

Original citation:

Sammut-Bonnici, Tanya and Paroutis, Sotirios. (2013) Developing a dominant logic of strategic innovation. *Management Research Review*, Volume 36 (Number 10). 924 -938. ISSN 2040-8277

Permanent WRAP url:

<http://wrap.warwick.ac.uk/56948>

Copyright and reuse:

The Warwick Research Archive Portal (WRAP) makes this work by researchers of the University of Warwick available open access under the following conditions. Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRAP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

Publisher's statement:

'This article is (c) Emerald Group Publishing and permission has been granted for this version to appear here: doi: <http://dx.doi.org/10.1108/MRR-08-2013-0184> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.'

A note on versions:

The version presented here may differ from the published version or, version of record, if you wish to cite this item you are advised to consult the publisher's version. Please see the 'permanent WRAP url' above for details on accessing the published version and note that access may require a subscription.

For more information, please contact the WRAP Team at: publications@warwick.ac.uk



<http://wrap.warwick.ac.uk>

Developing a Dominant Logic of Strategic Innovation

Authors

Tanya Sammut-Bonnici

(corresponding author)

Faculty of Economics, Management and Accounting, University of Malta

Email: tanya.sammut-bonnici@um.edu.mt

Sotirios Paroutis

Warwick Business School, University of Warwick

Email: sotirios.paroutis@wbs.ac.uk

Structured Abstract

Purpose: This paper aims to lay the foundations to develop a dominant logic and a common thematic framework of strategic innovation, and to encourage consensus over the field's core foundation of main themes.

Methods: We explore the intersection between the constituent fields of strategic management and innovation management through a concept mapping process. We categorize the main themes and search for common ground in order to develop the core thematic framework of strategic innovation. We look at the sub themes of strategic innovation in published research and develop a more detailed framework. The conceptual categories derived from the process are then placed in a logical sequence according to how they occur in practice or in the order of how the concepts develop from one other.

Findings: The results yield seven main themes that form the main taxonomy of strategic innovation: types of strategic innovation, environmental analysis of strategic innovation, strategic innovation planning, enabling strategic innovation, collaborative networks, managing knowledge, and strategic outcomes.

Research limitations and implications: The new thematic framework we are proposing for strategic innovation remains preliminary in nature and would need to be tried and tested by researchers and practitioners in order to gain acceptability. Academic rigor and methodological structure are not sufficient to determine whether our conceptual framework will become widely diffused in academia and industry. It would have to pass through an emergent, evolutionary process of selection, adoption and an inevitable degree of change and adaptation, just like any other innovation.

Practical implications: The practical implications concern the production of instructive material and the application of strategic management initiatives in industry. The proposed themes and sub themes can serve as a logical framework to develop and update publications, which have been instrumental in their own right to shape the field. The paper also provides a checklist of potential research projects in strategic innovation, which will improve and strengthen the field. The new framework provides a comprehensive checklist of strategic management initiatives that will help industry to initiate, plan and execute effective innovation strategies.

Originality: The concept mapping of the themes of strategic innovation yield a new dominant logic, which will influence the evolution of the field and its relevance to both academia and industry.

Keywords

Strategic innovation, dominant logic, thematic framework, taxonomy, strategic management, innovation management

Taking stock of strategic innovation

Strategic innovation (SI) is an emergent field in academic literature that is in its growth stage, characterized by a diversity of themes and sub themes. A universally accepted thematic framework of

SI is yet to be established by academia. The rich variety of concepts in the field spans the themes of creativity, strategic orientation, cooperation, internal capabilities, strategic implementation and environmental adaptation among many other areas. Whilst the concepts of SI present in the literature may cover an exhaustive list of themes, there is a lack of a dominant logic and structure. The field is at the stage where it is likely to experience an evolutionary shakeout that will determine which themes qualify as the core foundations of the subject and how knowledge on SI can be categorized into a rational sequence of thematic building blocks. Strategic management and innovation management, as independent fields, have been instrumental to disseminating knowledge on competitiveness and economic development. Merging the fields into a consistent taxonomy would assist the development of SI and promote its dissemination in academic and industry literature.

This paper aims to lay the foundations to develop a dominant logic and a common thematic framework of SI, and to encourage consensus over the field's main themes and components.

We initiate the methodological process by exploring the intersection between the constituent fields of SI, namely strategic management and innovation management. We categorize the main themes and search for common ground in order to develop the core thematic framework of SI. Next, we look at the sub themes of SI in published research and develop a more detailed framework. The process of categorization is carried out through a concept mapping methodology that groups topics into areas of knowledge. The categories are then placed in a logical sequence according to how they occur in practice or in the order of how the concepts develop from each other.

Table 1 provides a list of the main themes of strategic management and innovation management, which we discuss in the next sections.

Nag et al. (2007) demonstrate through a bibliometric methodology, that there is consensus on seven main themes of strategic management: intended and emergent initiatives, intra firm dynamics, management and ownership, resources, performance, nature of firms, and environmental considerations. The literature that is widely adopted for pedagogic purposes follows a theoretical framework based on the process of strategic management and includes: internal and external strategic evaluation, strategic planning (business, corporate, competitive, international and cooperative strategies), implementation, and analysis of strategic outcomes (Grant, 2013; Hitt et al., 2012; Johnson et al., 2011; McGee et al., 2010; Sammut-Bonnici and McGee, 2013).

The taxonomy of innovation management revolves around a less structured set of themes, which appears in different categories in academic literature on the subject. The core themes of innovation management are more difficult to identify than strategic management. The links and sequence of the themes are yet to be organized in a logical temporal order of how one topic builds on the other. The types of innovation range from gradual incremental change of current products to revolution, disruption and reinvention of new industries, as in the case of digital technology. Open innovation involves external resources in order to acquire inspiration, skills and ideas. Closed innovation is limited to proprietary internal resources such as internal R&D (Fagerberg et al., 2006; Tidd and Bessant, 2013; Trott 2008; Sammut-Bonnici, 2013; White and Bruton, 2013).

An evolving dominant logic of strategic innovation

The intersection of strategic management and innovation management is investigated by Sundbo (2002) from the academic perspectives of strategy, innovation, sociology and economics. The premise of an SI theory is discussed in the light of 'reproduced changes' (planned innovation) and 'non-reproduced changes' (reactions to change in the environment). This is an interesting departure from the Schumpeterian perspective of innovation as an "evolutionary process of continuous innovation and creative destruction" (page 126, Freeman, 2009), or the textbook description of innovation being incremental or radical, and open or closed. Sundbo's theoretical assumptions revolve around four principles. First, innovation can be forced by changes in markets and industries. Secondly, innovation can be generated independently by the firm's internal initiatives. Thirdly, the process of innovation is influenced by the decision makers' interpretation of their environment and their choice of strategic

actions. The fourth principle is that innovation requires internal and external social networks in order to tap into new ideas and resources.

The first and second principles are developed from the literature on strategic management. They combine elements of industrial organization and resource based views, which are usually considered as conflicting perspectives. Sundbo brings harmony between the perspectives by introducing a temporal sequence of occurrence between change in the environment and strategic activity. The environment acts as a determinant of innovation and internal resources are required for innovation to occur. The third principle builds on the themes of strategic management that focus on behavioral strategy (Hodgkinson, 2013), cognitive maps (Sammuto-Bonnicci, 2013) and strategic renewal (Sammuto-Bonnicci and McGee; 2013). The fourth element is derived from the theory of strategic management on social capital, which is the set of resources acquired from the networks of cooperation inside and outside the firm for the benefit of customers and shareholders. Social capital constitutes one of the key resource groups of a firm, which includes financial capital, organizational capital and human capital. Both the third and fourth elements of Sundbo's framework are concerned with the resources of the firm and how they extend beyond the organization's boundaries.

The pressure on the firm to innovate may come from trajectories (such as technological advancement and changes in the economy) and actors (such as shareholders, suppliers, customers and competitors). To alleviate the tension created between the disruption of the status quo and the firm's current competencies, the organization starts to look into its resources and capabilities to innovate and construct new core competences. In this way, the firm initiates an innovation process. Management will shape the nature and effectiveness of the process through the way resources are grouped into operational capabilities and transformed into core competencies, which competitors could find difficult to imitate. The concepts and assumptions described by Sundbo are familiar territory for researchers with knowledge of strategic management.

What is interesting about this particular framework is that it applies the concepts of SI in a logical manner. The temporal approach of describing SI brings a sense of order to the field. Sundbo simplifies SI, which is currently a diverse if somewhat chaotic field of study, and transforms it into a logical framework based on a sequence of events: the pressure to innovate, the reaction to those pressures and the implementation of innovation.

Keupp et al. (2012) provide a systematic review of the research conducted on SI from 1992 to 2010. The authors contend that the current state of the SI field is characterized by a variety of theoretical frameworks and gaps in knowledge on the nature and the process of SI. The research utilizes the strategic management framework constructed by Nag et al. (2007) to categorize the components of academic research on SI. The authors uncover an interesting list of the types of innovation that are studied in the literature, which fall into the broad groups of: technical innovation, administrative innovation, research and development, exploration and exploitation, and hybrid forms of innovation. A more important contribution by Keupp et al. is the compilation of two lists of antecedents and outcomes of SI. Due to the robust methodology of the research and the comprehensive set of themes uncovered in the field of SI, the list is a valid starting point for the construction of a more coherent and standard taxonomy of the field.

Proposal for a process-based thematic framework of SI

In this section, we develop a proposal for the development of a new standard taxonomy for SI based on the existing thematic frameworks of strategic management, innovation management and the emergent literature on SI, coupled with a logical progression of how innovation occurs over time.

In the first stage (see Table 1) we build the first framework on established knowledge from strategic management, which is based on strategic processes (Grant, 2013; Hitt et al., 2012; Johnson et al., 2011; McGee et al., 2010; Sammut-Bonnicci, 2013) and the classification of the seven elements of strategic management (Nag et al., 2007). We integrate the framework with the concepts of innovation management that are diffused in academic research and pedagogical publications (Fagerberg et al., 2006; Sammut-Bonnicci, 2013; Tidd and Bessant, 2013; Trott 2008; White and Bruton, 2013).

Table 1: A New Thematic Framework of Strategic Innovation (First Stage)
Derived from strategic management and innovation management literature

<p>Existing thematic frameworks of Strategic Management and Innovation Management <i>(High level themes)</i></p>	<p>Developing the new thematic framework of Strategic Innovation <i>(First stage of concept mapping derived from high-level themes in the fields of strategic management and innovation management.)</i></p>
<p>Strategic management</p> <p><i>Categories identified by Nag et al. (2007):</i></p> <p>Intended and emergent initiatives Internal organization Management and ownership Utilization of resources Performance Nature of firms External environmental</p> <p><i>Main themes (Grant, 2013; Hitt et al., 2012; Johnson et al., 2011; McGee et al., 2010; Sammut-Bonnici, 2013):</i></p> <p>Strategic analysis, internal and external evaluation Developing resources, capabilities and core competencies Strategic positioning Strategic planning (business, corporate, competitive, international, cooperative strategies) Implementation and realization of strategy Analysis of strategic outcomes</p> <p>Innovation management</p> <p><i>Main themes (Fagerberg et al., 2006; Tidd and Bessant, 2013; Trott 2008; Sammut-Bonnici, 2013, White and Bruton, 2013):</i></p> <p><u>Characteristics of Innovation</u> Benefits of innovation Emergent and planned innovation Incremental and radical innovation Open and closed innovation Sources of innovation</p> <p><u>Creating an innovative organization</u> Innovation process Developing firm structure Decision making under uncertainty Measuring and auditing innovation Characteristics of innovators</p> <p><u>Innovation strategy</u> Firm infrastructure Resources and support services Product development Core business processes development</p> <p><u>Managing knowledge</u> R&D Intellectual property Patents Developing internal knowledge Acquiring industry knowledge</p> <p><u>Collaboration</u> Ventures Innovation networks</p> <p><u>Market adoption</u> Diffusion and adoption</p>	<p><u>Characteristics of innovation</u> Benefits of innovation Emergent and planned innovation Incremental and radical innovation Open and closed innovation Sources of innovation Recognizing innovators</p> <p><u>Strategic innovation analysis</u> Internal evaluation: measuring and auditing innovation External evaluation: competition, demand, trends and challenges</p> <p><u>Strategic positioning</u> Identify current competitive position Shifting competitive position</p> <p><u>Strategic innovation</u> Firm infrastructure Resources and support services Product development Core business processes development</p> <p><u>Creating an innovative organization</u> Developing firm structure Management and ownership Decision making under uncertainty</p> <p><u>Implementation of innovation strategy</u> Innovation process Developing resources, capabilities and core competencies</p> <p><u>Managing knowledge</u> Developing internal knowledge Acquiring industry knowledge Internal and external R&D Intellectual property Patents</p> <p><u>Collaboration</u> Ventures Innovation networks</p> <p><u>Market adoption</u> Diffusion and adoption</p> <p><u>Analysis of strategic outcomes and performance</u> Performance measurement</p>

**Table 2: A New Thematic Framework of Strategic Innovation (Second Stage)
Derived from strategic innovation literature**

<p>Existing Themes of Strategic Innovation <i>High level themes and sub themes</i></p>	<p>Proposed New Thematic Framework of Strategic Innovation <i>Second stage of concept mapping derived from high level themes and sub themes within the literature on strategic innovation</i></p>																																																																								
<p>Strategic innovation framework</p> <p><i>Concepts developed by Sundbo (2002):</i></p> <p>Innovation determined by the market Innovation determined by internal resources and processes Managerial cognition of their environment Trajectories and trends Actors and stakeholders Managerial structures Internal and external networks</p> <p>Strategic innovation research themes</p> <p><i>List of SI themes codified by Keupp et al. (2012):</i></p> <table border="0"> <tr> <td>Acquisition and divestiture</td> <td>Multinational organization</td> </tr> <tr> <td>Administrative innovation</td> <td>Network characteristics</td> </tr> <tr> <td>Administrative organization</td> <td>New product development</td> </tr> <tr> <td>Agreement characteristics</td> <td>Organizational climate, culture</td> </tr> <tr> <td>Alliance performance</td> <td>Organizational design</td> </tr> <tr> <td>Appropriation strategy</td> <td>Ownership issues</td> </tr> <tr> <td>Barriers to innovation</td> <td>Patent output, quality, quantity</td> </tr> <tr> <td>Book value of assets</td> <td>Political factors</td> </tr> <tr> <td>Business survival/firm exit</td> <td>Prior firm performance</td> </tr> <tr> <td>Characteristics of alliance or co-operative network</td> <td>Problems of alliances</td> </tr> <tr> <td>Characteristics of partners</td> <td>Process characteristics</td> </tr> <tr> <td>Competition</td> <td>Process innovation</td> </tr> <tr> <td>Competitive strategy</td> <td>Process management issues</td> </tr> <tr> <td>Complementary assets</td> <td>Product characteristics</td> </tr> <tr> <td>Co-operation timing</td> <td>Product innovation</td> </tr> <tr> <td>Co-operative agreements</td> <td>Product quality</td> </tr> <tr> <td>Culture</td> <td>Productivity</td> </tr> <tr> <td>Economic and technological factors</td> <td>Product strategy</td> </tr> <tr> <td>Economic/technological significance of innovation</td> <td>R&D investment</td> </tr> <tr> <td>Experience with co-operation</td> <td>Resource creation</td> </tr> <tr> <td>Exploitation</td> <td>Resource inefficiency</td> </tr> <tr> <td>Financial performance</td> <td>Sector and industry affiliation</td> </tr> <tr> <td>Financial resources</td> <td>Service innovation</td> </tr> <tr> <td>Firm age, size</td> <td>Speed of technological development of industry</td> </tr> <tr> <td>Growth</td> <td>Structural integration</td> </tr> <tr> <td>Human resources and practices</td> <td>Tangible assets</td> </tr> <tr> <td>Industry resources</td> <td>Technical innovation</td> </tr> <tr> <td>Intangible resources, knowledge and capabilities</td> <td>Technological intensity</td> </tr> <tr> <td>Internationalization strategy</td> <td>Technological pioneering and first-mover strategy</td> </tr> <tr> <td>Knowledge sourcing</td> <td>Technological threats</td> </tr> <tr> <td>Lead user characteristics</td> <td>Technology sourcing</td> </tr> <tr> <td>Location</td> <td>Time-to-market/innovation speed/time-to-imitation</td> </tr> <tr> <td>Manufacturing strategy</td> <td>Turnover of industry</td> </tr> <tr> <td>Market entry mode</td> <td>Uncertainty</td> </tr> <tr> <td>Market performance</td> <td></td> </tr> <tr> <td>Measures of ambidexterity (exploration and exploitation)</td> <td></td> </tr> </table>	Acquisition and divestiture	Multinational organization	Administrative innovation	Network characteristics	Administrative organization	New product development	Agreement characteristics	Organizational climate, culture	Alliance performance	Organizational design	Appropriation strategy	Ownership issues	Barriers to innovation	Patent output, quality, quantity	Book value of assets	Political factors	Business survival/firm exit	Prior firm performance	Characteristics of alliance or co-operative network	Problems of alliances	Characteristics of partners	Process characteristics	Competition	Process innovation	Competitive strategy	Process management issues	Complementary assets	Product characteristics	Co-operation timing	Product innovation	Co-operative agreements	Product quality	Culture	Productivity	Economic and technological factors	Product strategy	Economic/technological significance of innovation	R&D investment	Experience with co-operation	Resource creation	Exploitation	Resource inefficiency	Financial performance	Sector and industry affiliation	Financial resources	Service innovation	Firm age, size	Speed of technological development of industry	Growth	Structural integration	Human resources and practices	Tangible assets	Industry resources	Technical innovation	Intangible resources, knowledge and capabilities	Technological intensity	Internationalization strategy	Technological pioneering and first-mover strategy	Knowledge sourcing	Technological threats	Lead user characteristics	Technology sourcing	Location	Time-to-market/innovation speed/time-to-imitation	Manufacturing strategy	Turnover of industry	Market entry mode	Uncertainty	Market performance		Measures of ambidexterity (exploration and exploitation)		<p>1. Types of strategic innovation</p> <p>Triggers of innovation Benefits of Innovation Emergent and planned innovation Incremental and radical innovation Open and closed innovation</p> <p>2. Environmental analysis and strategic innovation</p> <p>Internal evaluation: revenues, market share, growth, process efficiency, alliance performance, patent output, product and service delivery, quality, logistic efficiency External evaluation: consumer demand, competition, industry evolution, supply of resources, economy, technology, social trends, regulation Recognizing the firms strategic competitive position</p> <p>3. Strategic innovation planning</p> <p>Market level strategy - Product and service development - Customer process development - Competitive strategy - Market entry strategy - First-mover and follower strategies - Growth strategy Firm level strategy - Upgrading and sourcing resources - Firm infrastructure and core business processes - Knowledge and technology sourcing - Technological pioneering - Manufacturing strategy - R&D investment</p> <p>4. Enabling strategic innovation</p> <p>Developing innovation processes Identifying internal and external sources of innovation Transforming resources, capabilities and core competencies Human Capital - Recognizing innovators - Human resources practices - Managerial cognition - Decision making processes Organizational Capital - Organizational culture - Organizational structure - Management and ownership Social Capital - Internal networks - External networks Financial Capital - Investment in R&D and collaboration networks - Investment in human, organizational and social capital Strategic ambidexterity and flexibility Measuring and auditing internal innovation</p> <p>5. Collaborative networks</p> <p>Collaboration networks Partnering, venturing, alliances Acquisition and divestiture</p> <p>6. Managing knowledge</p> <p>Developing internal knowledge Acquiring external knowledge Internal and external R&D Intellectual property and patents</p> <p>7. Strategic outcomes and performance</p> <p>Market adoption Revenues, market share, growth, future survivability</p>
Acquisition and divestiture	Multinational organization																																																																								
Administrative innovation	Network characteristics																																																																								
Administrative organization	New product development																																																																								
Agreement characteristics	Organizational climate, culture																																																																								
Alliance performance	Organizational design																																																																								
Appropriation strategy	Ownership issues																																																																								
Barriers to innovation	Patent output, quality, quantity																																																																								
Book value of assets	Political factors																																																																								
Business survival/firm exit	Prior firm performance																																																																								
Characteristics of alliance or co-operative network	Problems of alliances																																																																								
Characteristics of partners	Process characteristics																																																																								
Competition	Process innovation																																																																								
Competitive strategy	Process management issues																																																																								
Complementary assets	Product characteristics																																																																								
Co-operation timing	Product innovation																																																																								
Co-operative agreements	Product quality																																																																								
Culture	Productivity																																																																								
Economic and technological factors	Product strategy																																																																								
Economic/technological significance of innovation	R&D investment																																																																								
Experience with co-operation	Resource creation																																																																								
Exploitation	Resource inefficiency																																																																								
Financial performance	Sector and industry affiliation																																																																								
Financial resources	Service innovation																																																																								
Firm age, size	Speed of technological development of industry																																																																								
Growth	Structural integration																																																																								
Human resources and practices	Tangible assets																																																																								
Industry resources	Technical innovation																																																																								
Intangible resources, knowledge and capabilities	Technological intensity																																																																								
Internationalization strategy	Technological pioneering and first-mover strategy																																																																								
Knowledge sourcing	Technological threats																																																																								
Lead user characteristics	Technology sourcing																																																																								
Location	Time-to-market/innovation speed/time-to-imitation																																																																								
Manufacturing strategy	Turnover of industry																																																																								
Market entry mode	Uncertainty																																																																								
Market performance																																																																									
Measures of ambidexterity (exploration and exploitation)																																																																									

In the second stage, (see Table 2) we enrich the framework with an adaptation of Sundbo's description of SI based on reactive and preemptive strategies, and the assumption that innovation is determined by the external forces, internal resources and capabilities, management's cognition of the environment and social capital. The research findings of Keupp et al. (2012) are integrated into the framework to provide a more detailed description of SI. The list of SI elements in Keupp et al. is comprehensive and reflects the meticulous cataloguing of research projects and their themes. It is not intended to reflect a temporal framework of how SI should be taught or the sequence of event of how it occurs in practice. We resolve this issue by looking at the temporal nature of the thematic framework of strategic management and adapt it to the special circumstances of SI.

The result of the concept mapping process yields seven main themes of SI: types of strategic innovation, environmental analysis and strategic innovation, strategic innovation planning, enabling strategic innovation, collaborative networks, managing knowledge, and strategic outcomes.

We propose that future studies of strategic management would consider a deeper and more nuanced understanding of the actions and processes involved in strategic initiatives. We suggest that innovation scholars adopt a processual approach (Pettigrew, 1992) and try to examine research questions about how and why particular innovations emerge, change or become institutionalized across particular firms, industries and geographies. A related approach would be to examine SI from a practice perspective (Sandberg and Tsoukas, 2011; Paroutis et al. 2013; Vaara and Whittington, 2012), which would entail studies examining the distinctive activities emerging during innovation projects. For instance, studies could explore the language and discursive features (Paroutis and Heracleous, 2013) of particular innovations and how they change over time. Studies of innovation adopting a processual and practice approach could try to investigate research question such as: "How do innovation initiatives emerge and get implemented? What is the performance impact of these initiatives for value activities of the firm?" In terms of the research design that these studies could use, we would suggest a qualitative design or a mixed qualitative and quantitative design as most appropriate to address these questions. Results from these studies would help provide more novel explanations of key questions found in strategic innovation research.

We suggest a renewed focus on the human capital, agents and their teams involved in SI initiatives or projects within and across firms. Here knowledge can be gained by advancements in the strategic management field, and particularly the strategy-as-practice perspective, which views strategy "as a socially accomplished, situated activity arising from the actions and interactions of multiple level actors" (Jarzabkowski, 2005, p. 6) and considers strategy not only as something an organization has but something that its members "do" (Jarzabkowski et al., 2007; Vaara and Whittington, 2012). Empirical research in this area focuses on particular strategists, for instance the strategy director or chief strategy officer (Angwin et al. 2009; Paroutis and Pettigrew, 2005) and strategy teams more generally (Paroutis and Pettigrew, 2007). In a similar vein, innovation scholars could provide a fresh understanding about "who are the managers and their teams involved in innovation projects" and "what they actually do during innovation projects" and exploring the enablers and disablers of such work. Such studies could help uncover whether, alongside the quantitative, performance outcomes of innovation initiatives, there are also qualitative, performative aspects (Paroutis and Heracleous, 2013) of innovation work.

Recent advancements in our understanding of strategic cognition and practice also point to areas that innovation management scholars could explore further. Hodgkinson and Healy (2011) challenge the assumptions and conclusions of dynamic capability theory by examining the core dimensions of strategic cognition. They offer a model in social cognitive neuroscience - controlled vs. automatic processing, to show that "the development and maintenance of dynamic capabilities requires firms to harness managers' reflexive and reflective abilities, to utilize implicit and explicit cognitive and emotional processes in harmony, to facilitate sensing, seizing and reconfiguration" (page 1510). Powell et al. (2011) introduce the Hodgkinson and Healey paper and explain that: "The authors argue that emotion and intuition play essential roles in building individual and collective capabilities and suggest ways of aligning strategy theory with models of capability development in cognitive neuroscience" (page 1382). Adopting a similar approach, future SI scholars could examine the cognitive and psychological foundations of managers involved in innovation projects, and critically,

how these foundations change over time and with what effect on the success or failure of the particular project.

Another theme we propose for future research efforts on SI, involves a focus on new artifacts of innovation and how they relate to other activities inside the firm and across industries. Related to the previous theme of process and practice, the focus on artifacts of innovation is not something totally new in the literature on innovation. What is novel here is the suggestion to study the emergence and adoption of particular artifacts and the way the adoption of these artifacts is related to principal activities inside the firm beyond the innovation process (for example marketing or organizational design or broader organizational issues). For instance, Paroutis and Al Saleh (2009) show how the adoption of Web 2.0 is related to the issue of trust.

Special issue papers

In this special issue, we have selected papers that promote new theoretical and empirical research on developments within the field and practice of innovation. The papers in this special issue aim to provide the reader with a number of alternative research questions, research designs and sub-areas of contribution within the broader innovation management scholarship.

We examine the papers in this special issue and their contribution to the agenda of SI knowledge, in more detail below:

Horn and Brem examine the field of innovation management from a strategic perspective. An analysis of research papers about innovation management, allows the author to identify seven major challenges in these areas: accelerating global innovation and new product development, network organizations and organizational design, intellectual property, business model innovation, frugality, sustainability, and finally, customer-oriented innovation. Building on these challenges, a conceptual framework is offered that allows researchers to identify potential gaps and areas for further research. Furthermore, the paper provides a discussion of aspects that will become increasingly important for future strategic innovation, such as sustainability, value chain, organizational behavior, design and technology management.

Cummings et al. examine the ways open innovation and crowdsourcing are utilized to address R&D issues. The authors provide a case study of an R&D organization's response to the increased adoption of open innovation and crowdsourcing. The findings demonstrate the range of benefits of crowdsourcing for R&D organizations, for instance the generation of a pipeline of projects and clients as well as avoiding the challenge to the professional status of the organization's research capability. Importantly, the study provides insights about how and why the alternative of problem sourcing can prove more effective than traditional innovation methods. Overall, innovation scholars gain a greater understanding of how open innovation and crowdsourcing initiatives are implemented and some of the challenges during this implementation.

Banerjee explores geographical location and its importance for technology clusters. The research looks at how the media describes and builds the reputation of different locations. The main findings are that the reputation generated by the media in a local context may not be interpreted on an international level in the same way. Negative reputation is difficult to overcome at a global level, even if the context and the social issues have changed. The reputation and social circumstances of a geographical location have a strong effect on the selection of a new location for technology firms.

Saunila and Ukko look at the impact of measurement on the strategic component of innovation capabilities. The study applies a survey methodology directed at small and medium sized enterprises. The results show that measurement has positive effects on issues related to the development of a firm's capabilities regarding innovation.

Theyel et al. provide insights into the work of inventors that try to grow new ventures. Using a case study of a non-profit company and its business clients, the author addresses the question: "How can new ventures be enabled to create value by finding the resources needed to realize business

opportunities in a specific market arena?” The analysis of the business case reveals four areas related to emerging ventures: technology, market, financing and team. Overall, this study provides a more nuanced understanding of how, in practice, new ventures try to address the challenge of matching resources to opportunities.

The purpose of Chaston’s research is to examine the performance of firms in relation to open innovation. Data is acquired through a survey of senior and middle managers. The results indicate that firms operating in an emerging economy find that engaging in open innovation can be an effective strategy for increasing organizational performance.

This special issue aims to promote a new empirical research on the developments within the field and practice of SI. Accordingly, the purpose of this editorial paper is three-fold: to provide an overview of the key themes in strategy and innovation research, to introduce the papers in the current special issue and finally to propose avenues for future research efforts. Overall, we hope readers of this special issue are inspired by the variety of topics and issues examined by the special issue papers.

Future studies

Further research could explore issues within the new SI thematic framework (see Table 2) that we propose earlier in the paper. Table 3 provides a summary of the themes that we are recommending for further research.

In the first theme on the ‘types of strategic innovation’, the sub theme on ‘emergence’ requires a more robust set of theoretical underpinnings. The knowledge on complexity adaptive systems (Sammut-Bonnici, 2013) would be a possible perspective to explore how innovation emerges in response to environmental stimuli, or how it emerges in a firm that needs to adapt to external pressures in order to survive. The underlying mechanism can be one of change and adaptation to fit the environment. Firms engage in the process of adaptation reactively or proactively, depending on their cognitive appreciation of the external environment and how they perceive competitive, market and economic threats (Hodgkinson, 2013; Sammut-Bonnici, 2013; Wilson, 2013). The link between adaptation to the environment and managerial cognition is yet to be developed through academic research.

In the second theme on ‘environmental analysis’, the sub theme on ‘sources of innovation’ merits more attention. Research in this area would document and catalogue examples of how firms seek ideas, inspiration and innovation, and how they acquire them. For example, Google provides an interesting set of strategies for innovation acquisition including the reconfiguration of existing resources (which created the technology for the original search platform), mergers and acquisitions and buying in of patent rights and inventions (such as the acquisition of the advertising model and the Google Earth components from its predecessor Keyhole). The process of how innovation is sought and absorbed by firms would provide insights to academia and industry to develop the practice further.

The third section on ‘strategic innovation planning’ drives the core foundation for a new dominant logic and thematic framework of SI. More research is required to update and enrich the typology of innovation strategies. The framework as it stands is dependent on knowledge from strategic management, which focuses on business, corporate, competitive, international and cooperative paradigms. Through a systematic approach to researching SI initiatives, academia can develop a set of strategies that is more aligned to the strategic objectives of innovation.

The fourth section on ‘enabling strategic innovation’ has sub themes that are developed and established in the strategy literature, particularly the treatment of transforming resources into capabilities and core competencies. The field of dynamic capabilities is a widely published theme in strategic management and is a rich source of knowledge on ‘strategic ambidexterity’. The sub theme could be developed through research to provide descriptive and prescriptive knowledge on how firms can speed up their reaction to environmental opportunities and challenges. The sub theme interlinks with the strategic management topics on strategic renewal and strategic fit (Sammut-Bonnici and McGee, 2013)

Table 3: Future Research Directions for Strategic Innovation
(Based on the proposed dominant logic and thematic framework in Table 2)

Main themes	Sub themes recommended for future research	Potential contribution
1. Types of strategic innovation	Emergent innovation initiatives	Insights on the mechanism and the ideal conditions to encourage response to environmental stimuli and adaptation to external pressures in order to survive and thrive.
2. Environmental analysis	Sources of innovation	Prescriptive insights on how firms seek ideas, inspiration and innovation capabilities to create and supply new products, services and processes.
3. Strategic innovation planning	Typology of strategic innovation initiatives	To enrich the typology of innovation strategies firm can plan and implement. To develop strategies that are better aligned with the objectives of innovation.
4. Enabling strategic innovation	Firm ambidexterity, flexibility and dynamic capabilities	To provide knowledge on how firms can speed up their reaction to environmental opportunities and challenges.
5. Collaborative networks	Nature of cooperation in strategic innovation	Cataloging the various forms of collaboration and providing insights on agreement content, configuration and structure.
6. Management of knowledge	Link of knowledge management and innovation	Identify how knowledge management can inform and enable strategic innovation initiatives.
7. Outcomes and performance	Market adoption	Development of the concept of market adoption to increase knowledge on innovation diffusion, technology adoption, network externalities, network effects, critical mass and increasing returns. More knowledge regarding the difference between network products (which diffuse rapidly) and other products provide strategic insights on market adoption rates.

The fifth section on ‘collaborative networks’ provides an opportunity for more research into the nature of cooperation, ventures, alliances and acquisitions. The sub theme can be explored within the parameters of cooperation for SI and aimed at cataloging the various forms of collaboration enacted specifically for the scope of fostering innovation.

In the sixth thematic group on the ‘management of knowledge’ opens up another area for SI. Future research in the area can aim to identify how knowledge management can inform and enable SI initiatives.

The seventh and the last theme on ‘outcomes and performance’ poses an interesting proposition for future research. Whilst the literature on performance measurement provides us with a prolific set of measurement tools and methodologies, there is a need for more content on ‘market adoption’ as applied to SI. The successful market adoption of an innovation is a clear indication that innovation strategy has been successful. The literature in academic journals provide an abundant supply of knowledge in the area of market adoption, which is linked to themes such as innovation diffusion, technology adoption, network externalities, network effects, critical mass and increasing returns (Varian et al., 2004; Rogers, 2010; Sammut-Bonnici, 2013; Sammut-Bonnici and McGee, 2002). The

insights gained from the literature on innovation diffusion would provide a solid base to develop new types of SI plans, directed at increasing the speed of market adoption. The fundamental question of why particular innovations get adopted and disseminated across industries could be reassessed and examined from a processual and practice approach to help reveal how the particular actions of actors (or groups of actors) help or hinder the adoption of innovation over time.

Conclusion

In this editorial paper we put forward a proposal for a new dominant logic and thematic framework of SI. We provide a brief outline of the current special issue papers. We look at the new framework of SI and offer a number of sub themes that future studies on innovation management could explore further. We discuss the objectives the research could be based upon as well as the potential contributions to SI's debates and practices. We argue that these themes have great potential in helping gain a deeper and more holistic understanding of the role and impact on process and practice in the modern firm. The knowledge gained from these studies could potentially assist practitioners involved in SI to improve their innovation initiatives and their effect on performance.

The new thematic framework we are proposing for SI in Table 2 remains preliminary in nature and would need to be tried and tested by researchers and practitioners in order to gain acceptability. A standard taxonomy and core framework of any field is developed through collective consensus, which can only be established over time by a large population of users. Its success will depend on whether there is a sufficient level of diffusion and adoption of the new framework, similar to the diffusion and adoption of any innovation. Academic rigor and methodological structure are not sufficient to determine whether our proposed thematic framework of SI will become widely diffused in academia and industry. It would have to pass through an emergent, evolutionary process of selection, adoption and an inevitable degree of change and adaptation.

We hope that our proposal for a new dominant logic and thematic framework of SI, and the discussions featured in this special issue will inspire current and future generations of strategy and innovation scholars to develop new questions, utilize bold research designs and generate novel findings that will fuel further debate in the field.

References

- Angwin, D., Paroutis, S. and Mitson, S. (2009) "Connecting Up Strategy: Are Senior Strategy Directors Link?" *California Management Review*, Vol. 51 No. 3, pp. 74-94.
- Fagerberg, J., Mowery, D. C., and Nelson, R. R. (eds.) (2006) *The Oxford handbook of innovation*. Oxford Publishing.
- Freeman, C. (2009) Schumpeter's Business Cycles and Techno-Economic Paradigms, in Drechsler, W., Kattel, R., Reinert, R. S., *Techno-Economic Paradigms. Essays in Honor of Calota Perez*, Anthem Press, pp. 125-144.
- Grant, R. M. (2013) *Contemporary strategy analysis and cases: text and cases*. Wiley.
- Hitt, M. A., Ireland, R. D. and Hoskisson, R. E. (2012) *Strategic Management Cases: Competitiveness and Globalization*. Cengage.
- Hodgkinson, G. (2013) Psychological foundations of strategic management, in Sammut-Bonnici, T., McGee, J. (eds.) *The Wiley Blackwell Encyclopedia of Management*, Vol. 12, 3rd edition Wiley Blackwell.
- Hodgkinson, G. P. and Healey, M. P. (2011) 'Psychological foundations of dynamic capabilities: Reflexion and reflection in strategic management'. *Strategic Management Journal*, Vol. 32 No. 13, pp. 1500-1516.
- Hodgkinson, G. P., and Johnson, G. (1994) Exploring the mental models of competitive strategists: The case for processual approach. *Journal of Management Studies*, Vol. 31 No. 4, pp. 525-551.
- Jarzabkowski, P. (2005). *Strategy as practice: An activity based approach*. Sage.
- Jarzabkowski, P., Balogun J. and Seidl, D. (2007) Strategizing: the challenges of a practice perspective. *Human Relation*, Vol. 60 No. 1, pp. 5-27.
- Johnson, G., Whittington, R., Scholes, K. and Pyle, S. (2011) *Exploring strategy: text and cases*. Financial

Times Prentice Hall.

- Kelley, T., and Littman, J. (2005) The ten faces of innovation: IDEO's Strategies for Defeating the Devil's Advocate and Driving Creativity Throughout your Organization. Double Day.
- Keupp, M. M., Palmié, M. and Gassmann, O. (2012) The Strategic Management of Innovation: A Systematic Review and Paths for Future Research. *International Journal of Management Reviews*, Vol. 14 pp. 367–390.
- McGee, J., Thomas, H. and Wilson, D. C. (2010) *Strategy: analysis and practice*, 2nd edition McGraw-Hill.
- Nag, R., Hambrick, D. C. and Chen, M. J. (2007) What is strategic management, really? Inductive derivation of a consensus definition of the field. *Strategic Management Journal*, Vol. 28 No. 9, pp. 935-955.
- Paroutis, S. and Al Saleh, A. (2009) Determinants of Knowledge Sharing using Web 2.0 Technologies. *Journal of Knowledge Management*, Vol. 13 No. 4, pp. 52-63.
- Paroutis, S. and Heracleous, L. (2013) Discourse Revisited: Dimensions and Employment of First-Order Strategy Discourse during Institutional Adoption. *Strategic Management Journal*, Vol. 34 No. 8, pp. 935-956.
- Paroutis, S. and Pettigrew, A. M. (2005) Making Strategy in the Multi-business Firm, in Floyd S. W., Roos J., Jacobs C. and Kellermanns F.W. (Eds.), *Innovating Strategy Processes*, pp. 97-110, Blackwell.
- Paroutis, S. and Pettigrew, A. M. (2007) Strategizing in the Multi-business Firm: Strategy Teams at Multiple Levels and over Time. *Human Relations*, Vol. 60 No. 1, pp. 99-135.
- Paroutis, S., Heracleous, L. and Angwin D. (2013) *Practicing Strategy: Text and Cases*. Sage.
- Pettigrew A. (1992) The character and significance of strategy process research. *Strategic Management Journal*, Vol. 13 No. 2, pp. 5-16.
- Powell, T. C, Lovallo, D. and Fox, C. R. (2011) Behavioral strategy. *Strategic Management Journal*, Vol. 32 No. 13, pp. 1369-1386.
- Rogers, E. M. (2010) *Diffusion of innovations*. Simon and Schuster.
- Sammuto-Bonnici, T. (2013) Cognitive maps, in Sammut-Bonnici, T., McGee, J. (eds.) *The Wiley Blackwell Encyclopedia of Management*, Vol. 12, 3rd edition Wiley Blackwell.
- Sammuto-Bonnici, T. (2013) Complex adaptive systems, in Sammut-Bonnici, T., McGee, J. (eds.) *The Wiley Blackwell Encyclopedia of Management*, Vol. 12, 3rd edition Wiley Blackwell.
- Sammuto-Bonnici, T. (2013) Cooperative strategy, in Sammut-Bonnici, T., McGee, J. (eds.) *The Wiley Blackwell Encyclopedia of Management*, Vol. 12, 3rd edition Wiley Blackwell.
- Sammuto-Bonnici, T. (2013) Critical mass, in Sammut-Bonnici, T., McGee, J. (eds.) *The Wiley Blackwell Encyclopedia of Management*, Vol. 12, 3rd edition Wiley Blackwell.
- Sammuto-Bonnici, T. and McGee, J. (2002) Network strategies for the new economy. *European Business Journal*, Vol. 14, pp. 174-185.
- Sammuto-Bonnici, T., (2013) Innovation strategy, in Sammut-Bonnici, T., McGee, J. (eds.) *The Wiley Blackwell Encyclopedia of Management*, Vol. 12, 3rd edition Wiley Blackwell.
- Sammuto-Bonnici, T. and McGee, J., (2013) Competitive strategy, in Sammut-Bonnici, T., McGee, J. (eds.) *The Wiley Blackwell Encyclopedia of Management*, Vol. 12, 3rd edition Wiley Blackwell.
- Sammuto-Bonnici, T. and McGee, J., (2013) Strategic renewal, in Sammut-Bonnici, T., McGee, J. (eds.) *The Wiley Blackwell Encyclopedia of Management*, Vol. 12, 3rd edition Wiley Blackwell.
- Sammuto-Bonnici, T. and McGee, J., (2013) Strategic fit, in Sammut-Bonnici, T., McGee, J. (eds.) *The Wiley Blackwell Encyclopedia of Management*, Vol. 12, 3rd edition Wiley Blackwell.
- Sandberg, J. and Tsoukas, H. (2011) Grasping the logic of practice: Theorizing through practical rationality. *Academy of Management Review*, Vol. 36 No. 2, pp. 338-360.
- Sundbo, J. (2002), *The Strategic Management of Innovation: A Sociological and Economic Theory*, Edwards Elgar.
- Tidd, J. and Bessant, J. (2013) *Managing innovation: integrating technological, market and organizational change*. Wiley.
- Trott, P. (2008) *Innovation management and new product development*. Pearson education.
- Vaara, E. and Whittington, R. (2012) Strategy-as-practice: Taking social practices seriously. *Academy of Management Annals*, Vol. 6 No. 1, pp. 258-336.
- Varian, H. R. and Farrell, J. V. (2004) *The economics of information technology: An introduction*.

Cambridge University Press.

White, M. A. and Bruton, G. D. (2013) *The management of technology and innovation: A strategic approach*. Cengage Learning.

Wilson, D. (2013) Decision making, in Sammut-Bonnici, T., McGee, J. (eds.) *The Wiley Blackwell Encyclopedia of Management*, Vol. 12, 3rd edition Wiley Blackwell.

Wright, R., Paroutis, S. and Blettner, D. (2013) How Useful are the Strategic Tools We Teach in Business Schools? *Journal of Management Studies*, Vol. 50 No. 1, pp. 92-125.