and tastes, proactive implementation will be expected to be more important in consumer product markets. This suggests the following hypotheses:

- H2a: Managerial risk-taking will be positively associated with companies producing goods for consumer markets more than with companies producing products for industrial markets.
- H2b: Managerial new idea creation will be positively associated with companies producing goods for consumer markets more than with companies producing products for industrial markets.
- H2c: Managerial proactiveness will be positively associated with companies producing goods for consumer markets more than with companies producing products for industrial markets.

## Size

It is also possible that firm size might affect the relationship between organizational context and support and entrepreneurial attitudes. The influence of firm size on CE has been discussed by several researchers. Nielsen et al. (1985) argue that CE occurs both in large and small firms. In the past, researchers used narrower definitions of CE, excluding smaller companies (Antoncic and Hisrich 2001). More recent studies have been extended to smaller firms. Smaller organizations act different with regard to innovation and entrepreneurial behavior (Kaufmann and Tödtling 2002). Sadler (2000), Quinn (1985), Prokopenko and Pavlin (1991), and Jennings (1994) suggest that smaller, flexible organizations are better entrepreneurship incubators than larger, bureaucratic organizations.

Large organizations generally use rigid rules and procedures to administer the routine tasks of the organization, which in turn stifle innovative and entrepreneurship (Jennings 1994). Liebcap (1986) added that organizational size has an incremental impact upon entrepreneurship. Large organizations tend to plan strategy and are not as prepared as smaller organizations to implement spontaneous innovation. Saxena (1991) indicated that size by itself is not an obstacle to entrepreneurship but rather the bureaucracies and conservatism traditionally associated with larger organizations are. Being part of an established organization, corporate entrepreneurs encounters

barriers and frustrations very different from the ones faced by entrepreneurs, suggesting the following hypotheses:

H3a: Managerial risk-taking will be negatively associated with company size.

H3b: Managerial new idea creation will be negatively associated with company size.

H3c: Managerial proactiveness will be negatively associated with company size.

### Entrepreneurial climate

Recent integrative models of CE have indicated that individual, organizational and environmental factors are related to CE behavior (Covin and Slevin 1991; Birkinshaw 1999; Antoncic and Hisrich 2003). Individual propensity to act entrepreneurially is a function of motivation (McClelland 1967; Baum and Locke 2004), which in turn is a function of the individual's innate personality and the context in which he or she is working (Birkinshaw 1999). The major thrust of entrepreneurship is to develop the entrepreneurial spirit within organizational boundaries, thus allowing an atmosphere of innovation to prosper (Kuratko and Hodgetts 1998).

Research supports the view that CE activity is a function of organizational context (Birkinshaw 1999; Morris and Kuratko 2002). Birkinshaw (1999) defined organization context as a set of administrative and social arrangements that shape the behaviors of individuals in the organization over which top management has some control. The essence of Birkinshaw's (1999) definition is that entrepreneurial initiative, like any other behavior, is a function of the setting in which it occurs, and that within an organization many of the critical success factors for CE are under the direct and indirect influence and control of top management. Factors that influence and shape the behavior of people in an organization includes reward systems, reporting relationships, access to financial resources and a host of other factors which together constitute the organizational context.

Despite the configuring of corporate entrepreneurial activities or even the intended content of actions, innovative efforts undertaken within a pre-existing organization come about through corporate strategy identified by the TMT. Radical or frame-breaking innovations are born out of the TMT's ability to expand or manipulate the organizational strategic context (Hodgkinson and Wright 2002). Thus, the ability to consistently and systematically create a stream of incremental and radical innovations is wholly dependent on an appropriate creative culture replete with reward systems and legitimizing processes that encourage the entrepreneurial spirit, a process called "strategic entrepreneurship" (Brazeal and Herbert 1999; Hitt et al. 2001). While some consistency in outlining parameters seems to be evident in the field of CE, only a few validated measures of firm-level entrepreneurship exist, which is a major obstruction to concentrated research efforts (Brown et al. 2001).

The role of the TMT has been viewed as a collective facilitator of entrepreneurial activities pursued at lower levels in the organizational structure. Dynamic executive leadership may prove to be a crucial factor to energize the organizational context with opportunity-seeking values and cultural norms, since innovations created by



lower level employees reside within the existing strategic context of the organization and the operating environment as defined by the TMT (Herbert and Brazeal 1999; Simsek et al. 2005). Top management is capable of defining, modifying or dramatically altering the strategic context of the company, all of which have strong implications for success and survival. The influence of organizational atmosphere leads to the following hypotheses:

- H4a: Managerial risk-taking will be positively associated with company entrepreneurial climate.
- H4b: Managerial new idea creation will be positively associated with company entrepreneurial climate.
- H4c: Managerial proactiveness will be positively associated with company entrepreneurial climate.

### Support

CE is important for organizational survival, growth, profitability, and renewal. Evidently, various types of organizations are promoting entrepreneurial activities within their staff and management teams. Management empowers to lead the organization with a clear vision and direction through their activities. Previous studies indicate that managerial support as well as reward and resource availability affect entrepreneurial activities within the organization (e.g., Hornsby et al. 1993; Antoncic and Hisrich 2001).

Therefore, an important organizational element that is beneficial for CE is management support for entrepreneurial activities. This support includes TMT involvement (Merrifield 1993), encouragement (Hisrich and Peters 1984), support, commitment, style, and the staffing and rewarding of venture activities (MacMillan et al. 1986).

Management support refers to the willingness of management to facilitate and promote entrepreneurial activities in the organization (Quinn 1985; Hisrich and Peters 1986; MacMillan et al. 1986; Stevenson and Jarillo 1990; Damanpour 1991; Pearce et al. 1997; Hornsby et al. 1999; Van der Panne et al. 2003). These theorists believe support can come in various forms including championing ideas, providing necessary resources or expertise, or institutionalizing the entrepreneurial activity within the firm's systems and processes. A firm's ability to increase its entrepreneurial character is strongly determined by the compatibility of its management practices with its entrepreneurial intentions, as indicated by Barringer and Bluedorn (1999) and Zahra et al. (1999). Some of these practices relate to leadership in the strategic management practices of the organization (Covin and Slevin 1991; Zahra 1993; Herbert and Brazeal 1999; Barringer and Bluedorn 1999). Strategic leadership refers to the facilitation of managers who commit to both incremental and radical innovations as strategically important to the competitiveness of the organization and tactically important to its operations and process (Kemelgor 2002).

Chandler et al. (2000) note that there is a burgeoning literature on organizational control systems such as pay-for-performance that could lead to innovation activity by employees. These authors suggest, citing Oliver and Anderson (1995) that, paradoxically, while pay-for-performance may encourage in-role



behavior, it may also discourage behaviors not linked to specific rewards. Therefore, the reward system has a tremendous impact on entrepreneurial activity, both because it imminently increases such activity and it discourages innovation activity by rewarding other behavior. Further, these authors indicate that expectancy theory (Vroom 1964) predicts that individual effort requires that the individual must believe that goal accomplishment will lead to a reward. Therefore, the perception that organizational systems support innovation activity seems likely to be an essential factor for an individual's motivation to engage in such activities. The significance of the role of support for entrepreneurship suggests the following:

- H5a: Managerial risk-taking will be positively associated with company support for entrepreneurship.
- H5b: Managerial new idea creation will be positively associated with company support for entrepreneurship.
- H5c: Managerial proactiveness will be positively associated with company support for entrepreneurship

## Methodology

### Research setting

According to Looney (2004), entrepreneurship in Thailand suffered a very serious blow in the economic crisis of 1997. Not only did the number of entrepreneurial activities decline significantly in 1997 and 1998, but in the aftermath of the crisis, entrepreneurship now must compete in a losing battle against foreign competitors around the region, such as China, which present opportunities for entrepreneurial investment, as a result of expanding liberalization in the context of globalization. Thailand, even before the crisis, was facing the problem of long run competitiveness (Kittiprapas 2000). If it is true that Asian economic growth has been built on the use of inputs from resource mobilization rather than technical progress and efficiency, then, it is already time to address this weakness. This can only be accomplished through continuous innovation and the creation of new ideas. Building a country's long run competitiveness and increasing efficiency would lead to more sustainable growth of the Asian region (Kittiprapas 2000). Therefore, to succeed in the global marketplace for new goods and services, Thai corporations must learn how to innovate and develop new businesses better and faster than their competition. To do this they require a special entrepreneurial strategy—one that is much different from the traditional strategy of Thai business—to achieve the maximum advantage in global competition. According to previous studies, corporate entrepreneurship should be recognized as a key factor in today's increasingly competitive, global economy. Developing a concept of corporate entrepreneurship in Thailand could be one solution to building growth based on efficiency instead of utilizing inputs and mobilizing resources spatially, which would not be sustainable in the long run. This paper represents an initial effort in this area.

## Data and sample selection

Questionnaires were sent to managers who held the title of division head or higher in three hundred Thai manufacturing companies that were randomly selected from a list of manufacturing companies registered with the Ministry of Commerce, Thailand. A total number of 105 usable questionnaires were returned, a 35% response rate. The questionnaire is divided into two parts. The first contains demographic information on the respondent and the second part contains the questions to assess the relationship in the research model. The questionnaire was developed from the review of literature on CE. The questionnaire was translated into Thai by a Ph.D. scholar who works in manufacturing firm and back translated to English by a graduate student from the US. A pilot test was employed to ensure the integrity of the translation. After amendments, questionnaires were mailed to the managers in the sample companies. The research topic, background of the research area, aim and objectives were explained in a cover letter.

## Respondents profile

Table 1 summarizes the profile of the 105 respondents. As can be noted, the respondents were 51% male and 48% female. Most of the respondents were between 31 and 45 years old. Almost all of the respondents hold section manager and higher positions. The number of years in service with the company of the sample varies. Approximately 32% of the respondents have been with the company longer than 15 years while approximately 66% worked with the company less than 10 years.

Table 2 presents a profile of the 105 manufacturing companies. Sixty nine percent of the companies' capitalization is greater than 100 million baht (approximately \$3.5 million) with more than 1,000 employees. The market of these companies is mainly international (60%) and nearly 40% are in both domestic and international markets. Almost 60% are producing industrial products with the remaining companies producing consumer products.

**Table 1** Respondent profile

Description		%
Gender	Male	51.43
	Female	48.57
Age	26–30 yrs	22.86
	31–45 yrs	48.57
	Over 45 yrs	28.57
	Section manager	42.85
Current position	Department manager	54.29
	Other	2.86
	Tenure	Less than 2 yrs
2–5 yrs		28.58
5–10 yrs		14.28
10–15 yrs		2.86
Over 15 yrs		31.43

**Table 2** Company profiles

Description		Number
Registered capital	25.01–50 mill	3
	75.01–100 mill	33
	over 100 mill	69
No. of employees	201–500	30
	501–1,000	30
	Over 1,001	45
Market scope	Domestic	9
	International	60
	Both	36
Type of product	Consumer product	42
	Industrial product	63

### The dependent variables

This study seeks to understanding the relationship between entrepreneurial atmosphere and support for entrepreneurship in companies and the attitudes of managers about key aspects of CE. Respondents were asked to what extent they strongly disagreed, disagreed, were neutral, agreed or strongly agreed with each of the following statements: 1. I am expected to come up with new ideas (idea generation); 2. Risk-taking is positively associated with my creativity (risk taking); and 3. I am encouraged to take action on my new ideas (proactiveness).

### Independent variables

Market scope was measured by a single question in which respondents were asked to indicate whether their firm competing only in Thailand, only in foreign countries, or both. Product Market was measured by one question to which respondents were asked to indicate whether the majority of revenue came from sales of goods or services to either end-users (consumer market) or resellers (industrial market). Size was computed by combining the responses to two questions. The first asked respondents to indicate the size of firm capitalization and the second to indicate the number of employees (as found in Table 2). Overall organizational entrepreneurship climate was measured using five items and organizational support for personal entrepreneurship was measured using four items to which the respondents were asked to indicate the level of their agreement with 1 = “Strongly Disagree” and 5 = “Strongly Agree.” Table 3 presents the confirmatory factor loadings and Cronbach alpha scores for reliability for the scales used to measure the climate and support constructs in the study.

## Results

Correlation analysis was conducted between independent and dependent variables Results are presented in Table 4 below. The correlation analysis of the data provides a preliminary overview of the relationships among the variables and a starting point to assess the research model.

Table 5 presents the results of the multivariate regression, using GLM multivariate analysis. The overall analyses indicate that the all three models are

**Table 3** Independent variable composition

	Factor load
Organizational entrepreneurial climate	
Organizational setting has influence on corporate entrepreneurship	0.858
Entrepreneurial-mindset of employees results in continuous reinvention of the company	0.846
Job descriptions promote creating new idea	0.816
Company strategy affects entrepreneurial behavior of the employees	0.770
Company policy was set up to promote innovative thinking for all employees	0.716
Eigen value	3.436
Cronbach alpha (5 items)	.867
Support for personal entrepreneurship	
Management listens to my ideas or suggestions	0.701
Management support influences corporate entrepreneurship in my organization	0.682
Rewards and recognition influence my new ideas for improving my work	0.668
I'm proud when my company acknowledges and implements my idea	0.505
Eigen value	2.062
Cronbach alpha (4 items)	0.515

Extraction method: principal component analysis. Rotation method: promax with Kaiser normalization

significant: risk taking ( $F=6.772$ ,  $p=.000$ ), idea creation ( $F=3.589$ ,  $p=.005$ ), and proactiveness ( $F=40.803$ ,  $p=.000$ ). Adjusted  $R_2$  for the risk taking model .217, for the idea creation model is .111, and for the proactiveness model is .657.

### Managerial risk taking

Assessment of the parameter estimates for the risk taking model indicates that manufacturing products for consumer markets ( $B=.454$ ,  $p=.027$ ), firm size ( $B=-.354$ ,  $p=.000$ ), and firm support for individual entrepreneurship ( $B=.201$ ,  $p=.012$ ) are significant. Market scope ( $B=-.141$ ,  $p=.249$ ) and firm entrepreneurship climate ( $B=-.043$ ,  $p=.630$ ) are not significant. These results support H1a (*Companies producing goods for consumer markets will be associated with higher levels of managerial risk-taking than companies producing goods for industrial markets*), H3a (*Company size will be negatively associated with managerial risk-taking*), and 5a (*Company support for entrepreneurship will be positively associated with managerial risk-taking*). Neither H2a (*Company market scope will be associated*

**Table 4** Correlation analysis

	Means	Std. Dev.	Risk	Idea	Innov	Product	Market	Size	Climate
Risk	3.69	.82							
Idea	3.89	.53	.116						
Proactiveness	3.89	.58	.045	.242*					
Product	.60	.49	-.171	-.067	.041				
Market	2.26	.615	-.184	-.179	-.163	.155			
Size	8.71	1.31	-.406**	-.216*	.148	.673**	.130		
OrgClimate	.00	1.00	-.193*	.017	.679**	.364**	.081	.541**	
PrsSupport	.00	1.00	.156	.230**	.574**	-.116	-.181	.063	.472**

\*\*Correlation is significant at the 0.01 level (2-tailed)

\*Correlation is significant at the 0.05 level (2-tailed)

**Table 5** Multivariate regression analyses

Source	Dependent variable	Type III sum of squares	df	Mean square	F	Sig.	Adj. R. Squ
Corrected model	Risk	17.999 <sup>a</sup>	5	3.600	6.772	.000	.217
	Idea	4.393 <sup>b</sup>	5	.879	3.589	.005	.111
	Proactiveness	23.315 <sup>c</sup>	5	4.663	40.803	.000	.657
Intercept	Risk	50.815	1	50.815	95.586	.000	
	Idea	32.695	1	32.695	133.559	.000	
	Proactiveness	28.688	1	28.688	251.030	.000	
Market Scope	Risk	.714	1	.714	1.343	.249	
	Idea	.428	1	.428	1.747	.189	
	Proactiveness	.514	1	.514	4.496	.036	
Product Type	Risk	2.685	1	2.685	5.051	.027	
	Idea	.756	1	.756	3.089	.082	
	Proactiveness	.002	1	.002	.022	.884	
Size	Risk	9.905	1	9.905	18.633	.000	
	Idea	2.284	1	2.284	9.329	.003	
	Proactiveness	.990	1	.990	8.666	.004	
EntClimate	Risk	.124	1	.124	.233	.630	
	Idea	.200	1	.200	.818	.368	
	Proactiveness	11.175	1	11.175	97.789	.000	
PrsSupport	Risk	3.449	1	3.449	6.488	.012	
	Idea	1.225	1	1.225	5.005	.028	
	Proactiveness	3.561	1	3.561	31.157	.000	
Error	Risk	52.629	99	.532			
	Idea	24.235	99	.245			
	Proactiveness	11.314	99	.114			
Total	Risk	1,497.000	105				
	Idea	1,614.000	105				
	Proactiveness	1,620.000	105				
Corrected Total	Risk	70.629	104				
	Idea	28.629	104				
	Proactiveness	34.629	104				

with managerial risk-taking) nor H4a (*Company entrepreneurial climate will be associated with managerial risk-taking*) is supported. Risk taking by managers in Thai manufacturing companies is greater in companies that manufacture goods for consumer markets (an external factor) and when these companies support their managers' personal entrepreneurship (an internal factor). As expected, managers are less likely to be willing to take risks in larger firms. Neither the scope of a company's competition nor its overall climate for entrepreneurship is related to managerial risk taking.

#### New idea creation

Assessment of the parameter estimates for the idea generation model indicates that firm size ( $B=-.3.054, p=.003$ ) and firm support for individual entrepreneurship ( $B=2.237, p=.028$ ) are significant. Market scope ( $B=-1.322, p=-.189$ ), product type ( $B=1.758, p=.082$ ), and firm entrepreneurship climate ( $B=-.055, p=.368$ ) are not significant. These results support H3b (*Company size will be negatively associated with managerial idea creation*) and 5b (*Company support for entrepreneurship will be*

positively associated with managerial idea creation). H2b (*Companies producing goods for consumer markets will be associated with higher levels of managerial idea creation than companies producing goods for industrial markets*), H1b (*Company market scope will be associated with managerial idea creation*) and H4b (*Company entrepreneurial climate will be associated with managerial idea creation*) are not supported. Idea creation by managers in Thai manufacturing companies is suggested by these results to be associated only with a company's support for its managers' personal entrepreneurship and, as expected, is less in large firms. Neither external factor, i.e., the scope of a company's competition nor the type of product it manufactures, nor the internal factor of its overall climate for entrepreneurship is related to managerial idea creation.

### Managerial proactiveness

Assessment of the parameter estimates for the proactiveness model indicates that market scope ( $B=-2.120$ ,  $p=.036$ ), firm size ( $B=-2.944$ ,  $p=.004$ ), firm entrepreneurship climate ( $B=9.889$ ,  $p=.000$ ), and firm support for individual entrepreneurship ( $B=5.582$ ,  $p=.000$ ) are significant. Product type ( $B=.147$ ,  $p=.884$ ) is not significant. These results indicate that H3c (*Company size will be negatively associated with managerial proactiveness*), H4c (*Company entrepreneurial climate will be associated with managerial proactiveness*), and H5c (*Company support for entrepreneurship will be associated with managerial proactiveness*) are supported. H1c (*Company market scope will be associated with managerial proactiveness*) is not supported. While significant, the relationship is opposite of that hypothesized. H2c (*Companies producing goods for consumer markets will be associated with more managerial proactiveness than companies producing goods for industrial market*) is not supported. These results indicate that proactiveness by managers in Thai manufacturing companies is positively associated with both internal factors, i.e., overall company entrepreneurial climate and support for personal entrepreneurship and, once again as expected, is less in large firms. Surprisingly, proactiveness is less in firms whose scope of competition is wide and, unlike risk taking and idea generation, is not associated with the type of product manufactured.

## Discussion

### Contributions to the CE literature

The results of this study add to the growing literature on CE in a number of ways. First, the results confirm previous research (e.g., Jennings 1994) that indicated that CE is more difficult in large organizations. Second, the results suggest that external factors influence CE dimensions in managers, as had been suggested in previous research (e.g., Pfeffer and Salancik 1978; Damanpour (1988)). Specifically, firms that compete in both domestic and international markets may have a more difficult time getting their managers to engage in CE behaviors, particularly a willingness to take action on innovation. Although this must be tempered by the results indicating no relationship between competitive scope and either idea generation or risk taking. Unlike

the findings of Kathuria and Joshi (2007), scope of competition for this sample was not a significant influence on CE. This might be due to the greater likelihood of strong coordinating mechanisms in organizations competing on many fronts.

The results add to an understanding that firms competing in end-users markets see more CE core activities, particularly generation of more ideas and more risk taking, than firms serving industrial markets. Interestingly, product type is not associated with proactiveness. These results extend the findings of Seborá et al. (1994) found that products manufactured for consumer markets are likely to differ in their requirements for innovation than goods manufactured for industrial markets in three ways. Seborá et al. (1994) investigated small firms in an established economy and only at idea generation and implementation. Here, product type is found significant for CE in large manufacturing firms, in an emerging economy, and includes risk taking.

Internal factors, particular an organization that is perceived to support the individual entrepreneurship of its managers, are the most consistently associated with idea generation, risk taking, and proactiveness. This is consistent with previous findings (e.g., Birkinshaw 1999; Morris and Kuratko 2002). In a somewhat surprising finding, the overall climate for entrepreneurship established by top management is found to have little relationship with either idea generation or risk taking. It is associated with proactiveness. This suggests that general organization factors might be more important for the implementation of innovations while support for individuals is more important for the formulation of innovations, as indicated by idea generation and risk taking. At the least, the findings seem to suggest that support for individuals and overall entrepreneurial climate affect CE differently. In sum, the findings of this study point to the importance of top management's attention to both their external competitiveness and their internal factors if they hope to use corporate entrepreneurship as a means to compete more effectively.

### Research on Thailand

Since Thailand's economic transformation in the early 1960s, the private sector has increasingly played a pivotal role in contributing to the country's rapid economic growth. As such, entrepreneurial activity has greatly intensified, thus turning Thailand from an agricultural and rural economy into an industrial and service-based economy (Phagaphasvivat 2003). However, in 1997 Thailand was among the worst affected countries by the Asian economic crisis. One third of Thailand's public listed companies did not survive the financial crisis in 1997. Great effort was required from all staff and management to pull their company through the crisis. To stay competitive domestically and internationally, it is crucial for Thai business organizations to understand the forces that drive CE. Organizational processes can be administered to facilitate entrepreneurial attitudes, thinking, and behavior. If organizations become more "entrepreneurial" to survive and prosper, then entrepreneurial practices should be so designed for their applicability to current corporate structures and processes.

The results indicate that entrepreneurial mindset is related to management support. Thai employees typically follow instruction from higher position. Although they might have new ideas or suggestions, without encouragement from management they



keep these to themselves. Therefore, it is management's responsibility to demonstrate their commitment to ensure those ideas get implemented.

Research involving CE in Thailand is in an early stage. Any contribution to this field adds to the limited body of knowledge of CE in Thailand. CE is critical to a Thai firm's success, particularly in today's dynamic environment. Managers need to understand how these factors may affect their firm. They can support CE by formulating strategy that motivates employees' involvement and their entrepreneurial mindset to ensure the firm's survival and long-term success.

Strategy and policy can be formulated to inspire entrepreneurial activities among employees. Having an open-door policy, willingness to listen, reward and recognition for new ideas and suggestions from employees are some of the examples. Such direction and vision should be communicated to the employee. A clear understanding of management expectation will direct the employees to the same path. To sustain CE, management support and related actions should be carried out consistently. The most important factors concern the firm's ability to establish a vision and for top management to support it (MacMillan et al. 1986), to organize people and tasks in ways that make it possible for entrepreneurial actions to flourish (Hisrich and Peters 1986), to have sufficient resources to support entrepreneurial actions, and to encourage risk taking as measured by individuals' willingness to accept risks and tolerate failure (Burgelman 1984). This research confirmed and supported these findings in Thai manufacturing firms.

### Limitations

Gartner (1988) noted that research in the entrepreneurship field is exceedingly difficult to do well because of the complex nature of the field. The difficulty involves decisions related to the independent variables that should be studied, the ways these variables should be used, the most appropriate ways for gathering relevant data, and the techniques that should be used in analyzing the data within the field of entrepreneurship.

There are several limitations for this research. The sample size of this study is relatively small and the sample is drawn from managers only in Thai manufacturing firms. This limits the generalizability of the results. This limitation, however, does not minimize the fact that this study found results similar to those presented in findings from research conducted only in established economies. This extension offers increased confidence that idea generation, risk taking, and proactiveness are affected by external and internal factors in all types of economies. This research focused only on the consumer and industrial products. The research results cannot be generalized to other industries or manufacturing firms as a whole.

Single item measures were used for each of the dependent variables. While the literature on entrepreneurship lacks uniform definitions for the central core of this research—CE—and the three dimensions suggested by Miller (1983) and Covin and Slevin (1991) used here, it is likely that the full concept of each construct can be adequately captured by a single item. This limits the results from clearly adding to support for these three dimensions and opens the door to challenges of the reliability of each measure.

## Future research

This research presents a platform for potential future study in CE. Future study may develop a broader context with additional variables to determine how they contribute to entrepreneurial mindset, management support and CE. The effects of these factors need to be fully explored over time. Schollhammer (1982) indicates there is a need for longitudinal studies to analyze the effectiveness of various internal entrepreneurial strategies. The changes in internal entrepreneurship relative to operating conditions and the impact of specific external environmental developments on various entrepreneurship strategies have to be researched carefully.

Future research may extend this research by using a performance measurement to assess whether the relationships among employees' entrepreneurial mindset, management support and CE found in this study do, in fact, affect the firms' performance. However, complexity of company performance measurements should be recognized. This research focused on the manufacturing industry in Thailand. Future research may use this study as a framework and enlarge the sample within the manufacturing industry to quantify and generalize the research results. Another useful approach is to apply the same study to other industries in Thailand. A comparative analysis of industries in Thailand is also possible. The current practices of different industries might present new opportunities to formulate strategies. Lastly, a similar study can also be conducted and applied to other developing countries as well as extended to a cross-country comparative research. The relationship between entrepreneurial mindset, management support and CE may differ.

## Appendix

**Table 6** Parameter estimates

Dependent variable	Parameter	B	Std. error	t	Sig.
Risk	Intercept	6.820	.698	9.777	.000
	Market scope	-.141	.122	-1.159	.249
	Product type	.454	.202	2.247	<b>.027</b>
	Size	-.354	.082	<b>-4.317</b>	<b>.000</b>
	EntClimate	-.043	.090	-.483	.630
	PrsSupport	.201	.079	<b>2.547</b>	<b>.012</b>
Idea	Intercept	5.471	.473	11.557	.000
	Market scope	-.109	.083	-1.322	.189
	Product type	.241	.137	1.758	.082
	Size	-.170	.056	<b>-3.054</b>	<b>.003</b>
	EntClimate	.055	.061	.904	.368
	PrsSupport	.120	.054	<b>2.237</b>	<b>.028</b>
Proactiveness	Intercept	5.124	.323	15.844	.000
	Market scope	-.120	.057	<b>-2.120</b>	<b>.036</b>
	Product type	.014	.094	.147	.884
	Size	-.112	.038	<b>-2.944</b>	<b>.004</b>
	EntClimate	.413	.042	<b>9.889</b>	<b>.000</b>
	PrsSupport	.204	.037	<b>5.582</b>	<b>.000</b>

## References

- Antoncic, B., & Hisrich, R. D. (2001). Intrapreneurship: Construct refinement and cross-cultural validation. *Journal of Business Venturing*, *16*, 495–527.
- Antoncic, B., & Hisrich, R. D. (2003). Privatization, corporate entrepreneurship, and performance: Testing a normative model. *Journal of Developmental Entrepreneurship*, *8*(3), 197–218.
- Barringer, B. R., & Bluedorn, A. C. (1999). The relationship between corporate entrepreneurship and strategic management. *Strategic Management Journal*, *20*, 421–444.
- Baum, J. R., & Locke, E. A. (2004). The relationship of entrepreneurial traits, skills, and motivation to subsequent venture growth. *Journal of Applied Psychology*, *89*(4), 587–598.
- Birkinshaw, J. (1999). The determinants and consequences of subsidiary initiative in multinational corporations. *Entrepreneurship: Theory and Practices*, *24*(1), 9–35.
- Brazeal, D., & Herbert, T. (1999). The genesis of entrepreneurship. *Entrepreneurship: Theory and Practices*, *23*(3), 29–45.
- Brown, T. E., Davidsson, P., & Wiklund, J. (2001). An operationalization of Stevenson's conceptualization of entrepreneurship as opportunity-based behavior. *Strategic Management Journal*, *22*, 953–968.
- Burgelman, R. A. (1983). Corporate entrepreneurship and strategic management: insights from a process study. *Management Science*, *29*, 1349–1364.
- Burgelman, R. A. (1984). Managing the corporate venturing process. *Sloan Management Review*, *25*(2), 33–48.
- Burgelman, R. A. (1991). Intraorganizational ecology of strategy making and organizational adaptation: theory and field research. *Organization Science*, *2*(3), 239–262.
- Chandler, G., Keller, C., & Lyon, D. (2000). Unraveling the determinants and consequences of an innovation-supportive organizational culture. *Entrepreneurship Theory and Practice*, *25*, 59–76.
- Chittipeddi, K., & Walleit, T. A. (1991). Entrepreneurship and competitive strategy for the 1990's. *Journal of Small Business Management*, *29*(1), 94–98.
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, *16*(1), 7–25.
- Covin, J. G., & Miles, M. P. (1999). Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship Theory & Practice*, *23*(3), 47–63.
- Damanpour, F. (1988). Innovation type, radicalness, and the adoption process. *Communication Research*, *15*(5), 545–567.
- Damanpour, F. (1991). Organizational innovation: a meta-analysis of effects of determinant and moderators. *Academy of Management Journal*, *34*, 355–390.
- Dess, G. G., Lumpkin, G. T., & McFarlin, D. (2005). The role of entrepreneurial orientation in stimulating effective corporate entrepreneurship. *Academy of Management Executive*, *19*(1), 147–156.
- Drucker, P. F. (2002). The discipline of innovation. *Harvard Business Review*, *80*, 95–102.
- Franko, L. G. (1989). Global corporate competition: Who's winning, who's losing, and the R&D factor as one reason why. *Strategic Management Journal*, *10*(5), 449–474.
- Gartner, W. B. (1988). Who is the entrepreneur? is the wrong question. *American Journal of Small Business*, *12*(4), 11–32.
- Ghoshal, S., & Bartlett, C. A. (1999). *Building the entrepreneurial corporation*. In: *Handbook of Management*. pp. 39–63. London: Financial Times.
- Gupta, A. K., & Govindarajan, V. (2001). Converting global presence into global competitive advantage. *Academy of Management Executive*, *15*(2), 45–58.
- Guth, W. D., & Ginsberg, A. (1990). Guest editor's introduction: corporate entrepreneurship. *Strategic Management Journal*, *11*, 5–15.
- Hamel, G., & Prahalad, C. K. (1993). Strategy as stretch and leverage. *Harvard Business Review*, *71*, 75–84 March-April.
- Hayes, R. H., & Abernathy, W. J. (1980). Managing our way to economic decline. *Harvard Business Review*, *58*, 67–77.
- Herbert, T. T. & Brazeal, D. V. (1999). Entrepreneurializing the organization: Archetypes of commitment to corporate entrepreneurship and implications for strategic entrepreneurship. The Proceedings for the 44th Annual ICSB Conference.
- Hisrich, R. D., & Peters, M. P. (1984). Internal venturing in large corporations. In J.A. Hornaday, et al. (Ed.), *Frontiers of entrepreneurship research* (pp. 321–346). Wellesley, MA: Babson College.
- Hisrich, R. D., & Peters, M. P. (1986). Establishing a new business venture unit within a firm. *Journal of Business Venturing*, *1*, 307–322.

- Hitt, M. A., Ireland, D., Camp, M., & Sexton, D. (2001). Strategic entrepreneurship: Entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22, 479–491.
- Hodgkinson, G. P., & Wright, G. (2002). Confronting strategic inertia in a top management team: Learning from failure. *Organization Studies*, 23(6), 949–977.
- Hornsby, J. S., Naffziger, D. W., Kuratko, D. F., & Montagno, R. V. (1993). An interactive model of the corporate entrepreneurship process. *Entrepreneurship Theory and Practice*, 17(2), 29–37.
- Hornsby, J. S., Kuratko, D. F., & Montagno, R. V. (1999). Perception of internal factors for corporate entrepreneurship: a comparison of Canadian and U.S. managers. *Entrepreneurship: Theory & Practice*, 24(2), 9–25.
- Hurley, R. F., & Hult, G. T. M. (1998). Innovation, market orientation, and organizational learning: An integration and empirical examination. *Journal of Marketing*, 62(3), 42–54.
- Huse, M., Neubaum, D., & Gabrielsson, J. (2005). Corporate innovation and competitive environment. *International Entrepreneurship and Management Journal*, 1, 313–333.
- Jennings, D. F. (1994). *Multiple perspectives of entrepreneurship*. Ohio: South Western Publishing.
- Kathuria, R., & Joshi, M. (2007). Environmental influences on corporate entrepreneurship: Executive perspectives on the internet. *International Entrepreneurship and Management Journal*, 3, 127–144.
- Kaufmann, A., Tödting, F., & . (2002). How effective is innovation support for SMEs? An analysis of the region of upper Austria. *Technovation*, 22(3), 147–159.
- Kemelgor, B. H. (2002). A comparative analysis of corporate entrepreneurial orientation between selected firms in the Netherlands and the USA. *Entrepreneurship and Regional Development*, 14, 67–87.
- Kittiprapas, S. (2000). *Causes of the recent Asian economic crisis: the case of Thailand*. Bangkok, Thailand: Thailand Development Research Institute.
- Kuratko, D. F., & Hodgetts, R. M. (1998). *Entrepreneurship: a contemporary approach* (4th ed.). USA: The Dryden, Harcourt Brace College Publishers.
- Kuratko, D. F., Montagno, R. V., & Hornsby, J. S. (1990). Developing an intrapreneurial assessment instrument for an effective corporate entrepreneurial environment. *Strategic Management Journal*, 11, 49–58.
- Kuratko, D. F., Hornsby, J. S., & Bishop, J. (2005). Managers' corporate entrepreneurial actions and job satisfaction. *International Entrepreneurship and Management Journal*, 1, 275–291.
- Lengnick-Hall, C. (1988). How to achieve efficiency and innovation. *Organization Development Journal*, 6(2), 67–74.
- Liebcap, C. M. (1986). A theory of individual creative action in multiple social domains. *Academy of Management Review*, 21(4), 1112–1142.
- Looney, R. (2004). Thaksinomics: a new Asian paradigm? *Journal of Social, Political & Economic Studies*, 29(1), 65–85.
- Lumpkin, G. T., & Dess, G. C. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21, 135–172.
- MacMillan, I. C., Block, Z., & Narasimha, P. N. S. (1986). Corporate venturing: alternatives, obstacles encountered, and experience effects. *Journal of Business Venturing*, 1, 177–191.
- Mahin, P. (1991). *Business-To-Business Marketing: Strategic Resource Management And Cases*. Boston, MA: Allyn and Bacon.
- McCarthy, E. J., & Perreault, W. (1987). *Basic marketing: A managerial approach* (9th ed.). Homewood, IL: Irwin.
- McClelland, D. C. (1967). *The Achieving Society*. New York, NY: The Free.
- Merrifield, D. B. (1993). Intrapreneurial corporate renewal. *Journal of Business Venturing*, 8(5), 383–389.
- Michie, J., & Padayachee, V. (1997). *The political economy of South Africa's transition*. San Diego, CA: Harcourt, Brace & Co.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770–791.
- Miller, D., & Friesen, P. H. (1982). Innovation in conservative and entrepreneurial firms: two models of strategic momentum. *Strategic Management Journal*, 1, 1–25.
- Mintzberg, H. (1987). The strategy concept I: Five Ps for strategy. *California Management Review*, 29 (Fall), 44–57.
- Morris, M. H., & Kuratko, D. F. (2002). *Corporate entrepreneurship*. New York: Harcourt College Publishers.
- Nielsen, R. P., Peters, M. P., & Hisrich, R. D. (1985). Intrapreneurship strategy for internal markets. *Strategic Management Journal*, 6, 181–189.
- Oliver, R. L., & Anderson, E. (1995). Behavior—and outcome-based sales control systems: evidence and consequences of pure-form and hybrid governance. *Journal of Personal Selling & Sales Management*, 15, 1–15.

- Parsons, A. J. (1992). Building innovativeness in large U.S. corporations. *The Journal of Business & Industrial Marketing*, 7(4), 33–39.
- Pearce, J. A., Kramer, T. R., & Robbins, D. K. (1997). Effects of managers entrepreneurial behavior on subordinates. *Journal of Business Venturing*, 12, 147–160.
- Peter, J., & Donnelly, J. (1986). *Marketing management: Knowledge and skills*. Plano, TX: Business Publications, Inc.
- Pfeffer, J., & Salancik, G. (1978). *The external control of organizations*. New York: Harper & Row.
- Phagaphasvivat, S. (2003). Entrepreneurship in Thailand. Presented at the Global Forum–Entrepreneurship in Asia: 4th U.S.-Japan Dialogue. April 16. Available from the Maureen and Mike Mansfield Foundation.
- Pinchot, G. (1985). *Intrapreneurship: Why you don't have to leave the corporation to become an entrepreneur*. New York: Harper & Row.
- Porter, M. E. (1985). *Competitive advantage*. New York: The Free.
- Prokopenko, J., & Pavlin, I. (1991). *Entrepreneurship development in public enterprises. Management Development Series No. 29*. Geneva: International Labour Office.
- Quinn, J. B. (1985). Managing innovation: controlled chaos. *Harvard Business Review*, 63, 73–84.
- Rydz, J. (1986). *Managing innovation*. Cambridge, MA: Ballinger Publishing Co.
- Sadler, R. J. (2000). Corporate entrepreneurship in the public sector: the dance of the chameleon. *Australian Journal of Public Administration*, 59(2), 25–43.
- Saxena, R. K. (1991). Intrapreneurship-entrepreneurial climate in the corporate world. Singapore: Proceedings of the ENDEC World Conference on Entrepreneurship and Innovative Change, NTU-Peat Marwick Entrepreneurship Development Centre. pp. 650–655.
- Schollhammer, H. (1982). Internal corporate entrepreneurship. In C. Kent, D. Sexton, & K. Vesper (Eds.), *Encyclopedia of Entrepreneurship*. Englewood Cliffs, NJ: Prentice Hall.
- Sciascia, S., Naldi, L., & Hunter, E. (2006). Market orientation as determinant of entrepreneurship: An empirical investigation on SMEs. *International Entrepreneurship and Management Journal*, 2, 21–38.
- Sebora, T. C., Hartman, E. A., & Tower, C. B. (1994). Innovative activity in small businesses: Competitive context and organization level. *Journal of Engineering Technology Management*, 11(3/4), 253–272.
- Simsek, Z., Veiga, J. F., Lubatkin, M. H., & Dino, R. N. (2005). Modeling the multilevel determinants of top management team behavioral integration. *Academy of Management Journal*, 48(1), 69–84.
- Stevenson, H. H., & Jarillo, J. C. (1990). A paradigm of entrepreneurship: Entrepreneurial management. *Strategic Management Journal*, 11, 17–27.
- Van de Ven, A. H. (1988). Central problems in the management of innovation. In M. L. Tushman, & W. L. Moore (Eds.), *Readings in the management of innovation* (pp. 103–122). Boston, MA: Ballinger.
- Van der Panne, G., Van Beers, C., & Kleinknecht, A. (2003). Success and failure of innovation: a literature review. *International Journal of Innovation Management*, 7(3), 309–339.
- von Hippel, E. (1978). Users as innovators. *Technology Review*, 80, 3–11.
- Vroom, V. H. (1964). *Work and motivation*. New York: Wiley.
- Wakkee, I., Elfring, T., & Monaghan, S. (2008). Creating entrepreneurial employees in traditional service sectors: The role of coaching and self-efficacy. *International Entrepreneurship and Management Journal*, in press.
- Webster, F. Jr. (1978). *Industrial Marketing Strategy*. New York: John Wiley.
- Webster, F. Jr. & Wind, Y. (1972). A general model for understanding organizational buying behavior. *Journal of Marketing*, 36, 12–19.
- Williamson, O. (1964). *Corporate control and business behavior: Managerial objectives in a theory of the firm*. Englewood Cliffs, NJ: Prentice Hall.
- Wind, Y., & Thomas, R. (1980). Conceptual and methodological issues in organizational buying behavior. *European Journal of Marketing*, 14(5/6), 239–263.
- Zahra, S. A. (1991). Predictors and financial outcomes of corporate entrepreneurship: an exploratory study. *Journal of Business Venturing*, 6(4), 259–285.
- Zahra, S. A. (1993). A conceptual model of entrepreneurship as firm behavior: a critique and extension. *Entrepreneurship: Theory and Practice*, 17(4), 5–21.
- Zahra, S. A. (1995). Corporate entrepreneurship and financial performance: the case of management leveraged buyouts. *Journal of Business Venturing*, 10(4), 225–247.
- Zahra, S. A., & Covin, J. G. (1995). Contextual influences on the corporate entrepreneurship performance relationship: a longitudinal analysis. *Journal of Business Venturing*, 10(1), 43–58.
- Zahra, S. A., Jennings, D. F., & Kuratko, D. F. (1999). "The antecedents and consequences of firm-level entrepreneurship: the state of the field". *Entrepreneurship Theory & Practice*, 24(2), 45–65.