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A Model of Strategic Entrepreneurship: The Construct and its Dimensions

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Strategic entrepreneurship (SE) involves simultaneous opportunity-seeking and advantage-seeking behaviors and results in superior firm performance. On a relative basis, small, entrepreneurial ventures are effective in identifying opportunities but are less successful in developing competitive advantages needed to appropriate value from those opportunities. In contrast, large, established firms often are relatively more effective in establishing competitive advantages but are less able to identify new opportunities. We argue that SE is a unique, distinctive construct through which firms are able to create wealth. An entrepreneurial mindset, an entrepreneurial culture and entrepreneurial leadership, the strategic management of resources and applying creativity to develop innovations are important dimensions of SE. Herein we develop a model of SE that explains how these dimensions are integrated to create wealth.

Entrepreneurship and strategic management are concerned with growth and wealth creation (Amit & Zott, 2001; Hitt & Ireland, 2000; Hitt, Ireland, Camp & Sexton, 2001, 2002; Ireland, Hitt, Camp & Sexton, 2001; Morris, 1998; Priem & Butler, 2001b). Indeed growth and wealth creation are entrepreneurship's defining objectives (Certo, Covin, Daily & Dalton, 2001; Ireland, Kuratko & Covin, 2003). In addition, entrepreneurship increasingly is viewed as a stimulus to wealth creation in emerging, developing, and developed economies as a result of the actions of individual firms (Peng, 2001; Zahra, Ireland, Gutierrez & Hitt, 2000). Similarly, strategic management is concerned with understanding the reasons

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for differentials among firms' wealth creation in various economies (Farjoun, 2002; Teece, Pisano & Shuen, 1997).

Wealth creation and firm growth are interrelated. In general, effective growth is expected to help firms create wealth by building economies of scale as well as market power. These outcomes provide additional resources and contribute to achieving a competitive advantage. Likewise, additional wealth makes it possible for firms to allocate resources to stimulate further growth. This relationship is especially critical to new venture firms—firms that often create wealth by growing rapidly. Our work assumes the importance of firm growth while examining wealth creation as an outcome of the effective use of entrepreneurship and strategic management.

In our analysis of strategic entrepreneurship (SE), we do not assume nor argue that entrepreneurship and strategic management are a single discipline that has been subdivided. Indeed, both entrepreneurship and strategic management research have rendered unique and valuable contributions to organization science. However, similar to some scholars, we believe that the two disciplines are often complementary (i.e., mutually supportive). Meyer and Heppard (2000), for example, observed that the entrepreneurship and strategic management disciplines are inseparable, making it difficult to understand one field's research findings without simultaneously studying the results reported in the other. Barney and Arikan (2001) suggested that there is a close, although not fully specified relationship between theories of competitive advantage and theories of creativity and entrepreneurship. Understanding the complementarity between entrepreneurship and strategic management provides promising avenues for researchers examining how organizations create wealth. Although both entrepreneurship and strategic management are concerned with wealth creation, their foci differ slightly.

Herein, we extend previous work on the recently proposed SE construct (Hitt, Ireland, Camp, et al., 2001, 2002; Ireland et al., 2001) to contribute to our understanding of how firms can use SE to create wealth. We first review the scope of the entrepreneurship and strategic management disciplines and emphasize the value of integrating areas within them. Secondly, we examine the four distinctive dimensions of SE—an entrepreneurial mindset, an entrepreneurial culture and entrepreneurial leadership, the strategic management of resources and applying creativity and developing innovation.

The Distinctive Nature of Strategic Entrepreneurship

The Scope of Strategic Management

To understand differentials among firm's performance, strategic management examines firms' efforts to develop sustainable competitive advantages as a determinant of their ability to create wealth (De Carolis, 2003; Rouse & Dallenbach, 1999). Favorable market positions (Porter, 1985) and the possession of valuable, rare, imperfectly imitable, and nonsubstitutable resources idiosyncratic to the firm (Barney, 1991) are the most frequently cited sources of sustainable competitive advantage. Recent arguments suggested that the *most* important competitive advantages are based on resources that are *more* valuable, rare, imperfectly imitable, and nonsubstitutable than those held by competitors (Gove, Sirmon &

Hitt, 2003). Thus, competition—in the form of competitive strategy, benchmarking, learning to consistently outperform competitors, strategic position, and so forth—forms the basis of many strategic management perspectives (Eisenhardt & Schoonhoven, 1996).

The Scope of Entrepreneurship

Some have argued that entrepreneurship focuses on newness and novelty in the form of new products, new processes, and new markets as the drivers of wealth creation (Daily, McDougall, Covin & Dalton, 2002; Lumpkin & Dess, 1996; Sharma & Chrisman, 1999; Smith & Di Gregorio, 2002). Somewhat differently, Shane and Venkataraman (2000) suggested that discovering and exploiting profitable opportunities is the foundation for wealth creation through entrepreneurship. Both of these viewpoints agree that opportunity recognition is at the heart of entrepreneurship (Brown & Eisenhardt, 2000; McCline, Bhat & Baj, 2000). Indeed, the ability to create additional wealth accrues to firms and individuals with superior skills in sensing and seizing entrepreneurial opportunities (Teece, 1998).

Entrepreneurship scholars seek answers to questions such as, "(1) why, when, and how opportunities for the creation of goods and services come into existence; (2) why, when, and how some people and not others discover and exploit these opportunities; and (3) why, when, and how different modes of action are used to exploit entrepreneurial opportunities" (Shane & Venkataraman, 2000: 218). Reflecting the importance of these questions, entrepreneurship has been defined as the identification and exploitation of previously unexploited opportunities (Hitt, Ireland, Camp, et al., 2001). Thus, as a context-dependent social process (Ireland et al., 2001), entrepreneurship involves bundling resources and deploying them to create new organizational and industry configurations (Schoonhoven & Romanelli, 2001).

Exploiting entrepreneurial opportunities contributes to the firm's efforts to form sustainable competitive advantages and create wealth. Unfortunately, many companies fail to motivate people in ways that incent them to pursue entrepreneurial opportunities, thereby failing to contribute to the firm's competitive advantages (Day & Wendler, 1998). Additionally, entrepreneurs may identify and exploit opportunities that create or establish temporary rather than sustainable competitive advantages. This occurs primarily when entrepreneurs fail to manage resources strategically, making it difficult to sustain the competitive advantages developed (Hitt, Ireland, Camp, et al., 2001). Therefore, both opportunity-seeking (i.e., entrepreneurship) and advantage-seeking (i.e., strategic management) behaviors are necessary for wealth creation, yet neither alone is sufficient (Amit & Zott, 2001; Hitt & Ireland, 2000; McGrath & MacMillan, 2000). Thus, Shane and Venkataraman's (2000) opposition notwithstanding, the integration of knowledge about entrepreneurship and strategic management is important for advancing our understanding of how wealth is created in new ventures and established firms.

Integrating Entrepreneurship and Strategic Management

Hitt, Ireland, Camp, et al. (2001, 2002) and Ireland et al. (2001) integrated and summarized the basic tenets of entrepreneurship and strategic management. Their primary purpose was to identify theoretically rich research questions to help advance the understanding of wealth creation in new ventures and established firms. Collectively, this work suggested that entrepreneurship and strategic management both focus on how firms create change (adapt or proact) by exploiting opportunities resulting from uncertainty in their external environment (Hitt, Ireland, Camp, et al., 2001; Ireland et al., 2001). Firms, therefore, create wealth by identifying opportunities in their external environments and then developing competitive advantages to exploit them (Hitt, Ireland, Camp, et al., 2001, 2002; Ireland et al., 2001). Based on this work, we conclude that *strategic entrepreneurship* results from the integration of entrepreneurship and strategic management knowledge.

Hitt, Ireland, Camp, et al. (2001, 2002) and Ireland et al. (2001) argued that SE involves taking entrepreneurial actions with strategic perspectives. Firms able to identify opportunities but incapable of exploiting them do not realize their potential wealth creation, thus under rewarding stakeholders. Similarly, firms with current competitive advantages but without new opportunities identified to pursue and exploit with these advantages expose their stakeholders to an increased risk such that market changes may diminish the rate of wealth creation or even reduce previously created wealth. Wealth is created only when firms combine effective opportunity-seeking behavior (i.e., entrepreneurship) with effective advantage-seeking behavior (i.e., strategic management).

Historically, small companies and start-up ventures have been relatively skilled in identifying entrepreneurial opportunities but less effective at developing and sustaining the competitive advantages needed to exploit those opportunities over time. In contrast, more established organizations have demonstrated relatively superior skills in terms of developing and sustaining competitive advantages but have been less effective in recognizing entrepreneurial opportunities that can be exploited with their resources and resulting capabilities. Thus, entrepreneurial and new venture firms tend to excel at opportunity-seeking behavior while established companies typically excel in the exercise of advantage-seeking behavior. Alternatively, firms pursuing SE seek fundamentally new opportunities (i.e., opportunity-seeking behavior) either to disrupt an industry's existing competitive conditions or to create new market spaces (i.e., advantage-seeking behavior).

The early attempts to integrate entrepreneurship and strategic management focused on domains relevant to both disciplines (Covin & Miles, 1999). Innovation, internationalization, organizational learning, alliances and networks, top management teams and governance, and growth are domains examined in the early SE studies (Hitt, Ireland, Camp, et al., 2001, 2002; Ireland et al., 2001). Theoretical roots in economics, international business and management, organization theory, sociology, and strategic management have informed the analysis of SE and the development of promising research questions.

Theoretical Framework

Although useful, early research efforts to explicate SE as a unique construct do not adequately describe its distinctive dimensions. Herein, we extend the contributions of prior work by identifying and critically examining SE's underlying dimensions. Several theoretical bases, including the resource-based view (RBV) of the firm, human capital, social capital, organizational learning, and creative cognition are integrated in this work. This integration is important because it addresses how combining and synthesizing opportunity-seeking behavior and advantage-seeking behavior leads to wealth creation.

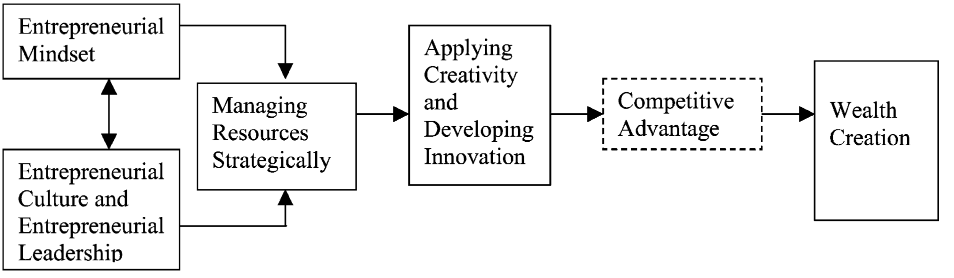

Figure 1. A model of strategic entrepreneurship.

Our examination of SE's distinctive dimensions unfolds in four major sections. First, we define an entrepreneurial mindset and describe its key components—entrepreneurial opportunities, entrepreneurial alertness, real options, and an entrepreneurial framework. Second, we examine entrepreneurial culture and entrepreneurial leadership as vital aspects of SE. In the third major section, we discuss how managing organizational resources strategically provides the foundation for the firm's opportunity-seeking and advantage-seeking behaviors. Grounded in resource-based theory, the strategic management of resources involves a comprehensive set of actions (i.e., structuring the resource portfolio, bundling resources in the portfolio into capabilities and the leveraging of multiple capabilities) needed to recognize opportunities and to develop competitive advantages to successfully exploit them. Financial capital, human capital, and social capital are the most important resources involved with effective resource management (Sirmon & Hitt, 2003). The fourth section is concerned with applying creativity and developing innovation, which are critical outcomes of an entrepreneurial mindset, an entrepreneurial culture and entrepreneurial leadership practices as well as the strategic management of the firm's resources. Drawing from Schumpeter's (1934, 1942) arguments as well recent work on bisociation (Smith & Di Gregorio, 2002), this section highlights the value of creativity and innovation to opportunity- and advantage-seeking behaviors. The paper closes with conclusions and discussions of research questions and managerial implications that are suggested by the paper's arguments. A model of SE as explained herein is presented in Figure 1.

Entrepreneurial Mindset

An entrepreneurial mindset is required to successfully engage in SE. In McGrath and MacMillan's (2000: xv) words, "The successful future strategists will exploit an entrepreneurial mindset, melding the best of what older models have to tell us with the ability to rapidly sense, act, and mobilize, even under highly uncertain conditions." An entrepreneurial mindset is both an individualistic and collective phenomenon; that is, an entrepreneurial mindset is important to individual entrepreneurs as well as to managers and employees in established firms to think and act entrepreneurially (Covin & Slevin, 2002).

McGrath and MacMillan (2000) view an entrepreneurial mindset as a way of thinking about business that focuses on and captures the benefits of uncertainty. Uncertainty is a perceptual phenomenon derived from an inability to assign probabilities to future events, largely because of a lack of information about cause/effect relationships (Hoskisson & Busenitz, 2002). Risk and ambiguity are part of organizational uncertainty (Priem, Love & Shaffer, 2002). Organizations capable of successfully dealing with uncertainty tend to outperform those unable to do so (Brorstrom, 2002). Thus, an entrepreneurial mindset can contribute to a competitive advantage (Miles, Heppard, Miles & Snow, 2000) and is necessary for creating wealth.

Based on earlier work, we define an entrepreneurial mindset as a growth-oriented perspective through which individuals promote flexibility, creativity, continuous innovation, and renewal. In other words, even under the cloak of uncertainty, the entrepreneurially minded can identify and exploit new opportunities because they have cognitive abilities that allow them to impart meaning to ambiguous and fragmented situations (Alvarez & Barney, 2002). Evidence suggests that an entrepreneurial mindset may support the growth of an entire economy (e.g., Sweden's economy) as well as the growth of individual firms (Jury, 1999).

The Components of an Entrepreneurial Mindset

Recognizing entrepreneurial opportunities. Recognizing entrepreneurial opportunities is a key wealth-creation activity and is a common outcome of an entrepreneurial mindset. Entrepreneurial opportunities are found in markets in which new goods, services, raw materials, and organizing methods can be introduced and sold at a price exceeding the cost of their production (Casson, 1982; Shane & Venkataraman, 2000). Information asymmetries in the marketplace often provide entrepreneurial opportunities. Asymmetrical information stocks suggest that opportunities aren't equally recognizable to everyone (Hayek, 1945). Indeed, only a subset of any population will recognize a given entrepreneurial opportunity (Kirzner, 1973; Shane & Venkataraman, 2000). Changing demographics, social change, the emergence of new market segments and changes in governmental regulations represent conditions that may create entrepreneurial opportunities (Morris, 1998). In the broadest sense, entrepreneurial opportunities exist because of information asymmetries through which different actors develop separate beliefs regarding the relative value of resources as well as the potential future value of those resources following their transformation from inputs into outputs (Alvarez & Barney, 2002; Kirzner, 1973; Schumpeter, 1934; Shane & Venkataraman, 2000).

Entrepreneurial alertness. Kirzner (1997) viewed entrepreneurial alertness as “flashes of superior insight” (Alvarez & Barney, 2002). Those with the ability to identify when new goods or services become feasible or when existing goods or services become unexpectedly valuable to consumers possess entrepreneurial alertness. The lure of creating wealth by pursuing entrepreneurial opportunities stimulates entrepreneurial alertness (Hitt & Ireland, 2000). The flash of superior insight resulting from entrepreneurial alertness informs the pursuit of entrepreneurial opportunities as well as stimulates development of an entrepreneurial culture and entrepreneurial leadership in a firm. In slightly different words, entrepreneurs' insights influence the search for markets in which the insight can be applied through new goods or new services.

Those with keen entrepreneurial alertness demonstrate a strong entrepreneurial mindset. McGrath and MacMillan (2000) label such people habitual entrepreneurs. Focusing on opportunity-seeking behavior, but with an orientation to engage in advantage-seeking behavior to successfully exploit identified opportunities, habitual entrepreneurs share several characteristics, including: (1) the passionate pursuit of entrepreneurial opportunities—habitual entrepreneurs constantly seek ways to profit from disruptions to the current conduct of business; (2) the disciplined pursuit of the most promising opportunities—habitual entrepreneurs maintain an inventory of entrepreneurial opportunities and pursue them only when they can be effectively matched with competitive advantages; (3) a consistent focus on execution—habitual entrepreneurs carefully analyze entrepreneurial opportunities but move quickly to develop competitive advantages to exploit them rather than overanalyzing individual opportunities; and (4) a commitment to engage everyone in identifying and pursuing entrepreneurial opportunities (McGrath & MacMillan, 2000).

Real options logic. Thought of commonly in terms of financial assets, an option is the right, but not the obligation, to buy or sell a particular asset at a predetermined price on a predetermined date. Real options entail the same conditions as financial options but are written in terms of "real" assets (c.f. the human, organizational, and physical capital the firm uses to select and implement its strategies) rather than financial assets (Barney, 2002). Real options logic, which enhances strategic flexibility (Mosakowski, 2002), helps firms and entrepreneurs deal with the uncertainties associated with identifying and pursuing entrepreneurial opportunities (Hoskisson & Busenitz, 2002; McGrath, 1999).

In some instances, firms using real options logic may limit their initial investment in an initiative based on an entrepreneurial opportunity. As a real option, the limited investment yields information suggesting the potential wealth creation of further investment in the identified opportunity. Thus, the firm can be more confident in its allocation decisions to pursue or not to pursue an opportunity. In an instance where the uncertainty associated with an initial investment is low or moderate, the firm may allocate a more significant amount of resources. The most successful firms develop a dynamic portfolio of entrepreneurial opportunities (options), allocating their resources in a way that balances the risks and returns generated by the options. Successful use of an options approach minimizes the waste of resources while increasing the likelihood that the firm concentrates on its most valuable entrepreneurial opportunities.

Entrepreneurial framework. The wealth-creating potential of an entrepreneurial mindset increases when it is applied within the context of an entrepreneurial framework. An entrepreneurial framework includes actions such as setting goals, establishing an opportunity register, and determining the timing associated with launching the strategy required to exploit an entrepreneurial opportunity. The entrepreneurial framework should be consistently used across projects and time to ensure common treatment as the firm evaluates alternatives for resource allocations. The wealth-creating *goals* to be pursued by using an entrepreneurial mindset are more than incremental in nature. The framing of expected outcomes allows parties to understand the process and outcome goals they should strive to achieve when pursuing entrepreneurial opportunities.

An *opportunity register* is where the firm records entrepreneurial opportunities (McGrath & MacMillan, 2000). From a strategic- or advantage-seeking behavior perspective, opportunities can be pursued only when the firm has the capabilities required to do so (De Carolis, 2003). Placing all opportunities into a register makes them visible to multiple parties, some of whom already possess the capabilities needed to pursue them. Thus, opportunities identified by those in one part of the firm can be exploited by those working in other divisions or units in which the opportunities may be more valuable.

Finally, an entrepreneurial framework includes an orientation to the appropriate *timing* to exploit entrepreneurial opportunities (Miller & Folta, 2002). For example, firms following a prospector strategy (Miles & Snow, 1978) are focused on assessing and using entrepreneurial opportunities to act quickly while a firm following a defender strategy is more concerned about the precise timing of exploiting an entrepreneurial opportunity. Thus, prospectors use entrepreneurial opportunities as a pathway to become first movers. In contrast, defenders are more likely to match their idiosyncratic, unique capabilities to an entrepreneurial opportunity to be second movers, commonly entering a market after first movers' actions demonstrate a market's viability.

Entrepreneurial Culture and Entrepreneurial Leadership

Entrepreneurial Culture

Organizational culture is a system of shared values (i.e., what is important) and beliefs (i.e., how things work) that shape the firm's structural arrangements and its members' actions to produce behavioral norms (i.e., the way work is completed in the organization) (Dess & Picken, 1999). More formally, culture has been defined by six properties: "(1) shared basic assumptions that are (2) invented, discovered, or developed by a given group as it (3) learns to cope with its problem of external adaptation and internal integration in ways that (4) have worked well enough to be considered valid, and, therefore, (5) can be taught to new members of the group as the (6) correct way to perceive, think, and feel in relation to those problems" (Schein, 1985, as adapted by Weick & Sutcliffe, 2001: 121). Thus, the firm's culture affects organizational members' expectations of each other as well as their expectations of interactions with stakeholders outside the firm's boundaries (e.g., suppliers and customers). As a guide, culture influences the cognitive framework that affects how organizational members perceive issues as well as how they view their firm's competitive landscape (Johnson, 2002).

An effective entrepreneurial culture is characterized by multiple expectations and facilitates firms' efforts to manage resources strategically. Committed to the simultaneous importance of opportunity-seeking and advantage-seeking behaviors, an effective entrepreneurial culture is one in which new ideas and creativity are expected, risk taking is encouraged, failure is tolerated, learning is promoted, product, process and administrative innovations are championed, and continuous change is viewed as a conveyor of opportunities. Thus, an entrepreneurial culture fosters and supports the continuous search for entrepreneurial opportunities that can be exploited with sustainable competitive advantages (McGrath & MacMillan, 2000). An entrepreneurial culture develops in an organization where the leaders employ an entrepreneurial mindset. People with an entrepreneurial mindset search for entrepreneurial opportunities existing in uncertain business environments and then determine the capabilities needed to successfully exploit them (Covin & Slevin, 2002; McGrath & MacMillan, 2000). Thus, entrepreneurial culture and entrepreneurial mindset are inextricably interwoven.

Leaders are responsible for developing and nurturing an entrepreneurial culture—a culture through which SE can be used successfully.

Entrepreneurial Leadership

Effective leadership is linked to the success of all sizes and types of firms (Daily et al., 2002). A specific type of leadership, entrepreneurial leadership is the ability to influence others to manage resources strategically in order to emphasize both opportunity-seeking and advantage-seeking behaviors (Covin & Slevin, 2002; Ireland & Hitt, 1999; Rowe, 2001). Covin and Slevin (2002) argued that entrepreneurial leadership is characterized by six imperatives.

Nourish an entrepreneurial capability. Human capital is the source of SE behaviors. A vision emphasizing the importance of SE as well as a commitment to develop human capital facilitates individuals' efforts to develop entrepreneurial capabilities such as agility, creativity, and skills to manage resources strategically (Alvarez & Barney, 2002).

Protect innovations threatening the current business model. Individuals sometimes see disruptive innovation (defined later) as threatening—to them personally as well as to their organizations. Effective entrepreneurial leaders openly share information with organizational members to describe disruptive innovations' potential benefits (e.g., stimulating development of new competitive advantages).

Make sense of opportunities. The probability that individuals will accept the need to pursue entrepreneurial opportunities and to develop unique competitive advantages needed to exploit them increases when those opportunities are a part of the firm's opportunity register. Entrepreneurial leaders are able to communicate the value of opportunities and how exploiting them contributes to the firm's overall goals as well as to individuals' goals.

Question the dominant logic. Dominant logic describes how leaders conceptualize their business and evaluate resource allocation decisions (Prahalad & Bettis, 1986). Key assumptions about industries and markets that influence the firm's opportunity- and advantage-seeking behaviors should be periodically questioned to ascertain their validity (i.e., challenging the dominant logic). Entrepreneurial leaders evaluate the assumptions underlying the dominant logic to make certain that the firm is successfully positioned to identify value-creating entrepreneurial opportunities.

Revisit the "deceptively simple questions". Entrepreneurial leaders examine questions about the viability of the markets in which the firm competes, the company's purpose, how success is defined and the firm's relationships with different stakeholders. Revisiting these questions over time is vital in that the answers influence what the firm identifies as opportunities and how it manages its resources to exploit those opportunities.

Link entrepreneurship and strategic management. Effective entrepreneurial leaders believe that to create the most value, firms must be *"strategically entrepreneurial"* (Covin & Slevin, 2002). This desired end state is achieved when leaders' entrepreneurial mindsets help them develop a culture in which resources are managed strategically (i.e., advantage-seeking behavior), yet entrepreneurially (i.e., opportunity-seeking behavior).

Managing Resources Strategically

The Tenets of the Resource-based View

Drawn from at least four theoretical sources (the study of distinctive competencies, Ricardian economics, Penrosian economics and the study of the anti-trust implications of economics—Barney & Arikan, 2001), the RBV of the firm provides the theoretical underpinnings for understanding how resources can be managed strategically. Thus, the RBV is used by strategic management scholars and increasingly by entrepreneurship scholars to identify and explain persistent performance differences among firms (Alvarez & Barney, 2002; Barnett, Greve & Park, 1994; Barney & Arikan, 2001; Michael, Storey & Thomas, 2002; Mosakowski, 2002). As such, it is critical to the framing and specification of SE.

RBV theory has two frequently cited assumptions: (1) resource heterogeneity, meaning that competing firms may own or control different bundles of resources; and (2) resource immobility, meaning that the differences in the resource bundles owned by separate firms may persist (Barney, 1991; Barney & Arikan, 2001; Priem & Butler, 2001a). Based on the work of several scholars (e.g., Daft, 1983; Hitt & Ireland, 1986), Barney (2001) and Barney and Arikan (2001) defined resources as the tangible and intangible assets a firm uses to choose and implement its strategies. Resources that are rare (i.e., not widely held) and valuable (i.e., able to enhance the firm's efficiency or effectiveness) can yield a competitive advantage. When resources are also simultaneously imperfectly imitable (i.e., they resist easy duplication by competitors) and nonsubstitutable or nontransferable (i.e., they can't be purchased in factor markets), they can lead to a sustainable competitive advantage (Barney, 1991; Dierickx & Cool, 1989; Priem & Butler, 2001a).

From a strategic perspective, the RBV suggests that competitive advantages are a function of the resources the firm develops or acquires to implement its product market strategy (Wernerfelt, 1984). As a complement to Porter's (1985) theory of competitive advantage based on the firm's product market position, the RBV suggests that, "competition among product market positions held by firms can also be understood as competition among resource positions held by firms" (Barney & Arikan, 2001: 131). Thus, competitive advantage lies upstream of product markets and is grounded in the firm's idiosyncratic and difficult to imitate resources (Teece et al., 1997).

Acknowledging their vital link to performance (Brush, Greene & Hart, 2001), entrepreneurship scholars concentrate on particular types of resources to understand differential firm performance, especially in terms of the ability to identify entrepreneurial opportunities. Information, social capital, and entrepreneurial experiences are examples of resources investigated by entrepreneurship researchers (Michael et al., 2002).

Effect of Managing Resources Strategically on Wealth Creation

Research has shown that resources are the basis of firm differential performances in terms of wealth creation. The evidence shows that firms' use of idiosyncratic resources has a stronger influence on performance than do industry characteristics, although the relative size of firm effects can vary by industry (Barney & Arikan, 2001). Brush and Artz (1999) found that firm-specific resources required by the industry affected performance and can be used to protect a competitive advantage. Miller and Shamsie (1996) discovered that different types of resources explained performance in separate types of environments. Hitt, Bierman, Shimizu and Kochhar (2001) found that human capital has direct and indirect (through interactions with strategy) effects on firm performance. Their results indicate that initially, the cost of human capital exceeds the value of the benefits it produces. However, as human capital increases (knowledge grows), the value it creates exceeds the costs. In addition, there is growing evidence that the firm's ability to effectively manage its resource portfolio affects its performance (Henderson & Cockburn, 1994; Teece et al., 1997; Zott, 2003).

Currently though, the process of managing the firm's resources to create wealth is implicitly assumed in the RBV (Hitt, Clifford, Nixon & Coyne, 1999; Priem & Butler, 2001a). The actions necessary to manage resources strategically are not evident, suggesting that resources alone are unlikely to predict firm performance differentials (Amit, Lucier, Hitt & Nixon, 2002). Indeed, the firm's idiosyncratic resources are likely to produce sustainable competitive advantages only when they are managed strategically (Gove et al., 2003).

Herein we argue that resources are managed strategically when their deployment facilitates the simultaneous and integrated use of opportunity- and advantage-seeking behaviors. In slightly different words, when firms structure a resource portfolio, bundle resources to form capabilities and leverage those capabilities flowing from their financial, human and social capital (resources) to simultaneously enact opportunity- and advantage-seeking behaviors and create wealth, they are managing their resources strategically (Adner & Helfat, 2003; Sirmon & Hitt, 2003). Thus, managing resources strategically affects the value to be derived from the intangible and tangible assets that organizations use to develop and implement their strategies, suggesting that, "the creation, maintenance, and sustainability of techniques for accumulating and deploying resources may become a focal point of research" (Mahoney, 1995: 97).

Resources to be Managed Strategically

There are three critical resources for engaging in SE. One, financial capital, is a tangible asset while the other two, human capital and social capital, are intangible assets.

Financial capital. Financial capital includes all the different monetary resources firms can use to develop and implement strategies. Firms with strong financial resources have the slack required to identify and subsequently exploit entrepreneurial opportunities. Financial capital can be used to acquire or accumulate other important tangible (e.g., plant and equipment) and intangible (e.g., human capital) resources.

For entrepreneurial ventures, financial resources are often sought from venture capitalists and even family members (Sirmon & Hitt, 2003). New ventures, especially those independent from on-going organizations, face adverse selection, meaning that they must be able to appropriately signal those from whom financial resources are sought that they possess the skills required to pursue opportunities and develop competitive advantages in order to create wealth (Michael et al., 2002). Thus, the quality, breadth, and depth of a venture's human capital and social capital influence the amount of financial resources it can expect to obtain. Moreover, human capital is the source of knowledge needed to effectively use the firm's financial capital (Dutta, Bergen, Levy, Ritson & Zbaracki, 2002).

Relative to human capital and social capital, performance resulting from the use of financial capital is far easier to assess. The tangibility of financial capital, compared to the intangibility of human capital and social capital, accounts for the measurement ease. In the context of competitive advantages, financial capital is valuable and may be rare—conditions leading to the possible creation of a competitive advantage. However, financial capital often can be duplicated by competitors and may be substituted by other resources on occasion. Thus, on a relative basis, human capital and social capital are more important sources of *sustainable* competitive advantages.

Human capital. Known to be critical to organizational success (Hitt, Bierman, et al., 2001; Hitt, Ireland & Harrison, 2001; Pfeffer, 1994), human capital is the knowledge and skills of the firm's entire workforce (Covin & Slevin, 2002; Dess & Picken, 1999; Hitt, Keats & Yucel, 2003). More comprehensively, human capital has been defined as the "individual capabilities, knowledge, skill, and experience of the company's employees and managers, as they are relevant to the task at hand, as well as the capacity to add to this reservoir of knowledge, skills, and experience through individual learning" (Dess & Lumpkin, 2001: 26). Human capital ". . . blends traditional aspects of personnel management (e.g., employee skills, knowledge, abilities) with economic principles of capital accumulation, investment, deployment and value creation that underlie much of strategic management" (Snell, Shadur & Wright, 2001: 635).

Most of a firm's knowledge and skills reside in its human capital (Hitt, Bierman, et al. (2001); Miller, 2002). Both articulable and tacit knowledge are relevant to opportunity-seeking and advantage-seeking behaviors (Lane & Lubatkin, 1998; Polanyi, 1967). Because articulable or explicit knowledge can be codified in several forms, including formal language and mathematical statements, it can be easily transferred (Dess & Picken, 1999). In contrast, tacit knowledge is embedded in uncodified routines including the firm's collaborative working relationships and its social context (Hitt, Bierman, et al., 2001), conditions preventing its easy transfer (Teece et al., 1997). Said differently, tacit knowledge is revealed through its application and can be acquired only through practice (Grant, 1996). Increasingly, tacit knowledge is viewed as a determinant of differential firm performance (Coff, 2002), suggesting the importance of managing this resource strategically.

The firm's total stock of knowledge is increased through social interactions between articulable and tacit knowledge (Dess & Lumpkin, 2001). Articulable knowledge tends to contribute to competitive parity while tacit knowledge is more commonly the source of competitive advantage (Hitt & Ireland, 2002). Moreover, the value of tacit knowledge often expands through additional applications and sharing among those possessing both articulable and tacit knowledge. Thus, knowledge is infinitely expandable, indicating that no matter how much or how often it is used, knowledge is not a perishable good (Dess & Picken, 1999).

Collected over time and events, knowledge, especially tacit knowledge, represents much of what the firm knows—about how to compete in its industry, to innovate, and to identify and exploit entrepreneurial opportunities (Barney, 2002). Tacit knowledge is particularly important in the identification of entrepreneurial opportunities and in evaluating their potential value (McGrath & MacMillan, 2000). However, tacit knowledge is also critical in the exploitation of these opportunities. For example, managerial tacit knowledge is necessary to bundle the most appropriate resources to create capabilities and to design effective leveraging strategies that produce a competitive advantage and exploit identified opportunities.

The ability to access and absorb knowledge affects the firm's efforts to create value. Absorptive capacity is the organization's ability to access and internalize externally generated knowledge (Zahra & George, 2002). In their pioneering work, Cohen and Levinthal (1989) viewed absorptive capacity as an organization's ability to identify, assimilate, and exploit knowledge from the external environment. Absorptive capacity has also been defined as the capability to learn about and solve problems (Kim, 1997). The level of prior knowledge residing in the firm, primarily in the form of human capital, helps the firm absorb related new knowledge. According to Cohen and Levinthal (1990, 131), "... the ability to evaluate and utilize outside knowledge is largely a function of the level of prior related knowledge" residing in the firm. Technical know-how and an awareness of where useful knowledge expertise lies outside the firm's boundaries are important forms of prior knowledge (Shenkar & Li, 1999).

Knowledge residing outside the firm can contribute to the development of innovation (Cohen & Levinthal, 1990), especially in the context of rapidly changing knowledge environments (Eisenhardt, 1999; Van den Bosch, Volberda & de Boer, 1999), indicating that across time and projects, organizations and their individual units must have the capacity to absorb new knowledge into their operations to create innovation. The ability to assimilate new external knowledge and the skill to successfully use such knowledge for commercial purposes contributes to the exploitation of opportunities (Tsai, 2001). Thus, absorptive capacity affects the level and range of exploration the firm conducts to recognize and exploit entrepreneurial opportunities (Van den Bosch et al., 1999).

Collectively, this evidence suggests that the firm's absorptive capacity is linked to the effective use of SE. Zahra and George (2002) proposed that absorptive capacity is composed of potential capacity and realized capacity. Potential capacity comprises knowledge acquisition and assimilation skills while realized capacity focuses on knowledge transformation and exploitation. Acquiring and assimilating value-creating resources (i.e., potential capacity) contributes to recognizing entrepreneurial opportunities (entails opportunity-seeking behavior). Transforming knowledge so it can be competitively exploited (i.e., realized capacity) is necessary to exploit opportunities (entails advantage-seeking behavior). Thus, firms with absorptive capacities that are superior to those possessed by their competitors have a source of competitive advantage. When these capabilities are used to identify and exploit entrepreneurial opportunities, the competitive advantage may be sustainable (imperfectly imitable and nonsubstitutable).

Most actions in new venture firms require the application of knowledge; that is, human capital is necessary to take actions. Therefore, the development and introduction of new goods and services is largely based on the firm's human capital. Without artificial intelligence, these actions require the use of intellectual capital embedded in the firm's managers and employees. Thus, human capital may be the most critical resource for new ventures as well as for large organizations seeking to act entrepreneurially and establish or maintain a competitive advantage. Human capital and social capital combined are the basis for obtaining and developing other important resources necessary for exploiting opportunities and thereby creating wealth.

Human capital is often enhanced through the firm's social capital (Burt, 1997; Lepak & Snell, 1999). Recent work has demonstrated social capital's importance in a number of organizational activities including the creation of intellectual capital, inter-firm learning, inter-unit and inter-firm exchanges, innovation and entrepreneurship (Adler & Kwon, 2002).

Social capital. Social capital is the set of relationships between individuals (internal social capital) and between individuals and organizations (external social capital) that facilitate action (Hitt, Lee, et al., 2002). Collectively, social capital is the total set of value-creating resources that accrues to the firm because of its durable network of intra- and inter-firm relationships (Ireland, Hitt & Vaidyanath, 2002; Koka & Prescott, 2002). Resulting from relationships inside the firm and with external entities, social capital helps the firm to gain access to and control of resources and to absorb knowledge (Dess & Lumpkin, 2001; Nahapiet & Ghoshal, 1998).

Leana and Van Buren (1999: 540) describe internal social capital as a resource "... reflecting the character of social relations within the organization, realized through members' levels of collective goal orientation and shared trust." Among other benefits, trust, an intangible asset and a property of relationships—dyads, groups and organizations (Hitt et al., 2003)—reduces the firm's internal and external transaction costs (Nahapiet & Ghoshal, 1998) and may be used as an alternative governance mechanism (Floyd & Wooldridge, 2000). In fact, without trust, relationships are often defined by contracts. As a governance mechanism, contract-based relationships can stifle knowledge transfers (Zaheer, McEvily & Perrone, 1998). Among other positive outcomes, effective internal social capital facilitates value creating horizontal and vertical collaborations among personnel. Trust influences the degree to which these collaborations are successfully used. Firms rely on internal social capital to transform knowledge in ways that support the exploitation of entrepreneurial opportunities by creating and successfully using competitive advantages. Thus, internal social capital is related to realized absorptive capacity.

External social capital involves relationships between those inside the focal firm and those outside with whom they interact to further the organization's interests (Hitt & Ireland, 2002; Hitt et al., 2003). This type of social capital can result from several sources to include social relationships between individuals holding important positions in separate organizations and informal and formal strategic alliances between two or more firms. To create external social capital, relationships must entail traits such as trust so norms of reciprocity will develop (Hitt, Lee, et al., 2002). With norms of reciprocity, parties are willing to contribute valuable resources to the other party(ies) in the relationship because they expect that the value will be returned in future transactions. Through reciprocity, external social capital can serve as a source of new knowledge and as a result, is related to potential absorptive capacity.

Next, we examine the three stages of managing resources strategically—the structuring of a resource portfolio, the bundling of resources to form capabilities and the subsequent leveraging of those capabilities.

The three stages of managing resources strategically. Evidence exists supporting the assertion that differences in firm performances are affected by both owned or controlled resources as well as how the firm manages those resources. Penrose (1959: 5), for example, observed that, "the experience of management will affect the productive services that all of its other resources are capable of rendering." Barney (1991) echoed this position, suggesting that managers are critical to firm performance because of their ability to understand the potential of the resources that are owned or controlled by the organization and to take actions that appropriate value from those resources. In terms of SE, resources are managed strategically when they foster simultaneous use of opportunity- and advantage-seeking behaviors.

Research indicates that the effective structuring of the resource portfolio, bundling (i.e., creating and altering capabilities) (Eisenhardt & Martin, 2000; Kogut & Zander, 1992; Sirmon, Hitt & Ireland, 2003) and leveraging (i.e., the making of specific choices about deployment) of capabilities (Barney & Arikan, 2001) contribute to higher firm performance (Sirmon & Hitt, 2003). Bundling and leveraging decisions affect the firm's relative resource-based advantages because resources have contingent value (Gove et al., 2003). For example, changes in the competitive environment can either increase or reduce the commercial value of the firm's resources (Miller & Shamsie, 1996). In addition, the firm's resource portfolio can be shaped over time through managerial decisions. However, the firm's existing resource portfolio may constrain managerial choices in the short term (Sirmon & Hitt, 2003; Sirmon et al., 2003), again suggesting that the value of resources is likely to vary over time. Thus, managers' abilities to strategically structure the resource portfolio and then bundle resources to form capabilities that can be effectively leveraged within the existing competitive conditions facilitate the firm's efforts to create wealth.

Structuring the resource portfolio. A resource portfolio is the collection of all of the tangible (i.e., financial) and intangible (i.e., human capital and social capital) resources the firm owns or controls. An important process (Dierickx & Cool, 1989; Makadok, 2001), structuring the resource portfolio involves the on-going processes of acquiring, accumulating and divesting resources. As the actions in the structuring process suggest, the resource portfolio is changed continuously, resulting in the firm owning or controlling a dynamic collection of tangible and intangible assets.

All organizations require resources. Thus, resource acquisition is of critical importance to new venture firms as well as to established organizations. Resources necessary to identify and exploit opportunities demand different sets of idiosyncratic knowledge and capabilities to perform specific tasks such as those leading to the development of competitive advantages. As the opportunities vary over time, new resources may need to be added and others divested (firms must sell off or eliminate the maintenance costs of low value resources to acquire new ones). Therefore, managing resources strategically requires the continuous evaluation of the potential for individual resources to create synergy when combined with other resources in the firm's portfolio.

Firms acquire some resources from external factor markets (Barney, 1986). Without private information about the value of a resource or factor of production, it is difficult for the firm to develop a competitive advantage solely on the basis of an acquired resource. With symmetrical information flows, the market price will fully capitalize a resource's net present value. On occasion, a resource's market price may exceed its underlying value. This occurs when bidders overestimate a resource's ability to provide value or contribute to synergy when bundled with other resources (Hitt, Ireland & Harrison, 2001).

Although individual resources from factor markets rarely create a competitive advantage, combining externally acquired resources with complementary resources held by the firm can create value that exceeds the summed value of the set of individual resources. Thus, firms search external factor markets to acquire resources that complement their current resources. Furthermore, if an individual firm has private information about the value-creating potential of its current resources, it may be able to acquire external resources from the factor market at prices below the value they will create as part of the firm's resource portfolio (Barney, 1986).

Accumulating resources is concerned with developing resources in the firm's resource portfolio. Because factor markets are imperfect (Dierickx & Cool, 1989), internally developed resources (which are products of integrating external and internal resources) are a more viable source of competitive advantage, especially one that can be sustained.

Several managerial decisions affect the value of the resources the firm accumulates for its resource portfolio. For example, decisions regarding the use of financial capital (i.e., flows) affect the size and quality of the resource portfolio (i.e., stocks) the firm is able to develop at any point in time (Dierickx & Cool, 1989). In addition, the choices managers make influence the degree to which resource stocks are protected by isolating mechanisms such as reputation, customer switching costs, advertising and network externalities (Mizik & Jacobson, 2003). Effective isolating mechanisms increase the likelihood that the firm's use of resources will lead to competitive advantages through which it will be able to appropriate the value created by properly exploiting previously recognized entrepreneurial opportunities.

Choices are also made when determining how the firm's financial capital is to be allocated. Managing resources strategically includes the firm's ability to allocate sufficient financial capital to acquire and accumulate human capital and social capital necessary to seek opportunities and build competitive advantages. Firms desiring to be entrepreneurial must avoid over-zealous commitments to accumulated resources, allowing them to become core rigidities. Core rigidities are inflexible capabilities that in part disallow acquiring new resources that can be bundled into value-creating capabilities. In time, core rigidities lead to decaying competitive advantages. Sequentially, core rigidities stifle innovation and generally contribute to organizational inertia and an inability to create wealth (Leonard-Barton, 1995).

Core rigidities frequently result from escalation of commitment on the part of managers responsible for oversight of the firm's resource portfolio (Ross & Staw, 1993; Staw, Barsade & Koput, 1997). In the context of resources, managers sometimes escalate their commitment to currently possessed resources such that they become core rigidities and hence, eventually competitively less valuable. Alternatively, managing the resource portfolio strategically involves divesting resources when their value-creating potential is lost or bundling those resources differently to create capabilities that contribute to the firm's wealth-creation efforts.

Acquiring, accumulating, and divesting resources maintain the firm's ability to recognize and exploit opportunities and develop competitive advantages. However, these actions rarely permit full appropriation of the value of the firm's resource portfolio. Indeed, structuring the resource portfolio provides the foundation for the bundling of resources to create capabilities, the second dimension of managing resources strategically.

Bundling resources. From SE's perspective, the purpose of bundling tangible and intangible resources is to organize them in ways that contribute to recognizing and exploiting entrepreneurial opportunities and lead to the development of competitive advantages. Resources are bundled to create capabilities such as in R&D, marketing, and production. Usually these capabilities are needed to select and implement the firm's strategies. The unique capabilities created help companies differentiate themselves from competitors.

Two general purposes drive the bundling of resources to shape the firm's capabilities. In some instances, the firm seeks to bundle resources to maintain its current competitive advantages. Bundling resources in this manner can be effective when firms are competing in fairly stable markets or when their goods or services are sharply differentiated from competitors' offerings in ways that create value for customers. Incremental enhancements to the current capabilities are appropriate when those capabilities are at least valuable and rare and perhaps imperfectly imitable and nonsubstitutable as well. However, the bundling of resources to create capabilities can become path dependent (core rigidities), an outcome that may lead to only incremental changes in capabilities when more significant changes are required (Lei, Hitt & Bettis, 1996). The most effective set of bundled capabilities is one that can be appropriately leveraged to exploit opportunities and develop competitive advantages.

Leveraging capabilities. After structuring and bundling, choices must be made as to how the capabilities formed by the bundling of resources will be leveraged within and across business units. For diversified firms, these choices are made at the corporate level and also in individual business units (Hitt & Ireland, 1986). In single business firms, leveraging capabilities (resource bundles) to maximize opportunity recognition and exploitation partly requires coordinating the bundles' use between and among organizational functions (Gove et al., 2003). Effective resource managers learn how to create significant value by leveraging capabilities. Effective leveraging is largely a product of managerial decisions rather than of the magnitude of competing firms' capabilities. Moreover, the most effective decisions about leveraging capabilities (bundled resources) to identify opportunities and appropriate rents from them are creative and entrepreneurial in nature (Barney & Arikan, 2001). Ineffective managerial choices about leveraging lead to poorly coordinated and often chaotic attempts to create maximum value by using the firm's capabilities (Sirmon et al., 2003).

The firm's tacit knowledge embedded within its human capital is critical to leveraging capabilities. Successful leveraging is often a product of considerable experience, a primary source of tacit knowledge (Sirmon & Hitt, 2003). The experience of the firm's human capital influences decisions made about how to leverage capabilities especially to exploit opportunities to develop and sustain competitive advantages.

As discussed next, creativity and innovation result when resources are managed strategically. Innovation is used to exploit entrepreneurial opportunities; thus, it is highly important to SE.

Applying Creativity and Developing Innovation

Schumpeter's classic work (1934, 1942) highlighted the importance of creativity and innovation within the context of market dynamics. The concept of creative destruction comes from Schumpeter's work; creative destruction involves the processes through which firms act and react in the pursuit of opportunities in free markets. Schumpeter (1942: 83) argued that creative destruction is a process "... that incessantly revolutionizes the economic structure ... incessantly destroying the old one, incessantly creating a new one." The shift from vacuum tubes to semiconductors that eliminated the dominance of firms such as RCA and Sylvania is a well-known example of creative destruction (Tushman & O'Reilly, 1996). Technological discontinuities (innovations that dramatically advance an industry's price versus performance frontier) are the common denominator of the changes brought about by creative destruction (Anderson & Tushman, 1990).

Innovative first movers destroy incumbents' market power and enjoy transient monopoly advantages and abnormal profits because of rivals' lagged responses (Thesmar & Thoenig, 2000). Innovations eliminate obsolete goods and services and production methods. In turn, even newer and more efficient advances eventually destroy these innovations. In Schumpeter's view, innovativeness stimulates economic development and is the engine of corporate growth and wealth creation. Industrial failure has positive effects on markets (Rossant, 2001), in that it contributes to succeeding and incessant gales of creative destruction. An extension of Schumpeter's arguments is that the creative destruction process is a principal agent of change in a society (Morris, 1998).

Schumpeter (1934) pointed out that new combinations of production factors are the essence of innovation. These novel combinations of existing resources may result in new goods or services, new processes to use to create or manufacture a good or service, new means of distribution, new supplies of raw materials or immediate goods, or the creation of a new organization. Innovations resulting from new combinations of production factors are critical to firms' wealth-creating efforts. Innovation is linked to successful performance for firms in both the industrial and service sectors as well as to entire economies (Kluge, Meffert & Stein, 2000). Effective innovations create new value for customers (Mizik & Jacobson, 2003) and are required to help the firm survive gales of creative destruction along with serving as a catalyst for those gales (Danneels, 2002). Firms must be creative to develop innovation.

Creativity and Bisociation

Evidence suggests that at least some of the actions that lead first to creativity and subsequently to innovation result from a process called *bisociation* (Koestler, 1964). In general, the greater the breadth of individuals' knowledge the more likely they will be able to use a bisociation decision process.

Bisociation occurs when a person combines two or more previously unrelated matrices of skills or information (Koestler, 1964; Smith & Di Gregorio, 2002). Bisociation takes place when individuals combine information to identify an opportunity or to help shape competitive advantages. Commonly a function of entrepreneurial alertness, bisociation leads to the recognition of entrepreneurial opportunities often after periods of mental incubation. Following a conscious and sequential process of reasoning and experimentation, bisociation can contribute to the development and use of innovations that in turn produce competitive advantages. Thus, bisociation and creativity are important components of SE.

Creativity is increasingly important, especially for companies operating in markets with multiple opportunities to differentiate goods and services (Barney & Arikan, 2001). Defined as "... an approach to work that leads to the generation of novel and appropriate ideas, processes, or solutions" (Perry-Smith & Shalley, 2003: 90), creativity is a continuous process rather than the outcome of single acts. Creativity skills include the ability to manage diverse matrices of information, to suspend judgment as complexity increases, to recall accurately and to recognize patterns of opportunities (Smith & Di Gregorio, 2002). Creativity is the basis for innovations and is supported when resources are managed strategically.

Creativity affects the quality and quantity of both disruptive and sustaining innovations (defined and discussed below). In general, organizational actors with substantial knowledge in a given area are likely to be creative in developing sustaining innovations. Actors with a breadth of knowledge across disciplines are likely to be creative in ways that result in disruptive innovations. In the context of a specific job, sustaining creativity results in actors generating new ways to create value through their work while disruptive creativity is displayed as actors reconfigure known work procedures into new alternatives (Perry-Smith & Shalley, 2003).

Disruptive and Sustaining Innovations

There are at least two types of innovation in which firms can engage—disruptive and sustaining (Christensen, 1997). In general, disruptive innovation produces revolutionary change in markets while sustaining innovation leads to incremental change (Tushman & O'Reilly, 1996). Incremental or sustaining innovation is the product of learning how to better exploit existing capabilities that contribute to competitive advantages. In contrast, radical or disruptive innovation is derived from identifying and exploiting entrepreneurial opportunities through new combinations of resources to create new capabilities that lead to competitive advantages. Through effective SE, firms are able to engage in both disruptive and sustaining innovation.

Disruptive innovation. Often produced by new market entrants, *disruptive innovations* lead to the creation of new markets and new business models (Christensen, Johnson & Dann, 2002). Disruptive innovations drive major waves of growth in a variety of industries and frequently surprise market leaders (Kenagy & Christensen, 2002). Essentially, disruptive innovations introduce "new ways of playing the competitive game"—ways that are different from and conflict with current business models. Internet banking, low-cost airlines, direct insurance, and online brokerage trading are examples of prior disruptive innovations (Charitou & Markides, 2003). Firms committed to disruptive innovations seek to locate entrepreneurial opportunities that can shift the basis of competition in the industry. Thus, disruptive innovators try to proactively influence their competitive destiny rather than waiting to be influenced by the evolution of the markets in which they compete (Barney, 2002).

Disruptive innovation is possible partly because established market leaders commonly focus on improving their current goods and services. This focus can result in established players' failure to recognize less complex, more convenient, and more affordable innovations that can satisfy basic customer needs. Competitors recognize the opportunity created by simpler innovations and work to refine them to provide customers with goods or services that have greater reliability, customization, accessibility, and a lower cost than the leader's offerings (Kenagy & Christensen, 2002). In economic terms, the simpler innovations have a disruptive effect on the prevailing market dynamics. As the disruptive innovation improves functionality, it becomes appealing to more demanding customer segments. Only when the disruptive innovation affects the industry leader's market position is it perceived as a competitive threat. However, by that time, the incumbent attacked by the disruptive innovation is left with a less attractive market position—a position that can only be altered through further disruptive innovations (Christensen, Johnson & Dann, 2002).

Given the current competitive landscape, firms should be highly motivated to pursue disruptive innovations. However, "few companies have introduced genuinely disruptive innovations, the kind that result in the creation of entirely new markets and business models" (Christensen, Johnson & Rigby, 2002: 22). Firms are able to develop disruptive innovations and introduce them into the marketplace only by integrating opportunity-seeking behavior with advantage-seeking behavior. In slightly different words, successful disruptive innovations are a product of SE. Indeed, firms not engaging in SE are threatened by disruptive innovations. Evidence suggesting that managers in established firms tend to view disruptive innovations as threats to the firm's current business model and their position in it (Covin & Slevin, 2002) supports this contention. Those managing high-performing organizations, especially in mature product markets, may conclude that the company's performance validates its current business model (Miller, 1992). In these instances, managers may feel threatened by the idea of pursuing disruptive innovations that deviate from the firm's current recipes (Covin & Slevin, 2002; Spender, 1989). Effective SE helps managers overcome such fears.

Sustaining innovation. "Innovations that help incumbent companies earn higher margins by selling better products to their best customers are sustaining, not disruptive. Sustaining innovations comprise both simple, incremental engineering improvements as well as break-through leaps up the trajectory of performance improvement" (Christensen, Johnson & Rigby, 2002: 23). Incremental improvements can be thought of as "creative creations" (Hart & Christensen, 2002) in that they help the firm extend existing competitive advantages that promote its growth as a path to wealth creation. Often oriented to developing new processes rather than new goods or services, incremental innovations are important to help the firm derive maximum value from the firm's current capabilities. However, at some point, sustaining innovations result in incremental improvements to goods or services that exceed customers' needs, creating an entry point for a disruption innovation—one that provides the customer with the needed good or service functionality at a lower cost and perhaps easier accessibility as well (Kenagy & Christensen, 2002).

Without practicing SE, the firm might overly concentrate on sustaining innovations and exploiting its current advantages. Indeed, too much emphasis on sustaining innovations (which are exploitation oriented) prevents the firm from recognizing and exploiting new entrepreneurial opportunities. On the other hand, too much emphasis on disruptive innovation (which is exploration oriented) makes it difficult to sustain competitive advantages they produce and fully appropriate the value from those innovations. While the current competitive landscape mandates that firms devote significant effort to disruptive innovations, these efforts should not be at the expense of sustaining innovations. Effective use of SE leads to a comprehensive and integrated commitment to both sustaining and disruptive innovations as drivers of wealth creation.

Conclusions and Implications

The SE construct (which includes opportunity- and advantage-seeking behaviors) contributes to our understanding of how firms create wealth. Firms that identify potentially valuable opportunities but are unable to exploit them to develop a competitive advantage will not create value for their customers or wealth for their owners. Firms that build competitive advantages but lose their ability to identify valuable entrepreneurial opportunities are unlikely to sustain those advantages over time. As such, they will discontinue creating wealth for their owners. Therefore, all firms, new and established, small and large, must engage in both opportunity-seeking and advantage-seeking behaviors.

Herein, we have described the dimensions of successful SE. The actions associated with these dimensions are complex and challenging. It is difficult for new venture firms to obtain and manage resources strategically to establish and sustain a competitive advantage. They are more likely to be flexible and entrepreneurial, but less likely to have the needed resources and capabilities to build competitive advantages. Likewise, it is difficult for established firms with competitive advantages to continue to seek and exploit entrepreneurial opportunities. Some opportunities might delimit the value of the firm's current goods or services. It is risky to cannibalize a successful good or service in favor of an unproven one with potential. New venture firms must be able to establish a foothold in the market with their new goods or services or risk imitation or substitution from established firms with which they must compete. Alternatively, established firms risk losing their market to a disruptive innovation introduced by a new venture firm or an entrepreneurial competitor.

Given the importance of the construct, the model of SE presented herein requires research to better understand the relationships posed. For example, we need to more fully understand how to establish an entrepreneurial mindset and entrepreneurial culture and the relationship between the two. In addition, empirical research is needed to explicate and understand how entrepreneurial leaders manage resources strategically to create competitive advantages. How do managers optimally structure a resource portfolio, bundle resources into capabilities, and develop procedures through which those capabilities can be successfully leveraged? Specifically, how can resources be managed to enhance alertness to and to identify entrepreneurial opportunities? Likewise, what processes are involved in leveraging capabilities (resource bundles) to exploit those opportunities and create and sustain competitive advantages? What is the appropriate balance between sustaining and disruptive innovations? We hope that this work spurs research to answer these research questions and others regarding SE.

SE integrates theory and research from multiple disciplines but especially from entrepreneurship and strategic management. The implications of the SE construct are important for scholars and managers alike for a better understanding of how firms identify and exploit entrepreneurial opportunities, establish and sustain competitive advantages and create wealth.

References

Adler, P. S., & Kwon, S.-W. 2002. Social capital: Prospects for a new concept. *Academy of Management Review*, 27: 17–40.

Adner, R., & Helfat, C. E. 2003. Corporate effects and dynamic capabilities. *Strategic Management Journal*, 24: in press.

Alvarez, S. A., & Barney, J. B. 2002. Resource-based theory and the entrepreneurial firm. In M. A. Hitt, R. D. Ireland, S. M. Camp, & D. L. Sexton (Eds.), *Strategic entrepreneurship: Creating a new mindset*: 89–105. Oxford: Blackwell Publishers.

Amit, R., & Zott, C. 2001. Value creation in e-business. *Strategic Management Journal*, 22(Special Issue): 493–520.

Amit, R., Lucier, C., Hitt, M. A., & Nixon, R. D. 2002. Strategies for creating value in the entrepreneurial millennium. In M. A. Hitt, R. Amit, C. Lusier, & R. D. Nixon (Eds.), *Creating value: Winners in the new business environment*: 1–12. Oxford: Blackwell Publishers.

Anderson, P., & Tushman, M. L. 1990. Technological discontinuities and dominant designs: A cyclical model of technological change. *Administrative Science Quarterly*, 35: 604–633.

Barnett, W. P., Greve, H. R., & Park, D. Y. 1994. An evolutionary model of organizational performance. *Strategic Management Journal*, 15(Special Issue): 11–28.

Barney, J. B. 1986. Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, 32: 1231–1241.

Barney, J. B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17: 99–120.

Barney, J. B. 2001. Is the resource-based "view" a useful perspective for strategic management research? Yes. *Academy of Management Review*, 26: 41–56.

Barney, J. B. 2002. *Gaining and sustaining competitive advantage*: 2nd ed., 314–315. Upper Saddle River, NJ: Prentice-Hall.

Barney, J. B., & Arikan, A. M. 2001. The resource-based view: Origins and implications. In M. A. Hitt, R. F. Freeman, & J. S. Harrison (Eds.), *Handbook of strategic management*: 124–188. Oxford: Blackwell Publishers.

Brorstrom, B. 2002. The world's richest municipality: The importance of institutions for municipal development. *Journal of Economic Issues*, XXXVI(4): 55–78.

Brown, S. L., & Eisenhardt, K. M. 2000. Patching: Restitching business portfolios in dynamic markets. *The McKinsey Quarterly*: 137–146.

Brush, T. H., & Artz, K. W. 1999. Toward a contingent resource-based theory: The impact of information asymmetry on the value of capabilities in veterinary medicine. *Strategic Management Journal*, 20: 223–250.

Brush, C. G., Greene, P. G., & Hart, M. M. 2001. From initial idea to unique advantage: The entrepreneurial challenge of constructing a resource base. *Academy of Management Executive*, 15(1): 64–78.

Burt, R. 1997. The contingent value of social capital. *Administrative Science Quarterly*, 42: 339–365.

Casson, M. 1982. *The entrepreneur*. Totowa, NJ: Barnes & Noble Books.

Certo, S. T., Covin, J. G., Daily, C. M., & Dalton, D. R. 2001. Wealth and the effects of founder management among IPO-stage new ventures. *Strategic Management Journal*, 22(Special Issue): 641–658.

Charitou, C. D., & Markides, C. C. 2003. Responses to disruptive strategic innovation. *MIT Sloan Management Review*, 44(2): 55–63.

Christensen, C. M. 1997. *The innovator's dilemma*. Boston: Harvard Business School Press.

Christensen, C. M., Johnson, M. W., & Dann, J. 2002, November. *Disrupt and prosper*. Optimizemag.com: 41–48.

Christensen, C. M., Johnson, M. W., & Rigby, D. K. 2002. Foundations for growth: How to identify and build disruptive new businesses. *MIT Sloan Management Review*, 43(3): 22–31.

Coff, R. W. 2002. Human capital, shared expertise, and the likelihood of impasse in corporate acquisitions. *Journal of Management*, 28: 107–128.

Cohen, W. M., & Levinthal, D. A. 1989. Innovation and learning: The two faces of R&D. *Economic Journal*, 99: 569–596.

Cohen, W. M., & Levinthal, D. A. 1990. Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35: 128–152.

Covin, J. G., & Miles, M. P. 1999. Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship Theory and Practice*, 23(3): 47–63.

Covin, J. G., & Slevin, D. P. 2002. The entrepreneurial imperatives of strategic leadership. In M. A. Hitt, R. D. Ireland, S. M. Camp, & D. L. Sexton (Eds.), *Strategic entrepreneurship: Creating a new mindset*: 309–327. Oxford: Blackwell Publishers.

Daft, R. 1983. *Organization theory and analysis*. New York: West Publishing Company.

Daily, C. M., McDougall, P. P., Covin, J. G., & Dalton, D. R. 2002. Governance and strategic leadership in entrepreneurial firms. *Journal of Management*, 28: 387–412.

Danneels, E. 2002. The dynamics of product innovation and firm competencies. *Strategic Management Journal*, 23: 1095–1121.

Day, J. D., & Wendler, J. C. 1998. The new economics of organization. *The McKinsey Quarterly*, 1: 5–18.

De Carolis, D. M. 2003. Competencies and imitability in the pharmaceutical industry: An analysis of their relationship with firm performance. *Journal of Management*, 29: 27–50.

Dess, G. G., & Lumpkin, G. T. 2001. Emerging issues in strategy process research. In M. A. Hitt, R. E. Freeman, & J. S. Harrison (Eds.), *Handbook of strategic management*: 3–34. Oxford: Blackwell Publishers.

Dess, G. G., & Picken, J. C. 1999. *Beyond productivity: How leading companies achieve superior performance by leveraging their human capital*. New York: AMACOM.

Dierickx, I., & Cool, K. 1989. Asset stock accumulation and sustainability of competitive advantage. *Management Science*, 35: 1504–1511.

Dutta, S., Bergen, M., Levy, D., Ritson, M., & Zbarack, M. 2002. Pricing as a strategic capability. *MIT Sloan Management Review*, 44(3):61–66.

Eisenhardt, K. M. 1999. Strategy as strategic decision making. *Sloan Management Review*, 40(3): 65–72.

Eisenhardt, K. M., & Martin, J. A. 2000. Dynamic capabilities: What are they? *Strategic Management Journal*, 21: 1105–1121.

Eisenhardt, K. M., & Schoonhoven, C. B. 1996. Resource-based view of strategic alliance formation: Strategic and social effects in entrepreneurial firms. *Organization Science*, 7: 136–150.

Farjoun, M. 2002. Towards an organic perspective on strategy. *Strategic Management Journal*, 23: 561–594.

Floyd, S. W., & Wooldridge, B. 2000. *Building strategy from the middle: Reconceptualizing strategy process*. Thousand Oaks, CA: Sage Publications.

Gove, S., Sirmon, D. G., & Hitt, M. A. 2003. *Relative resource advantages: The effect of resources and resource management on organizational performance*. Paper presented at the annual Strategic Management Society Conference, Baltimore.

Grant, R. M. 1996. Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(Special Issue): 109–122.

Hart, S. L., & Christensen, C. M. 2002. Driving innovation from the base of the global pyramid. *MIT Sloan Management Review*, 44(1): 51–56.

Hayek, F. 1945. The use of knowledge in society. *American Economic Review*, 35: 519–530.

Henderson, R., & Cockburn, I. 1994. Measuring competence? Exploiting firm effects in pharmaceutical markets. *Strategic Management Journal*, 15(Special Issue): 63–84.

Hitt, M. A., & Ireland, R. D. 1986. Relationships among corporate level distinctive competencies, diversification strategy, corporate strategy and performance. *Journal of Management Studies*, 23: 401–416.

Hitt, M. A., & Ireland, R. D. 2000. The intersection of entrepreneurship and strategic management research. In D. L. Sexton & H. Landstrom (Eds.), *Handbook of entrepreneurship*: 45–63. Oxford: Blackwell Publishers.

Hitt, M. A., Clifford, P. G., Nixon, R. D., & Coyne, K. P. 1999. *Dynamic strategic resources: Development, diffusion* & *integration*. Chichester, UK: John Wiley & Sons.

Hitt, M. A., Bierman, L., Shimizu, K., & Kochhar, R. 2001. Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. *Academy of Management Journal*, 44: 13–28.

Hitt, M. A., & Ireland, R. D. 2002. The essence of strategic leadership: Managing human and social capital. *Journal of Leadership and Organization Studies*, 9(1): 3–14.

Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. 2001. Strategic entrepreneurship: Entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22(Special Issue): 479–491.

Hitt, M. A., Ireland, R. D., & Harrison, J. S. 2001. Mergers and acquisitions. In M. A. Hitt, R. E. Freeman, & J. S. Harrison (Eds.), *Handbook of strategic management*: 384–408. Oxford: Blackwell Publishers.

Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. 2002. Strategic entrepreneurship: Integrating entrepreneurial and strategic management perspectives. In M. A. Hitt, R. D. Ireland, S. M. Camp, & D. L. Sexton (Eds.), *Strategic entrepreneurship: Creating a new mindset*: 1–16. Oxford: Blackwell Publishers.

Hitt, M. A., Keats, B. W., & Yucel, E. 2003. Strategic leadership in global business organizations: Building trust and social capital. In W. H. Mobley & P. Dorfman (Eds.), *Advances in global leadership*: Vol. III. Greenwich, CT: JAI Press, 9–35.

Hitt, M. A., Lee, H., & Yucel, E. 2002. The importance of social capital to the management of multinational enterprises: Relational networks among Asian and Western firms. *Asia Pacific Journal of Management*, 19: 353–372.

Hoskisson, R. E., & Busenitz, L. W. 2002. In M. A. Hitt, R. D. Ireland, S. M. Camp, & D. L. Sexton (Eds.), *Market uncertainty and learning distance*: 151–172. Oxford: Blackwell Publishers.

Ireland, R. D., & Hitt, M. A. 1999. Achieving and maintaining strategic competitiveness in the 21st century: The role of strategic leadership. *Academy of Management Executive*, 13(1): 43–57.

Ireland, R. D., Hitt, M. A., Camp, S. M., & Sexton, D. L. 2001. Integrating entrepreneurship and strategic management action to create firm wealth. *Academy of Management Executive*, 15(1): 49–63.

Ireland, R. D., Hitt, M. A., & Vaidyanath, D. 2002. Strategic alliances as a pathway to competitive success. *Journal of Management*, 28: 413–446.

Ireland, R. D., Kuratko, D. F., & Covin, J. G. 2003. Antecedents, elements, and consequences of corporate entrepreneurship strategy. In D. H. Nagao (Ed.), *Proceedings of the Sixty-third Anual Meeting of the Academy of Management (CD)*, ISSN 1543–8643.

Johnson, L. K. 2002. The organizational identity trap. *MIT Sloan Management Review*, 43(4): 11.

Jury, J. J. 1999, October. Focus: Sweden—Venture capitalists flock to Swedish high-tech. *European Venture Capital Journal*, 1: 34–38.

Kenagy, J. W., & Christensen, C. M. 2002, May. Diagnosis for health care's "financial flu." *Healthcare Financial Management*: 62–66.

Kim, L. 1997. *From imitation to innovation: The dynamics of Korea's technological learning*. Cambridge, MA: Harvard Business School Press.

Kirzner, I. 1973. *Competition and entrepreneurship*. Chicago: University of Chicago Press.

Kirzner, I. 1997. *How markets work: Disequilibrium, entrepreneurship and discovery*. Great Britain: The Institute of Economic Affairs.

Kluge, J., Meffert, J., & Stein, L. 2000. The German road to innovation. *The McKinsey Quarterly*, 2: 99–105.

Koestler, A. 1964. *The act of creation*. New York: Dell Publishers.

Kogut, B., & Zander, U. 1992. Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3: 383–397.

Koka, B. R., & Prescott, J. E. 2002. Strategic alliances as social capital: A multidimensional view. *Strategic Management Journal*, 23: 795–816.

Lane, P. J., & Lubatkin, M. 1998. Relative absorptive capacity and interorganizational learning. *Strategic Management Journal*, 19: 461–477.

Leana, C. R., & Van Buren, H. J., III. 1999. Organizational social capital and employment practices. *Academy of Management Review*, 24: 538–555.

Lei, D., Hitt, M. A., & Bettis, R. A. 1996. Dynamic core competences through meta-learning and strategic context. *Journal of Management*, 22: 549–569.

Leonard-Barton, D. 1995. *Wellsprings of knowledge: Building and sustaining the sources of innovation*. Boston: Harvard Business School Press.

Lepak, D. P., & Snell, S. A. 1999. The human resource architecture: Toward a theory of human capital allocation and development. *Academy of Management Review*, 24: 31–48.

Lumpkin, G. T., & Dess, G. G. 1996. Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21: 135–171.

Mahoney, J. T. 1995. The management of resources and the resource of management. *Journal of Business Research*, 33: 91–101.

Makadok, R. 2001. Towards a synthesis of the resource-based and dynamic capabilities views of rent creation. *Strategic Management Journal*, 22: 387–401.

McCline, R. L., Bhat, S., & Baj, P. 2000. Opportunity recognition: An exploratory investigation of a component of the entrepreneurial process in the context of the health care industry. *Entrepreneurship Theory and Practice*, 25(2): 81–94.

McGrath, R. M. 1999. Falling forward: Real options reasoning and entrepreneurial failure. *Academy of Management Review*, 24: 13–30.

McGrath, R. M., & MacMillan, I. C. 2000. *The entrepreneurial mindset*. Boston: Harvard Business School Press.

Meyer, G. D., & Heppard, K. A. 2000. Entrepreneurial strategies: The dominant logic of entrepreneurship. In G. D. Meyer & K. A. Heppard (Eds.), *Entrepreneurship as strategy: Competing on the entrepreneurial edge*: 1–22. Thousand Oaks, CA: Sage Publications.

Michael, S., Storey, D., & Thomas, H. 2002. Discovery and coordination in strategic management and entrepreneurship. In M. A. Hitt, R. D. Ireland, S. M. Camp, & D. L. Sexton (Eds.), *Strategic entrepreneurship: Creating a new mindset*: 45–65. Oxford: Blackwell Publishers.

Miles, G., Heppard, K. A., Miles, R. E., & Snow, C. C. 2000. Entrepreneurial strategies: The critical role of top management. In G. D. Meyer & K. A. Heppard (Eds.), *Entrepreneurship as strategy: Competing on the entrepreneurial edge*: 101–114. Thousand Oaks, CA: Sage Publications.

Miles, R. E., & Snow, C. C. 1978. *Organizational strategy, structure, and process*. New York: McGraw-Hill.

Miller, D. 1992. The Icarus paradox: How exceptional companies bring their own downfall. *Business Horizons*, 35(1): 24–35.

Miller, D., & Shamsie, J. 1996. The resource-based view of the firm in two environments: The Hollywood film studios from 1936 to 1965. *Academy of Management Journal*, 44: 513–531.

Miller, K. D. 2002. Knowledge inventories and managerial myopia. *Strategic Management Journal*, 23: 689–706.

Miller, K. D., & Folta, T. B. 2002. Option value entry timing. *Strategic Management Journal*, 23: 655–665.

Mizik, N., & Jacobson, R. 2003. Trading off between value creation and value appropriation: The financial implications of shifts in strategic emphasis. *Journal of Marketing*, 67: 63–76.

Morris, M. H. 1998. *Entrepreneurial intensity: Sustainable advantages for individuals, organizations, and societies*. Westport, CT: Quorum Books.

Mosakowski, E. 2002. Overcoming resource disadvantages in entrepreneurial firms: When less is more. In M. A. Hitt, R. D. Ireland, S. M. Camp, & D. L. Sexton (Eds.), *Strategic entrepreneurship: Creating a new mindset*: 106–126. Oxford: Blackwell Publishers.

Nahapiet, J., & Ghoshal, S. 1998. Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23: 242–266.

Peng, M. W. 2001. How entrepreneurs create wealth in transition economies. *Academy of Management Executive*, 15(1): 95–108.

Penrose, E. T. 1959. *The theory of the growth of the firm*. New York: John Wiley & Sons.

Perry-Smith, J. E., & Shalley, C. E. 2003. The social side of creativity: A static and dynamic social network perspective. *Academy of Management Review*, 28: 89–106.

Pfeffer, J. 1994. *Competitive advantage through people*. Boston: Harvard Business School Press.

Polanyi, M. 1967. *The tacit dimension*. Garden City, NY: Anchor Publishing.

Porter, M. E. 1985. *Competitive Advantage*. New York: Free Press.

Prahalad, C. K., & Bettis, R. A. 1986. The dominant logic: A new link between diversity and performance. *Strategic Management Journal*, 7: 485–501.

Priem, R. L., & Butler, J. E. 2001a. Is the resource-based "view" a useful perspective for strategic management research? *Academy of Management Review*, 26: 22–40.

Priem, R. L., & Butler, J. E. 2001b. Tautology in the resource-based view and the implications of externally determined resource value: Further comments. *Academy of Management Review*, 26: 57–66.

Priem, R. L., Love, L. G., & Shaffer, M. A. 2002. Executives' perceptions of uncertainty scores: A numerical taxonomy and underlying dimensions. *Journal of Management*, 28: 725–746.

Ross, J., & Staw, B. M. 1993. Organizational escalation and exit: Lessons from the Shoreham nuclear power plant. *Academy of Management Journal*, 36: 701–732.

Rossant, J. 2001, December 31. Why a few Enrons would do Europe good. *Business Week*: 58.

Rouse, M. J., & Dallenbach, U. S. 1999. Rethinking research methods for the resource-based perspective: Isolating sources of sustainable competitive advantage. *Strategic Management Journal*, 20: 487–494.

Rowe, W. G. 2001. Creating wealth in organizations: The role of strategic leadership. *Academy of Management Executive*, 15(1): 81–94.

Schein, E. H. 1985. *Organizational culture and leadership*. San Francisco: Jossey-Bass.

Schoonhoven, C. B., & Romanelli, E. 2001. Emergent themes and the next wave of entrepreneurship research. In C. B. Schoonhoven & E. Romanelli (Eds.), *The entrepreneurship dynamic: Origins of entrepreneurship and the evolution of industries*: 383–408. Stanford, CA: Stanford University Press.

Schumpeter, J. A. 1934. *The theory of economic development*. Cambridge, MA: Harvard University Press.

Schumpeter, J. A. 1942. *Capitalism, socialism and democracy*. New York: Harper & Row.

Shenkar, O., & Li, J. 1999. Knowledge search in international cooperative ventures. *Organization Science*, 10: 134–143.

Shane, S., & Venkataraman, S. 2000. The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25: 217–236.

Sharma, P., & Chrisman, J. J. 1999. Toward a reconciliation of the definitional issues in the field of corporate entrepreneurship. *Entrepreneurship Theory and Practice*, 23(3): 11–27.

Sirmon, D. G., & Hitt, M. A. 2003. Managing resources: Linking unique resources, management and wealth creation in family firms. *Entrepreneurship Theory and Practice*, 27(4):339–358.

Sirmon, D. G., Hitt, M. A., & Ireland, R. D. 2003. *Managing the firm's resources in order to achieve and maintain a competitive advantage*. Paper presented at the annual Academy of Management meeting, Seattle.

Smith, K. G., & Di Gregorio, D. 2002. Bisociation, discovery, and the role of entrepreneurial action. In M. A. Hitt, R. D. Ireland, S. M. Camp, & D. L. Sexton (Eds.), *Strategic entrepreneurship: Creating a new mindset*: 129–150. Oxford: Blackwell Publishers.

Snell, S. A., Shadur, M. A., & Wright, P. M. 2001. Human resources strategy: The era of our ways. In M. A. Hitt, R. E. Freeman, & J. S. Harrison (Eds.), *Handbook of strategic management*: 627–649. Oxford: Blackwell Publishers.

Spender, J.-C. 1989. *Industry recipes: The nature and sources of managerial judgment*. Oxford: Blackwell Publishers.

Staw, B. M., Barsade, S. G., & Koput, K. W. 1997. Escalation at the credit window: A longitudinal study of bank executives' recognition and write-off of problem loans. *Journal of Applied Psychology*, 82: 130–142.

Teece, D. J. 1998. Capturing value from knowledge assets: The new economy, markets for know-how, and intangible assets. *California Management Review*, 40(3): 55–79.

Teece, D. J., Pisano, G., & Shuen, A. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal*, 18: 509–533.

Thesmar, D., & Thoenig, M. 2000. Creative destruction and firm organization choice. *The Quarterly Journal of Economics*: 1201–1237.

Tsai, W. 2001. Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. *Academy of Management Journal*, 44: 996–1004.

Tushman, M. L., & O'Reilly, C. A. 1996. Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, 38(4): 8–30.

Van den Bosch, F. A. J., Volberda, H. W., & de Boer, M. 1999. Coevolution of firm absorptive capacity and knowledge environment: Organizational forms and combinative capabilities. *Organization Science*, 10: 551–568.

Weick, K. E., & Sutcliffe, K. M. 2001. *Managing the unexpected: Assuring high performance in an age of complexity*. San Francisco: Jossey-Bass.

Wernerfelt, B. 1984. A resource-based view of the firm. *Strategic Management Journal*, 5: 171–180.
Zaheer, A., McEvily, B., & Perrone, V. 1998. Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance. *Organization Science*, 9: 141–159.
Zahra, S. A., Ireland, R. D., Gutierrez, I., & Hitt, M. A. 2000. Privatization and entrepreneurial transformation: Emerging issues and a future research agenda. *Academy of Management Review*, 25: 509–524.
Zahra, S. A., & George, G. 2002. Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27: 185–203.
Zott, C. 2003. Dynamic capabilities and the emergence of intraindustry differential firm performance: Insights from a simulation study. *Strategic Management Journal*, 24: 97–125.

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