

**Corporate Entrepreneurship:  
A Critical Challenge for Research and Teaching**

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## **Abstract**

The world is in the midst of a new wave of economic development with entrepreneurship and innovation as the catalysts. Yet, organizations struggle with the proper strategies to initiate innovative activity among their people. Corporate entrepreneurship (CE) is a term used to describe entrepreneurial behavior inside established mid-sized and large organizations. The value of corporate entrepreneurship lies in the extent to which it becomes a strategy to engage in an ongoing process of entrepreneurial actions to achieve a competitive advantage. Moreover, a lack of innovative (or entrepreneurial) actions in today's global economy could be a recipe for failure. With that in mind, this paper examines the evolution of research related to CE, the specific areas that have been studied, and the emerging future topics that demonstrate the continuing importance of CE for research and teaching.

## Introduction

The development, application, and enhancement of new technologies are occurring at a breathtaking pace and innovation is driving the way business is conducted. As the number of new ventures, products, processes, technologies, and patents literally explodes worldwide, established companies can either innovate their future or become victims of innovation. The world is in the midst of a new wave of economic development with entrepreneurship and innovation as the catalysts. Yet, organizations struggle with the proper strategies to initiate innovative activity among their people (Kuratko, Covin, & Hornsby, 2014). For educators and researchers in the entrepreneurship field this is a critical component to examine if contemporary students are to be prepared for the disruptive future they will confront.

It is clear that today's environment is filled with many contradictions, and dealing with paradox becomes a critical aspect of managing in the new innovative landscape. Today we must embrace contradiction by replacing *or* with *and* (McNulty, 2017). For instance, quality can be higher *and* operating costs can be lower. Firms must innovate *and* operate with less risk. There needs to achieve greater autonomy *and* a sense of centrality. The pathway through such paradoxes involves fostering and promoting entrepreneurial activity. If history is the true roadmap of the future, then any organizational advancement will always rise from the energy and passion that define the entrepreneurial spirit within individuals. Entrepreneurial activity is the result of each individual's creativity, passion and tenacity. The one true strategy that unleashes individual innovators is corporate entrepreneurship (CE).

Corporate entrepreneurship (CE) is a term used to describe entrepreneurial behavior inside established mid-sized and large organizations (Stopford and Baden-Fuller, 1994). Other popular or related terms include organizational entrepreneurship, intrapreneurship, corporate

venturing, and strategic entrepreneurship (Pinchot, 1985; Morris, Kuratko, and Covin, 2011).

Regardless of the reason the firm decides to engage in CE, it has become a major strategy in all types of organizations (Ireland, Covin and Kuratko, 2009).

While innovative actions are a phenomenon that have captivated the interest of executives in many corporate boardrooms as well as university classrooms, there is a danger in getting too caught up in the excitement of a particular innovation or inspiring stories of individual corporate innovators. It is easy to become enamored with the idea of innovation as the word is fast becoming an over-hyped “buzzword” among corporations, universities, and even governments. One recent article in Wired magazine called it the most important and overused word in America (O’Bryan, 2013).

The value of corporate innovation lies in the extent to which it becomes a corporate strategy to engage in an ongoing process of entrepreneurial actions for a competitive advantage (Vanhaverbeke & Peeters, 2005). Moreover, given ongoing levels of dynamism in the external environments of companies, a lack of entrepreneurial actions in today’s global economy could be a recipe for failure (Johnson, 2012). A corporate entrepreneurial strategy represents the guiding light and the motivating force for organizations as they attempt to sustain advantage in the marketplace. It is therefore an imperative that educators and researchers continue to explore and teach the newest concepts of CE in order to instill a full understanding in the next generation of organizational leaders.

In order to convey a greater understanding of how the CE field has evolved to a point of such importance, this paper begins with a review of the specific domains of CE, followed by an examination of the nature of a corporate entrepreneurship strategy, and the specific research that has been conducted with regard to external drivers, internal climates and the roles of managers in

the CE process. The paper assesses the critical questions emanating from CE scholars that must now be addressed if we are to properly prepare the next generation of students. Finally, we explore pedagogical approaches to teaching CE.

## **Defining Corporate Entrepreneurship**

### **An Evolving Focus**

The concept of corporate entrepreneurship (CE) has evolved over the last four decades. Definitions have varied considerably over time. The early research in the 1970's focused on venture teams and basic notions of how entrepreneurship could exist inside established organizations (Hill & Hlavacek, 1972; Peterson & Berger, 1972; Hanan, 1976).

In the 1980's, researchers conceptualized corporate entrepreneurship as entrepreneurial behavior requiring organizational sanctions and resource commitments for the purpose of developing different types of value-creating innovations. In other words, it concerned extending the firm's domain of competence and its opportunity set through innovation (Alterowitz, 1988; Burgelman, 1983a,b, 1984; Kanter, 1985; Schollhammer 1982; Sathe 1989; Sykes & Block, 1989). During this decade, the term 'intrapreneurship' was introduced (Pinchott, 1985).

By the 1990's researchers had adjusted the focus to include re-energizing and enhancing the firm's ability to develop the skills through which innovations could be created (Jennings & Young, 1990; Merrifield, 1993; Zahra, 1991; Birkinshaw, 1997; Borch et al., 1999; Barringer & Bluedorn, 1999; Zahra, Kuratko, & Jennings, 1999). More comprehensive definitions began to take shape during this period, such as Guth and Ginsberg's (1990) distinction between two major types of phenomena: new venture creation within existing organizations and the transformation of on-going organizations through strategic renewal. Similarly, Sharma and Chrisman (1999, 18) suggested that corporate entrepreneurship "is the process where by an individual or a group of

individuals, in association with an existing organization, create a new organization or instigate renewal or innovation within that organization.”

By the start of the 21<sup>st</sup> century corporate entrepreneurship had become relatively well defined as a field of study – thanks in large part due to the work of scholars to reconcile past works into a holistic viewpoint. The development of innovation competencies through CE continued to receive attention in this decade, but this innovation was manifested in a variety of ways, as reflected in a series of key articles. Ahuja and Lambert (2001) used empirical evidence from the chemicals industry to present a model explaining how large established firms created breakthroughs. Smith and DiGregorio (2002) offered a theory of discovery and entrepreneurial action and examined the varying market effects of entrepreneurial actions. They were addressing what has become known as the strategic entrepreneurship segment of CE. Schildt, Maula and Kiel (2005) examined explorative versus exploitative learning interactions in corporate venturing, indicating that the governance structure of these external ventures was key in determining the type of learning that took place. With all of these various perspectives offering new insights, it became clear that corporate entrepreneurship is more complex and can take a number of different forms. As a result, the contemporary approach acknowledges particular domains into which these corporate entrepreneurial activities can be categorized.

### **Current Domains of Corporate Entrepreneurship**

Many of the elements essential to constructing a theoretically grounded understanding of the domains of corporate entrepreneurship can now be identified. Based on the work of Kuratko & Audretsch (2013) and Morris, Kuratko & Covin (2011), corporate entrepreneurship can be manifested in companies either through *corporate venturing* or *strategic entrepreneurship*.

*Corporate venturing* is concerned with the launching of new ventures, and this can be further broken down into two sub-categories. The first of these would be innovative ventures created *within* the firm, referred to as internal corporate ventures (ICVs). With internal corporate venturing, new businesses are created and owned by the corporation and typically reside within the current corporate structure (Kuratko, Covin, & Garrett, 2009). The second activity would be any innovation that is created *outside* of the firm, referred to as external corporate ventures (ECVs). External corporate venturing involves new businesses that are created by parties outside the corporation and subsequently invested in or acquired by the corporation. These external businesses are typically very young ventures or early growth-stage firms (Covin & Miles, 2007; Morris, Kuratko, & Covin, 2011). They could also include joint ventures created in partnership with another firm.

*Strategic entrepreneurship* approaches refer to a broad array of significant entrepreneurial activities or innovations that are adopted in the firm's pursuit of competitive advantage. They usually do not result in new businesses for the corporation. With strategic entrepreneurship, innovation can be found within any of five areas – the firm's strategy, product offerings, served markets, internal organization (i.e., structure, processes, and capabilities), or business model (Kuratko & Audretsch, 2013). These innovations can constitute a firm's fundamental differentiation from its industry rivals. Hence, there are two possible reference points that can be considered when a firm exhibits strategic entrepreneurship: (1) how much the firm is transforming itself relative to where it was before (e.g., transforming its products, markets, internal processes, etc.) and (2) how much the firm is transforming itself relative to industry conventions or standards (again, in terms of product offerings, market definitions, internal processes, and so forth). Strategic entrepreneurship can take one of five forms – *strategic*

*renewal* (adoption of a new strategy), *sustained regeneration* (introduction of a new product or service into an existing category), *domain redefinition* (reconfiguration of existing product or market categories), *organizational rejuvenation* (internally focused innovation for strategy improvement), and *business model reconstruction* (redesign of existing business model), (Covin & Miles, 1999; Hitt, et al., 2001; Ireland, Hitt & Sirmon, 2003; Ireland & Webb, 2007; Kuratko & Audretsch, 2009).

Related to these various activities and domains is the question of how entrepreneurial an organization tends to be. The concept *Entrepreneurial Orientation (EO)* was developed by Miller (1983) and formalized in the entrepreneurship literature by Covin and Slevin (1989, 1991) (see also Morris and Paul, 1987). Here, a continuum of a firm's strategic behavioral proclivities is recognized. A firm's orientation can range more conservative to more entrepreneurial, with the entrepreneurial end of the spectrum evidenced by innovativeness (the introduction of new products, processes, and business models); proactiveness (actively entering new product/market spaces and seeking market leadership positions); and risk-taking (a willingness among strategic decision-makers to contribute resources to projects with uncertain outcomes). A large number of scholars subsequently examined the performance implications of a firm's entrepreneurial orientation (e.g., Lumpkin and Dess, 1996; Morris and Sexton, 1996; Rauch, et al., 2009; Stam and Elfring, 2008), generally finding a positive relationship between EO and performance. Others have questioned EO's underlying dimensions and how they are measured (Lumpkin and Dess, 2001; Lumpkin, Coglisier, and Schneider (2009); Stevenson and Gumbert, 1985). Over the years, a number of alternative perspectives on the conceptual domain of a firm-level strategic orientation towards entrepreneurship have been proposed (see the EO Models section of Covin and Wales (2012) for a discussion of the different conceptualizations). Nonetheless, as noted in

two recent meta-analyses, the Miller/Covin and Slevin conceptualization is by far the dominant perspective of EO in the relevant literature (Rauch *et al.*, 2009; Rosenbusch, Rauch, and Bausch, 2013).

A critical question raised by the considerable volume of nomological research on EO concerns the extent to which it is more of an attitude, outlook or perspective within an organization, or whether it is more behavioral in nature. Drawing from measurement theory, Anderson, et al. (2015) propose a formative construction of EO that includes both managerial attitudes (e.g., towards innovation or risk) and entrepreneurial behaviors as jointly necessary dimensions that collectively form the higher-order EO construct.

In essence, corporate venturing, strategic entrepreneurship, and entrepreneurial orientation combine to form the overall domain of corporate entrepreneurship. Building on these elements, it becomes possible to develop a corporate entrepreneurship strategy.

### **Understanding a Corporate Entrepreneurship Strategy**

As firms innovate more regularly they must be willing to accept considerable, though reasonable, levels of risk (Miller & Friesen, 1982). To Sykes and Block (1989), reasonable risks are “affordable” to the organization in terms of its current and future viability as an operating entity. When these actions re-define how the entity is positioned within their environments, including the main bases on which they compete, then we are addressing the entrepreneurship and strategy interface (Covin & Slevin, 1991).

Strategy has two key facets when it comes to CE. Morris, Kuratko, and Covin (2011) contend that when the strategy-making efforts taken to create competitive advantages and exploit them are grounded in entrepreneurial actions, the firm is employing an *entrepreneurial strategy*. Here, then, we are talking about being entrepreneurial in how management specifies the overall

direction of the firm and how it adapts to changing environmental contingencies (Russell, 1999). Further, when establishing direction and priorities for the various product, service, process, and business model innovation efforts of the firm, the company is formulating its *strategy for entrepreneurship*. Management is now determining the role of entrepreneurship and how it can be facilitated within the firm. If we compare these two strategies, both address issues that are external and internal to the firm. However, the application of entrepreneurial thinking to the firm's core strategy is primarily dealing with external questions such as identifying the unmet needs in the market and how the firm can best pursue innovation on a sustained basis. Alternatively, the development of a strategy for entrepreneurship is especially concerned with internal questions, including the appropriate entrepreneurial environment in order for employees to seek and discover company innovations. Clearly, both aspects of a CE strategy are needed (Morris, et al., 2011).

For successful corporate entrepreneurship, those within the firm must be encouraged and supported in how to think and act in entrepreneurial ways. Without awareness, encouragement, and nurturing, the entrepreneurial behavior that is linked to corporate entrepreneurship will not surface or be used consistently throughout the firm (Kuratko, Ireland & Hornsby, 2001). Furthermore, an awareness of what corporate entrepreneurship calls for in terms of behavior on the part of individuals permits an analysis of choices. Typically, organizational members compare and evaluate the opportunity costs of engaging in entrepreneurial behavior with those of either not doing so or engaging in other behaviors. Thus, linking CE activities to strategy and processes is important (Dess, Lumpkin, & MvGee, 1999).

Burgelman (1984; 1983a) argued that organizational innovation, along with other strategic activities, surfaces through two models, which he labeled induced versus autonomous

strategic behavior. Of the two models, induced strategic behavior occurs more frequently in organizations. Comparatively, induced strategic behavior captures formal entrepreneurial behavior while autonomous strategic behavior is entrepreneurial behavior that surfaces informally, and can be initiated by individuals and teams anywhere in the firm. The more resource rich the firm, the greater the likelihood that autonomous strategic behavior will emerge.

Burgelman's (1983b) induced strategic behavior approach is a top-down process whereby the firm's strategy and structure provide the context within which entrepreneurial behavior is elicited and supported. The responsibility for establishing a strategy and forming a structure that can induce entrepreneurial behavior rests with top-level managers. The structures put in place for the organization will either enhance entrepreneurial behaviors by encouraging cross discipline communications or discourage such behavior with silos that fail to communicate with each other. In addition, the strategy of the organization must convey an emphasis in entrepreneurial activity for the organization. Thus, induced strategic or entrepreneurial behavior can be shaped by the firm's structural context. While Burgelman's (1983b) analysis focuses on induced strategic behavior, it does not suggest ignoring the importance of autonomous strategic behavior for successful corporate entrepreneurship actions. Indeed, both induced and autonomous strategic behavior are important to a firm's corporate entrepreneurship efforts, whether they are oriented to creating new businesses or reconfiguring existing ones. In the induced strategic behavior model, top-level managers oversee, nurture, and support the firm's attempts to use entrepreneurial behavior as the foundation for product, process, and administrative innovations (Heller, 1999). A corporate entrepreneurship strategy that is intended to elicit and support induced strategic behavior should also include degrees of flexibility through which autonomous strategic behavior is allowed and indeed encouraged to surface. Properly viewed as a formal

tolerance of autonomous strategic behavior, an intentional commitment of this type is a conscious strategic decision on the part of the firm's upper-level decision makers to foster innovative entrepreneurial behavior, regardless of whether its origin rests with formal or informal processes.

A more integrated perspective, then, might define a corporate entrepreneurship strategy as "a vision-directed, 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" (Ireland, Covin, and Kuratko, 2009, 21). The strategy is heavily driven by conditions in the external environment of companies, but it also dependent upon an internal climate that is conducive to entrepreneurial activity. Let us further explore what is known about these external and internal considerations.

### **External Environment and Corporate Entrepreneurship**

What is the incentive for a company to engage in entrepreneurial behavior? While all companies must continually strive to get better, arguably the biggest driver of entrepreneurship in companies is environmental turbulence (Covin and Slevin, 1989; Morris and Sexton, 1996, Ireland, Hitt and Sirmon, 2003). Turbulence refers to the relative dynamism, hostility and complexity in the various components (e.g., technological, competitive, regulatory, customer, social, economic) of the firm's external environment.

In effect, if conditions are fairly stable, or the environment is considered to be relatively munificent, then the company does not experience as much pressure to engage in entrepreneurial activity. There is always a need for innovation as managers look for ways to cut costs, improve quality, or otherwise enhance performance. However, an unchanging environment suggests the innovation can be more modest or incremental. Environmental turbulence increases the threats

confronting the managers within a company, but also opens up new opportunities. The firm achieves competitive advantage under a given set of conditions and constraints, but when these change, firm advantage can be undermined or even disappear. To the extent that this external change is ongoing and/or more dramatic, corporate entrepreneurship must become an integral aspect of company operations. Moreover, these entrepreneurial efforts must result in dynamically continuous and discontinuous innovation (Morris, Kuratko and Covin, 2011).

There is considerable empirical support for these arguments. We earlier alluded to a series of studies that have found a positive correlation between a firm's entrepreneurial orientation (EO) and company performance. However, this relationship is stronger when the firm faces greater turbulence in its external environment (Davis, Morris and Allen, 1991; Barringer and Bluedorn, 1999; Rauch, et al, 2009; Sine and David, 2003).

It is also helpful to consider the concepts of exploitation and exploration (Gupta, Smith and Shalley, 2006). Exploitation involves competing in mature technologies and markets where efficiency, control, and incremental improvement are prized, while exploration involves capitalizing on new technologies and markets where flexibility, autonomy, and experimentation are needed (O'Reilly and Tushman, 2008). Central to exploration are the entrepreneurial capabilities of a company. In a stable environment, a company can concentrate on refining its current competencies, technologies, and strategic trajectory to fully exploit existing market opportunities. Yet, as conditions in the external environment change, the ability to capitalize on new possibilities becomes critical. Exploration makes it possible for the organization to develop the innovations that create the future and redefine the rules of competition.

The concept of ambidexterity has been introduced to capture the need for companies to simultaneously engage in both exploitation and exploration (O'Reilly and Tushman, 2004). This

can be difficult, as the skills, structures, resources, controls and management styles required for one differ considerably from the other. Entrepreneurship can be involved in both exploitation and exploration, with the latter requiring a greater degree and frequency of entrepreneurial behavior (Morris, et al., 2009).

The conclusion, then, is that external change forces internal change. Let us turn now to considerations within the firm, or what we shall refer to as the internal climate.

### **Internal Climate for Corporate Entrepreneurship**

The internal work environment conveys the perceived costs and benefits associated with an employee assuming the career-related and other personal risks associated with entrepreneurial behavior. It determines how much tolerance there is for the ambiguity, uncertainty, time commitment and stress that come with entrepreneurship. The internal climate can be nurturing, stifling or somewhere in between when it comes to CE. Management's challenge is to develop an "innovation friendly" internal environment where any employee can 'step to the plate' and attempt to innovate through their job. The challenge is that the environment that supports entrepreneurship (creation of something new) is also attempting to support everyday operations (efficiently and effectively managing current products and markets). Keep in mind that innovation is often disruptive when it comes to existing operations. Yet, employee perceptions of management commitment to the pursuit of innovative projects, the acceptability of taking calculated risks on the job, and the costs of failure are instrumental in explaining the tendency to act on entrepreneurial opportunities (Hornsby, Kuratko, Shepherd, & Bott, 2009).

As such, it is important to regularly audit the internal climate to determine the extent to which it discourages or supports entrepreneurial behavior. When attempting to inventory the firm's current situation regarding the readiness for innovation, managers need to consider

elements of the firm's strategy, structure, control systems, human resource management system, and culture (Ireland, Kuratko, & Morris, 2006 a&b).

In order to understand what constitutes an effective internal environment for entrepreneurial activity, understanding the specific antecedents to employee entrepreneurial behavior is critical. A growing body of work addresses the impact of organizational antecedents on individual-level entrepreneurial behavior (Kuratko, Montagno, & Hornsby, 1990; Hornsby, Kuratko, & Montagno, 1999; Hornsby, Kuratko, & Zahra, 2002; Kuratko, Ireland, Covin, & Hornsby, 2005; Hornsby, Kuratko, Shepherd, & Bott, 2009; Morris and Jones, 1993; Morris, et al. 2006; Rutherford and Holt, 2007; Zahra, 1991).

In the Kuratko et al. (1990) study, the authors identified five conceptually distinct factors that can elicit and support entrepreneurial behavior on the part of first- and middle-level managers (i.e., top management support for CE, reward and resource availability, organizational structure and boundaries, risk taking, and time availability). Hornsby et al. (2002) then developed the Corporate Entrepreneurship Assessment Instrument (CEAI) to provide a sound instrument for analyzing employee perceptions of the organizational climate for CE. The instrument featured 48 Likert-style questions that were used to assess antecedents of entrepreneurial behavior. Results supported the five stable antecedents of middle-level managers' entrepreneurial behavior. The five antecedents are: (1) *management support* (the willingness of top-level managers to facilitate and promote entrepreneurial behavior, including the championing of innovative ideas and providing the resources people require to behave entrepreneurially), (2) *work discretion/autonomy* (top-level managers' commitment to tolerate failure, provide decision-making latitude and freedom from excessive oversight and to delegate authority and responsibility to middle- and lower-level managers), (3) *rewards/reinforcement*

(developing and using systems that reinforce entrepreneurial behavior, highlight significant achievements and encourage pursuit of challenging work) (4) *time availability* (evaluating workloads to ensure that individuals and groups have the time needed to pursue innovations and that their jobs are structured in ways that support efforts to achieve short- and long-term organizational goals), and (5) *organizational boundaries* (precise explanations of outcomes expected from organizational work and development of mechanisms for evaluating, selecting and using innovations). The CEAI instrument measures the degree to which individuals within a firm perceive the presence of these five elements critical to an environment conducive for individual entrepreneurial activity (Kuratko, Hornsby & Covin, 2014). Through the results of this instrument, corporate entrepreneurial leaders are better able to assess, evaluate, and manage the firm's internal work environment in ways that support entrepreneurial behavior, which becomes the foundation for successfully implementing a corporate entrepreneurship strategy. However, it is important to recognize that there are critical roles that must be fulfilled by the different levels of management for the successful implementation of corporate entrepreneurship. For students, this can be an essential preparation for the roles they may seek in organizations.

### **The Essential Roles of Managers**

Managers, at all organizational levels, have critical strategic roles to fulfill for the organization to be successful (Ireland, Hitt, & Vaidyanath, 2002). Senior, middle, and first-level managers have distinct responsibilities which are then associated with particular managerial actions (Floyd and Lane, 2000), and this becomes especially relevant when we consider CE.

In examining the role of senior-level managers in the process of corporate entrepreneurship, Burgelman (1984) contends that their principal involvement concerns corporate strategy and setting the strategic and structural context within which entrepreneurial

behavior can occur. In particular, senior-level managers are responsible for *retroactively rationalizing* selected new businesses into the firm's portfolio and developing strategy based on their evaluations of those businesses' prospects as desirable, value-creating components of the firm. They play an important *selecting* role in CE. Senior-level managers are also responsible for *structuring* the organization in ways that facilitate the development and eventual integration of new business ventures embraced as part of the firm's strategic context. A wide range of structural possibilities exist, from new product development departments and new venture units to spin offs and outsourcing.

Ling, Simsek, Lubatkin, and Veiga (2009) examined 152 firms in regard to the impact of a "transformational" CEO on corporate entrepreneurship. They found that the transformational CEO had a significant role in directly shaping four salient characteristics of top management teams: behavioral integration, risk-taking propensity, decentralization of responsibilities, and long-term compensation. This study provided impetus to the importance of the *directing* role that top management must embrace. Thus, senior-level managers have critical roles in the articulation of an entrepreneurial strategic vision and instigating the emergence of an organizational climate conducive to entrepreneurial activity. In addition, senior-level managers are centrally involved in the defining processes of both the corporate venturing and strategic entrepreneurship forms of CE, as they provide leadership to various entrepreneurial initiatives.

The evidence indicates that middle-level managers are a hub through which most organizational knowledge flows (Floyd & Wooldridge, 1992; 1994; King, Fowler, & Zeithaml, 2001). To interact effectively with first-level managers, middle-level managers must possess the technical competence required to understand the firm's core competencies, particularly as they relate to management and development of entrepreneurial initiatives. Simultaneously, in their

interaction with senior-level executives, middle-level managers must understand the firm's strategic intent and goals. Through interactions with senior- and first-level managers, those operating in the middle of an organization's leadership hierarchy influence and shape the operationalization of the firm's corporate entrepreneurial strategy.

Consistent with this view, Kuratko, Ireland, Covin, and Hornsby (2005) argue that the middle-level manager's work as a change agent and promoter of innovation is facilitated by their positioning in the organization hierarchy. These authors contend that middle-level managers *endorse, refine, and shepherd* entrepreneurial initiatives and *identify, acquire, and deploy* resources needed to pursue those initiatives.

Based on the work of Kuratko, et al. (2005), these roles can be further broken down. *Endorsement*: middle-level managers often find themselves in evaluative positions with entrepreneurial initiatives emerging from lower levels in the firm. Then middle-level managers must endorse selected initiatives to the top levels of the organization. They must also endorse initiatives originating at the top-level and "sell" their value-creating potential to the primary implementers—first-level managers. *Refinement*: involves molding the entrepreneurial opportunity into one that makes sense for the organization, given the organization's strategy, resources, and structure. Middle-level managers must convert potential entrepreneurial opportunities into initiatives that fit the organization. *Shepherding*: middle-level managers champion and guide the entrepreneurial initiative to assure that those originating at lower levels in the firm are not abandoned once their continued development requires higher level support. *Identification*: knowing which resources will be needed to convert the entrepreneurial initiative into a business reality as these initiatives tend to evolve in their scope, content, and focus as they develop (McGrath & MacMillan, 1995). *Acquisition*: middle-level managers are responsible for

redirecting resources away from existing operations and toward entrepreneurial initiatives appearing to have greater strategic value for the firm (Burgelman, 1984). In short, it might be argued that the middle management level is where entrepreneurial opportunities are given the best chance to flourish based on the resources likely to be deployed as they are pursued.

According to Floyd and Lane (2000), first-level managers have *experimenting*, *adjusting*, and *conforming* roles. The *experimenting* role is expressed through the initiating of entrepreneurial projects. The *adjusting* role is expressed through, for example, a first-level manager responding to recognized and unplanned entrepreneurial challenges. Finally, the *conforming* role is expressed through first-level managers' adaptation of operating policies and procedures to the strategic initiatives endorsed at higher organizational levels.

To better understand entrepreneurial actions and the role of management, Hornsby, et al. (2009) conducted a study of 458 managers at different levels in their firms. They found that the relationship between perceived internal antecedents (as measured by the Corporate Entrepreneurship Assessment Instrument mentioned earlier) and entrepreneurial actions (measured by the number of new ideas implemented) differed depending on managerial level. Specifically, the positive relationship between managerial support and entrepreneurial action was stronger for senior and middle level managers than for first-level (lower level) managers. The positive relationship between work discretion and entrepreneurial action was also stronger for senior and middle level managers than for first-level managers. The few studies that have explored managerial level have emphasized the role of first-level managers in a "bottom-up" process of corporate entrepreneurship (Burgelman, 1983a; 1983b; 1984). The Hornsby, et al, (2009) study offered a counter view to this "bottom-up" perspective, supporting the notion that higher level managers have greater ability to "make more of" conditions in the company and thus

implement a greater number entrepreneurial ideas than do first-level managers.

Working jointly, senior, middle, and first-level managers are responsible for developing the entrepreneurial behaviors that can be used to form the capabilities through which future competitive success can be achieved (Kuratko, Hornsby, & Bishop, 2005). Thus, organizations developing an environment conducive to entrepreneurial activity must recognize that there is an integrated set of roles at the senior, middle, and first-levels of management.

### **Emerging Specialized Topics in CE**

As the field of corporate entrepreneurship has become more defined, both the depth and breadth of topical coverage in the published research have increased. New theoretical and empirical insights regularly appear that address ever more specific issues, expanding the richness of what can be taught in CE courses.

Examples of some of the contemporary topics receiving attention include:

- Corporate venture capital and its role in supporting innovation within firms (Wadhwa, Phelps, & Kotha, 2016; Weber, Bauke, & Raibulet, 2016).
- External corporate venturing as a means for acquiring new innovations (Basu, Phelps, & Kotha, 2016; Titus, House, & Covin, 2017).
- Women and their role in corporate entrepreneurial activity (Lyngsie, & Foss, 2017).
- Understanding employee innovative behaviors (Kang, Matusik, Kim, & Phillips, 2016).
- Validation and termination processes for corporate entrepreneurial projects (Behrens, & Patzelt, 2016; Fisher, Kuratko, Bloodgood, & Hornsby, 2017).
- Control system factors that influence or restrain corporate entrepreneurial activity (Goodale, Kuratko, Hornsby, & Covin, 2011).

- Cognitive processes and corporate entrepreneurs (Corbett & Hmieleski 2007; Garrett & Holland, 2015).
- The extension of CE to small and medium sized firms and not-for-profit institutions (Nason, McKelvie, & Lumpkin, 2015; Kearney & Morris, 2015).
- The role of CE in family firms (Minola, Brumana, Campopiano, Garrett, & Cassia, 2016).

Two especially promising areas for research concern specific elements within the entrepreneurial process in established companies and the role of affect or emotions in this process. For instance, Covin, et al. (2015) have analyzed the evolution of the value proposition and subsequent performance of internal corporate ventures (ICVs). Aimed at developing a deeper understanding of the process requirements of successful exploratory initiatives, the authors built and tested a model of venture performance using data from 145 ICVs. They found that moderate levels of evolution of the value proposition results in better performance than either no evolution or extensive evolution. Another example concerns work on the learning that takes places as an entrepreneurial initiative unfolds. Covin, et al. (2017) found that learning proficiency is more positively related to venture performance when the ICV's initial value propositions are unclear and when the ICV's goals do not extensively evolve over the course of the venture's development.

Corporate entrepreneurship and the accompanying risks and rewards can, at times, be an emotional process for both managers and employees. Brundin, Patzelt, and Shepherd, (2008) examined the impact of confidence, satisfaction, frustration, worry, bewilderment and strain on employees' willingness to act entrepreneurially. Biniari (2012) examines how the emotions

resulting from and influenced by the interaction between entrepreneurs and non-entrepreneurs in a given social context affect the entrepreneurial process and its outcomes in companies.

A related issue concerns the experience of failure when pursuing an entrepreneurial initiative in a company. Although failure can be an important source of information for learning, this learning is not automatic or instantaneous. The emotions generated by the failure of an innovative project (e.g., grief) can interfere with the learning process. Shepherd and Kuratko (2009) highlight explanations of the grief process and how it can be managed by individuals and organizations to enhance learning. Separately, Shepherd, Covin, and Kuratko (2009) explore two approaches to managing one's emotional response to the failure of an entrepreneurial project, regulation and normalization.

As indicated throughout this paper, a wide variety of elements affect the corporate entrepreneurial process. Whether these elements are internal or external to the organization, the research work is important and that research must be translated into the classroom. CE is a dynamic concept growing in importance every year, so as educators and scholars we must “push the envelope” to better prepare students for the innovative challenges that confront tomorrow's organizations.

## **Pedagogy and Corporate Entrepreneurship**

### **Teaching a CE Course**

While corporate entrepreneurship is sometimes approached as a module or set of modules in a more general entrepreneurship course, at many institutions around the world it is taught as a standalone course or seminar (Morris, Cornwall and Kuratko, 2013). However, there is no standard structure for the CE course. The approach to course design will tend to vary depending

on the objectives of the instructor, the level of the student, and the amount of time allocated for the course.

From a content perspective, below is an example of the topics around which a CE course might be organized:

- How Organizations Evolve; The Strategic Challenge Confronting Organizations;
- What it Means to Be Entrepreneurial; The Concept of Entrepreneurial Orientation (EO);
- Differences between Start-up and Corporate Entrepreneurship;
- Forms that Entrepreneurship Takes Inside Corporations
- Who is the Corporate Entrepreneur?; Entrepreneurs versus Managers ;
- A Framework for Understanding Obstacles to Corporate Entrepreneurship;
- Innovation, Technology and Corporate Entrepreneurship; The Innovation Portfolio
- Setting Goals and Formulating Entrepreneurial Strategies;
- Types of Organizational Structures and CE;
- The Role of Control Systems, Budget Systems and Cost Systems;
- Internal Venture Capital
- How the HRM System can Facilitate Corporate Entrepreneurship;
- Critical Aspects and Issues Surrounding the Corporate Culture;
- People Issues: Resistance to Change and Fear of Failure
- Entrepreneurship within Different Functional Areas of a Company
- Ethics and the Corporate Entrepreneur?
- Course Wrap-up

A number of learning resources are available to support the delivery of a CE course.

Examples of standard textbooks include Morris, Kuratko and Covin (2011), Sathe, (2007), Hisrich and Kearney (2011), Burns (2013) and Desouza (2011). These are general texts around which a course can be designed. A wide range of other books, such as *Good to Great* (Collins, 2001), *The Innovator's Dilemma* (Christensen, 2013), *Open Innovation* (Chesbrough, 2006) represent good supplements when teaching a CE course.

For many students, entrepreneurship inside a large, established company is further removed, conceptually, from their life experiences, especially compared to start-up entrepreneurship. As such, it becomes important to integrate experiential learning tools into the

CE classroom. Toward this end, excellent case studies are available to augment lectures and other course activities. These delve into a range of challenges in organizing for entrepreneurship and seeing projects through the entrepreneurial process. Cases can be found through a search of ‘corporate entrepreneurship’ in the online case study sites of Harvard Business Publishing, Darden Business Publishing at the University of Virginia, the Case Centre at Ivey Publishing, and other case clearing houses.

Other experiential or application-oriented resources can be found online. A series of podcasts entitled *How I Built This* is available from National Public Radio in the U.S. Here, fairly in-depth and personal insights are provided as founders of a number of prominent firms describe the challenges of sustaining growth and innovation beyond the initial start-up. In addition, shorter videos that address a host of topics and examples related to corporate entrepreneurship and innovation inside companies can be found on You Tube and through online TED talks.

In addition to these application-oriented resources, engaging students by having them complete some sort of course project can greatly enhance the learning process. One direction for such a project could involve a research paper. Students might synthesize available scholarly and applied research and take positions on such topics as reward systems that encourage CE, the design of internal venture capital funds, or top-down versus bottom up approaches to CE. Another direction is more experiential. Here, students might be required to conduct and write up an interview with someone who has been involved with innovative projects inside a larger, established company. While many other possibilities exist, we encourage educators to consider having students conduct an audit of a company from an entrepreneurial perspective.

### **The Entrepreneurial Health Audit**

How do we instill an understanding in students about the critical elements of the internal environment, the roles of managers, and the entrepreneurial strategy of a firm? A useful class project is called the *Entrepreneurial Health Audit* (Ireland et al., 2006). Students are put into teams and assigned to a mid-sized or large company that has agreed to participate in exchange for a final report and presentation assessing the firm from an entrepreneurial vantage point. The Audit involves a systematic approach that involves three steps or stages.

*Step I: Assessing the Company's Entrepreneurial Intensity (EI)* The entrepreneurial performance of a company at a given point in time is reflected in its entrepreneurial intensity score. EI is an extension of EO, and is concerned with both the degree and frequency of entrepreneurship (Morris and Sexton, 1996).

To assess degree of entrepreneurship, measures are needed of the organization's entrepreneurial orientation (EO) which consists of innovativeness, risk-taking, and proactiveness. Innovativeness refers to the seeking of creative, unusual, or novel solutions to problems and needs. These solutions take the form of new technologies and processes, as well as new products and services. Risk-taking involves the willingness to commit significant resources to opportunities having a reasonable chance of costly failure. These risks are typically manageable and calculated. Proactiveness is concerned with pursuing initiatives in advance of rivals' actions, with doing what is necessary to anticipate and act upon an entrepreneurial opportunity. Such pioneering behavior usually entails considerable perseverance, adaptability, and tolerance of failure. Assessment of frequency of entrepreneurship involves measuring the number of new products, services, and process innovations introduced over some defined time period (e.g., the last two years).

A proven measurement instrument for assessing EI within a company can be found in Morris, Kuratko, and Covin (2011). It allows students to graphically capture the position of a company on a grid that has degree on the vertical axis and frequency on the horizontal axis. When interpreting EI scores, it is important to recognize that norms for entrepreneurial intensity will differ among industries. One is attempting to achieve higher levels of EI not in absolute terms, but relative to a specific industry standard. Measurement of EI also provides numerous opportunities for developing a richer understanding of how entrepreneurship works in a particular company. For example, the relative importance of degree and frequency when measuring entrepreneurial actions may vary depending on certain strategic factors, such as the pace of technological change in an industry, the levels of competitive intensity, or the heterogeneity of market demand. Also, the conditions under which degree or frequency is the strongest contributor to performance can be assessed. It has been speculated that frequency and degree may contribute fairly equally to short-term results, whereas a greater degree of entrepreneurship has a stronger long-term impact. In any event, the EI is a powerful assessment tool for capturing entrepreneurship at the organization or division level.

*Step II: Diagnosing the Climate for Corporate Entrepreneurship* While the assessment of EI captures how entrepreneurial the company is, a need also exists to determine the underlying reasons *why* a given level of EI is being achieved. In a sense, management must determine the entrepreneurial health of the organization. The Corporate Entrepreneurship Assessment Instrument (CEAI) is a diagnostic tool for assessing, evaluating, and managing the internal environment of the company in a manner that supports entrepreneurship. By taking inventory of the company's current situation as seen through the eyes of managers, executives can identify

organizational systems and structures that are inconsistent with, or represent obstacles to, higher levels of EI.

As discussed earlier, the CEAI is designed around five key antecedents to the creation of sustainable entrepreneurship within a company - *management support; work discretion/autonomy; reinforcement; time availability; and organizational boundaries*. The full CEAI survey and its scoring instructions can be found in Kuratko, Hornsby, and Covin (2014). It consists of 48 Likert-style questions. The instrument has been shown to be psychometrically sound as a viable means for assessing areas requiring attention and improvement in order to achieve intended results through use of a CE strategy. The instrument can be used to develop a profile of a company across the dimensions and internal environment variables previously described. Low scores in an area suggest the need for training activities, redesign of systems or processes, restructuring, or other managerial changes to enhance the company's readiness for entrepreneurial behavior and implementation of a CE strategy.

Essentially concerned with a company's "entrepreneurial health," the instrument can significantly benefit organizations and would be of interest to both organizational practitioners, researchers, and students. For managers, the instrument provides an indication of a company's likelihood of being able to successfully implement a CE strategy. It highlights areas of the work environment that should be the focus of ongoing design and development efforts. Further, the CEAI can be used as an assessment tool for students attempting to evaluate a company as part of the entrepreneurial health audit.

The tacit knowledge of managers at the executive, middle, and operating levels regarding the role of entrepreneurship within the company and what the company is explicitly doing to reinforce entrepreneurial behavior is critical. Managers are most likely to engage in

entrepreneurial behavior when the organizational antecedents to that behavior are well-designed and well-communicated. Individuals assess their entrepreneurial capacities in reference to what they perceive to be is a set of organizational resources, opportunities, and obstacles related to entrepreneurial activity. Determining that the value of entrepreneurial behavior exceeds that of other behaviors leads managers to champion, synthesize, facilitate, and implement.

*Step III: Create an Organization-Wide Understanding of CE*

Having assessed the entrepreneurial performance and the internal environment, the third step in the health audit involves determining the degree to which a CE strategy and the entrepreneurial behavior through which it is implemented are understood and accepted by affected parties. A CE strategy is implemented successfully only when all actors are committed to it. Hence, individuals must be aware of the intent and mission surrounding a CE strategy. Key decision makers must find ways to explain their intent and mission to those from whom entrepreneurial efforts are expected. In addition, the readiness of each actor to display entrepreneurial behavior should be realistically assessed. Actions to enhance entrepreneurial skills of employees should then be set into motion. These commitments and processes help to shape a common vision around the importance of a CE strategy and entrepreneurial behavior as the cornerstone to an effective strategic adaptation process. As a way for organizations to develop a sound program for understanding entrepreneurial activity, a CE employee development program can be established. Some suggested elements for such a program can be found in Kuratko, Covin, and Hornsby (2014).

## **CONCLUSION**

In this paper we have shown that throughout the past four decades CE research has suggested important linkages between strategy, the external and internal environments, and

management roles. While more research is needed to examine the linkages among the many other variables involved with CE, future research will provide a better understanding of the specific conditions of the managerial decisions and actions in pursuit of CE strategies. Therefore, it is imperative that entrepreneurship researchers continue to explore CE to uncover the nuances that make this concept so difficult for today's organizations to implement.

For teachers in the entrepreneurship and strategy domains, this topic holds tremendous significance as many students will begin careers in major established organizations. With the exponential changes happening in today's organizations due to the ever increasing speed of disruptive innovations, students need to be prepared for the challenges that lie ahead of them. Using a tool such as the Entrepreneurial Health Audit, students can gain the experience of gauging an organization's internal environment for CE activities. Not only will they learn more about the challenges of implementing corporate entrepreneurship but also retain a valuable tool which could eventually be applied in the organization that employs them.

So, corporate entrepreneurship is the critical challenge confronting today's organizations in this disruptive age. It is clear that this topic should continue to be embraced by both researchers and teachers.

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