



Strategic entrepreneurship: Creating competitive advantage through streams of innovation

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Abstract In today's fast-paced competitive environment, firms face the need to be increasingly nimble and adaptive. While often able to establish a certain level of performance based upon existing technologies, firms are equally as often to be left flat-footed in the face of emerging, novel technologies. We discuss strategic entrepreneurship as the means through which firms simultaneously exploit their current competitive advantages while exploring for future opportunities. Achieving a balance between exploration and exploitation consists of more than merely allocating resources evenly between the two processes. As discussed, exploration and exploitation are operationally, structurally, and culturally distinct processes.

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1. Managing tension for competitive advantage

Think of today's organizations. In your view, aren't most of them faced with the challenge of changing frequently in order to meet the needs of those they serve, such as customers, suppliers, and shareholders? Indeed, for many organizations, using their resources and skills to change in ways that will create value for stakeholders, and perhaps especially customers, is becoming increasingly difficult. Among other executives, those leading General Motors (GM) and Ford would likely support these

views if we were able to ask them to do so. For these tradition-rich manufacturers, a stream of continuous value-creating innovations by global competitors (e.g., Toyota and Honda), increasing health-care costs, and the effects of escalating energy prices combine to create extremely challenging conditions.

In addition to companies such as GM and Ford, the challenge of continuous and dynamic change is affecting firms across multiple industries. This includes the computer storage industry, in which flash memory innovations are radically changing the nature of competition. The "winners" and "losers" resulting from changes in this particular industry remain unknown. Consider the situation being created by SanDisk and an Intel-Micron joint venture, both of which are using novel technolog-

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ical capabilities as the foundation for competing in this industry. By employing these strengths, the new competitors are creating for customers value that seems to exceed that which is being generated by firms using less-novel technologies. Being able to create a more attractive value proposition for customers is making it quite difficult for some of the more traditional hard-drive manufacturers, such as Maxtor and Iomega, to keep pace on the pathway to success in today's rapidly changing and dynamic competitive environment. Similarly, provisions associated with the Telecommunications Act of 1996 redefined the nature of competition in the telecommunications industry, and appear to have provided wireless companies a long-term competitive advantage over wireline (i.e., landline) network competitors and pay-phone businesses. The 1996 Act lifted long-distance restrictions on wireless companies, greatly enhancing the value proposition these firms could choose to offer customers. Although not a complete substitute for wireline services, evidence suggests that consumers are at least opting for wireless subscriptions instead of adding a second or third wireline phone (Weaver, 2001).

The examples we offer, covering several firms and the different industries in which they operate, suggest a few things about competition in today's complex, increasingly globalized business environment. Not surprisingly, the challenging nature of competing in a global environment creates several tension-filled questions for firms: In what markets should we compete? Should we offer standardized products across all markets or should we modify our products for local preferences? How much risk are we willing to accept to compete in markets with which we are not deeply familiar? What kinds of skills should we develop in order to become more innovative? The issues raised by these questions have the potential to create tensions in today's firms.

All of these tensions (and certainly others) are important and demand careful consideration by those interested in organizational success. What is of interest to us, though, is a particular type of tension that the need to rapidly change creates for firms; specifically, the need for a firm to learn how to simultaneously *exploit* today that which it does well relative to rivals, while also *exploring* to determine what it needs to do to be successful in the future. This is the tension we consider in this article. In essence, this tension is between doing what is necessary to *exploit* today's competitive advantages and *exploring* today for innovations that can be the foundation for the firm's future competitive advantages. We think that the ability

to effectively manage this tension is rapidly becoming a key differentiator between maintaining organizational success and facing dwindling performance over time. The *Fortune 100* annual survey rankings indicate that most firms do, in fact, find it difficult to sustain their performance over a considerable period of time. As evidence for this assertion, consider the fact that only 26% of the 100 companies listed in *Fortune's* 1980 ranking remained on the list in 2001 (Cappelli & Hamori, 2005).

Our paper proceeds as follows. First, we introduce strategic entrepreneurship as a concept with the potential to influence the degree of success today's organizations can achieve while engaging their rivals in competitive exchanges. We then drill deeper into strategic entrepreneurship by examining its two components: exploration and exploitation. Explanations of differences in operational activities, organizational structure, and organizational culture that contribute to effective strategic entrepreneurship are included as parts of these discussions.

2. Introducing strategic entrepreneurship

As some of our earlier comments suggest, *strategic entrepreneurship* (SE) is a term used to capture firms' efforts to simultaneously exploit today's competitive advantages while exploring for the innovations that will be the foundation for tomorrow's competitive advantages. The SE concept, as we are describing it, is somewhat new for academics and business practitioners; however, the concept is important in that effective SE practices result in a firm being able to form a balance between *opportunity-seeking* (i.e., exploration) and *advantage-seeking* (i.e., exploitation) behaviors (Ireland, Hitt, & Sirmon, 2003).

Based on both academic literature and experiences being witnessed in a growing number of companies committed to practicing SE, we believe that effective SE helps a firm position itself such that it is capable of properly responding to the types of significant environmental changes that face many of today's organizations. Beyond this, and importantly so, effective SE helps the firm develop relatively *sustainable* competitive advantages. In addition to being valuable and rare, sustainable advantages are also difficult for competitors to fully understand, and difficult to imitate as a result of that lack of understanding (Barney, 1991). As this initial discussion of SE suggests, *continuous innovation* is at the core of what firms

are able to achieve as a result of balancing exploitation and exploration.

2.1. The challenge of strategic entrepreneurship

In spite of its benefits, firms find balancing exploration and exploitation to be difficult. There are several reasons for this. First, although exploration contributes to *strategic flexibility* (a skill through which the firm is able to acquire and subsequently use information to appropriately respond to change), the outcomes of investments made in the firm's exploratory capabilities are uncertain. Because some stakeholders (e.g., suppliers) often are uncertainty avoiders, exploratory actions may lack appeal, due to their experimental nature and the lack of certainty that positive outcomes will accrue from them. Employees (another stakeholder group), too, may at least initially find exploratory actions to be difficult and perhaps undesirable. The reason for this is that exploration typically calls for employees to use novel routines to complete their work instead of continuing to use the patterns of organizational action with which they are familiar and likely comfortable. In general, those working in companies prefer the known to the unknown. (We can all probably think of individuals for whom this is the case.) Jointly, these factors create a situation in which, in most firms, exploitation, which takes place by exercising familiar organizational routines, is preferred at the expense of exploration, which takes place by exercising unfamiliar routines (March, 1991). Some organizational observers label this a condition in which *exploitation tends to drive out exploration*.

The fragility of the process used to transition from exploration to exploitation is a second reason companies find developing an appropriate balance between the two types of actions to be difficult. Indeed, operational, structural, and cultural changes must take place for a firm to transition from exploring for new opportunities (as well as new ways to take advantage of them) to exploiting current competitive advantages as the source of today's competitive success. Thus, when transitioning, the firm moves from a concentration on diversity with the intent of creating newness (i.e., seeking new opportunities, new market space, and new advantages) to a concentration on successfully using current skills and routines as the source of today's advantages.

In short, although SE has great promise as a contributor to sustainable competitive advantages, the complexity of the individual sets of actions, as well as the actions taken to transition from

exploration to exploitation (and from exploitation to exploration, as well), poses significant challenges. Additional discussions of SE and its components, which are presented in the next section, demonstrate this complexity.

2.2. An expanded view of strategic entrepreneurship

Defining the terms *strategy* and *entrepreneurship* is a useful first step in becoming more familiar with strategic entrepreneurship. In Fig. 1, we present some of the individual attributes of strategy, entrepreneurship, and SE.

As suggested in Fig. 1, *strategy* is concerned with the firm's long-term development (Ghemawat, 2002). A firm's long-term development includes a number of elements, such as decisions regarding scope, how resources are to be acquired and managed, and intended sources of competitive advantage, among others (Hofer & Schendel, 1978). The attributes listed in Fig. 1 suggest that, in the most general sense, *entrepreneurship* is concerned with actions taken to create newness (Ireland et

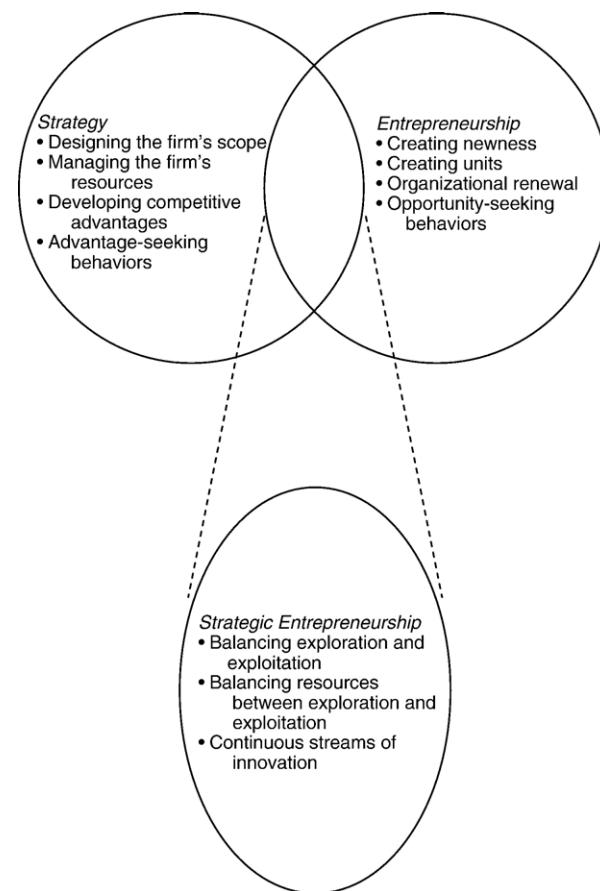


Figure 1 Strategic entrepreneurship: A value-creating intersection between strategy and entrepreneurship.

al., 2003). We can extend this a bit to note that newness results from actions framed around efforts to create new organizational units, to establish new organizations, or to renew existing organizations (Sharma & Chrisman, 1999). As these descriptions suggest, strategy and entrepreneurship are products of an array of decisions made about various issues and phenomena (Miller & Ireland, 2005).

SE results from combining attributes of strategy and entrepreneurship. Here, the firm combines exploration-oriented attributes with exploitation-oriented attributes to develop consistent streams of innovation and to remain technologically ahead of competitors. Thus, SE is concerned with actions the firm intends to take to *exploit* the innovations that result from its efforts to continuously *explore* for innovation-based opportunities (i.e., new organizational forms, new products, new processes, etc.). An ability to anticipate and then properly respond to environmental change is one of the important outcomes of effective SE. Indeed, through SE, the firm intends to rely on innovation and its exploitation as the source of sustainable competitive advantages and effective responses to continuous environmental changes. Effective SE practices find firms realizing that adapting to change requires an array of newness in the form of innovations. In fact, research suggests that between 30% and 50% of both a firm's sales and its profits originate from products commercialized in the previous 5 years (Griffin, 1997; Hauser, Tellis, & Griffin, 2005). These percentages have remained fairly stable over the past decade, highlighting the necessity to create consistent streams of innovation to maintain organizational success.

The stream of newness created through SE results from a balance of actions taken to explore and exploit. Importantly, this balance positions a firm to take advantage of existing and future opportunities. Exploitation maintains and hopefully enhances current levels of performance by incrementally extending the firm's established knowledge base. In doing so, exploitation also supports the firm's exploration efforts. Exploration occurs as the firm integrates diverse knowledge with existing knowledge stocks. Absorbing new knowledge to which the firm gains access while exploring becomes the foundation for future exploitation actions.

Effective SE leads to a *combination* of both effectiveness and efficiency-oriented forms of newness, and is the source of sustainable competitive advantages. New products, new processes used to produce products, and new ways to structure a firm to facilitate innovation are all examples of newness that SE can produce. Product

innovations are the source of *effectiveness* as a result of satisfying market expectations, while process and structural innovations are the foundation for *efficiency* as the firm wisely uses its resources. Although new products highlight to the world a firm's innovativeness and prestige, some scholars suggest that process and administrative innovations provide firms with greater competitive advantage than product innovations. The reason for this is that process and administrative innovations are hidden within the firm. Consequently, it is more difficult for competitors to reverse engineer and imitate these innovations, as is often easily and quickly achieved with product innovations.

As an example, Philip Morris held a competitive advantage over its competitors for a number of years because of its "expanded" tobacco process, which signified a radical innovation in cigarette manufacturing. The firm discovered that when tobacco was allowed to soak in liquid carbon dioxide and then passed through a stream of hot air, it would expand and pop, much like popcorn. By employing this technique, Philip Morris was able to fill the same amount of cigarettes with less tobacco, greatly enhancing its productivity and, subsequently, its profitability. To the naked eye, cigarettes filled with expanded tobacco and those filled with regular tobacco are indistinguishable. Furthermore, the process through which Philip Morris expands tobacco remains safely housed behind the walls of its manufacturing facilities, hidden from those who may wish to imitate such value-creating activities. This process innovation provided great value to Philip Morris, but the company's success was already founded on its Marlboro brand of cigarettes. Therefore, in the case of SE, we take the position that sustainable competitive advantage results from a combination of product, process, and administrative innovations, *as firms cannot gain value from low-quality or outdated products, even when utilizing highly efficient processes*.

3. Differentiating exploration and exploitation

In the following sections, we discuss in greater detail the processes of exploration and exploitation. To do this, we describe the operational, structural, and cultural characteristics enabling efficient and effective SE. As we will explain, firms can undertake effective SE practices by separating the exploration and exploitation activities, and supporting each with distinct operational, structural, and cultural mechanisms.

3.1. Exploration: Benefiting from diverse investments

Identifying ways to position a firm in one or more market spaces to deal with environmental change is a key outcome sought through exploration. Exploration's success depends on the firm's ability to acquire new, diverse knowledge and subsequently integrate it with existing knowledge. In other words, exploration represents a learning process in which the firm attempts to significantly broaden and deepen its total stock of knowledge. Knowledge *breadth* is achieved by seeking diverse knowledge from external sources to add to internal knowledge. Knowledge *depth* is achieved as the firm seeks to increase its store of *both* internal and external knowledge in focal areas.

As an operational choice, mergers and acquisitions are a path firms use to increase their knowledge diversity. Although controversial, this path remains favored by a number of companies. Recently, for example, Cisco Systems acquired Scientific-Atlanta, a provider of television set-top boxes, video distribution networks, and video system integration. By adding Scientific-Atlanta's knowledge of video systems and networks to its existing knowledge about data and voice networks, Cisco intends to leverage its newly-formed knowledge base to establish expertise in video internet protocol networks. Cisco's interest in leveraging knowledge this way centers on the ability to take advantage of the expected integration of televisions with the capabilities of personal computers. In short, acquiring Scientific-Atlanta demonstrates Cisco's recognition of a changing environment (i.e., the further integration of Internet and television technologies), as well as the initial steps the firm is taking to bundle diverse knowledge with its own internal expertise as the foundation for exploring opportunities that it hopes to be able to exploit because of changes in technologies.

In general, recent corporate actions suggest that increases in the rate and complexity of environmental changes find firms seeking more efficient operational means of exploration (compared to mergers and acquisitions). Strategic alliances and corporate venture capital programs are examples of means of operating that firms believe are efficient exploration paths. Contributing to the perceived efficiency is the fact that alliances and corporate venture capital programs allow a firm to share, with one or more companies, the risks and uncertainty associated with exploration investments. Using these means enables a firm to stretch its constrained internal resources across a broad, diverse scope of opportunities.

Corning uses alliances for exploration purposes. In general, Corning's heritage is based on its own internal knowledge of glass and ceramics. Nonetheless, the company has successfully leveraged knowledge acquired from alliance partners with its own knowledge about glass and ceramics to generate new technologies to create new products. Corning's alliances include major collaborative relationships with the likes of Dow Chemical, Samsung, and Mitsubishi. A web of smaller alliances, which broadens the knowledge base tapped by Corning and its partners, rests within these relationships. Using these relationships for exploration purposes has contributed to identifying opportunities and developing various products, including some for the automotive industry (e.g., selective catalytic reduction substrates for emission systems), the television and computer industries (e.g., liquid crystal glass displays), and the construction industry (e.g., insulation products).

Corporate venture capital programs represent a way of operating that firms use in order to mimic independent venture capital funds. Firms provide funding and expertise to a broad number of ventures; in return, they may become aware of attractive opportunities before their competitors. Having a "first-mover advantage" in terms of identifying one or more attractive opportunities can subsequently lead to exploitation actions that get launched before those of competitors.

A number of firms across a broad array of industries, including Intel, Reuters, Bertelsmann, and UPS, have established corporate venture capital programs (Garvin, 2002). These operational initiatives are yielding mixed results. For example, Intel reaped over \$4 billion from its venture capital investments in the 1990s before losing \$632 million in 2001 alone. Of course, proponents of corporate venture capital programs assert that the strategic objectives outweigh potential financial losses. Despite the setbacks it has endured, Intel has continued its program, investing over \$130 million in 2004 in approximately 110 ventures, spanning mobile Internet products, digital home applications, enterprise hardware and software, and numerous other emerging technologies (Intel, 2006). Although Intel's 2004 portfolio investment represents a sizeable amount of money, it is still dwarfed by the previously-mentioned, multi-billion dollar joint venture with Micron Technology and the billions of dollars the company spends annually on internal R&D. Nonetheless, as our discussion illustrates, corporate venture capital programs can serve as an efficient means through which to invest across a broad range of opportunities.

More comprehensively, our consideration of Corning's and Intel's actions demonstrates that a key purpose of exploration is creating new streams of knowledge as the source of radically different technologies and, subsequently, of new products and sources of competitive advantage. Because of the need to invest across a broad range of opportunities and the uncertainty regarding the success of many exploration investments, benefits accrue to firms capable of efficiently handling the demands of different operational choices (mergers and acquisitions, alliances, and venture capital programs) as exploration investments.

Exploration and exploitation demand different behaviors—behaviors that are facilitated by a firm's structure and culture. Indeed, the structural and cultural mechanisms required to support exploration differ from those needed to support exploitation.

The degree of centralization of authority, the standardization of procedures, and the formalization of processes are three structural mechanisms an organization uses to support exploration and exploitation. *Centralization of authority* refers to the amount of autonomy individuals have to make decisions regarding the use of organizational resources. *Standardization of procedures* refers to the extent to which behaviors are routinized within the firm. The *formalization of processes* concerns the degree to which the firm has prepared codified and written instructions about how procedures are to be followed.

Organizational structures characterized by decentralized authority, semi-standardized procedures, and semi-formalized processes support exploration. Decentralization authority patterns yield a large number of occasions throughout a firm for knowledge to be meaningfully acquired and processed (Siggelkow & Levinthal, 2003). The surfacing of multiple nodes of people working together to acquire and integrate knowledge increases the likelihood of identifying several opportunities in the external environment. This is important in that examining a larger number of possibilities is the path to finding a few true opportunities.

Decentralization of authority enhances the potential effectiveness of a firm's exploration behaviors in that it makes it possible for the firm to examine a relatively large number of potentially attractive market-related opportunities. In contrast, semi-standardization and semi-formalization contribute to the firm's efforts to efficiently use resources when exploring. More specifically, standardizing and formalizing some of the decision rules used for guiding the exploration for opportunities creates routines of knowledge search that have the

potential to reduce the amount of financial and human capital that is inappropriately used or "wasted." However, standardization and formalization should not be used to the point that they stifle the creativity of individuals to whom authority to explore has been decentralized. Thus, freedom should exist to creatively explore, but within the context of guidelines about when to further pursue a particular opportunity or not. Firms are able to gain efficiency, without forfeiting effective exploration, by standardizing and formalizing decision rules and by *not* targeting the behaviors that occur between decisions. In essence, this creates an environment of options. In such an environment, firms control exploration actions by pre-determined specifications of uncertainty, risk, and cost, yet allow ventures to experiment freely between decision milestones. Efficiently making these types of decisions is important in that, as noted above, only a very small number of opportunities will be judged appropriate for exploitation.

Organizational culture (i.e., the set of values and beliefs that are shared throughout a firm (Ireland, Hoskisson, & Hitt, 2006)) supports a company's structural characteristics. Unsatisfied with GE's performance in exploration, CEO Jeffrey Immelt acquired British bioscience/diagnostics company Amersham. Previously, GE's success rested upon successfully exploiting knowledge gained through acquisitions. Immelt believed that as the company grew continuously larger, relying on acquisitions as the primary means of exploring would not yield the levels of success the firm sought. Therefore, Immelt used the Amersham transaction to spur changes in GE's culture and increase the firm's exploration. Unlike prior acquisitions in which GE replaced target company executives, Immelt placed Amersham's CEO in charge of GE's existing healthcare unit. Furthermore, Immelt invested over \$100 million in R&D both domestically and internationally (Brady & Capell, 2004). It is hoped that these radical decisions will underscore Immelt's intentions to promote the risk-taking behaviors of a successful exploration culture.

As our discussion suggests, exploration is a long-term, uncertain process. Pharmaceutical companies' attempts to develop new drugs clearly demonstrate this. Even after spending years to develop a new drug, these companies are required to obtain regulatory approval through multiple stages of testing. (The requirements pharmaceutical companies must satisfy vary by country.) On average, 8–12 years elapse from the time an opportunity is identified to when the medicinal product is successfully positioned in the market

space for exploitation purposes (Biomedical Industry Advisory Group, 2005). Furthermore, only one in five to ten thousand opportunities pursued by pharmaceutical firms actually survives this entire process (Pfizer, 2006). Although the numbers are elevated in the pharmaceutical industry, statistics weigh against success in exploration for a host of companies competing in other industries beyond pharmaceuticals. In all industries, however, the link between exploration and exploitation highlights the need for an organizational culture valuing experimentation, the acceptance of uncertainty, and a tolerance of failure. In Table 1, we highlight the fundamental, organizational characteristics of successful exploration.

3.2. Exploitation: Benefiting from focus

As previously noted, radical changes are occurring rapidly in many of today's competitive environments. Despite this flux, firms that learn how to use SE as a means of dealing with these changes may enjoy a reasonable amount of stability between changes. During periods of relative calm or stability, firms concentrate on incrementally extending their knowledge base as the source of exploiting

current competitive advantages to address new market demands. Consider digital cameras in the photography industry as an example of how this works. When introduced, digital cameras were a radical innovation relative to the use of film. Following initial competitive reactions to the introduction of the innovative digital product, however, competitors have settled into a pattern of competing primarily on the basis of incremental innovations, including such minor changes as improving the quality of the digital image (i.e., megapixels) and lens speed.

Because incremental innovations represent minor extensions to established bases of knowledge, how the firm efficiently and effectively processes knowledge to exploit new market demands differs substantially from exploration-related behaviors. Two major variables, the heightened certainty regarding market trends and the shorter duration between market introductions of successive innovations, create the differences. Exploitation rests on knowledge of a proven innovation (i.e., product, process, or administrative), making it possible for firms to be aware of present needs and demands. Companies that are able to meet these market opportunities early with high-quality prod-

Table 1 Exploration—Benefiting from managing diverse investments

Operational mechanisms	
Mergers and acquisitions	Although efficient transactions compared to alliances and CVC programs, M&As allow firms to gain full control over valuable, diverse resources and knowledge. Moreover, M&As alleviate concerns that partners may become competitors in the future—issues that arise in alliances or corporate venture capital investments.
Strategic alliances	Alliances allow firms to tap more external resources than possible with M&As, but less than with CVC programs. Within alliances, firms may not be able to explore partners' knowledge in as much depth as allowed in M&As, yet still much more than in CVC programs.
Corporate venture capital	Firms can invest across a broad number of opportunities to keep aware of changes in the external environment. The depth of these investments is much lower than in M&As and alliances.
Structural mechanisms	
Decentralized authority	Decentralization provides autonomy to individuals and allows the firm to effectively pursue a larger number of opportunities.
Semi-standardized procedures/ Semi-formalized processes	In exploration, semi-standardization and semi-formalization refer to controlling decision rules, while placing less restriction on creative, entrepreneurial behaviors. This balances efficiency and effectiveness.
Cultural mechanisms	
Promoting experimentation	Research shows that employees and other stakeholders prefer leaders who take a consistent path. Entrepreneurship is based upon change and innovation, however. Firms that create a culture in which experimentation and change is the consistent course of action will be more successful in their SE behaviors.
Willingness to face uncertainty/risk	In exploration, firms seek to discover opportunities for which markets do not exist. The process inherently involves much uncertainty and risk regarding, for example, how markets will form and the nature of competitors' actions. Firms require a culture that transforms this uncertainty into positive entrepreneurial behaviors—not stress and rigidity.
Motivation to overlook failure	For those opportunities that lead to new product development, 35% of these still eventually are considered failures. Therefore, it is important for firms to pursue numerous opportunities efficiently and effectively—and to be cognizant of the likelihood of failure for most ventures. Discontinued ventures should be viewed as learning experiences, not failures.

ucts and services enjoy competitive advantage by being able to gain market share and by forming entry barriers.

Through stages of exploration and subsequent exploitation, individuals within the firm build an intimate knowledge base of the product, process, and administrative attributes supporting an innovation. These individuals are often the source of valuable ideas to re-bundle resources and knowledge to create incremental innovations. Much of Honda Motor Corporation's success can be attributed to empowering individuals to stimulate positive change. For example, the company permits its employees to join teams that explore ideas they find interesting. Allowing such interactions has led to numerous innovations throughout the firm, from minor improvements in the type of rag used to wipe down dashboards to more technologically complex innovations involving how hood and hood frames are stamped (Colman, 2002).

Although firms can take advantage of internal resources and knowledge, they may also seek external partnerships when engaged in exploitation. When *exploring*, firms seek knowledge and resources primarily in order to increase diversity. In contrast, exploitation finds firms acquiring and bundling complementary knowledge and resources to extend their ability to leverage existing capabilities and competitive advantages. Firms may tap into external knowledge and resources to achieve several objectives, including those of increasing the breadth of their distribution channels and the speed at which they introduce incremental innovations to customers. For example, Apple Computer has partnered with Hewlett-Packard (HP) to expand the global reach of its iPod digital music player and its online music store. The alliance finds Apple leveraging HP's established distribution channels and taking advantage of market opportunities in Asia. Thus, this alliance extends Apple's distribution capabilities as a means of solidifying the iPod's position as the world's top digital music player. With extensive distribution capabilities established through a cooperative relationship with another firm, Apple is able to concentrate some of its resources on developing value-creating, incremental innovations for the iPod.

Consider, again, the Honda Motor Corporation. Although the company gains huge benefits from its employees, as described above, it also forms alliances with some of its suppliers to identify opportunities for incremental improvements. Through the 1990s, these collaborative efforts rewarded Honda with a 25% reduction in the manufacturing costs of the Honda Accord. Rather than merely absorb these reduced costs in higher

profits, Honda produced a larger Accord loaded with additional options, without raising the consumer's price (Choi & Krause, *in press*). Through successful exploitation, Honda has profitably increased its share of the global automobile market.

Firms also complete mergers and acquisitions to facilitate exploitation of chosen opportunities. Although a less efficient means of acquiring external resources compared to alliances and corporate venture programs, mergers and acquisitions do allow firms to avoid uncertainties regarding a partner's behaviors and create the potential for greater economies-of-scale and scope. Many firms in the banking industry merge or acquire to exploit new geographic markets for just these reasons. For example, Wachovia Corporation, already one of the largest financial services providers in the nation, recently acquired SouthTrust Corporation to expand its geographical footprint in the southeastern United States, especially in the fast-growing Texas market. Similar to exploration, merging or acquiring to exploit generates potential synergies by integrating complementary capabilities. These efforts are not risk free, though, in that rapidly changing environmental conditions have the potential to decrease the value of acquired knowledge and resources.

Exploitation is characterized by structural and cultural mechanisms that allow the firm to focus on a core set of knowledge and capabilities. As we discuss, there are differences in the structural and cultural mechanisms firms use when exploiting compared to when exploring.

Continuously acquiring and integrating *diverse* knowledge stocks is not critical when exploiting. Indeed, the need for speed requires that the firm focus on established knowledge. Because of this, the incremental nature of exploitation also minimizes the need for extensive cross-divisional communication (although, as noted from the Honda example, some cross-functional cooperation can spark valuable, incremental innovations).

A centralized structure takes advantage of each of these factors. Centralization defines a clear locus of control, thereby overcoming ambiguity concerning who has the authority to make decisions. This structural mechanism also makes it possible for organizations to implement decisions quickly and efficiently by limiting the extent to which diverse perspectives are addressed. Therefore, centralization deters the potential for internal conflict among separate divisions, divisions that may have different perspectives regarding how to best exploit an opportunity.

Highly-specialized and formalized routines also benefit a firm's exploitation efforts. Although

these mechanisms constrain creativity, exploitation's success rests more primarily on the proper use of fast, simple routines. Firms that attempt to become a leader by honing numerous capabilities (as the sources of multiple competitive advantages) often find themselves, due to a resulting lack of focus, lagging behind competitors that, due to their concentrated efforts, precisely target customers' needs. Formalization provides the authority individual employees require as the foundation for making decisions in a timely manner. Consistent managerial support for the formalized procedures, in turn, solidifies the employee behaviors in standardized routines.

Not surprisingly, exploitation is also culturally distinct from exploration. The system of shared values supporting exploitation includes a need for greater certainty regarding tasks and outcomes, a preference for meeting short-term goals, and a commitment to focus on existing competencies and competitive advantages. Exploitation is based on a heightened level of certainty regarding market trends. In providing necessary focus, centralization, standardization, and formalization limit the extent to which experimental behaviors may manifest in exploitation. Nevertheless, ex-

ploration-oriented behaviors may still surface if the firm employs a cultural mindset that does not complement these structural mechanisms. For example, even when the appropriate structural mechanisms are in place, individuals with a greater propensity for experimentation can sidetrack the focus of decision makers. Such behaviors slow down the exploitation process and introduce inefficiencies, both of which undermine the firm's ability to effectively exploit market opportunities. Therefore, firms must engender a culture in which greater certainty and a desire to focus on what is known, as opposed to what *could be*, is supported.

Exploitation's incremental nature also implies that the time between milestones is much shorter than is the case when exploring. Indeed, the formalization characterizing exploitation demands specification of when and how outcomes should be delivered. The constant presence of new objectives can be stressful, especially given that competitors' incremental innovations reduce the time available to a firm to achieve its specific objectives. Firms able to prevent this type of stress from reducing their concentration on competitive advantages as the source of exploitation outperform those incapable of doing this. In Table 2, we highlight the

Table 2 Exploitation—Benefiting from managing focused investments

Operational mechanisms	
Internal development	The intimate knowledge held by employees involved with exploitation activities is often sufficient to lead the firm's incremental innovation. However, firms do not always possess all of the physical (and sometimes knowledge) resources needed to adequately exploit global markets in a timely fashion.
Strategic alliances	Alliances enable firms to expand their knowledge and resources to accurately and quickly target global opportunities. At times, partners may have divergent, or even competing, interests which may undermine an alliance's success.
Mergers and acquisitions	M&As allow firms to gain full control over valuable distribution channels and establish economies-of-scale and -scope. Furthermore, M&As do not increase the capacity within an industry. In a dynamic environment, however, environmental changes may make these sunk investments worthless.
Structural mechanisms	
Centralized authority	Centralization defines a clear locus of control, facilitating the focus and quick decisions necessary for exploitation success.
Standardized procedures/ formalized processes	In exploitation, to a much greater extent, decision rules and behaviors are standardized and formalized. Routines should focus on one or two competencies, as opposed to exploiting numerous capabilities, which may slow the firm's activities.
Cultural mechanisms	
Need for certainty in outcomes	In exploitation, outcomes are much more certain as compared to exploration. Some individuals prefer striving for tangible, known goals, whereas others enjoy uncertainty and the creativity it affords. Socializing individuals to the determined, exploitation context may benefit the firm's incremental innovativeness.
Preference for short-term goals	The duration between incremental innovations is much less than for radical innovations. The ability to meet short-term milestones determines a firm's exploitation success. If a firm can establish routines, it may be able to avoid the time stress created by a fast-paced culture.
Commitment to focus	Research consistently shows that early moving firms outperform late movers. This success depends on employees' willingness to focus on their exploitation activities and allowing others in the firm to explore novel initiatives. The firm should highlight and reward employees' incremental innovations as a key determinant of the firm's ability to exploit opportunities.

fundamental, organizational characteristics of successful exploitation.

4. Implications for organizational actions

Dynamic, yet continuous environmental change is the rule of the day. The result of a host of conditions, including global competition and rapidly changing technological capabilities, change is an ever-present and increasingly rigorous challenge facing today's firms. If anything, the significance of the challenge to organizational success that constant change surfaces can be expected to increase in the decades ahead.

The reality of constant and challenging environmental change potentially creates a need for organizations to alter their approach to developing and using competitive advantages as the pathway to superior performance. In our view, strategic entrepreneurship (SE) is an approach that can serve firms well in their efforts to rely on competitive advantages as the path to superior performance, both today and in the future.

As the intersection between strategic management's focus on exploiting competitive advantages and entrepreneurship's concentration on exploring for opportunities as the building blocks around

which future competitive advantages will be framed, we believe that strategic entrepreneurship captures a set of organizational actions with the capacity to strongly (and positively) contribute to a firm's efforts to outperform competitors. Moreover, continuous innovations are an outcome of effective SE. This is important, in that there is little debate regarding the position that newness (in the form of new products, new processes to produce those products, and new ways of organizing work in a firm to produce products) is critical to organizational success.

The decision to engage in SE is a vital but insufficient step to being able to consistently outperform competitors; indeed, firms reach SE's potential only by balancing their actions between exploration and exploitation. In slightly different words, the most successful firms balance the efforts they expend to explore for tomorrow's opportunities while exploiting today's competitive advantages. Firms use three types of mechanisms (operational, structural, and cultural) to help balance exploration and exploitation; in Tables 1 and 2, we highlight the essence of how this desired balance can be attained. Achieving this goal is challenging, a reason many firms have yet to accomplish the task. In Table 3, we present steps firms can take to "get started" with their efforts to

Table 3 Getting started

To date, few of today's firms have been able to achieve an entrepreneurially-effective balance between exploration and exploitation. Interestingly, because each firm has unique resources and capabilities, the nature of the desired balance between exploration and exploitation also differs among firms.

Next, we briefly discuss 3 key actions managers can take that positively contribute to firms' efforts to achieve a better balance between exploration and exploitation:

1. Understanding the exploration and exploitation balance

In any market, a firm may be ill-advised to seek a 50/50 balance (in terms of resource allocations) between exploration and exploitation. A number of factors affect the appropriate balance between exploration and exploitation in a firm. These factors include the frequency and significance of changes taking place in the firm's external environment, whether the firm competes in a slow or fast-cycle market, and the firm's resources and capabilities. For example, a firm competing in a dynamic market needs to emphasize exploration more than firms competing in stable environments.

2. Identifying the optimal balance

Effective analyses of external and internal environments are the foundation for discovering an ideal exploration/exploitation balance. The external environment analysis should identify current as well as emerging trends in the technological, sociocultural, economic, political/legal, demographic, and global arenas in which the firm competes. The internal environment analysis should examine the firm's strengths and weaknesses to discern how external changes may lead to opportunities or threats. If the potential weaknesses and threats outweigh the strengths and opportunities, a firm likely needs to enhance its exploratory actions.

3. Reintroducing the middle-level manager

Middle-level managers experienced mass layoffs in the late 1980s through the 1990s, as firms flattened their structures in an attempt to become more responsive to external changes. However, we believe middle-level managers play two vital roles in strategic entrepreneurship. First, these managers bridge the gap between operational- and strategic-level managers. Because of this, middle-level managers are instrumental in how a firm's strategy becomes operationalized, as well as in keeping top management teams apprised of opportunities that have been identified in lower organizational levels. Second, middle-level managers are ideally positioned for separating the operationally, structurally, and culturally different processes of exploration and exploitation.

develop an appropriate balance between exploration and exploitation actions.

In the final analysis, we anticipate successful organizations as ones in which strategic entrepreneurship will be used to deal with the organizational tension that surfaces as firms try to simultaneously emphasize today what they already do well (relative to competitors) while exploring for opportunities to build the foundation for their future success. Thus, we believe that superior firm performance will be a function of the degree to which firms learn how to combine the best of strategic management and entrepreneurship as the source of today's and tomorrow's competitive advantages.

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