

## Strategic knowledge management: theory, practice and future challenges

João Ferreira, Jens Mueller and Armando Papa

### Theoretical background

The current knowledge economy requires companies to create new business structures and new concepts for the management of its resources to remain competitive. The latest approaches to strategic management (Ferreira *et al.*, 2016) tend to consider strategic alliances (as sources of knowledge) and intellectual capital (human, structural and relational capital) as the main sources for a sustainable competitive advantage. In an increasingly globalized world, the survival of business management depends on their organizational intelligence, which is the result of information and knowledge systems they have, the skills of its employees and how they relate to its stakeholders (Durst and Edvardsson, 2012).

Strategic knowledge management (SKM) relates to the processes and infrastructures organizations use to attain, create and share knowledge for formulating strategy and making strategic decisions (Zack, 2002). A knowledge strategy defines the overall approach an organization intends to take to align its knowledge resources and capabilities to the intellectual requirements of its strategy. A strategic attitude is necessary to achieve a sustainable competitive advantage.

From a practice perception, businesses are seeing the prominence of managing knowledge if they are to persist competitive and grow. Consequently, several firms everywhere are starting to dynamically manage their knowledge and innovation (Ferreira *et al.*, 2015). Knowledge does matter, but the question is when, how and why? (Carayannis and Campbell, 2009). Today, knowledge matters further and in forms that are not always predictable or even controllable. Knowledge systems are so highly complex, dynamic and adaptive (Carayannis and Campbell, 2009).

Numerous views on knowledge are discussed in several different scientific areas, such as strategy, management, organization theory literature and philosophy. Different views on knowledge lead to different conceptualizations of (strategic) knowledge management. Our starting point is knowledge as a strategic resource. This is in accordance with the business strategy theory, specifically the resource-based view (RBV) of the firm. The main proposition of the RBV is that competitive advantage is based on valuable and unique internal resources and capabilities that are costly to imitate for competitors (Wernerfelt, 1984; Barney, 1991).

We refer to SKM as a capability pertaining to knowledge creation, knowledge organization and storage, knowledge transfer and knowledge applications which enhances a firm's ability to gain and sustain a competitive advantage (Davenport and Prusak, 1998; Ferreira *et al.*, 2016; Heisig *et al.*, 2016). A knowledge-based view of the firm states that these resources and capabilities are knowledge-related and knowledge-intensive resources and capabilities (Grant, 1997). Some questions can be raised:

- Q1. What resources can be used to create, acquire and integrate knowledge in knowledge-intensive processes?

João Ferreira is based at the University of Beira Interior, Covilhã, Portugal. Jens Mueller is Professor at Waikato Management School, The University of Waikato, Hamilton, New Zealand. Armando Papa is Post Doc Research Fellow in Management at Department of Informatics, University of Turin, Italy.

The authors would like to thank the Editor-in-Chief, Professor Manlio Del Giudice, reviewers at *JKM* for their efforts in making this special issue possible and authors who tirelessly worked under time pressure to improve the quality of the submitted manuscripts.

- Q2. How can knowledge-intensive processes be designed, redesigned and adapted to changing technological and market conditions?
- Q3. What resources and capabilities can be used to design the processes?

In this regard, a key aspect of the process of knowledge creation and innovation is the ability of the organization to absorb external knowledge – absorptive capacity. Absorptive capacity has emerged as a concept that connects across the literature on dynamic capabilities and organizational learning (Teece *et al.*, 1997; Zollo and Winter, 2002). Absorptive capacity was defined by Cohen and Levinthal (1989, p. 569) as “the firm’s ability to identify, assimilate and exploit knowledge from the environment.”

Later, seeking to analyze the multidimensional nature of the concept, Zahra and George (2002) visualize absorptive capacity as a set of dynamic capabilities through which companies acquire, assimilate, transform and apply to external information and therefore constitutes a pre-requirement needed to implement innovation processes. Absorptive capacity could enhance organizations’ capabilities to facilitate knowledge exchange processes, which can increase innovation performance (Patterson and Ambrosini, 2015) and competitive advantage (Zahra and George, 2002; Carayannis *et al.*, 2016).

SKM considers the interaction between technological and intellectual resources essential for organizational survival (Heisig *et al.*, 2016). This interaction is based on the distinction between the “old world of business” and the “global knowledge networking.”

### Overview of the contributions to the special issue

Following those premises, this special issue took inspiration from the observation of this scenario, and it widely focused on the application of strategic patterns and innovative practices of knowledge management within the organizations by emphasizing a holistic research question based on: “How knowledge management becomes the real matter of competitiveness for modern organizations and what are the challenges for the future?”

Based on the discussion thus far, the purpose of this special issue of the *Journal of Knowledge Management* (JKM) was to seek together scholarly thoughts from different disciplines to extant paradigms and/or to develop new theoretical conceptualizations.

Conscious of many underexplored phenomena that should be scientifically and practically addressed, this special issue aimed at analyzing empirical and practical applications of best practices, comparative analyses, cross-studies, network analyses and synthesize the prior theoretical literature.

With this in mind and based on the interesting research offered for this special issue, this volume aims at collecting both theoretical and empirical research papers.

Several research questions stemmed out from the articles selected, and we may hardly summarize them. Submitted papers consisted of theoretical and applied research in topics addressing the benefits and criticalities of business management worldwide.

The selected papers witness research collaborations between scholars from different nations, include contributions worldwide and discuss empirical findings across multiple levels of analysis from a wide range of organizational archetypes. The research methodologies used for gathering empirical data vary from quantitative surveys to exploratory case studies based on qualitative data. Several rounds of blind peer review resulted in the final form of this volume for publication here. We aimed at selecting papers reporting on the application of innovative methods to real world problems. We were looking for studies containing both some form of novel innovation and a documented application. We looked for contributions, which should widely focus on the application of innovative methods to practical problems of the modern enterprise. Nevertheless, all the selected articles demonstrated predictable applications coming from cross-cultural management aimed at

discovering the phenomenon of innovation within the business organizations. Readers of this special issue should be technically savvy, scientifically demanding and drawn to practically relevant phenomena.

This volume opens with a quantitative research by Guillermo Ruiz-Pava and Clemente Forero-Pineda titled “Internal and external search strategies of innovative firms: the role of the target market.” This study finds that search strategies of firms are more effective for innovation depending on the target market. Firms searching for both internal and external ideas generate ideas leading to products new to international markets. The researchers developed the concept of internal search of ideas to show the contrast between search strategies adopted by firms that introduce new products into local and international markets. Based on data from 2,652 innovative firms, the paper uses factor analysis to explore and confirm appropriate groups of sources of innovative ideas. The analysis differentiates between internal and two types of external sources. Logistic and bivariate regressions reveal different search strategies for innovation in local and international markets. In conclusion, firms reporting products new to international markets exhibit search strategies combining ideas from internal sources with ideas from other firms. Firms reporting products new to the local market reveal a search strategy centered on ideas from other firms. From a practical side, managers and policymakers wishing to promote innovations for international markets should concentrate their resources on developing the organizations’ capacity to generate ideas internally while monitoring other firms’ ideas. Managers targeting local markets may focus their efforts on intelligence over ideas coming from other firms.

The second article, by an Italian team, entitled as “Dual relational embeddedness and knowledge transfer in European multinational corporations and subsidiaries,” is written by Alberto Ferraris, Gabriele Santoro and Veronica Scuotto. The research emphasizes the relevance of the knowledge transfer process in multiple directions, evoking the central role of dual-embedded subsidiaries. The authors are able to investigate the relationship between the level of subsidiaries’ internal and external relational embeddedness and the degree of subsidiaries’ knowledge transfer. More specifically, they empirically explore dual embeddedness of subsidiaries involved in the knowledge transfer process within multinational corporations’ (MNCs) networks by analyzing 165 European subsidiaries to demonstrate the crucial role of dual relational embeddedness in the transfer of knowledge within MNCs. Results show that internal embeddedness directly and positively influences the degree of subsidiaries’ knowledge transfer, whereas external embeddedness does not. Notwithstanding, a higher level of both types of embeddedness – known as dual embeddedness – generates multiplicative and positive effects on the degree of subsidiaries’ knowledge transfer. Best practices and relevant knowledge follow a reverse transfer of knowledge from the subsidiaries to the internal MNC network that is facilitated by the relational embeddedness of subsidiaries. This has resulted in developing a dual embeddedness, which introduces new routines and scripts, as well as more relational links.

“A holistic model for inter-plant knowledge transfer within an international manufacturing network” is the third article selected for this special issue, written by Farhad Noruzi, Daniel Stenholm, Peter Sjögren and Dag Bergsjö. This study addresses a deep literature review that is able to support the choice of an appropriate strategy for conducting a knowledge transfer (KT) project in an international manufacturing network (IMN) environment. Despite the abundant research in KT area, not many research projects provide holistic views on the KT process. The focus has rather been sectional and concentrated on specific aspect within the KT. In this regard, scholars propose a model that includes multiple aspects of a KT project along with guidelines on each aspect. The results of this paper detail the key issues of five KT projects. The proposed learning network model improves the performance of KT projects by providing a holistic view including several factors that the organization should emphasize to succeed with inter-plant KT. Furthermore, an aggregated model comprising the main aspects and strategies for a KT project within an IMN has been proposed to compromise and identify the main aspects and strategies for a KT that will eventually increase the odds for successfully performing such projects. Following these assumptions, a multiple case study method was adopted. Data have

been collected by conducting semi-structured interviews regarding five KT projects in three multinational corporations. Data were triangulated by means of comparisons to complementary data acquired through observations and archival documents.

The fourth article in this volume is authored by Ying Guo, Pavlina Jasovska, Hussain Gulzar Rammal, Elizabeth L. Rose, and it is titled "Global mobility of professionals and the transfer of tacit knowledge in multinational service firms." This study takes the unique approach of studying barriers to the movement of professionals and a firm's strategic response. It identifies the pressures and barriers that companies face in the global economy and highlights the role of government agencies and other stakeholders in facilitating or restricting the transfer of knowledge within a firm's international network. The paper articulates the implications for policy and practice and a future research agenda. The use of expatriates to transfer individual and organizational know-how and knowledge is a practice widely used by multinational enterprises (MNEs). However, for service firms, the mobility of employees across national borders depends on the commitments made by countries under the General Agreement on Trade in Services (GATS). In particular, the Mode 4 form of supply under GATS can limit the ability of professionals to enter a particular country and can restrict the intra-organizational transfer of knowledge in multinational service firms. The purpose of this paper is to investigate how MNEs attempt to overcome these barriers and transfer knowledge through their global network. As Nonaka and Takeuchi's SECI model of knowledge transfer, the authors study the intra-organizational knowledge transfer practices of an Indian multinational service firm. Semi-structured interviews were conducted with 20 key informants involved with the organization. As a result, the company uses global teams to transfer tacit knowledge and facilitates impatriation through an internship program that helps the firm overcome nationality requirement that restricts the movement of their managers to other countries, which in turn limits their ability to transfer knowledge in the intra-organizational setting by also facilitating the relationship with the Indian Government.

"A Jack of all trades or a master of none: the performance effects of balancing exploration and exploitation within vs across alliance portfolio domains" is the fifth paper selected for the special issue authored by Jennifer Sexton Jennifer, Christopher Peneny, Jim Combs and Nolan Gaffney. This study predicts a balancing of exploratory and exploitative learning (i.e. ambidexterity) across alliance portfolio domains (e.g. value chain function and governance modes) increases firm performance, whereas balance within domains decreases performance. Prior empirical work, however, only assessed balance/imbalance within and across two domains. To ensure that theory generalizes beyond specific domain combinations, we investigate across multiple domains whether alliance portfolios should be imbalanced toward either exploration or exploitation within domains and balanced across domains. We also extend prior research by exploring whether the direction of imbalance matters. Current theory only advises managers to accept imbalance without helping with the choice between exploration vs exploitation. An alliance portfolio that allows for exploration in some domains and exploitation in other domains appears more difficult to implement than prior theory suggests. Firms benefit mostly from using the alliance portfolio for exploratory learning. With respect to the balance between exploration and exploitation within each of the five domains investigated, hypotheses are tested using fixed-effects GLS regression analysis of a large 13-year panel sample of Fortune 500 firms from the years 1996 to 2008. The results show imbalanced alliance portfolios had higher firm performance, while no evidence was found that balance across domains relates to performance. Instead, for four of the five domains, imbalance toward exploration related positively to firm performance.

A team composed of Leyland Pitt Leyland, David Hannah, Michael Parent and Pierre Berthon have authored a conceptual research framework, and it is titled "Secrets and Knowledge management strategy: the role of secrecy appropriation mechanisms in realizing value from firm innovations." The purpose of this research is to explore in depth the mechanisms that organizations use to keep their innovations secret. This paper examines how, when and why secrecy appropriation mechanisms (SAMs) can enable innovators to appropriately value from their innovations. The authors aim at adding a new view to previous research that has identified

secrecy as an important appropriation mechanism for firms by exploring the origins, characteristics and effects of secrecy appropriation mechanisms. Building on the innovation and secrecy literature, the authors provide that SAMs can have both positive and negative effects on a number of organizational dynamics. SAMs involve tradeoffs, and the key to understanding whether they create value for organizations lies in understanding that these tradeoffs exist and the nature of these tradeoffs. While most managers recognize the importance of secrecy in innovations, many struggles with the practical challenges of doing so. The paper presents guidance that managers and theoreticians can use to meet these challenges as a form of testable propositions and recommendations for practitioners.

“Assessing the relationship between market orientation and business performance in the hotel industry – the mediating role of service quality” is the seventh quantitative article accepted for the special issue, and it is coauthored by Carlos Sampaio, José Hernández-Mogollón and Ricardo Rodrigues. This study seeks to explore the nature of the relationship between market orientation and business performance in the Portuguese hotel industry and to evaluate the mediating role of service quality in this relationship. On one hand, research on the hospitality sector has been conducted mainly using tools developed for the manufacturing and consumer goods sectors. On the other hand, little has been done to explore the nature of the mediating effect of service quality on the relationship between market orientation and business performance in the hotel industry. Moreover, despite the contribution of the tourism industry to the Portuguese GDP, research on the hotel industry is scarce. A literature analysis on market orientation, service quality and hotel business performance was conducted. The structural model was developed, and the measurement scales’ items were generated. Working data were obtained by sending a survey to Portuguese hotel managers. A purification process was conducted, and the convergent and discriminant validity, as well as the reliability of the measurement models, were assessed. The structural model was tested by conducting a path analysis, as well as by evaluating the coefficient of determination ( $R^2$ ) and the predictive relevance indicator ( $Q^2$ ). Research results show that market orientation has a positive direct effect on business performance. Moreover, the results indicate that market orientation effects on business performance are mediated throughout the hotels’ ability to provide service quality.

In conclusion, the last article, “Improving innovation performance through knowledge acquisition: the moderating role of employee retention and human resource management practices,” developed by Armando Papa, Luca Dezi, Gian Luca Gregori, Jens Mueller and Nicola Miglietta aims to fill research gaps in the existing literature, evaluating the effects of knowledge acquisition on innovation performance and the moderating effects of human resource management (HRM), in terms of employee retention and HRM practices, on the aforementioned relationship. This starts from the assumption that the knowledge base of the firm resides in the people who work for the firm and that some HRM factors can influence innovation within firms. According to an increasing proclivity toward engaging in open innovation, firms are likely to face some tensions and opportunities leading to a shift in the management of human resources. Despite this, there is a lack of research investigating the link between knowledge acquisition, HRM and innovation performance under the open innovation lens. This paper intends to fill this gap and nurture future research by assessing whether knowledge acquisition influences innovation performance and whether HRM moderates such a relationship. More specifically, for testing these hypotheses a sample of 129 firms operating in a wide array of sectors has been used to gather data through a standardized questionnaire for testing the hypotheses through ordinary least squares regression models. As a result, the authors show that knowledge acquisition positively affects innovation performance, and HRM moderates the relationship between knowledge acquisition and innovation performance.

## Concluding thoughts

In this special issue, we have been able to combine different perspectives of thought and develop new theoretical conceptualizations within this complex and amazing research area. The authors

have demonstrated much innovativeness and rigor, as well as commitment and resilience through the review rounds. However, they embody only a small portion of a large cast of scholars that was involved in bringing this special issue into success. Furthermore, this essay provided some empirical and theoretical issues that will generate future academic debates.

The limitations found in our papers in this special issue also yield additional gaps for future research. We wish to encourage scholars from strategy and knowledge management to focus on these gaps to help fill them and suggest a wider and multidisciplinary perspective on what constitutes SKM will lead to better theory and more insights in the field. Future studies might also pursue other opportunities unearthed in this special issue by testing construct measurements and models across different SKM contexts and relationships.

## References

- Barney, J. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.
- Carayannis, E.G. and Campbell, D. (2009), "Mode 3' and 'quadruple helix': toward a 21st century fractal innovation ecosystem", *International Journal of Technology Management*, Vol. 46 Nos 3/4, pp. 201-234.
- Carayannis, E., Ferreira, J., Ferreira, F. and Peris-Ortiz, M. (2016), "Location and innovation capacity in multilevel approaches: editorial note", *Journal of the Knowledge Economy*, 19 December 2015.
- Cohen, I.M. and Levinthal, D.A. (1989), "Absorptive capacity, coauthoring behavior, and the organization of research in drug discovery", *Journal of Industrial Economics*, Vol. 46 No. 2, pp. 157-183.
- Davenport, T.H. and Prusak, L. (1998), *Working Knowledge*, Harvard Business School Press, Boston, MA.
- Durst, S. and Edvardsson, I. (2012), "Knowledge management in SMEs: a literature review", *Journal of Knowledge Management*, Vol. 16 No. 6, pp. 879-903.
- Ferreira, J., Fernandes, C. and Ratten, V. (2016), "A co-citation bibliometric analysis of strategic management research", *Scientometrics*, Vol. 109 No. 1, pp. 1-32.
- Ferreira, J., Fernandes, C., Alves, H. and Raposo, M. (2015), "Drivers of innovation strategies: testing the tidd and bessant (2009) model", *Journal of Business Research*, Vol. 68 No. 7, pp. 1395-1403.
- Grant, R.M. (1997), "The knowledge-based view of the firm: implications for management practice", *Long Range Planning*, Vol. 30 No. 3, pp. 450-454.
- Heisig, P., Suraj, O.A., Kianto, A., Kemboi, C., Arrau, G.P. and Easa, N.F. (2016), "Knowledge management and business performance: global experts' views on future research needs", *Journal of Knowledge Management*, Vol. 20 No. 6, pp. 1169-1198.
- Patterson, W. and Ambrosini, V. (2015), "Configuring absorptive capacity as a key process for research intensive firms", *Technovation*, Vols 36/37, pp. 77-89.
- Teece, D.J., Pisano, G. and Shuen, A. (1997), "Dynamic capabilities and strategic management", *Strategic Management Journal*, Vol. 18 No. 7, pp. 509-533.
- Wernerfelt, B. (1984), "A resource-based view of the firm", *Strategic Management Journal*, Vol. 5 No. 2, pp. 171-180.
- Zack, M.H. (2002), "Developing a knowledge strategy", *California Management Review*, Vol. 41 No. 3, pp. 125-223.
- Zahra, S.A. and George, G. (2002), "Absorptive capacity: a review, reconceptualisation, and extension", *Academy of Management Review*, Vol. 27 No. 2, pp. 185-203.
- Zollo, M. and Winter, S.G. (2002), "Deliberate learning and the evolution of dynamic capabilities", *Organization Science*, Vol. 13 No. 3, pp. 339-351.

---

For instructions on how to order reprints of this article, please visit our website:

[www.emeraldgroupublishing.com/licensing/reprints.htm](http://www.emeraldgroupublishing.com/licensing/reprints.htm)

Or contact us for further details: [permissions@emeraldinsight.com](mailto:permissions@emeraldinsight.com)