The current issue and full text archive of this journal is available at
www.emeraldinsight.com/0955-534X.htm

Strategic entrepreneurship: origins, core elements and research directions

Lida P. Kyrgidou
School of Economics and Business Administration, International Hellenic University, Thessaloniki, Greece, and
Mathew Hughes
Nottingham University Business School, University of Nottingham, Nottingham, UK

Received December 2008
Revised February 2009, April 2009
Accepted May 2009

Abstract

Purpose – The question of how to integrate strategic and entrepreneurial management to achieve a better balance between advantage- and opportunity-seeking behaviours has received increased academic and practitioner interest in recent years. However, little consensus exists over the meaning of this concept of "strategic entrepreneurship" (SE), its constituents and its operation. This paper aims to address these issues.

Design/methodology/approach – In response, the paper reports a thorough review of SE's origins and current conceptualizations to map its core components and charts critical research directions for this exciting emerging field. Analysis of the terrain of SE reveals eight core components drawn from entrepreneurship and strategic management that captures conditions necessary for its application.

Findings – From this analysis, the paper offers an alternative model of SE, and charts four key research areas with accompanying research questions to inspire future research. These outcomes offer avenues to further sharpen the understanding of how SE might operate both in theory and practice.

Research limitations/implications – A relative lack of analysis and integration of external factors influencing and shaping the process of SE represents a limitation. Also, whilst the authors have attempted to review, assess and understand its position in the entrepreneurship and strategic management literature, the full range of its strengths and weaknesses cannot be grasped.

Originality/value – The paper illustrates how these four question areas pose significant promise to better understand the development and application of SE in research and in practice.

Keywords Entrepreneurialism, Strategic management

Paper type General review

Introduction

Managers must maximize the pursuit of new business opportunities while simultaneously maximizing the generation and application of temporary competitive advantages to sustainably create organizational value. It is this key management problem that has led to convergence in studies of entrepreneurship (opportunity-seeking behaviour) and strategic management (advantage-seeking behaviour); and strategic entrepreneurship (SE) has recently emerged as a new concept to examine this convergence (Ireland *et al.*, 2003).

The authors deeply thank *European Business Review* Editor Göran Svensson and the anonymous reviewers for their constructive comments in the development of this work. All errors remain those of the authors. Both authors contributed equally to this work.

European Business Review
Vol. 22 No. 1, 2010
pp. 43-63

0955-534X
DOI 10.1108/09555341011009007

While the fields of entrepreneurship and strategy have developed independently over the last three decades, several important developments have recently taken place which point towards a marriage of both perspectives. For example, studies in the area of strategic management, in particular, have gradually uncovered the relationship between strategic management and entrepreneurship: Mintzberg (1973) introduced the notion of entrepreneurial strategy making; Pinchot (1985) examined intrapreneurship; Covin and Slevin (1989) presented the concept of an entrepreneurial strategic posture within organizations; Lumpkin and Dess (1996) extended this concept introducing the entrepreneurial orientation construct, which they identify as the tendency of organizations to engage in innovative, risk-accepting and proactive strategies; Ireland *et al.* (2001) extend and broaden this concept to integrate strategic management as a context for entrepreneurial actions; and Foss *et al.* (2008) highlight the concept of subjectivism in order to reconcile entrepreneurship theory with strategic management and the resource-based view (RBV).

Yet, despite these developments, only one study has so far presented a conceptual model of SE, specifically, Ireland *et al.* (2003). Ireland *et al.* (2003) posit that a firm which linearly and sequentially: employs an entrepreneurial mindset to identify opportunities; manages resources strategically to tackle the opportunity; applies creativity and innovation; and generates a competitive advantage is operating strategically entrepreneurially.

However, this model suffers from several limitations and absences that compromise our understanding of how SE might be made to work effectively in practice. For example, despite being defined as the simultaneous pursuit of opportunity-seeking (entrepreneurship) and advantage-seeking (strategic management) behaviours (Ireland *et al.*, 2003), the model is linearly punctuated between episodes of entrepreneurial and strategic behaviour and lacks a defined feedback loop between the two. Moreover, their model is dependent on the effective deployment of behaviours (for example, an entrepreneurial mindset to identify opportunities, or the application of creativity to create innovation) but does not account for the internal firm conditions that provide the contextual and structural framework within which these behaviours take place. Lastly, turbulent environments over time deteriorate resources that underpin entrepreneurial acts. Thus, dynamic capability processes need consideration. Dynamic capabilities reflect systems that sense, seize and transform accumulated knowledge into improvements in firm activity. Hence, they appear critical for activating and sustaining strategic and entrepreneurial processes and so to balance advantage- and opportunity-seeking behaviours.

Given that SE is a domain in its infancy (Ireland, 2007), we review relevant literature on entrepreneurship, strategic management and SE to:

- ascertain the roots of the SE concept;
- identify where the *locus* of integration lies;
- establish what components emerge at the interface of the two sets of activities; and
- identify elements that aid SE to successfully unfold, offering an improved model of SE, based on the criticism of Ireland *et al.*'s (2003) model.

We conclude by identifying fruitful areas for investigation to sharpen our understanding of how SE operates both in theory and practice to contribute value to firms.

The roots of SE

In defining entrepreneurship, Shane and Venkataraman (2000, p. 218) emphasize that it is a "nexus" that involves entrepreneurial individuals seizing and exploiting lucrative opportunities: "the field involves the study of sources of opportunities; the processes of discovery, evaluation, and exploitation of opportunities; and the set of individuals who discover, evaluate, and exploit them". In the initial stages of venture creation and launch, entrepreneurs often have to do more with less and use what abilities and resources they have at their disposal with a minimum of capital and a maximum of ingenuity and improvisation (Harrison *et al.*, 2004; Miner *et al.*, 2001). Established mid-to-large firms however face very different conditions. Although their resource base is evidently greater, their entrepreneurial capacity for innovativeness and risk-taking are constrained by structures, systems and processes set-up over time to formalize their operations towards achieving efficiency and effectiveness (Mintzberg, 1979). Still, established and larger sized firms do have considerably greater knowledge and competence at creating, shaping and deploying competitive advantages but nevertheless, there exists an entrepreneurial imperative for firms to innovate and adapt rapidly to change or face obsolescence and failure (Hitt *et al.*, 2001; Merrifield, 1993).

Strategy is often likened to a process of planning that places emphasis on improved decision making brought about by managing resources within a framework of structures, systems and processes. Strategy is considered a primary advantage that differentiates entrepreneurial firms and creates organizational excellence (Darling *et al.*, 2007). It provides the context within which firms can exploit identified opportunities, that is, through their current strategic platform and through structured, well-planned actions, thereby aiding firms to specialize and gain competitive advantage. Entrepreneurial firms risk focusing excessively on opportunity recognition and risk-taking activities; lacking a balanced strategic focus can then undermine the benefits and value their entrepreneurial initiatives might generate. As such, they become incapable of gaining the advantages that their propensity towards entrepreneurial behaviour has to offer. Still, the excessive formalization of firm organizing activity that strategy entails, can create conditions that restrict rapid adaptation to change and tolerance of frame-breaking ideas (DeSimone *et al.*, 1995), which in turn might prevent the firm from capturing the benefits that its entrepreneurial behaviour could create. Balancing entrepreneurship and strategic management then can help firms avoid the trap of excessive risk-taking activities while preventing inertia caused by iteratively adding to present advantages.

Strategic management theory, epitomized by the RBV, emphasizes the creation of a unique resource position for the firm to create advantages that allow it to compete effectively into the long term (Barney, 1991; Wernerfelt, 1984). However, this perspective does not adequately explain long-term success when firms face volatile and environmental conditions. Indeed, advantage is at best temporary such that a firm must continuously explore new opportunities over and above merely exploiting its resource advantages over other firms (Leonard-Barton, 1992). It is this very weakness that explains why small firms and new entrants can outmanoeuvre larger market incumbents.

Owing to their emphasis on innovation and entrepreneurial outmanoeuvring, entrepreneurial ventures regardless of size are characterized by high degrees of uncertainty and so their managers must simultaneously maximize their ability to recognize and pursue new business opportunities while minimizing the strategic risk related to venture development by improving the formation, management and leverage of temporary competitive advantages (Ireland *et al.*, 2001). This problem can be viewed as one of creating and sustaining SE.

The heritage of SE

The founding works of SE, as well as recent bibliometric research, show that SE crystallizes the mutual support and interdependence that exists between entrepreneurship and strategic management (Hitt *et al.*, 2002). The emergence of SE has its roots in the field of economics (Knight, 1921; Schumpeter, 1942) and later in the field of management. Several studies have uncovered the relationship between strategic management and entrepreneurship. Covin and Slevin (1989), following Miller's (1983) conception of an entrepreneurial firm, define strategic posture as a firm's competitive orientation on a spectrum from conservative to entrepreneurial. Lumpkin and Dess (1996) subsequently developed the construct of entrepreneurial orientation. Ireland *et al.* (2001) viewed strategic management as a context for entrepreneurial actions. Meyer and Heppard (2000) discussed the notion of entrepreneurial strategy. Barringer and Bluedorn (1999) examine the relationship between entrepreneurship intensity and five specific strategic management practices and conclude that scanning intensity, planning flexibility, *locus* of planning and strategic controls positively influence entrepreneurial intensity. Therefore, the relationship between strategic management and entrepreneurial activity has emerged in an interrelated way over many years but has only now been crystallized into a construct of practice.

Schumpeter (1942) theory, a key theory of entrepreneurship, views entrepreneurship as a disequilibrating phenomenon. Through creative destruction, where industrial and market dynamics "destroy" old business models and new more effective ones emerge from the activities of innovating entrepreneurial firms, less-innovative incumbents are replaced and a higher degree of economic growth is achieved in the longer term. In this framework, entrepreneurship refers to the creation of new productive resource combinations through the act of innovation. The Schumpeterian definition also views entrepreneurship contextually as the key factor leading to fundamental shifts in entire production systems, thus it implicitly makes entrepreneurship a fundamental strategic consideration for all types of organizations. Adherence to existing strategic frameworks in a performance-maximizing manner is inadequate in this sense.

The Schumpeterian tradition is featured in studies that focus on entrepreneurship as a way of describing and characterizing a firm's actions. In their quest for wealth creation, entrepreneurial firms focus on innovative, proactive and risk-taking behaviours conducive to the formation of new business models and organizational forms (Lumpkin and Dess, 1996). Building on the Schumpeterian base, Shane and Venkataraman (2000) state that entrepreneurship is about discovering and exploiting new opportunities in the environment. This highlights the chief role of opportunity identification as well as doing something with these opportunities, which is conductive to wealth creation.

But insufficient strategic management would lead to excessive opportunity exploration at the expense of prompting or strengthening advantage, which may ultimately lead to value destruction. Hence, opportunity pursuit needs to be integrated in a strategic framework to bear any significant fruit.

Penrose (1959) contributed the RBV of the firm, focusing on resource heterogeneity as the primary source of competitive advantage. Although it is a dominant framework in strategic management, entrepreneurship scholars use it to analyze the resource characteristics, resource combinations and dynamic capabilities that drive entrepreneurial acts (Foss *et al.*, 2008). Through this theoretical lens, entrepreneurship is seen as a context-dependent social process through which individuals and teams create wealth by creatively bringing together unique "packages" or "bundles" of resources to exploit marketplace opportunities (Morris, 1998). Of particular importance for entrepreneurial processes is the dynamic capability perspective that has emerged from the RBV. In unpredictable environments, dynamic capabilities are essential drivers behind the recombination of existing resources into new sources of firm value (Eisenhardt and Martin, 2000). This perspective overcomes the static limitations of the RBV, which places emphasis only on the effective leverage of resources at any one moment. In addition, the tension between combining explorative and exploitative activities suggests that managers from decisions through to processes and activities face constant pressures in balancing entrepreneurial and strategic activity (Adner and Levinthal, 2008). Nonetheless, the dynamic capability approach focuses on the internal organization as key to achieving firm success. Numerous studies describe the way in which dynamic capabilities allow firms to profitably enter emergent markets (King and Tucci, 2002), tie up industry relations (Dyer and Hatch, 2006) and restructure underperforming resources (Galunic and Eisenhardt, 2001). Each act, although strategic in nature, is driven by an entrepreneurial imperative.

From the above discussion, SE can be defined as a process that facilitates firm efforts to identify opportunities with the highest potential to lead to value creation, through the entrepreneurial component and then to exploit them through measured strategic actions, based on their resource base. The entrepreneurial aspect contributes to the ability of identifying opportunities and to the willingness of firms to pursue new opportunities, whilst the strategic perspective enables them to isolate and exploit those opportunities most likely to lead to sustainable competitive advantage and subsequent means by which to form advantage (Hitt *et al.*, 2001).

The concept of SE and its fundamental components

The study of SE involves the combination of actions distinctly entrepreneurial (focusing on opportunity) with actions essentially of a strategic nature (creating competitive advantage). This concept may be viewed as an extension of entrepreneurial strategy making, being a mode of strategy, which integrates strategy making with the ability to make quick decisions in a changing environment (Bird, 1988). Specifically, Mintzberg and Waters (1982) characterized entrepreneurial strategy making by its degree of deliberateness and clear vision with the flexibility to allow that vision to change. Bird (1988) reinforces the concept of vision within SE, by identifying a focus on the present with a firm's vision of the future. Still, Eisenhardt *et al.* (2000) on the other hand reinforce flexibility within the notion of managing the chaos of change, proposing six fundamental processes in order to make entrepreneurship a standard strategic practice.

These processes include improvisation, co-adaptation, patching, regeneration, experimentation and time pacing.

Eisenhardt *et al.*'s (2000) six-process framework is similar to the six domains of SE identified by Ireland *et al.* (2001): innovations, networks (access to resources), internationalization, organizational learning (transferring knowledge and developing resources), growth and top management teams and governance (effective selection and implementation of strategies). Hitt *et al.* (2001) revised these domains to external networks, resources and organizational learning, innovation and internationalization, as they developed SE both as a field of study and a specific construct. While both these views place an emphasis on networks, learning and growth, Hitt *et al.*'s (2001) revised work places an added emphasis on resources, competencies and capabilities to develop a sustainable competitive advantage when undertaking entrepreneurial behaviour.

Based on the broad range of components associated with SE and the common themes it shares with literature in the disciplines of entrepreneurship and strategy, it is possible to identify and evaluate those components that are consistently highlighted to contribute to the fundamental principles of SE. Specifically, these can be summarized as opportunity identification, innovation, acceptance of risk, flexibility, vision and growth. This is evident in Meyer and Heppard's (2000) notion of dominant logic; Hitt *et al.*'s (2001) emphasis on innovation within their six domains of SE; Lumpkin and Dess' (1996) reference to an acceptance of risk within the notion of an entrepreneurial orientation; Eisenhardt *et al.*'s (2000) emphasis on flexibility when operating on the edge of chaos; Covin and Slevin's (1989) reference to vision within the notion of an entrepreneurial strategic posture; and Ireland *et al.*'s (2001) emphasis on growth orientation. Each component is set against the common value of resource management and dynamic capability generation, resulting in a total of eight components relevant to the study and analysis of SE (Figure 1). Given that these eight components were consistently associated with SE at its birth, concentrating on these components allows us to remain true to the origins of the concept.

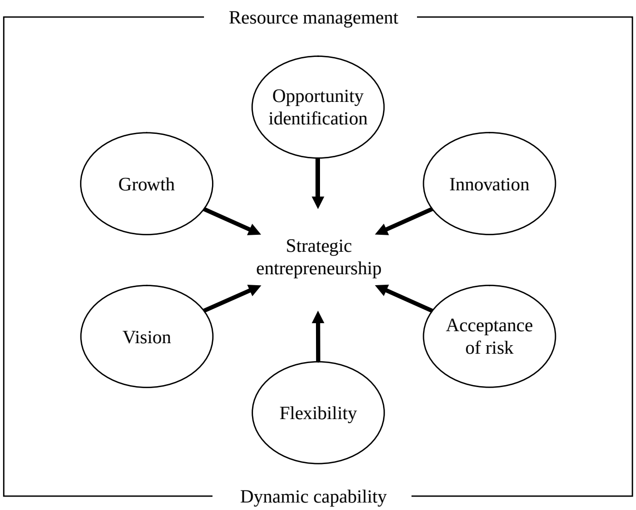

Figure 1.
Components of SE

Opportunity identification in the literature on SE is suggested to be an important source of competitive advantage (Hitt *et al.*, 2002), which can lead to entrepreneurial opportunity creation, while setting the ground for exploitation (Zahra, 2008); albeit such a view is narrowly conceived because of the inherent need to value, select and purposefully exploit only those that fit with the prevalent conditions of the firm. Bhide (1994) emphasizes the importance of balancing opportunity identification with analysis and strong execution skills to ensure that opportunities will be of strategic value to the firm. Innovation or the ability to innovate on the other hand is one of the distinctive competencies of entrepreneurial firms (Kirby, 2003). Sonfield and Luccier (1997) expand on this concept proposing that the most effective way to position an entrepreneurial firm is to use risk and innovation. Risk may be explained by referring to perceived environment (Smircich and Stubbart, 1985). Thus, risk is not fundamental to SE but rather the perception of risk within an entrepreneurial mindset differs from the wider perception of risk (Janney and Dess, 2006). The entrepreneur does not make a conscious decision to engage in highly risky projects, but rather their perception of that situation is of moderate rather than of high risk (Busenitz and Barney, 1997). Therefore, it is an acceptance of risk that is characteristic of entrepreneurs and when balanced with intuition and strategic action it becomes a potential source of competitive advantage. Regarding flexibility, within the SE perspective, it becomes evident that firms should be able to respond to change quickly, independent of their current strategy (Eisenhardt *et al.*, 2000). Flexibility refers to balancing structure with the freedom to implement and change strategy (Eisenhardt *et al.*, 2000), which in turn will facilitate quick response to change (Bhide, 1994), as well as regular assessment of the firm's core resources and competencies to ensure they are developed and reconfigured (Prahalad and Hamel, 1990). In this way, flexibility leads to competitive and sustainable advantage (Barney, 1991). If a firm fails to renew its resources or key strengths, its future strategic options will be eliminated (Hitt and Reed, 2000). Establishing a clear vision and developing strategy that focuses both on opportunity and advantage within that vision (Hitt *et al.*, 2001) enhance opportunity identification and exploitation as well as the strategies formulated to achieve this exploitation. Another central theme both within the entrepreneurship and strategy literature (Ireland *et al.*, 2001), growth is related not only to innovative and creative ideas, but also to the structure and strategy to turn such ideas into profitable ventures. Finally, resources and dynamic capabilities appear two additional critical components in the study of SE. Resources are perceived as value creation drivers via the development of competitive advantage (Ireland *et al.*, 2003), suggesting that possessing valuable and rare resources provides the basis for value creation. The RBV (Mosakowski, 2002) is aligned with the main dimensions of SE; value creation in the marketplace through opportunity exploration and exploitation, and sustainable competitive advantage. Hence, it provides a useful complementary framework to understand the development of necessary resources. The link to SE is apparent in the need to identify, develop and leverage advantageously the resource portfolio of an organization in order to achieve entrepreneurial outcomes. Dynamic capabilities (Eisenhardt and Martin, 2000; Teece *et al.*, 1997) are defined as the firm's capacity to renew physical resources and skills at a high pace and achieve congruence with a changing business environment (Winter, 2003). Therefore, a firm's ability to continually improve current resources and build new ones is paramount to maintaining competitive advantages and the entrepreneurial exploitation of opportunities over time.

In this context, the availability and allocation of firm resources and the dynamics of change processes emerging though dynamic capabilities become central elements for our understanding of the development and wealth creation actions of firms. The sooner resources are secured and transformed into competitive advantages through dynamic capabilities, the higher the chances for a successful wealth-creating process will be.

These components can be viewed as fundamental characteristics of SE and can be used both for further research and as a benchmark for comparison with activities employed by firms widely recognized as both strategic and entrepreneurial. The essence of SE is such that the fundamental components work together in a common direction. It is not necessary that each component weights equally, but SE is both created and bound by these conditions. Individually, each of these eight components reflects a business' strategic position and may interact directly with other internal and external environmental factors. Together, however, they form an integrated system creating SE. If all eight components are not present, SE may be incomplete, leading to an incomplete process, creating the opportunity for components which could otherwise contribute to SE to instead operate in different and inconsistent directions. Once established, SE ought to allow the firm to adapt in a changing competitive landscape, balancing innovation with risk-taking activities, facilitating the vision to both identify opportunities and to modify strategy as required.

An extant model of SE

Of the eight component themes presented by Eisenhardt *et al.* (2000), Ireland *et al.* (2001) and Hitt *et al.* (2001), several appear common with the only model of SE presented so far in research: the model of Ireland *et al.* (2003). Also, an important distinction between Ireland *et al.*'s (2003) model and previous frameworks is the conceptualization of SE as a construct. Hence, the notion of SE as both a field of study and a specific concept is reinforced and further developed therein. In relation to the eight consolidated components shown in Figure 1, opportunity recognition is included in Ireland *et al.*'s (2003) notion of an entrepreneurial mindset, which affects the way entrepreneurs selectively interpret and frame market signals in order to undertake entrepreneurial activity (Mitchell *et al.*, 2008); innovation, acceptance of risk, are referred to by Ireland *et al.* (2003) in their discussion of entrepreneurial culture and entrepreneurial leadership. Flexibility is presented as real options logic and the notion of growth is presented as a direct outcome of Ireland *et al.*'s (2003) SE model. Thus, Ireland *et al.*'s (2003) development of SE provides support for the components recognized as fundamental to entrepreneurship and its intersection with strategy.

A key attribute of this model is its treatment of SE as a construct consisting of four sequential, linear and alternating entrepreneurial and strategic activities. Ireland *et al.* (2003) specify four components to the process of SE:

(1) an entrepreneurial mindset, culture and leadership that support the search for entrepreneurial opportunity;

(2) strategic management of resources involving managing the bundling, structuring and leverage of financial, human and social capital;

(3) applying creativity to develop innovations and novel combinations to achieve radical and incremental innovation; and

(4) forming and executing competitive advantages.

Firms that follow this linear sequence of activities are apparently strategically entrepreneurial and should achieve wealth creation.

Limitations of the current model

The SE construct focuses on how opportunity- and advantage-seeking behaviours can be integrated to create balance between both behaviours to achieve sustainable competitive advantage (Ireland *et al.*, 2003). However, studies have failed to consider the time and spatial considerations associated with "balance". That is, do firms need to balance such behaviours simultaneously in a process of SE, ambidextrously using both at the same time, or, do firms draw on entrepreneurial behaviours when necessary to be followed by strategic advantage-building activities and vice versa? Ireland *et al.*'s (2003) definition views SE as the simultaneous use of opportunity- and advantage-seeking behaviours but their model shows that SE is not necessarily simultaneous in its application of strategy and entrepreneurship. Rather, their model implies that the use of entrepreneurial and strategic activities alternate linearly. The model shows a movement from entrepreneurial behaviour (entrepreneurial action to identify opportunities) to strategic behaviour (managing resources strategically) and back to entrepreneurial behaviour (applying creativity and innovation).

Whilst the linear simplicity of the Ireland *et al.* (2003) model represents strengths, it also conceals several weaknesses that become evident when one considers the practical implementation of SE. For example, the processes and activities involved in entrepreneurial creativity and risk-taking contradict the measured and analytical approach inherent in strategic management. A further criticism of the Ireland *et al.* (2003) model is its failure to account for factors that lead the firm to act strategically entrepreneurially. The "triggers" of the SE process in terms of the parallel existence of entrepreneurial and strategic acts are not referred to explicitly. Here, an entrepreneurial "vision" by top management or a dominant "logic" representing a commitment to innovation and entrepreneurial behaviour (Meyer and Heppard, 2000) might act as a strategic driver in the context of SE; but equally a purposeful internal environment that creates stimulus for entrepreneurial action might encourage the firm to become entrepreneurial too. It is a criticism of the model more generally that there is no reference to the internal design of the firm. Vision and the design of an environment to promote entrepreneurial and strategic actions to take place simultaneously through opportunity recognition and resource analysis is implied in extant theory and warrants further consideration. The tandem activities of opportunity recognition (entrepreneurial) and resource analysis (strategic) may need to occur simultaneously although in other instances the firm may need to alternate between entrepreneurial and strategic activity. The complexity of this process indicates why it is a pinnacle that many firms do not achieve.

Second, the management of risk is an implied outcome of the process mapped by Ireland *et al.* (2003), which occurs by managing resources strategically in the face of a range of identified opportunities. This leads to a consideration of governance in the SE process. Effective governance can increase future performance by increasing management commitment to entrepreneurship and better management of risk. However, a focus on governance or financial control might create a paradoxical agency problem as managers become risk averse or conservative instead of entrepreneurial, that is, unwilling to take risk in fear of financial loss or weaker performance owing to investment requirements and uncertainties. This anomaly further indicates why SE is difficult to achieve and why the simple linearity of Ireland *et al.*'s (2003) model is unlikely to necessarily hold in practice. As before, the duality required by the simultaneous combination of innovative opportunity pursuit as an entrepreneurial practice with governance and control as strategic practices illustrates the complex approach firms need to take to successfully make SE work.

Third, although resource based, the concept of dynamic capabilities is not sufficiently explained, while the transformation process of resources into dynamic capabilities through organizational learning is heavily overlooked. Since firm resources may become insufficient or inappropriate to the firm's future value creation initiatives (Prahalad and Hamel, 1990), it becomes imperative for firms to install systems and mechanisms that enable dynamic capability building. In particular, this involves learning form past initiatives to revise, restore and renew the resource base of the firm (Teece *et al.*, 1997). Learning, surprisingly, is absent in the current model of SE despite reference to it in studies of the domain of SE (Hitt *et al.*, 2001).

Fourth, following Eisenhardt *et al.* (2000), not only does a linear view of SE mask its inherent complexity, but it also distracts managers from giving consideration to how the process might be adapted over time. First, the linear sequence of activities suggests that iteration between the stages may not be necessary when in practice it is likely that a firm, for example, will need to revise or enhance its stock of resources after engaging in the innovation process. Managers cannot know in advance what innovations will be shaped to respond to opportunities and which innovation will be selected as the best response (Ketchen *et al.*, 2007). Although, it is necessary to understand the firm's unique resource bundles before engaging in innovation, any shortfall in resources will only become apparent during the innovation process itself, necessitating a need to explore new resource options and means to acquire them. Furthermore, resources are important both as an input into the innovation process and during the commercialization phase, which implies that before an innovation generates competitive advantage, a deployment of a different set of resources will be necessary (Sorescu *et al.*, 2003). Accordingly, iteration is then needed across these two stages.

Inevitably, firms do evolve over time (Mintzberg, 1979), which can result in intended and unintended changes in the systems, processes and human capital of the organisation. Consequently, SE as a process may need iteration and adaptation to restore its effectiveness when different firm systems or complementary processes change. A firm can put in place an internal structure to manage this inevitable change but ultimately it will be the task of top management to monitor the firm's evolution with respect to the effectiveness of the SE process.

An alternative model of SE

Our vision of an improved and practical model of SE is shown in Figure 2. Notably, we retain the main structure of Ireland *et al.*'s (2003) stages as the logic bears resemblance to the eight core components of SE discussed previously. However, to overcome the linearity problem, we see firms as having to iterate between episodes of opportunity identification, managing resources strategically (by bundling, rebundling, acquiring and divesting resources (Sirmon *et al.*, 2007)), and opportunity exploitation through creating and deploying innovation. Moreover, as our discussion has outlined, we do not see the stages themselves as its chief weakness but rather the architecture within

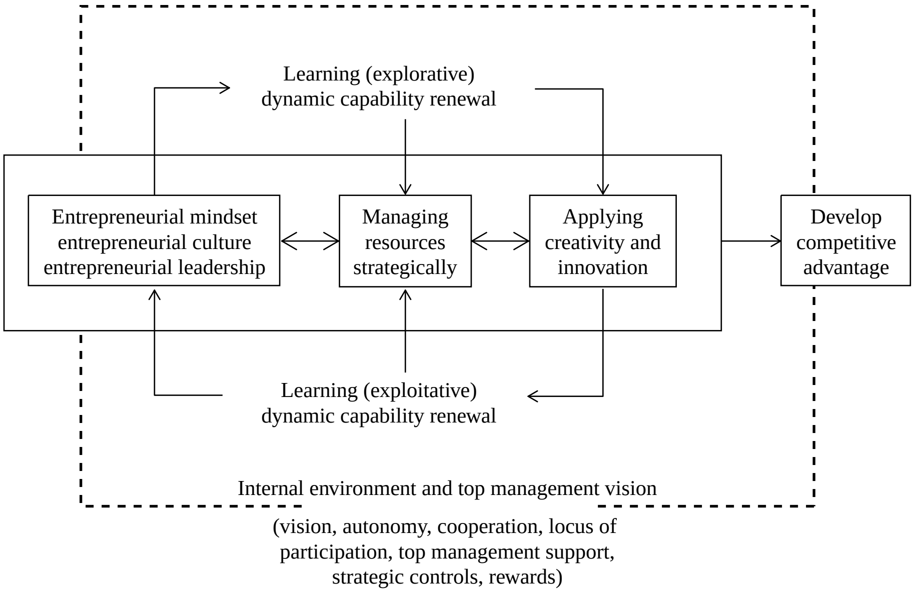

Figure 2.
A practical model of SE

which these stages take place and the manner of their deployment. In this section, we will explain the rationale behind the structure of our revised model, its content and its components.

Non-linearity, iteration and dynamic capability

It is arguable that our suggested practical model contains a form of quasi-linearity (Farjoun, 2002) as it adopts at its core the initial Ireland *et al.* (2003) process albeit we have added bidirectionality to account for the fact that firms do need to carry out these stages in an iterative way so as to refine decisions and prevent escalation of commitment. However, we see no immediate concerns with the sequencing of the stages of SE themselves. Indeed, their overall logic is persuasive: the identification of entrepreneurial opportunities through the firm's entrepreneurial mindset, leadership and culture must be followed by an understanding of the resource base of the firm before it moves to develop innovation or risk undermining the performance of the firm and destroy value as it pursues spurious opportunities outside the competencies of the firm. But a remaining concern is that the process essentially contains only one filter, the "managing resources strategically" stage.

We further address the linearity problem and tackle the lack of filters by considering what feedback and feedforward mechanisms might assist the firm to refine its use of SE and improve the effectiveness of each stage over time. Specifically, iteration among stages occurs when a firm, its managers or employees, detects a problem in the execution of a particular activity which then triggers a process of review and learning (Huber, 1991). Therein, we draw on March's (1991) theory of explorative and exploitative learning as dynamic capabilities to consider how iteration might take place and the effects of doing so.

Explorative learning reflects efforts to create new, unique insight and knowledge through a process of discovery and experimentation (March, 1991). Exploitative learning on the other hand reflects a process of knowledge acquisition and refinement of existing knowledge to improve current activities or resolve immediate problems (March, 1991). Exploitative learning as a process of knowledge refinement is dependent on the identification of a problem or gap in the way the firm presently conducts itself and its business processes, its products or its services. That is, given that exploitative activity represents initiatives to improve the firm's present activities (He and Wong, 2004) and build on past and present technological, business and product-service trajectories (Benner and Tushman, 2002), we can specify that the process activates as a result of the identification of a problem within current activities, which requires refinement to take place. Accordingly, the feedback effect in our model reflects exploitative learning efforts to refine present activities as the firm iterates back through the process of SE. Conversely, explorative learning is associated with a shift to new and different technology, business and product-service trajectories (Benner and Tushman, 2002). Explorative learning occurs when firms seek to experiment with knowledge and resources to develop new and novel ways of doing things (He and Wong, 2004). Both are designed to achieve meaningful contributions to the processes and performance of the firm (Adner and Levinthal, 2008). In our model, we conceptualize that explorative learning occurs in feedforward iterations as the firm develops new initiatives to augment SE.

Given that in dynamic industries: a firm's ability to continually shift current resources and build new capabilities is central to achieving advantage and to the long-term ability of the firm to behave entrepreneurially; and that the development of such dynamic capabilities is dependent on accumulating experience across, within and from business processes (Sundbo, 2001), the integration of iterative learning practices into the SE process overcomes its static limitation and better conceptualizes how firms might sustain wealth creation over the long term through this process.

Internal environment and SE

There are two key areas of concern regarding an internal environment conducive to SE. First, it is people that must ultimately carry out the process of SE. Therefore, the organizational architecture within which employees operate, are controlled by and rewarded through dictates how they will engage with the process (Hornsby *et al.*, 2002). Second and part based on our efforts to move away from a linear structure, a fundamental tension exists between explorative and exploitative learning (March, 1991) and between strategy and entrepreneurship such that both require very different structures to work effectively. This may undermine the SE process. However, Birkinshaw and Gibson's (2004) work provides solutions to this, drawing on contextual ambidexterity to reconcile differences between competing activities. Thus, if the SE process is to work effectively, we must account for the internal environment conditions that facilitate ambidexterity (that is, the ability to "switch" between "contradictory" activities).

SE remains an elusive ideal because regardless of whether a linear or non-linear process is in place, the effectiveness of the process depends on the internal environment of the firm and the perception of employees regarding how things are meant to be done. This is reflected in what is controlled and what is rewarded. Kuratko *et al.* (1990) found top management support (willingness of top managers to facilitate and promote, champion and support entrepreneurial behaviour with resources), organization structure and rewards (using systems that reward performance based on achievements in challenging tasks) as important antecedents of employees' entrepreneurial behaviour. Hornsby *et al.* (1999) extended this work to include autonomy (top managers' commitment to tolerate failure, delegate authority and empower people to make decisions free from excessive supervision) and resource availability (evaluating workloads to ensure people have the available time and necessary resource slack to pursue innovations) as drivers of a favourable internal environment in the pursuit of entrepreneurship. Hornsby *et al.* (2002) in their work found support for these five conditions as inducing a positive environment for entrepreneurship but replaced organization structure with organizational boundaries, a reflection of control in the firm (for example, explanation of outcomes expected from work and clarity on mechanisms used to evaluate, select and implement innovations). Such antecedents define to individuals what they should perceive to be the set of opportunities and obstacles to SE in the firm (Chen *et al.*, 1998).

A study by Barringer and Bluedorn (1999), however, reveals a complementary but different set of internal environment conditions that facilitate the relationship between the strategic management of the firm and its entrepreneurial intensity. These authors found scanning intensity (continuous activity to learn about events and trends in the environment), planning flexibility (the capacity of a firm's strategic plan to change as opportunities and threats emerge to help prepare for and capitalize on change), *locus* of planning (depth of employee involvement and participation in the firm's strategic activities) and strategic controls (basing performance on strategically relevant criteria capable of rewarding creativity, pursuit of opportunities and innovation with further rewards for incremental but substantive progress) as important firm-level conditions. Barringer and Bluedorn (1999) also found financial controls to negatively influence the relationship between strategic management and entrepreneurial intensity implying that such a reward and control system, in the context of Hornsby *et al.*'s (2002) antecedents, would not be advisable when pursuing SE as they orient employees towards immediate short-term rewards at the expense of medium and long-term performance (which comes from pursuing new opportunities to renew and reinvigorate revenue sources and income streams).

To reconcile this plethora of internal environment conditions, we draw on the work of Birkinshaw and Gibson (2004) as the internal environment must facilitate ambidexterity to enable, first, the firm to switch between explorative and exploitative learning as required by our previous revision to the model of SE, but second, to further enable the firm to switch between the contradictory strategic and entrepreneurial modes embedded in the process of SE. Birkinshaw and Gibson (2004) posited that ambidextrous individuals are adept at four key behaviours, supported by analogous firm conditions. Ambidextrous individuals take initiative and are alert to opportunities beyond the confines of their own jobs; are cooperative and seek out opportunities to combine their efforts with others; are brokers looking to build internal linkages; and are multiskilled multitaskers. In terms of an underlying supportive architecture, Birkinshaw and Gibson (2004) indicate the need for autonomy, flexibility and collaboration as well as top management support to promote the latter conditions to ensure that individuals feel confident to act in this way. They also indicate that a participative strategic planning process is necessary to encourage buy-in into the SE process.

There are two alternative paths to such ambidexterity however. First, firms can separate both activities into different units, which reflect structural ambidexterity (Tushman and O'Reilly, 1996), or they can use organizational levers to achieve contextual ambidexterity inside one unit (Birkinshaw and Gibson, 2004; Gibson and Birkinshaw, 2004). The latter is outlined here because small-to-medium sized firms rarely have the capacity to structurally split activities into different units. Given the fact that as a linear process SE is meant to be carried out simultaneously inside a single or multi-unit firm (Ireland *et al.*, 2003), we opt for Birkinshaw and Gibson's (2004) view of contextual ambidexterity to understand what conditions might enable these contradictory activities to occur simultaneously. As such, the autonomy to multitask and develop *ad hoc* internal linkages and acts of cooperation are posited as key levers in pursuit of SE.

Lastly, as Birkinshaw and Gibson (2004) specify, the propensity of individual employees to buy into such a change programme depends on top managers successfully conveying their vision (in this case of SE) to employees. Indeed, Meyer and Heppard (2000) highlight the need for managers to present an entrepreneurial "dominant logic" to employees and consistently carry out their duties in line with this vision in order for employees to accept that this is the dominant *modus operandi* of the firm. Still, although a vision must be supplied by top managers, it must be supported by the correct combination of internal design characteristics. For example, if managers promote the need for employees to act entrepreneurially but try to counterbalance this with financial controls designed to optimise returns present advantages, the system will breakdown as financial controls go against the ethos of entrepreneurship as they encourage short-termism over long-term creative value creation (Barringer and Bluedorn, 1999). Of course, this may also precipitate a change in top management or middle management depending on the size of the firm and its historical traditions. For example, a firm with a history of conservative and bureaucratic management is unlikely to be able to effectively implement a vision of SE as the shift would not be credible to employees.

Drawing these studies together, an underlying consensus emerges towards appropriate internal environment conditions that promote entrepreneurship, strategic management and the ambidextrous ability to switch across contradictory modes of operation. Specifically, autonomy, cooperation, *locus* of participation, top management support, strategic controls and reward systems that incentivize employees towards long-term value creation over short-term profit represent six conditions characteristic of a supportive internal environment for SE in our revised model. However, as specified, the caveat on the successful leverage of such an internal environment is the presence and prominence of top management vision for SE as a long-term value creating strategy for the firm.

Conclusions, implications and future research

In this paper, we sought to examine the literature on entrepreneurship, strategic management and SE to ascertain the roots of the SE concept; identify where the *locus* of integration lies; and establish what factors emerge at the interface of the two sets of activities. Our intention was to use the observations from this review to identify fruitful areas for investigation to broaden our understanding of how SE operates and how it might contribute value to firms. To this end, an improved model of SE was suggested, in order to sharpen understanding of how the construct operates in theory and practice, with a further objective to pinpoint components that facilitate it to successfully unfold.

Several avenues for future research emerge from this analysis of SE. First, should SE be considered as a process, as implied in the Ireland *et al.* (2003) model, or a discrete concept which in and of itself is a potential source of competitive advantage? Ireland *et al.*'s model implies that a firm which employs an entrepreneurial mindset to explore for opportunities, manages its resource and applies creativity to exploit these opportunities to create advantage is behaving strategically and entrepreneurially. But another set of literature that identifies a set of elements which we synthesized into eight common components suggests that these configure SE in a firm and their implementation need not be linear for a firm to be strategically entrepreneurial. Our revised model in part synthesizes these components but nonetheless even that model could be reconfigured depending on how investigators frame and understand the interaction among these components. That is, there may be different pathways to SE based on a configurational approach (Meyer *et al.*, 1993) to the implementation of the components of SE. Therefore, it is necessary to consider both the integration and interdependency of these components to synthesize SE. Indeed, we sought to do this. Still, ultimately, these components may create a framework that could be applied by entrepreneurial managers and established firms to structure and refine their business architecture. The term business architecture (Wolfenden and Welch, 2000) suggests a better understanding of areas for performance improvement, which can be obtained by identifying a firm's actual and desired framework. SE could then be perceived as a form of strategic architecture, outlining the various elements that should be incorporated in the development of strategy and entrepreneurship. Refining both structure and strategy in a firm represents a challenge to establish and maintain competitive advantage in a changing competitive landscape (Hitt *et al.*, 2002). Consequently, two key research questions emerge:

RQ1. Do firms exhibit different configurations of SE?

RQ2. Can a single key configuration best explain superior performance?

Second, any configuration of SE might interact with other forces and elements internal and external to the firm. SE can be used to assist a firm in developing new methods, exploiting new market opportunities and continually refining strategy in a changing business environment. Ultimately, this should foster growth, improve the firm's competitive position and allow opportunities to be identified within the political, economic and technological environments (Hitt *et al.*, 2002; Ireland *et al.*, 2001). But a firm should look to continuously adapt and balance the fundamental components of SE such that it best exploits the competitive business environment at any given point in time. The problem this creates for research and practice, however, is that if any single component dominates to an extreme whilst other components are ignored, the competitive advantage created by SE will diminish. Consider Sony for example. When Apple released i-Tunes and i-Pod and revolutionized the music industry, Sony, historically highly entrepreneurial, responded by attempting to protect its current technology and market platform by deploying resources to consolidate its position in the music industry. Strategically, this was an appropriate response to a threat but in doing so, it lost sight of what entrepreneurial opportunities might lay ahead. It has taken Sony considerable time to offer a rival to i-Pod but still has no real alternative in place for i-Tunes despite more than five years of market activity. So, an excess focus on managing existing resources undermined its ability to innovate in the face of change. Consequently, at times, conflict might arise among the components of SE, yet a balance must be maintained by using entrepreneurial and strategic activities separately and in combination at specific intervals to sustain real-time competitive advantage. How this balance can be sustained however, is a key consideration for further study as a simple linear process is inadequate to capture this complexity.

We attempt to address this problem in the iteration and feedback elements of our model but in general studies have failed to consider the time and spatial considerations associated with "balance". That is, do firms need to balance entrepreneurial and strategic behaviours simultaneously in a process of SE, ambidextrously using both at the same time, or, do firms draw on entrepreneurial behaviours when necessary to be followed by strategic advantage-building activities and vice-versa? As highlighted in Gibson and Birkinshaw's (2004) work, the entrepreneurial and strategic components might still be organised in one unit or undertaken separately by individual business units (termed contextual ambidexterity versus structural ambidexterity). Accordingly, this raises three research questions:

RQ3. How might SE activity best be organized to take place in organizations?

RQ4. Does the organisation of SE differ between firms of different sizes and is it necessary for this to happen?

RQ5. Do firms exhibit different degrees and types of value creation if strategic is organised structurally as opposed to contextually?

Third, any process of SE will not unfold and continuously renew itself without the existence of a number of firm specific resources and dynamic capabilities. Through the combined acts of exploration and exploitation, SE facilitates organizational selection processes to evaluate the outcomes of new activities along new performance dimensions and organizations' resource allocation along established performance dimensions. In the strategizing sub-process, for instance, an integration capability might enable the simultaneous consideration of opportunity- and strategic advantage-based actions, whilst a learning capability is needed to renew firm resources and as a means for efficiently translating strategy into action. This immediately raises questions on how to tackle the "capability-rigidity" paradox caused by the need to exploit existing competencies whilst exploring to create new ones. Ireland *et al.* (2003) model hints towards this challenge in its discussion of bundling and leveraging resources when managing resources strategically. But the emphasis is still on exploiting presently available resources. The fact that the SE process itself is not inherently self-sufficient partially explains Sony's inability to challenge Apple in the digital music market. By understanding the role of learning and dynamic capabilities in SE, we would be in better position to understand the tension caused by exploration and exploitation of resources in working toward competitive advantage through SE (March, 1991). Resources and dynamic capabilities are facilitating mechanisms that ensure that the process of SE is ongoing and incrementally adjusted to create sustainable competitive advantages, as depicted in our model. Further identification, research and operationalization of types of firm resource and categories of dynamic capabilities will shed light on the ways in which SE is implemented to increase firm performance and wealth creation. Thus, specific research questions that emerge include:

RQ6. What specific firm resources facilitate, enable or constrain SE?

RQ7. What processes prevent capability lock-in from occurring and thus damaging long-term SE?

RQ8. Does the evolution of resource endowments and historical investments therein create a strategic emphasis over and above and entrepreneurial one, and what are the consequences therein for firms' SE?

Fourth, the current competitive landscape mandates that firms devote significant efforts to disruptive innovations but these efforts should not be at the expense of sustaining innovations. Effective use of SE needs to maintain commitment to both types of innovation as drivers of wealth creation. However, whilst resource management and application of creativity might be one consideration here, an additional issue is what triggers the process of SE on the one hand and what factors push the firm to pursue one or both types of innovation as a product of the SE process, on the other. The introduction of a breakthrough technology or disruptive innovation by a rival, for example, may not necessarily trigger the process. If we consider the Sony example again, we might argue that such a breakthrough change caused a breakdown in the SE process within Sony. Environmental change in and of itself appears somewhat insufficient as explanada for the triggering of SE. It is likely a conscious effort by managers to implement entrepreneurial actions within a strategic framework but efforts need to be concentrated on understanding what motivates its use, how it could be implemented, and how we can prevent breakdown in the value creation aspect of SE. Thus:

- What conditions trigger SE?
- What conditions create an imbalance towards strategic activity as opposed to entrepreneurial activity and vice-versa, and how might such deterioration be mitigated?

Some limitations to our work exist. First, we do not analyse how external factors influence and shape the process of SE. Except for the assumed existence of a continuous stream of opportunities that does not cease, there is no explicit consideration of how external contextual conditions and shifts could have an impact on the SE process. Industry structure and context could have an impact on the volume and nature of opportunities surrounding the firm engaging in SE and so could the knowledge, technology and research base of the firm and its geographic location. Entrepreneurship research has established the importance of environmental context, including institutional factors, and so, we can assume their influence is notable on the SE process. Environmental factors, including regulatory influences, market conditions and technology developments are all considerations. Second, the literature on SE is young but burgeoning. The above discussion demonstrates that successful application of SE can shift organizational efforts towards performance dimensions not currently recognized or accepted. Whilst we have attempted to review, assess and understand its position in the entrepreneurship and strategic management research, we acknowledge that we cannot grasp the full range of its strengths and weaknesses. Still, the critical avenues identified here are directly connected with clear flaws in present understanding and thus offer tangible and robust directions for scholars.

References

Adner, R. and Levinthal, D. (2008), "Doing versus seeing: acts of exploitation and perceptions of exploration", *Strategic Entrepreneurship Journal*, Vol. 2, pp. 43-52.

Barney, J.B. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.

Barringer, B.R. and Bluedorn, A.C. (1999), "The relationship between corporate entrepreneurship and strategic management", *Strategic Management Journal*, Vol. 20 No. 5, pp. 421-44.

Benner, M.J. and Tushman, M. (2002), "Process management and technological innovation: a longitudinal study of the photography and paint industries", *Administrative Science Quarterly*, Vol. 47 No. 4, pp. 676-706.

Bhide, A. (1994), "How entrepreneurs craft strategies that work", *Harvard Business Review*, Vol. 72 No. 2, pp. 150-61.

Bird, B. (1988), "Implementing entrepreneurial ideas: the case for intention", *Academy of Management Review*, Vol. 13 No. 3, pp. 442-53.

Birkinshaw, J. and Gibson, C.B. (2004), "Building ambidexterity into an organization", *MIT Sloan Management Review*, Vol. 45 No. 4, pp. 47-55.

Busenitz, L.W. and Barney, J.B. (1997), "Biases and heuristics in strategic decision-making: differences between entrepreneurs and managers in large organizations", *Journal of Business Venturing*, Vol. 12 No. 1, pp. 9-30.

Chen, C.C., Greene, P.G. and Crick, A. (1998), "Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?", *Journal of Business Venturing*, Vol. 13 No. 4, pp. 295-316.

Covin, J.G. and Slevin, D.P. (1989), "Strategic management of small firms in hostile and benign environments", *Strategic Management Journal*, Vol. 10 No. 1, pp. 75-87.

Darling, J., Gabrielsson, M. and Seristo, H. (2007), "Enhancing contemporary entrepreneurship: a focus on management leadership", *European Business Review*, Vol. 19 No. 1, pp. 4-22.

DeSimone, L.D., Hatsopoulos, G.N., O'Brien, W.F., Harris, B. and Holt, C.P. (1995), "How can big companies keep the entrepreneurial spirit alive?", *Harvard Business Review*, Vol. 73, pp. 183-9.

Dyer, J.H. and Hatch, N.W. (2006), "Relation-specific capabilities and barriers to knowledge transfers: creating advantage through network relationships", *Strategic Management Journal*, Vol. 27, pp. 701-19.

Eisenhardt, K.M. and Martin, J.K. (2000), "Dynamic capabilities: what are they?", *Strategic Management Journal*, Vol. 21, pp. 1105-21.

Eisenhardt, K.M., Brown, S. and Neck, H. (2000), "Competing on the entrepreneurial edge", in Meyer, G. and Heppard, K. (Eds), *Entrepreneurship as Strategy*, Sage, Thousand Oaks, CA.

Farjoun, M. (2002), "Towards an organic perspective on strategy", *Strategic Management Journal*, Vol. 23, pp. 561-94.

Foss, N.J., Klein, P.G., Kor, Y.Y. and Mahoney, J.T. (2008), "Entrepreneurship, subjectivism and the resource-based view: toward a new synthesis", *Strategic Entrepreneurship Journal*, Vol. 2, pp. 73-94.

Galunic, C.D. and Eisenhardt, K.M. (2001), "Architectural innovation and modular corporate forms", *Academy of Management Journal*, Vol. 44 No. 6, pp. 1229-49.

Gibson, C.B. and Birkinshaw, J. (2004), "The antecedents, consequences, and mediating role of organizational ambidexterity", *Academy of Management Journal*, Vol. 47 No. 2, pp. 209-26.

Harrison, R., Mason, C. and Girling, P. (2004), "Financial bootstrapping and venture development in the software industry", *Entrepreneurship & Regional Development*, Vol. 16 No. 3, pp. 307-33.

He, Z. and Wong, P. (2004), "Exploration vs. exploitation: an empirical test of the ambidexterity hypothesis", *Organization Science*, Vol. 15 No. 4, pp. 481-94.

Hitt, M.A. and Reed, T.S. (2000), "Entrepreneurship in the new competitive landscape", in Meyer, G.D. and Heppard, K.A. (Eds), *Entrepreneurship as Strategy*, Sage, Thousand Oaks, CA, pp. 23-47.

Hitt, M.A., Ireland, R.D., Camp, S.M. and Sexton, D.L. (2001), "Strategic entrepreneurship: entrepreneurial strategies for wealth creation", *Strategic Management Journal*, Vol. 22 No. 479, p. 491 (special issue).

Hitt, M.A., Ireland, R.D., Camp, S.M. and Sexton, D.L. (2002), "Strategic entrepreneurship: integrating entrepreneurial and strategic management perspectives", in Hitt, M.A., Ireland, R.D., Camp, S.M. and Sexton, D.L. (Eds), *Strategic Entrepreneurship: Creating a New Mindset*, Blackwell, Oxford.

Hornsby, J.S., Kuratko, D.F. and Montagno, R.V. (1999), "Perception of internal factors for corporate entrepreneurship: a comparison of Canadian and US managers", *Entrepreneurship Theory & Practice*, Vol. 24 No. 2, pp. 9-24.

Hornsby, J.S., Kuratko, D.F. and Zahra, S.A. (2002), "Middle managers' perception of the internal environment for corporate entrepreneurship: assessing a measurement scale", *Journal of Business Venturing*, Vol. 17 No. 3, pp. 253-73.

Huber, G.P. (1991), "Organizational learning: the contributing processes and the literatures", *Organization Science*, Vol. 2 No. 1, pp. 88-115.

Ireland, R.D. (2007), "Strategy vs. entrepreneurship", *Strategic Entrepreneurship Journal*, Vol. 1 Nos 1/2, pp. 7-10.

Ireland, R.D., Hitt, M.A. and Sirmon, D.G. (2003), "A model of strategic entrepreneurship: the construct and its dimensions", *Journal of Management*, Vol. 29 No. 6, pp. 963-89.

Ireland, R.D., Hitt, M.A., Camp, S.M. and Sexton, D.L. (2001), "Integrating entrepreneurship and strategic management actions to create firm wealth", *Academy of Management Executive*, Vol. 15 No. 1, pp. 49-63.

Janney, J.J. and Dess, G.G. (2006), "The risk concept for entrepreneurs reconsidered: new challenges to the conventional wisdom", *Journal of Business Venturing*, Vol. 21 No. 3, pp. 385-400.

Ketchen, D.J. Jr, Ireland, R.D. and Snow, C.C. (2007), "Strategic entrepreneurship, collaborative innovation, and wealth creation", *Strategic Entrepreneurship Journal*, Vol. 1 Nos 3/4, pp. 371-85.

King, A.A. and Tucci, C.L. (2002), "Incumbent entry into new market niches: the role of experience and managerial choice in the creation of dynamic capabilities", *Management Science*, Vol. 48, pp. 171-86.

Kirby, D. (2003), *Entrepreneurship*, McGraw-Hill, London.

Knight, F.H. (1921), *Risk, Uncertainty, and Profit*, Houghton Mifflin, New York, NY.

Kuratko, D.F., Montagno, R.V. and Hornsby, J.S. (1990), "Developing an intrapreneurial assessment instrument for an effective corporate entrepreneurial environment", *Strategic Management Journal*, Vol. 11, pp. 49-58 (special issue).

Leonard-Barton, D. (1992), "Core capabilities and core rigidities: a paradox in managing new product development", *Strategic Management Journal*, Vol. 13, pp. 111-25 (special issue).

Lumpkin, G.T. and Dess, G.G. (1996), "Clarifying the entrepreneurial orientation construct and linking it to performance", *Academy of Management Review*, Vol. 21, pp. 135-72.

March, J.G. (1991), "Exploration and exploitation in organizational learning", *Organizational Science*, Vol. 2, pp. 71-87.

Merrifield, D.B. (1993), "Intrapreneurial corporate renewal", *Journal of Business Venturing*, Vol. 8, pp. 383-9.

Meyer, A., Tsui, A. and Hinings, C. (1993), "Configurational approaches to organizational analysis", *Academy of Management Journal*, Vol. 36 No. 6, pp. 1175-95.

Meyer, G.D. and Heppard, K.A. (2000), "Entrepreneurial strategies: the dominant logic of entrepreneurship", in Meyer, G.D. and Heppard, K.A. (Eds), *Entrepreneurship as Strategy: Competing on the Entrepreneurial Edge*, Sage, Thousand Oaks, CA.

Miller, D. (1983), "The correlates of entrepreneurship in three types of firms", *Management Science*, Vol. 24, pp. 921-33.

Miner, A.S., Bassoff, P. and Moorman, C. (2001), "Organizational improvisation and learning: a field study", *Administrative Science Quarterly*, Vol. 46, pp. 304-37.

Mintzberg, H. (1973), "Strategy making in three modes", *California Management Review*, Vol. 16 No. 2, pp. 44-53.

Mintzberg, H. (1979), "An emerging strategy of 'direct' research", *Administrative Science Quarterly*, Vol. 24 No. 4, pp. 582-9.

Mintzberg, H. and Waters, J. (1982), "Tracking strategy in an entrepreneurial firm", *Academy of Management Journal*, Vol. 25, pp. 465-99.

Mitchell, R.K., Mitchell, R.J. and Smith, J.B. (2008), "Inside opportunity formation: enterprise failure, cognition and the creation of opportunities", *Strategic Entrepreneurship Journal*, Vol. 2, pp. 225-42.

Morris, M. (1998), *Entrepreneurial Intensity*, Quorum Books, London.

Mosakowski, E. (2002), "Overcoming resource disadvantages in entrepreneurial firms: when less is more", in Hitt, M.A., Ireland, R.D., Camp, S.M. and Sexton, D.L. (Eds), *Strategic Entrepreneurship: Creating a New Integrated Mindset*, Blackwell, Oxford, pp. 106-26.

Penrose, E.T. (1959), *The Theory of the Growth of the Firm*, Wiley, New York, NY.

Pinchot, G. (1985), *Intrapreneuring*, Harper & Row, New York, NY.

Prahalad, C.K. and Hamel, G. (1990), "The core competence of the corporation", *Harvard Business Review*, Vol. 68, pp. 79-91.

Schumpeter, J.A. (1942), *Capitalism, Socialism and Democracy*, Harper & Brothers, New York, NY.

Shane, S. and Venkataraman, S. (2000), "The promise of entrepreneurship as a field of research", *Academy of Management Review*, Vol. 25 No. 1, pp. 217-26.

Sirmon, D.G., Hitt, M.A. and Ireland, R.D. (2007), "Managing resources: linking unique resources, management and wealth creation in family firms", *Academy of Management Review*, Vol. 22 No. 1, pp. 273-92.

Smircich, L. and Stubbart, C. (1985), "Strategic management in an enacted world", *Academy of Management Review*, Vol. 10 No. 4, pp. 724-36.

Sonfield, M. and Luccier, R. (1997), "The entrepreneurial strategy matrix: strategies for new and ongoing ventures", *Business Horizons*, Vol. 40 No. 3, pp. 73-7.

Sorescu, A.B., Chandy, R.K. and Prabhu, J.C. (2003), "Sources and financial consequences of radical innovation: insights from pharmaceuticals", *Journal of Marketing*, Vol. 67 No. 4, pp. 82-102.

Sundbo, J. (2001), *The Strategic Management of Innovation*, Edward Elgar, Cheltenham.

Teece, D.J., Pisano, C. and Shuen, A. (1997), "Dynamic capabilities and strategic management", *Strategic Management Journal*, Vol. 18 No. 7, pp. 509-33.

Tushman, M. and O'Reilly, C. (1996), "Ambidextrous organizations: managing evolutionary and revolutionary change", *California Management Review*, Vol. 38 No. 4, pp. 8-30.

Wernerfelt, B. (1984), "A resource-based view of the firm", *Strategic Management Journal*, Vol. 5, pp. 171-80.

Winter, S.G. (2003), "Understanding dynamic capabilities", *Strategic Management Journal*, Vol. 24, pp. 991-5.

Wolfenden, P. and Welch, D.E. (2000), "Business architecture: a holistic approach to defining the organization necessary to deliver a strategy", *Knowledge and Process Management*, Vol. 7 No. 2, pp. 96-106.

Zahra, S.A. (2008), "The virtuous cycle of discovery and creation of entrepreneurial opportunities", *Strategic Entrepreneurship Journal*, Vol. 2, pp. 925-50.

About the authors

Lida P. Kyrgidou is a Visiting Lecturer in Entrepreneurship at International Hellenic University. Her research interests include SE, teleological forms of entrepreneurship, sustainable entrepreneurship and organizational ambidexterity. Lida P. Kyrgidou is the corresponding author and can be contacted at: l.kyrgidou@ihu.edu.gr

Mathew Hughes is a Lecturer in Entrepreneurship at Nottingham University Business School. His research interests include entrepreneurial orientation, networking and social capital effects on learning and innovation, top management change and SE.