Management Innovation Capabilities

A Typology and Propositions for Management Innovation Research

Harder, Mie

Management Innovation Capabilities:
A Typology and Propositions for Management Innovation Research

Mie Harder

SMG WP 2/2011

January, 2011

SMG Working Paper No. 2/2011
January, 2011
ISBN: 978-87-91815-64-5

Department of Strategic Management and Globalization
Copenhagen Business School
Porcelænshaven 24
2000 Frederiksberg
Denmark
www.cbs.dk/smg

Management Innovation Capabilities:

A Typology and Propositions for Management Innovation Research

Mie Harder

Department of Strategic Management and Globalization

Copenhagen Business School

mh.smg@cbs.dk – www.cbs.dk/smg

January 5, 2011

ABSTRACT

Management innovation is the implementation of a new management practice, process, technique or structure that significantly alters the way the work of management is performed. This paper presents a typology categorizing management innovation along two dimensions; radicalness and complexity. Then, the paper introduces the concept of management innovation capabilities which refers to the ability of a firm to purposefully create, extend and modify its managerial resource base to address rapidly changing environments. Drawing upon behavioral theory of the firm and the dynamic capabilities framework, the paper proposes a model of the foundations of management innovation. Propositions and implications for future research are discussed.

INTRODUCTION

The importance of innovation for societies, firms and individuals has long been recognized and intensely studied in various scientific disciplines (Abernathy & Clark, 1985; Imai et al., 1985; Urabe et al., 1988; Wolfe, 1994). Recently, scholars have increasingly devoted attention to what has been labeled management innovation (Birkinshaw et al., 2008; Hamel, 2006; Mol & Birkinshaw, 2009; Mol & Birkinshaw, 2007). Management innovation refers to the introduction of new management practices, processes, techniques or structures[1] and, arguably, can be an important source of value creation in firms (Hamel, 2006; Hamel, 2007; Mol & Birkinshaw, 2009). Examples of management innovations include Motorola's six sigma methodology, the multidivisional form at General Motors and Oticon's spaghetti organization (Chandler, 1962; Foss, 2003; Mol & Birkinshaw, 2007). Management innovations are often more systemic and difficult to imitate than technological innovations and involve higher degrees of ambiguity and uncertainty for the adopting organization. Therefore, they can play a significant role in building and sustaining competitive advantage (Barney , 1991; Penrose, 1959; Teece & Pisano, 1994). Also, management innovations will often alter the distribution of decision rights and income rights in an organization. Hence, compared to technological innovation, implementation of management innovations may be more controversial and associated with more resistance. Therefore, a better understanding of management innovation, their characteristics and the conditions under which they can be a source of competitive advantage should be of interest to strategic management scholars.

However, despite recent efforts the research field is still in a stage of early development and there are large gaps in our knowledge of management innovations. No agreed-upon model or even conceptualization of management innovation have emerged, and little systematic research has examined the antecedents or the performance consequences of management innovations. Scholars

[1] For the sake of readability, the term management practices is used to refer to both practices, processes, techniques and structures throughout the paper

have approached the topic from a range of theoretical and methodological perspectives, but a shared definition and a coherent theoretical framework has yet to be developed. In order to enable a cumulative body of knowledge to emerge, there is an immediate need for theoretical and conceptual clarification.

The purpose of this paper is twofold. First, I aim to contribute to the clarification of management innovation as a construct and, second, I attempt to build a model of the antecedents of management innovation based on the concept of management innovation capabilities. Much of the extant literature focuses on drivers, processes or diffusion of specific management innovations. However, firms may implement new management practices once or twice out of pure luck or coincidence. This type of non-routine change implemented in the face of a force-majeure type situation is labeled "ad hoc problem solving" by Winter (2003). In contrast, for management innovation to contribute to the sustainability of a firm's competitive advantage over time, it needs to be imbedded in organizational skills and routines (Eisenhardt & Martin, 2000; Teece et al., 1997). Therefore, this paper introduces management innovation capabilities as a type of dynamic capability enabling firms to continuously develop and reconfigure the managerial resource base necessary to address rapidly changing environments. Adapted from the definition of resource base proposed by Helfat et al (2007), the managerial resource base refers to all the organizational and human assets related to the performance of management activities that a firm owns, controls or has access to.

The structure of the paper is as follows. First, findings and contributions from the literature on management innovation are briefly reviewed. Second, a definition and typology of management innovation are introduced. Third, a model of the foundations of management innovation is introduced and the notion of management innovation capabilities is developed based on a review of related constructs and findings from behavioral theory of the firm (Cyert & March, 1963; Pierce et al., 2008) and

dynamic capabilities (Adner & Helfat, 2003; Barney , 1991; Helfat et al., 2007; Teece et al., 1997; Teece, 2007; Winter, 2003; Zollo & Winter, 2002). Fourth, a set of propositions is formulated and, finally, implications for future research are discussed.

BACKGROUND

Management innovation is still struggling to establish legitimacy as a phenomenon and a research field in its own right. Naturally, definitions and boundaries vis-à-vis other streams of literature remain somewhat fussy. According to Mol & Birkinshaw (2009), three large streams of literature addressing management innovation can be identified.

The first and largest research stream examines the patterns of diffusion of management practices (e.g. Cole, 1986; Kossek, 1987; Teece, 1980). Although few of these contributions explicitly use the term management innovation, there is a substantial amount of literature on how management practices and structures diffuse over time and across populations of firms, industries and countries. Part of this literature focuses on the diffusion patterns of a specific innovation. For example, Teece (1980) found that a simple deterministic model commonly used to represent the diffusion of technological innovations also performed well in predicting the diffusion pattern of the multidivisional structure. However, the speed of diffusion of the M-form was a lot slower than that of the technological innovations it was compared to. A few years later, Fligstein (1985) found that companies adopting the multidivisional form generally did so when competitors shifted structure, when internal power dependencies favored the change, and when they were pursuing multiproduct strategies. More recently, Guler, Guillén and Macpherson (2002) used neo institutional theory and social network theory to examine the cross-national diffusion of ISO 9000 certification. Also, the diffusion and adoption of total quality management, HRM practices, quality circles and self-managed teams have received

attention from scholars (e.g. Abrahamson & Fairchild, 1999; Boer & During, 2001; Ehigie & McAndrew, 2005; Kossek, 1987).

Another stream of diffusion literature focuses on developing general theories of the diffusion of management innovations. Whereas general theories of the diffusion of technological innovations abound (Rogers, 2003), there are relatively fewer contributions addressing general patterns of diffusion of management innovations. One example, though, is Massini, Lewin and Greve (2005) who studied the patterns of adoption of new organizational routines and explained that innovators and imitators differ because of their choices of reference groups. Another example is Ansari, Fiss and Zajac (2010) who extend our understanding of the diffusion processes by highlighting when and how firms are likely to adapt diffused practices to attain organizational fit. Nevertheless, since most of these contributions have focused on specific practices rather than on a generic category of innovations, the diffusion literature offers little guidance in delimiting and defining the concept of management innovation.

The second stream of literature that can be said to address management innovation is the research on management fashions (e.g. Abrahamson, 1991; Abrahamson, 1996; Benders & van Veen, 2001; Clark, 2004; Gill & Whittle, 1993; Jackson, 1996; Kieser, 1997). This literature typically adopts a neo-institutional perspective and focuses on the so-called market for management practices and investigates how innovations can become management fads or fashions. Abrahamson (Abrahamson, 1991; Abrahamson & Fairchild, 1999) proposes four perspectives on the processes (e.g. imitation and external pressures) that impel the diffusion (or rejection) of innovations among populations of firms. In doing so, he argues that factors other than the efficiency of the innovation may determine whether it is diffused or rejected. While this stream of literature provides insights into why and how certain management ideas and practices become popular, it provides little knowledge about how the new practices and structures have come about. What processes lead some companies or individuals to

innovate in the first place is not the focus of attention here. Also, management fashions are broadly defined to encompass anything from abstract ideas to very concrete practices and techniques and while all management fashions involve management innovation, hardly all management innovations become fashions. Therefore, this literature only addresses a small part of the relevant issues relating to management innovation.

The third stream of research investigates management innovation from a firm-level perspective. This perspective adopts a more generic view of management innovation. The nature, characteristics, determinants and diffusion patterns of specific innovations is not the focus of attention. Instead, scholars have offered explanations of the organizational, individual and contextual factors leading some companies to implement new management practices as well as the performance consequences of adopting such innovations (e.g. Birkinshaw et al., 2008; Damanpour et al., 2009; Damanpour, 1991; Kimberly & Evanisko, 1981; Kossek, 1987; Lazonick, 2010; Mol & Birkinshaw, 2009).

Kossek (1987), for example, analyzes historical examples of companies adopting new HRM practices and suggests that companies' propensity to innovate is affected by external pressures or crises and by normative pressures to mimic behaviors of external reference groups. More recently, Birkinshaw, Hamel and Mol (2008) proposed a framework for the management innovation process. They identify four phases in the innovation process (motivation, invention, implementation, and theorization & labeling). The model suggests that the identification of a novel problem, or a new threat or opportunity, and an organizational context supportive of new thinking drives the motivation for developing management innovations. Also, Mol and Birkinshaw (2009) found that firm size, access to internal and external knowledge sources and the level of education of the workforce significantly impacted the adoption of new management practices.

DEFINING MANAGEMENT INNOVATION

As the brief review above indicates, the list of contributions to firm-level research on management innovation is fairly short. Nevertheless, scholars have adopted quite different definitions of the core concept (see Table 1). For example, Birkinshaw et al (2008) define management innovation as "[t]he generation and implementation of a management practice, process, structure, or technique that is new to the state of the art and is intended to further organizational goals" (p. 829). In their subsequent empirical study, Mol and Birkinshaw (2009) however define the concept as "management practices that are new to the firm" and later measure it by asking respondents whether their companies have made major changes in a number of areas of business structure and practices. Hamel (2006), from a more practitioner oriented perspective, defines management innovation more broadly as "[..] a marked departure from traditional management principles, processes, and practices or a departure from customary organizational forms that significantly alters the way the work of management is performed" (p. 75). Mol and Birkinshaw (2009) share this focus on the day-to-day work of management and explicitly focuses on changes that take place at an operational level rather than changes of ideas or ideologies. Thus, while the recent literature seems to agree on the content of management innovation (i.e. new management practices, processes, techniques or structures that change the day-to-day work of management), the extent of newness required for a change to be labeled an innovation is somewhat unclear.

Table 1: Main contributions addressing firm-level management innovation

Reference	Definition of Management Innovation	Theoretical foundation	Method / Key questions
Damanpour et al (2009)	Administrative process innovations are new approaches and practices to motivate and reward organizational members, devise strategy and structure of tasks and units, and modify the organization's management processes	Socio-technical system theory	Panel data analysis: The consequences of adoption of different types of innovation in service organizations
Mol & Birkinshaw (2009)	The introduction of management practices that are new to the firm and intended to enhance firm performance	Organizational reference group theory, behavioral	Survey data analysis: the conditions under which firms introduce new management practices and the effect on

		theory, resource based theory, institutional theory	future productivity growth
Birkinshaw et al (2008)	The generation and implementation of a management practice, process, structure, or technique that is new to the state of the art and is intended to further organizational goals	Intrafirm evolutionary theory	Conceptual: The role of internal and external change agents in the motivation, invention, implementation and theorization & labeling phase of management innovation
Birkinshaw & Mol (2006)	The implementation of new management practices, processes and structures that represent a significant departure from current norms		Historical analysis of major management innovations: stages of management innovation and role of change agents

In the broadest sense, I adopt a definition of management innovation as the implementation of a new management practice, process, technique or structure that significantly alters the way the work of management is performed. In the following, I will discuss how management innovation can be understood vis-à-vis traditional typologies of innovation, and I will propose a new typology for categorizing and understanding the nuances of management innovations.

Product versus process innovation

Innovation research has traditionally employed a range of typologies to understand the different characteristics of innovation (Damanpour et al., 1989; Damanpour, 1991; e.g. Light, 1998; Wolfe, 1994). Subdividing innovation into groups that share certain characteristics allows researchers to better understand the individual, organizational or contextual factors that may be more or less important for different types of innovations and, hence, it may increase construct clarity (Suddaby, 2010). While the innovation literature abounds with typologies and definitions, the most well-known typology is probably the distinction between product and process innovation (Abernathy & Utterback, 1978; Damanpour & Aravind, 2006; Edquist et al., 2001; Utterback & Abernathy, 1975). Here the determining factor is

whether the innovation is an end product in itself (product innovation) or whether it is an innovation in the production or delivery of other end products (process innovation). In this sense, both categories may refer to innovations that are either technical or intangible (e.g. relating to the administrative system or management practices of the organization). Management innovation, generally accepted to be a change in management practices or structures, may be understood as a type of process innovation. Nevertheless, since this category also includes technical innovations such as new production facilities and components, process innovation remains too broad a construct to clearly capture the essential properties of management innovation.

Another similar distinction is the one made between technological and administrative innovation (e.g. Kimberly & Evanisko, 1981). Here, innovations related to the core technology of the organization are labeled as technological, whereas administrative innovations are those that are only indirectly related to the organization's basic work activity and mainly affect its management system (Damanpour et al., 2009; Damanpour & Evan, 1984). The notion of administrative innovation is probably the closest to the definitions of management innovation adopted in recent literature (e.g. Birkinshaw et al., 2008). However, the administrative innovation construct does not solely focus on the management system. E.g. Kimberly and Evanisko (1981) studied innovation in the hospital sector and define administrative innovations to include "the adoption of electronic data processing for a variety of internal information storage, retrieval, and analytical purposes" (p. 692). This illustrates the general focus on technology in many of the earlier studies of innovation.

Edquist and colleagues (Edquist et al., 2001; Meeus & Edquist, 2006) have suggested combining the two typologies discussed above into a taxonomy with two types of product innovation (goods and services) and two types of process innovation (technological and administrative). According to Damanpour et al (2009, p. 655), administrative process innovation refers to "new approaches and

practices to motivate and reward organizational members, devise strategy and structure of tasks and units, and modify the organization's management processes". Therefore, positioning the management innovation concept vis-à-vis the broader innovation literature, I will suggest that management innovation can be understood as a type of administrative process innovation.

Radicalness

Another typology that has emerged in the innovation literature is the dichotomy between radical and incremental innovations (Afuah, 1998; Dewar & Dutton, 1986; e.g. Ettlie et al., 1984; Greenwood & Hinings, 1996). Where the distinction between product (goods or services) and process (technological or administrative) innovation refers to the outcome or content of the innovation, the discussion of radicalness more directly relates to the nature of the change brought on by an innovation. A radical innovation is generally said to mark a distinct and risky departure from existing practices and competences, whereas incremental change builds on the existing skill set (Afuah, 1998; Amis et al., 2004; Ettlie et al., 1984; Greenwood & Hinings, 1996; Poole & Van de Ven, 2004b). Related typologies include the distinction made between competence destroying and competence enhancing change (Abernathy & Clark, 1985; Tushman & Anderson, 1986), single loop and double loop learning (Argyris, 1977), and first order and second order change (Meyer et al., 1993).

The use of this sort of distinction is surprisingly absent in the management innovation literature. It may, however, prove valuable as a supplement to the discussion of newness. As discussed above, the published work on management innovation can be divided into those who advocate "new to the state of the art" definitions (e.g. Birkinshaw et al., 2008; Hamel, 2006) and those who opt for a "new to the adopting organization" concept (Damanpour et al., 2009; Kimberly & Evanisko, 1981; Mol & Birkinshaw, 2009). In accordance with Mol and Birkinshaw (2009), I will suggest that both perspectives be included in our understanding of management innovation.

Nevertheless, standing alone newness may not be the most relevant characteristic to study if we would like to understand the drivers and consequences of management innovation. Newness gives us a way to distinguish between innovators and imitators, but an innovation may well be new to the world without being radical in the traditional sense of the word. I.e. without representing a large departure from current practice. On the other hand, even though an innovation is only new to the firm, it may still represent a huge paradigm shift for the adopting organization. Therefore, in addition to distinguishing between new to the firm and new to the world (or the state of the art), I suggest that we should also distinguish between incremental and radical management innovations.

The new to the state of the art represents the true novelties, i.e. the management practices and structures never seen before. Oticon's spaghetti organization and the M-form at General Electric (Chandler, 1962; Foss, 2003) are examples of such innovations. These innovations constitute large departures from current practices and norms and represent both competence destroying change and double-loop learning. As such, these are examples of racial new to the world management innovations (Ettlie et al., 1984; Poole & Van de Ven, 2004b). However, for firms subsequently adopting the M-form, the innovation is likely to still represent a departure from current norms and practices of the organization even though it is only new to the firm. Such subsequent adoption of e.g. the M-form may, therefore, be described as a radical new to the firm management innovation. These innovations are already present on the so-called management fashion market (Abrahamson, 1991; Abrahamson, 1996) and although they may be adapted slightly to the adopting organization, they constitute imitation more than true novelty.

At the other extreme are the incremental management innovations. These innovations represent minor changes to management practices, processes, techniques or structures that do not fundamentally alter the theories in use (Argyris, 1977) of the organization or render its current competences obsolete

(Abernathy & Clark, 1985; Tushman & Anderson, 1986). Although these innovations appear smaller and less risky for the adopting organization, they may still be new to the world and true novelties. Due to their incremental nature these innovations may be more difficult to observe and, hence, to study. Nevertheless, a comprehensive understanding of management innovation should at least include a discussion of the role of incremental innovations in management practices.

In sum, I suggest that newness and radicalness are to distinct and complementary dimensions describing management innovation. The individual, organizational and contextual drivers of management innovation, their impact on the adopting organization and hence the processes of their implementation as well as their performance outcomes is likely to differ vastly depending on the extent of radicalness and newness (Amis et al., 2004; Greenwood & Hinings, 1996). Therefore, I will argue that these are meaningful and valuable characteristics for future research on management innovation. That the qualitative nature of incremental and radical innovations differ may seem straightforward. From the perspective of the adopting firm, it may be harder to sense a substantial difference between new to the firm and new to the state of the art. Both in essence represent changes that are new to the adopting organization. However, the distinction between new to the firm and new to the state of the art is relevant because it represents a divide between imitators and innovators. What drives some companies to develop entirely new ideas and ways of organizing the work of management while others choose to implement off-the-shelve management solutions is a highly relevant question (Birkinshaw et al., 2008; Massini et al., 2005). Whether and how this affects the generative mechanisms and processes of implementation is an interesting empirical question.

The bulk of research on management innovation and even on innovation in general has focused on the new to the firm type of innovation. This type of innovation is often more easily observed, more common and hence more easily made subject to statistical scrutiny than the new to the world

innovations. While management innovation scholars, per se, have not devoted much attention to the incremental innovations defined above, this category of innovation, it may be argued, is highly overlapping with other streams of research on change from the perspectives of e.g. cultural studies, management cognition, behavioral theory and institutional theory (e.g. Armenakis & Bedeian, 1999; Becker et al., 2005; Colombo & Delmastro, 2002; Ford et al., 2002; March, 1996; Mintzberg & Westley, 1992; Palmer & Dunford, 2008; Pettigrew et al., 2001; Poole & Van de Ven, 2004a; Santos & Garcia, 2006; Tidd et al., 2001; Weick & Quinn, 1999). In practice, incremental innovations that do not fundamentally alter the work of the organization may be hard to distinguish from other types of organizational changes. On the other hand, new to the state of the art management innovation is hugely understudied in spite of having potentially huge impact on firms, industries and maybe whole economies. For these reasons, new to the state of the art innovation should be high on the research agenda for management innovation scholars in the future.

Complexity

In studies of technological innovation, scholars have defined a vast number of innovation attributes (e.g. Afuah, 1998; Damanpour et al., 1989; Garcia & Calantone, 2002; Tornatzky & Klein, 1982; Wolfe, 1994). Having a clear understanding of innovation characteristics is necessary for comparing and generalizing results (Suddaby, 2010). Only characterizing management innovation along one dichotomous dimension, radicalness, may be a too limited categorization. On the other hand, some will argue that the proliferation of conflicting and overlapping attributes in the technological innovation literature has not always improved the generalizability of research findings (Wolfe, 1994). Nevertheless, I will suggest to further qualify the concept of management innovation by categorizing it along another dimension: complexity. Complexity has been included in innovation research both as an organizational variable driving innovation and as an innovation attribute. As a characteristic of a firm, complexity

typically refers to how differentiated the structure of the organization is (Blau & McKinley, 1979; Damanpour, 1996; Hall, 1977). For example, Blau (1970) identified four dimensions of differentiation that form the core of the formal structure of organizations; namely spatial, occupational, hierarchical, and functional differentiation (p. 201). The degree of structural complexity, then, is implied by the extent of differentiation along these four dimensions (Aiken et al., 1980; Damanpour, 1996; Hall, 1977). A typical measure used in innovation research is the number of units under the top executive or the variety of specialists that work in an organization (Blau & McKinley, 1979; Wolfe, 1994).

As an innovation attribute, complexity has been defined in a number of ways. Rogers and Shoemaker (1971, p. 154) defines complexity as "the degree to which an innovation is perceived as relatively difficult to understand and use". Pelz (1985) distinguishes between technical and organizational complexity of an innovation, where the first refers to the divisibility of the new technology and the latter to the number of units or groups involved in its adoption. Others have defined complexity as the triability, originality, difficulty of implementation or decomposability of an innovation (Damanpour & Schneider, 2009; Simon, 1962). For example, Damanpour (2009) argues that "[i]nnovations which are more difficult to implement, more original, and less trialable are less likely to be adopted by the organization because of higher uncertainty of their success and lower likelihood of their contribution to organizational performance" (p. 498). In this paper, I will use the notion of complexity in the sense proposed by Simon (1962). He describes a complex system as "one made up of a large number of parts that interact in a nonsimple way" (p. 468). Social systems often take form as a parts-within-parts structure (ibid.). As such, the perceived complexity of a system may be reduced because of its hierarchic nature. In other words, most interactions between organizational members is likely to take place within distinct subsystems and fewer interactions will take place among and across subsystems. The more decomposable a system is, the fewer interdependencies and linkages cross

subsystem boundaries. On the other hand, highly complex systems involve more interactions and interdependencies between organizational members across the organizational subsystems.

A similar notion of complexity may be useful for understanding management innovation. Complex management innovations will involve new management practices, processes, techniques or structures that necessitate a high number of interdependencies between organizational units and members. One example of a complex management innovation, then, could be the spaghetti organization implemented at the Danish hearing aids company Oticon in the 1990s (Foss, 2003). In the 1980s, the company's market share dropped substantially and in 1988 a new CEO, Lars Kolind, was appointed with a clear objective to turn around the financial performance of the organization. Kolind implemented a radically new organizational structure that centered on self-organizing teams and abolished the formal hierarchy. As such, any employee could initiate projects, assemble teams and then compete for resources. Traditional offices and work stations were abolished and employees would travel around the facilities with mobile carts and laptops. The physical redesign also included the paperless office where all incoming mail was scanned into the computer system and then shredded. This management innovation represented a large departure from customary practices and was not seen before. Responsibilities for coordination and initiation of activities that had previously been held by managers was delegated to employees (Foss, 2003). This vastly increased the number of interdependencies between organizational members.

On the other hand, the M-form developed independently at General Motors and Du Pont in the 1920s may be understood as a less radical management innovation. As it has been thoroughly depicted by Chandler (1962), an overload in decision making of senior managers created a need for new ways of coordinating and delegating work. Thus, a general office was created with the responsibility of coordinating and allocating resources for a number of quasi-autonomous divisions. Divisions'

headquarters then administered a range of functional departments each comprising a number of field units (Chandler, 1962). This structure, which has by now diffused across a large population of firms (Fligstein, 1985; Teece, 1980), represented a great departure from the customary organizational forms of the time. Despite its newness and radicalness, the M-form maintained a high level of decomposability. Tasks and responsibilities are clearly divided between divisions and headquarters, subsystems are clearly defined and relatively few interdependencies exist across e.g. divisions (Chandler, 1962).

The higher the complexity, i.e. the number of interdependencies between organizational members and units, the more difficult it is likely to be to implement a new management practice. Therefore, this dimension is relevant for categorizing management innovation. The determinants, implementation processes and performance consequences associated with a management innovation are likely to vary depending on the complexity of the management innovation. For example, more complex innovations may be more difficult or costly to implement and encounter more resistance and, thus, can be thought of as more risky for the adopting organization. However, more complex innovations are also likely to be associated with higher levels of causal ambiguity and may therefore be more difficult to imitate. Then, assuming that the innovation is valuable in the first place, a more complex innovation is more likely to give rise to sustainable competitive advantages (Barney , 1991; Wernerfelt, 1984).

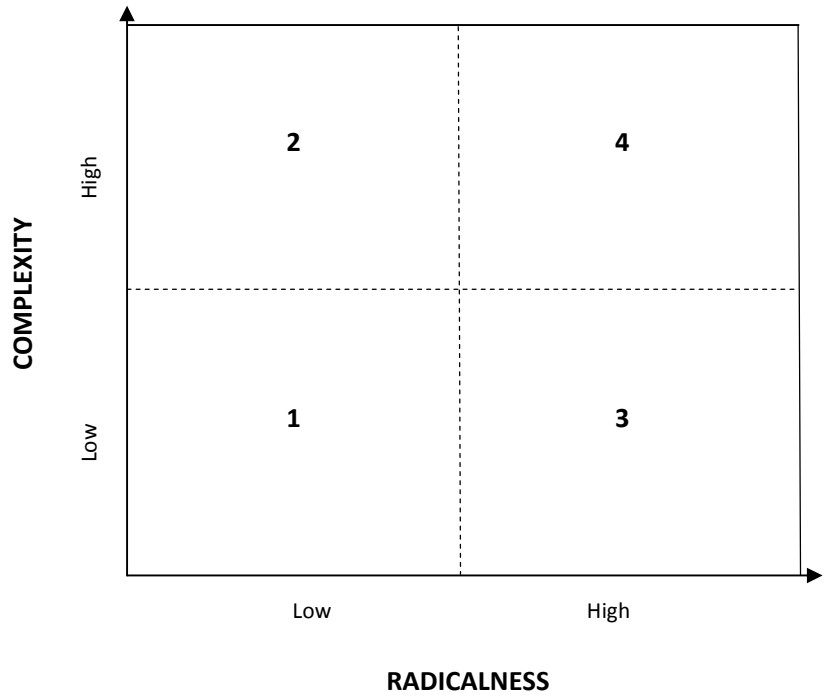
A typology for management innovation

In sum, I define management innovation in the broadest sense as the implementation of a new management practice, process, technique or structure that significantly alters the way the work of management is performed. In terms of the content of management innovation, this definition corresponds to what seems to be an emerging consensus in recent contributions (Birkinshaw et al.,

2008; Damanpour et al., 2009; Mol & Birkinshaw, 2009). Positioning management innovation vis-à-vis the broader innovation literature, I understand management innovation as a type of administrative process innovation (Damanpour et al., 2009; Edquist et al., 2001). For a list of examples of management innovations, please see e.g. Birkinshaw et al (2008) or Mol and Birkinshaw (2007).

As already mentioned, the most important disagreement in the management innovation literature pertains to the degree of newness required for a change to be labeled an innovation. While I agree that this distinction is relevant, I propose to categorize management innovation along two other dimensions, that are more likely to directly influence the causal drivers, processes and performance consequences of innovation adoption: Radicalness and complexity (see figure 1). This enables a more nuanced and encompassing understanding of the core construct and lays a foundation for more comparable and generalizable studies in the future. For each of the four types defined here, a further distinction can be made between new to the firm and new to the state of the art innovations.

Figure 1: Management innovation typology



Even though the most incremental innovations pertaining to categories 1-2 may be hard to distinguish from other types of organizational changes and are to some extent studied by related literatures (e.g. cultural studies, management cognition, behavioral theory, and institutional theory: Armenakis & Bedeian, 1999; Becker et al., 2005; Colombo & Delmastro, 2002; Ford et al., 2002; March, 1996; Mintzberg & Westley, 1992; Palmer & Dunford, 2008; Pettigrew et al., 2001; Poole & Van de Ven, 2004a; Santos & Garcia, 2006; Tidd et al., 2001; Weick & Quinn, 1999), it is important for the purpose of conceptual clarity to include them here. In fact, it is somewhat a negligence in the extant management innovation literature to mostly disregard these, maybe less bombastic, alterations of management practices that nevertheless constitute an ongoing process of enhancing competences, resources and capabilities in many firms (Teece et al., 1997). One example of a (new to the firm) type 1 management innovation could be the adoption of a so-called "Fed-Ex Day" at a small software company, Atlassian (see www.managementlab.org). The CEO of Atlassian was inspired by Google's 20 percent rule (Vise & Malseed, 2005), but he felt that his company was too small to devote 20 percent of developers' time to exploration. Instead he decided to set aside a single day to new product development. The first part of the day was spend brainstorming and the rest of the day developers worked on turning the best ideas into working prototypes. The event was named "Fed-Ex Day" after the day-to-day delivery made famous by Fed-Ex. The event was so successful that it was made a recurring part of new product development at Atlassian. While this innovation is new to Atlassian, it is clearly inspired by the practices of other companies such as Google. The practice does not drastically break with the theories in use of the organization. The new practice only affects the work of managers a few days a year, while the daily routines and practices of the firm are largely unaltered. Also, it does not create a high number of interdependencies and, hence, is fairly straightforward to implement.

An example of a (new to the firm) type 3 management innovation is the 360-degree feedback implemented at HCL (see www.managementlab.org). After Vineet Nayar became president of HCL in

2005, he implemented a number of changes in the management practices of the large IT services company. One change was to create an annual survey where employees rate the communication skills, responsiveness, strategic vision and so on of the company's 1500 managers. Instead of just linking the 360 degree feedback to compensation packages, the results are compiled and published online. Even though the adoption of 360 degree feedback marked a large change in the management practices and culture of HCL, it is a very widespread practice and, thus, only qualifies as a new-to-the-firm innovation. Also, it does not directly affect the interdependencies between organizational members and units. Examples of type 4 management innovations include implementation of e.g. lean management, quality circles or total-quality-management. Also, the so-called backward policing developed and implemented as a quality control initiative at the Japanese auto manufacturer Honda is an example of a (new to the state of the art) type 4 management innovation. Instead of inspecting the quality of a product at the end of the production process, each employee involved in production and shipping has the right to reject substandard inputs received from earlier production stages. If this means closing down the production line, the unit supplying the out-of-specification input would be held accountable for the downtime (Coleman, 1990; Coleman, 1993). As such, the policing normally performed by a line foreman is instead performed by all operators on the line creating a high degree of interdependencies across units and members. This reallocation of rights and accountability was undoubtedly new to the state of the art.

As I have demonstrated here, the two-by-two typology of management innovation is useful for classifying known innovations and, as such, provides a framework for future studies. This conceptual clarification hopefully can assist in enabling more generalizable studies and may thus help overcome the inconsistent results that characterize the innovation literature in general (Suddaby, 2010; Wolfe, 1994).

FOUNDATIONS OF MANAGEMENT INNOVATION

The definitions of management innovation and most of the studies mentioned above are primarily phenomenon-driven. Most scholarly interest in management innovation has until now been driven by the empirical observation and categorization of a new or poorly understood phenomenon. Hence, management innovation has been approached from a range of different theoretical viewpoints. This paper seeks to apply a more theory-driven approach to management innovation. Rather than focusing on the observation of specific innovations in organizations, the aspiration of this paper is to lay the foundation for a model explaining why firms differ in their ability to continuously develop and reconfigure managerial resources to meet and exploit external opportunities and demands. In the following, this ability, which will be termed "management innovation capabilities", is introduces, defined and discussed vis-à-vis constructs and frameworks from behavioral theory (Cyert & March, 1963; Pierce et al., 2008) and dynamic capabilities research (Teece et al., 1997; Teece & Pisano, 1994).

Behavioral theory of the firm

The behavioral theory of the firm (BTF) pioneered the understanding of the internal organization of firms and has laid the foundation for most modern theories of strategy and firm behavior (Pierce et al., 2008). BTF incorporates sociological and social psychology perspectives into economics and thereby provides a more realistic theory of decision making in firms. The original contribution by Cyert and March (1963) provided a deep understanding of how firms make decisions in a context of bounded rationality, conflicting goals, problem driven search and imperfect environmental matching. Prior to the emergence of BTF, these internal dynamics had largely been "black-boxed" in the dominant neo-classical perspectives. The BTF has been hugely influential on the field of strategic management and on most modern theories of strategy and firm behavior (Pierce et al., 2008).

BTF provides a useful framework for understanding the search and decision behavior of firms. However, Cyert and March (1963) provided few guidelines for how managers may seek to improve or change firm behavior. The resource based view (Barney , 1991; Barney, 1996; Penrose, 1959; Wernerfelt, 1984) and dynamic capabilities (Helfat & Peteraf, 2009; Pierce et al., 2008; Teece et al., 1997; Teece, 2007; Winter, 2003) are examples of modern perspectives that build on and extend the learnings and assumptions of BTF. These theories place emphasis on the heterogeneous internal resources, routines and capabilities enabling firms to adapt to and exploit changes in their external environments.

Dynamic capabilities

The dynamic capabilities approach suggests that firms sustain competitive advantage in rapidly changing environments by integrating, building, and reconfiguring internal and external competences in congruence with environmental demands (Teece et al., 1997). For example, Teece et al observed that simply accumulating valuable assets is often not enough to give firms a competitive advantage, rather "winners in the global marketplace have been firms that can demonstrate timely responsiveness and rapid and flexible product innovation, coupled with the management capability to effectively coordinate and redeploy internal and external competences" (1997, p. 515).

By nature, the dynamic capabilities approach is broad and encompasses multiple levels of analysis from that of the environment to that of the individuals (Helfat & Peteraf, 2009; Teece, 2007). Helfat et al (2007) synthesized the most influential definitions provided by Teece et al (1997), Eisenhardt and Martin (2000), and Zollo and Winter (2002) in defining dynamic capabilities as "the capacity of an organizational to purposefully create, extend, and modify its resource base" (p. 4). A firm's resource base according to Helfat et al (2007, p. 4) includes "tangible, intangible, and human assets (or resources) as well as capabilities which the organization owns, controls, or has access to on a preferential basis".

Dynamic capabilities can be seen as an approach to understanding competitive advantage and strategic change more than as a theory in itself (Helfat & Peteraf, 2009; Teece et al., 1997) and, as such, its theoretical underpinnings have yet to be fully defined (Felin & Foss, 2005). However, the dynamic capabilities approach draws heavily upon earlier theoretical perspectives, particularly evolutionary economics, behavioral theory and the resource based view of the firm. Organizational routines are central to dynamic capabilities research. For example, Winter (Winter, 2000; Winter, 2003) and Zollo and Winter (2002) view an organizational capability as a high level routine or collection of routines. However, an important distinction between organizational routines and dynamic capabilities lies in the notion of "purpose" in the definition proposed by Helfat et al (2007): "The word "purposefully" also has a specific meaning in our definition. This word indicates that dynamic capabilities reflect some degree of intent, even if not fully explicit. We therefore distinguish dynamic (and other) capabilities from organizational routines, which consist of rote organizational activities that lack intent" (p. 5). The focus on routines and path dependencies as determining of organizational performance and strategic change is rooted in evolutionary economics (Nelson & Winter, 1982).

But dynamic capabilities, like evolutionary economics, also draw upon behavioral theory (Helfat & Peteraf, 2009; Winter, 2000). Behavioral theory, for example Simon (1947) and Cyert and March (1963), introduced the notion of firms as path dependent, learning organizations that make strategic decisions based on a principle of satisficing rather than optimization. The assumptions about boundedly rational and path dependent decision making procedures proposed in the behavioral theory of the firm are consistent with the dynamic capabilities approach. For example, Eisenhardt and Martin (2000) explicitly build on the behavioral notions of rules of thumb and efficient decision processes to analyze the processes underlying dynamic capabilities. Finally, like the resource based view of the firm (Argote & Ingram, 2000; Barney , 1991; 1996; Wernerfelt, 1984), the dynamic capabilities framework builds on the

notion of firm-level heterogeneous assets and resources as the fundamental building block of competitive advantage (Helfat & Peteraf, 2009; Teece et al., 1997).

Dynamic capabilities come in many shapes and forms. Since there are many different types of dynamic capabilities, Helfat et al (2007) suggest that scholars should define and specify the particular dynamic capabilities that they are investigating. This paper proposes and investigates a specific dynamic capability revolving around the ability of firms to develop, renew and reconfigure their managerial resource base. This dynamic capability, which is termed management innovation capabilities, is defined as the ability of a firm to purposefully create, extend and modify its managerial resource base to address rapidly changing environments. Adapted from the definition of resource base proposed by Helfat et al (2007), the managerial resource base refers to all the organizational and human assets related to the performance of management activities that a firm owns, controls or has access to.

Management cognition

Adner and Helfat (2003) introduce the notion of dynamic managerial capabilities which is somewhat similar to the notion of management innovation capabilities introduced in this paper. Adner and Helfat (2003, p. 1012) define dynamic managerial capabilities as "the capabilities with which managers build, integrate, and reconfigure organizational resources and competences". The concept is aimed at explaining why some managers are more skillful than others at anticipating, interpreting, and responding to the demands of an evolving environment. However, management innovation capabilities in this paper differs from dynamic managerial capabilities by taking the organization as the unit of analysis and by having a more narrow focus in terms of content, since only changes to the managerial resource base are considered. Dynamic managerial capabilities on the other hand resides at an individual level but has a more encompassing content, since any skillful response to environmental demands is investigated. Nevertheless, dynamic managerial capabilities logically are part of the

foundation of management innovativeness, since the skills and capabilities of top managers are important drivers of changes in the managerial resource base (Helfat & Peteraf, 2010; Teece, 2007).

According to Teece (2007), dynamic capabilities are composed of the capacity to sense opportunities and threats, to seize opportunities, and to reconfigure organizational assets. Adner and Helfat (2003) divide dynamic managerial capabilities into three underlying attributes: managerial human capital, managerial social capital, and managerial cognition. Helfat and Peteraf (2010) expands the notion of managerial cognitive capabilities by discussing the role of cognition and mental activities for three underlying capabilities that follow from Teece's (2007) framework: namely, managerial sensing, seizing and reconfiguration capabilities.

Management innovation capabilities

In his discussion of the microfoundation of sustainable firm performance, Teece (2007) specifically emphasized the importance of managerial and organizational innovations. For example, Teece states that "not only must the innovating enterprise spend heavily on R&D and assiduously develop and protect its intellectual property; it must also generate and implement the complementary organizational and managerial innovations needed to achieve and sustain competitiveness" (2007, p. 1321). The notion of management innovation capabilities proposed in this paper is an attempt at specifying this ability to generate and implement managerial innovations necessary for sustainable competitive advantages.

As mentioned, management innovation capabilities refer to the ability of a firm to purposefully create, extend and modify its managerial resource base to address rapidly changing environments. This definition is similar to the definitions adopted in the dynamic capabilities literature (see the most common definitions in table 2) and stresses the ability of the organization to reliably reproduce the desired outcome (Helfat & Peteraf, 2010; Winter, 2003). Dynamic capabilities is still a relatively new

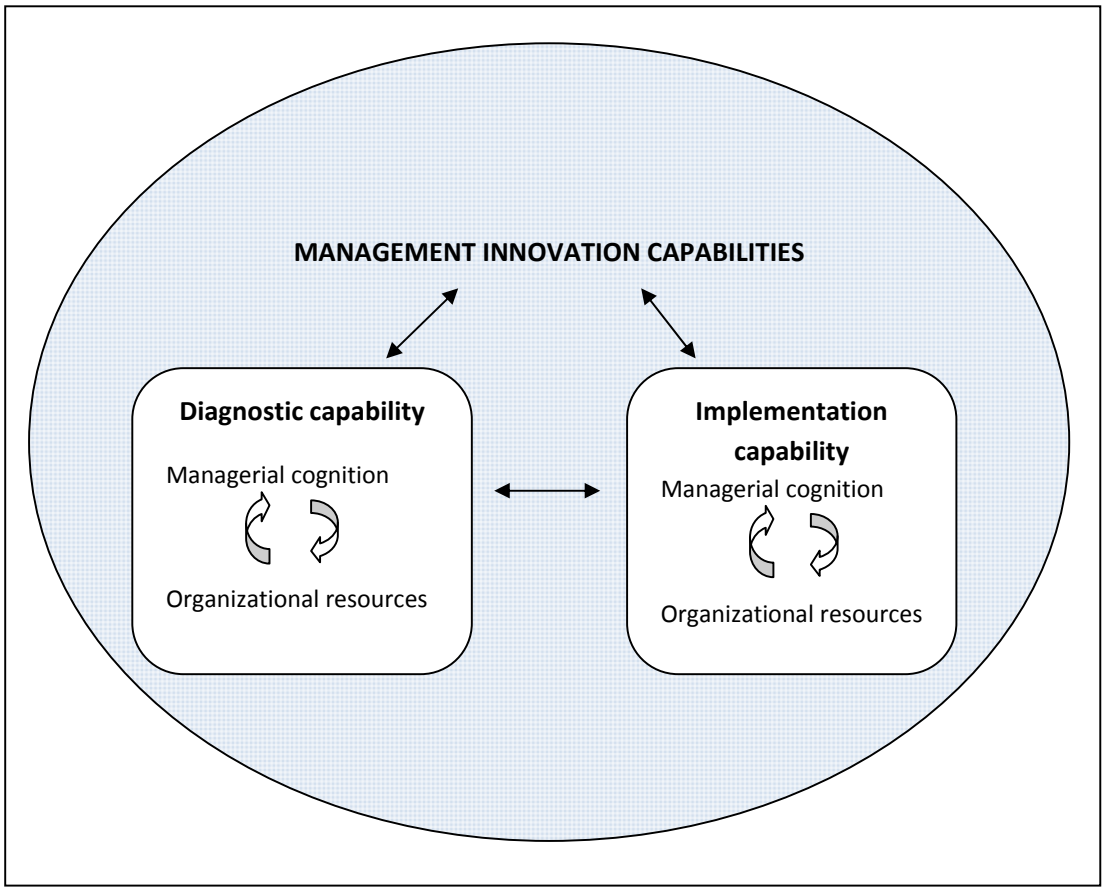
field of inquiry and, hence, terms and constructs remain somewhat vague and "rough around the edges" (Helfat & Peteraf, 2009). Particularly, the microfoundations and interaction of antecedents at different levels of analysis is ill understood (Felin & Foss, 2005). However, in order to make sense of complex real life phenomenon such as management innovations, theories and ideas often need a long time to develop into neatly defined constructs. Therefore, the dynamic capabilities framework, in spite of its weaknesses, is still a relevant frame for developing ideas and theories for management innovation research.

Table 2. Main definitions of dynamic capabilities

Author	**Definition of dynamic capabilities**
Helfat, Finkelstein, Mitchell, Peteraf, Singh, Teece & Winter (2007)	"[A dynamic capability is] the capacity of an organization to purposefully create, extend, and modify its resource base" (p. 4)
Winter (2003)	"An organizational capability is a high-level routine (or collection of routines) that, together with its implementing input flows, confers upon an organization's management a set of decision options for producing significant outputs of a particular type" (p. 991)
Zollo & Winter (2002)	"A dynamic capability is a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness" (p. 340)
Eisenhardt & Martin (2000)	"Dynamic capabilities (..) are the organizational and strategic routines by which firms achieve new resource configurations as markets emerge, collide, split, evolve, and die" (p. 1107)
Teece, Pisano & Shuen (1997)	"We define dynamic capabilities as the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (p. 516)

Similar to the subdivisions made by Teece (2007) and Helfat & Peteraf (2010), this paper divides management innovation capabilities into two subparts, (1) diagnostic capability, which is the ability of an organization to recognize the locus of a perceived problem or an opportunity for improved performance and to develop management solutions that either solve the problem or exploit the opportunity, and (2) implementation capability, which refers to the ability of an organization manage the transition process from one managerial setup to another. Each of these capabilities, then, is driven by managerial cognition and organizational resources (see model in figure 2).

Figure 2. Management innovation capabilities



Managerial cognition here refers to the capacity of individuals (in this case managers) to perform mental activities (Helfat & Peteraf, 2010). According to *A Dictionary of Psychology* published by Oxford University Press, cognition broadly refers to "the mental activities involved in acquiring and processing information" (Colman, 2006). Cognition plays an important part in understanding individuals' learning, decision making, perception, attention and search behavior (Gavetti, 2005; Helfat & Peteraf, 2010; Helfat & Peteraf, 2009; Ocasio, 1997). Research in cognitive psychology have found that mental activities may be divided into two types: (1) mostly automatic mental processing of information and (2) an "executive function" responsible for goal-directed, deliberate behavior (Helfat & Peteraf, 2010). Due to difference in innate cognitive capacities as well as differences in environmental

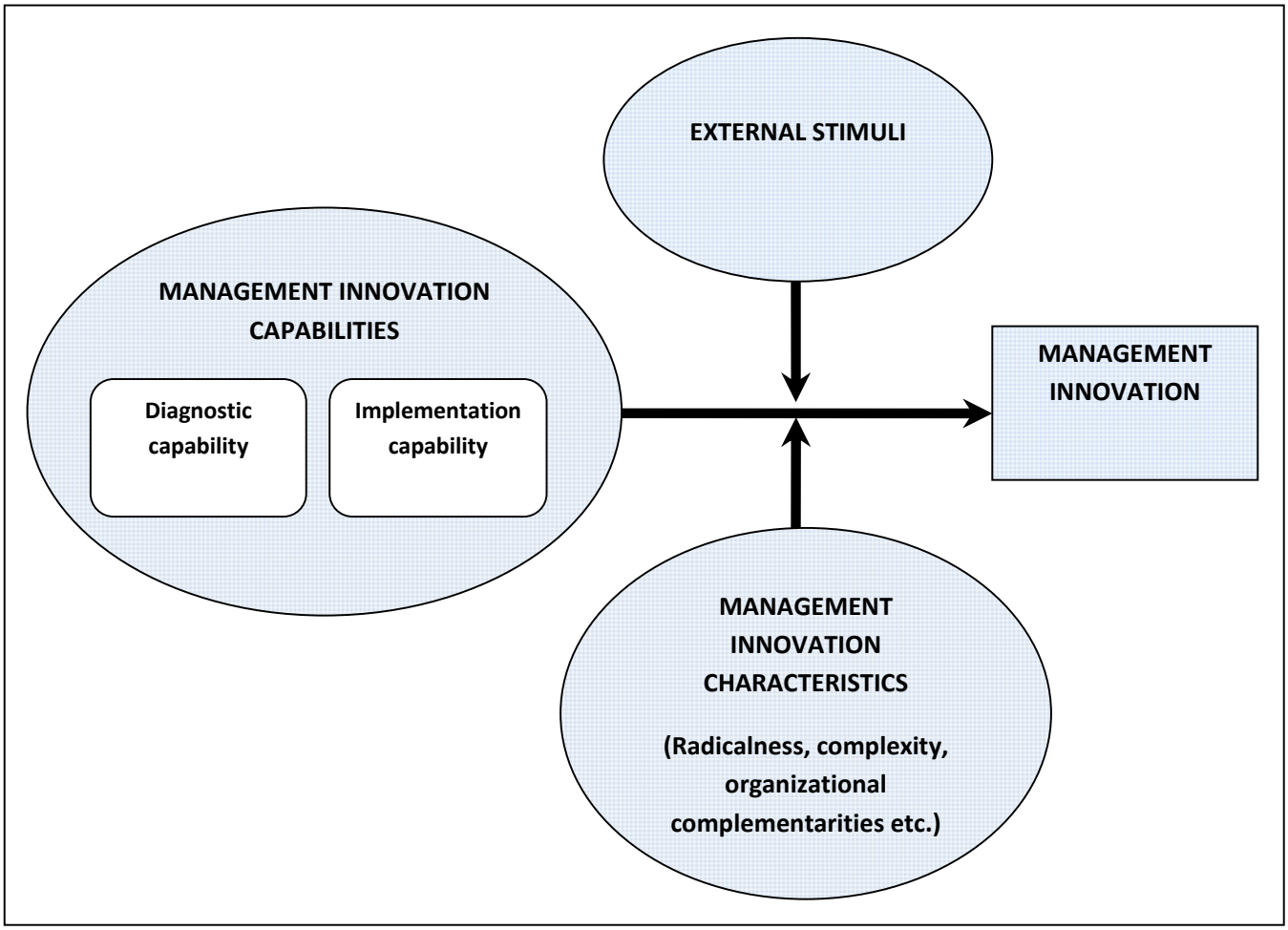
conditioning, individuals exhibit heterogeneity in their abilities to perform mental activities. As such "heterogeneity of cognitive capabilities can contribute to persistent performance differences between organizations through managerial sensing, seizing, and recongifuration" (Helfat & Peteraf, 2010, p. 12). By including the notion of managerial cognition, this paper attempts to counter some of the typical criticism of dynamic capabilities research. Namely, the lack of clearly defined microfoundations (e.g. Felin & Foss, 2005; Gavetti, 2005). However, at the same time including individual level cognition is a departure from the traditional focus on capabilities and routines as a collective phenomenon (Becker, 2004; Weick & Roberts, 1993).

Organizational resources, on the other hand, refer to a number of firm-level factors such as how the firm has organized its activities and what sources of knowledge and assets it has access to. These factors reflect the institutionalized routines, operating procedures, power structures and learning paths of the organization (Becker et al., 2005; Nelson & Winter, 1982; Winter, 2003). This paper views organizational capabilities as emerging from the interaction between intentional but somewhat routinized organizational structures and procedures (i.e. organizational resources) and the deliberate, goal oriented actions of individuals (i.e. managerial cognition). Gavetti (2005) similarly argues that routine-based and cognitive logics are intertwined and both affect capability development. However, more theoretical and empirical work is needed to fully understand the microfoundations and the underlying processes of management innovation capabilities and its two subcategories of diagnostic capability and implementation capability.

A model of the foundations of management innovation is presented in figure 3. In addition to the expected influence of management innovation capabilities on the likelihood of implementing management innovations, the model also incorporates an expected moderating influence of external

stimuli and innovation characteristics. In the following section propositions are developed based on the behavioral theory and dynamic capabilities framework adopted.

Figure 3: Foundations of management innovation



PROPOSITIONS

Diagnostic capability

Firms perceive their environments through an organizational filter and, hence, a range of internal factors influence the ability of firms to recognize opportunities and threats and to mobilize resources and capabilities in response (Cyert & March, 1963; Pitelis, 2007; Teece, 2007). Diagnostic

capability refers to the ability of an organization to recognize the locus of a perceived problem or an opportunity for improved performance and to develop management solutions that either solve the problem or exploit the opportunity. As already mentioned, diagnostic capability can be institutionalized and relate to structural variables in the organization, which I have labeled as organizational resources, or it may depend on the perceptiveness and sensitivity of managers. The idea that decision making in firms is a result of both the (limited) cognitive ability of managers and the influence of structural variables on the attention and search behavior of individuals is hardly new (see Simon, 1947), but it has not previously been incorporated directly into theories of management innovation. Nevertheless, elements of the invention phase discussed in Birkinshaw et al's (2008) conceptual model are compatible with the notion of diagnostic capability used here.

A number of organizational variables are likely to be part of the diagnostic capability of firms and this paper does not attempt to fully disentangle the empirically observable components. Nevertheless, dynamic capabilities and behavioral theory suggest a number of relevant variables to include. First, the managerial cognitive capabilities of managers as well as more observable underpinnings of these such as attitudes, beliefs and values of power holders, are likely to exert significant influence on the diagnostic capability of an organization and on the likelihood of adopting management innovation (Helfat & Peteraf, 2010). According to Ocasio (1997) attention structures are "social, economic, and cultural structures that govern the allocation of time, effort, and attentional focus of organizational decision-makers in their decision-making activities" (p. 195). An important component in firms' attention structures are the beliefs and values of critical organizational players and most notably of the CEO and the top management team (Eggers & Kaplan, 2009; Hambrick & Mason, 1984; Ocasio, 1997). Managers are also in a special position to exercise influence on aspiration levels, attention structures, search behavior and standard operating procedures adopted in the organization. Likewise, in resolving the inherent conflicts between organizational groups, managers will often be in a

position to determine the sequence of goals being attended to (Cyert & March, 1963; Pitelis, 2007). Examining the role of top managers and their beliefs and attitudes, thus, is crucial for understanding the likelihood of a firm implementing management innovations.

Proposition 1: The cognitive capabilities of managers, i.e. their abilities to perform mental activities related to sensing opportunities, positively influence the diagnostic capability and the management innovation capabilities of an organization and, hence, increases the likelihood of implementing management innovations.

Second, a number of variables relating to how the firm has organized its resources and what sources of knowledge it has access to are likely to influence its diagnostic capability. It is commonly acknowledged that firms' unique resources and assets are important determinants of their competitive advantage (Barney, 1996; Foss, 2007; Pitelis, 2007; Teece et al., 1997). Also, the present skill set and prior experiences of organizational members are likely to influence their search behavior (Cyert & March, 1963; Knudsen & Levinthal, 2007). Therefore, the educational background and level of education of employees, as well as the access to internal and external knowledge sources are likely to make firms more perceptive to problems and opportunities and, hence, more likely to implement management innovations. Likewise, organizational design variables may influence the cross-fertilization and spread of ideas and knowledge in the organization. For example, firms with more dispersed decision making processes (decentralization) should arguably be more sensitive to new ideas from within the organization. Other institutionalized structures such as reward schemes, decision rules, and knowledge sharing practices may likewise be more or less conducive to idea generation, experimentation and risk taking.

Proposition 2: Organizational resources (e.g. workforce characteristics, knowledge sources, knowledge sharing practices and organizational structures promoting experimentation and knowledge

sharing) positively influence the diagnostic capability and the management innovation capabilities of an organization and, hence, increases the likelihood of implementing management innovations.

Implementation capability

While diagnostic capability refers to the ability to develop managerial solutions in response to perceived problems or opportunities, implementation capability refers to the ability of the organization to manage the transition process associated with implementing new management practices. Implementation capability does not in itself precipitate innovation, but it is an important part of an organization's management innovation capabilities and is a necessary prerequisite for management innovation success. This parallels what Birkinshaw et al (2008) have identified as a distinct phase in the management innovation process, namely the implementation phase. As for diagnostic capability, I have identified two main components of firms' implementation capability: organizational resources and managerial cognition.

First, as stated by Teece (2007, p. 1327) "the existence of layer upon layer of standard procedures, established capabilities, complementary assets, and/or administrative routines can exacerbate decision-making biases against innovation". Implementing new management practices almost always requires substantial investments and necessitates developing new or altering existing managerial assets (ibid.). The institutionalized practices and the set up of current assets and knowledge sources, therefore, have an important influence on the implementation capability of a firm (Helfat & Peteraf, 2010). For example, established routines and path dependency may lead firms to adopt excessive risk averse behaviors.

A range of scholars in organizational sociology and psychology have acknowledged and studied the tendency of individuals to resist change (e.g. Agócs, 1997; Ford et al., 2002; Giangreco & Peccei, 2005; Meyer & Stensaker, 2006; Meyer et al., 2007; Oreg, 2003; Reger et al., 1994; Reichers et al., 1997;

Strebel, 1996). Change is inherently associated with uncertainty and stress for organizational members. If employees are not well informed and involved in the change process, resistance to change may be an important barrier to management innovation (Armenakis et al., 1993; Bandura, 1982; Zbaracki, 1998).

Resistance to change is common due to the institutionalized nature of value commitments, norms and power structures (Greenwood & Hinings, 1996). As such, power distributions tend to become institutionalized as powerful coalitions and individuals establish procedures and structures that buffer themselves and the organization against change (Pfeffer, 1981; Pfeffer, 1992; Salancik & Pfeffer, 1977). Implementing new management structures is likely to shift the power balance within an organization and, hence, is often resisted by the current power holders.

Furthermore, experience and learning paths of the organization are important drivers of organizations' implementation capability. For example, Greenwood and Hinings (1996) found that recent experience with change and knowledge of the new organizational setup are important enablers of radical change. In line with this argument, Amburgey et al (1993) found that companies with a recent history of change are more likely to attempt further change. Based on their experience, firms may develop skills and routines that support change implementation and may to a varying extent posses knowledge of the desired change outcome (Barney , 1991; Barney, 1996; Teece et al., 1997; Teece, 2007). In BTF, the experiences and backgrounds of organizational members are also thought to influence their search behavior (Cyert & March, 1963; Knudsen & Levinthal, 2007).

Finally, structural variables such as educational backgrounds and levels of organizational members and the distribution of decision authority may influence the implementation capability of organizations. A more well educated workforce is likely to increase the ability of organizational members to comprehend and manage new organizational configurations (Greenwood & Hinings, 1996). On the other hand, while decentralization is likely to increase the diagnostic capability of firms, the loss of

central control in the transition process is likely to decrease implementation capability. In this respect, structural variables are likely to influence different aspects of management innovation capabilities differently. Teece (2007) likewise observed that "sensing activities need to be decentralized with the information rolling up to top management", while "tight planning will be part of seizing, but less so of sensing" (p. 1343).

Proposition 3: Organizational resources (e.g. employee and middle-manager support of change, workforce characteristics, prior experience and centralized decision making) positively influence the implementation capability and the management innovation capabilities of an organization and, hence, increase the likelihood of implementing management innovations.

Second, for arguments similar to the ones introduced in proposition 1, managerial cognition plays a role not only in the process of diagnosing opportunities and coming up with innovative solutions, but also in the implementation phase. Due to the risks often associated with implementing large changes and the path dependent nature of the organization, in fact, the purposeful actions of managers may be particularly important in the implementation phases of management innovation (Eggers & Kaplan, 2009; Helfat et al., 2007; Helfat & Peteraf, 2010). Hence, the beliefs, values, attentional focus, reasoning etc. of top managers exert important influence on the implementation capability of an organization.

Proposition 4: The cognitive capabilities of managers, i.e. their abilities to perform mental activities related to seizing opportunities and reconfiguring assets, positively influence the implementation capability and the management innovation capabilities of an organization and, hence, increases the likelihood of implementing management innovations.

External stimuli

Early contingency theory and institutional approaches largely assumed organizational change to be a consequence of the need to adapt to contextual and institutional pressures. For example, Chandler (1962) formulated the idea that organizational structures were predominantly a consequence of the external strategies and demands confronting the firm. While contemporary organization scholars still acknowledge the importance of external contingencies, today more emphasis is placed on understanding how internal dynamics shape the way an organization responds to its institutional and competitive context ((Greenwood & Hinings, 1996; Scott, 1995). However, since firms are characterized by bounded rationality, imperfect knowledge and conflicting goals, innovation is likely to ofte be an outcome of problemistic search induced by failure to meet the organizational aspiration levels (Cyert & March, 1963; Penrose, 1959).

As such, management innovation is more likely to occur in situations where firms experience external stimuli in the form of e.g. a performance shortfall. Such a shortfall can be either a perceived problem or a future unexploited opportunities (Birkinshaw et al., 2008; Ocasio, 1997). Since the search processes of firms are simple-minded, i.e. they begin the neighborhood of the problem or current solution and stop once an acceptable solution is found, it is likely that the scale of the performance shortfall will predict the likeliness of firms engaging in more radical types of management innovation. Since more severe or complex problems decrease the likelihood of finding a solution in the proximity of the current organizational setup, more severe problems should be more likely to lead firms to broader search efforts and more novel solutions (Cyert & March, 1963; Levinthal, 1997; Nickerson & Zenger, 2004).

This type of logic is also used in the conceptual model proposed by Birkinshaw et al (2008), which predicts the identification of a novel problem to spark the process of management innovation.

Since the search process is problem driven, Birkinshaw and colleagues (2008) expect firms to first exhaust the market for management fashions, i.e. the new to the firm innovations, before experimenting with developing novel, new to the state of the art, management innovations.

Proposition 5: A performance shortfall, either in the form of a perceived problem or unexploited opportunity, positively moderates the relationship between management innovation capabilities and the implementation of actual management innovations.

Innovation characteristics

The contention that innovation characteristics influence the antecedents and outcomes of innovation activities is hardly new (Abernathy & Utterback, 1978; Damanpour & Schneider, 2009; Damanpour et al., 1989; Damanpour, 1996; Edquist et al., 2001; Utterback & Abernathy, 1975; Wolfe, 1994). Among other things, innovations differ in their complexity, radicalness, perceived benefit for the adopting organization, cost, risk, modularity and their complementarity with the existing organizational system (James et al., 20th February 2010; Pelz & Munson, 1982; Sanchez & Mahoney, 1996; Sanchez, 2000; Stieglitz & Heine, 2007; Wolfe, 1994). These differences of characteristics are likely to moderate the relationship between management innovation capabilities and the actual adoption rate of management innovations. For example, management innovation capabilities are likely to be particularly important for innovations that are associated with higher levels of risk, radicalness or complexity.

Proposition 6: Management innovation characteristics (e.g. radicalness, complexity, complementarity etc.) moderate the relationship between management innovation capabilities and the implementation of actual management innovations.

CONCLUDING DISCUSSION

In this paper, I have argued that management innovation is a phenomenon that should be of interest to both managers and scholars in its own right. That is, there is good reason to believe that management innovation is important for firm competitiveness, yet the phenomenon is not fully understood and adequately addressed in the extant innovation and management literatures. Being an emergent field of research, a range of relevant questions revolving around management innovation remain unanswered. This paper has attempted to further our understanding of management innovation by offering a more nuanced typology and by suggesting a conceptual model of key determinants. In so doing, the paper introduced the concept of management innovation capabilities as an important antecedent of management innovation.

The contribution made in this paper should be viewed as a first step in developing a comprehensive model of the causal drivers of management innovation. In so saying, I acknowledge that more theoretical and empirical work is needed in order to fully appreciate the generative mechanisms underlying management innovation and management innovation capabilities. Based on behavioral theory and the dynamic capabilities framework, I have suggested avenues to pursuit in future work on disentangling the driving and moderating factors leading some firms to adopt management innovations. Future research should go further by exploring and testing empirically if the factors outlined in this paper are in fact the key drivers of firms' adoption of new management practices. In so doing, future research may also expand our understanding of the actual process and sequence of events leading firms to innovate and explore how management innovation influences firm performance.

Management innovation is inherently a multi-level phenomenon. This poses challenges for scholars wishing to empirically study management innovation. In particular, it is difficult to reliably measure and study the causal relationships between variables at different levels of analysis. For

example, the relationship between the cognitive capabilities of individual managers and the diagnostic capability or management innovation capability of the organization as a whole. In general, the capabilities literature suffer from a lack of clear conceptualization as well as operationalization. Much theoretical and empirical work has yet to be done before dynamic capabilities and management innovation capabilities are fully understood, clearly defined and not the least measurable.

-

REFERENCES

Abernathy, W., & Utterback, J. 1978. Patterns of industrial innovation. ***Technology review***, 80(7): 40.

Abernathy, W. J., & Clark, K. B. 1985. Innovation: Mapping the winds of creative destruction. ***Research Policy,*** 14(1): 3-22.

Abrahamson, E. 1991. Managerial fads and fashions: The diffusion and refection of innovations. ***Academy of Management Review***, 16(3): 586-612.

Abrahamson, E. 1996. Management fashion. ***Academy of Management Review***, 21(1): 254-285.

Abrahamson, E., & Fairchild, G. 1999. Management fashion: Lifecycles, triggers, and collective learning processes. ***Administrative Science Quarterly***, 44(4): 708-740.

Adner, R., & Helfat, C. 2003. Corporate effects and dynamic managerial capabilities. ***Strategic Management Journal***, 24(10): 1011-1025.

Afuah, A. 1998. ***Innovation management***. Oxford: Oxford University Press.

Agócs, C. 1997. Institutionalized resistance to organizational change: Denial, inaction and repression. ***Journal of Business Ethics***, 16(9): 917-931.

Aiken, M., Bacharach, S. B., & French, J. L. 1980. Organizational structure, work process, and proposal making in administrative bureaucracies. ***The Academy of Management Journal***, 23(4): 631-652.

Amburgey, T. L., Kelly, D., & Barnett, W. P. 1993. Resetting the clock: The dynamics of organizational change and failure. ***Administrative Science Quarterly***, 38(1): 51-73.

Amis, J., Slack, T., & Hinings, C. R. 2004. The pace, sequence, and linearity of radical change. ***Academy of Management Journal***, 47(1): 15-39.

Ansari, S., Fiss, P., & Zajac, E. 2010. Made to fit: How practices vary as they diffuse. ***Academy of Management Review***, 35(1): 67.

Argote, L., & Ingram, P. 2000. Knowledge transfer: A basis for competitive advantage in firms. ***Organizational behavior and human decision processes***, 82(1): 150-169.

Argyris, C. 1977. Double loop learning in organizations. ***Harvard Business Review***, 55(5): 115-125.

Armenakis, A., Harris, S., & Mossholder, K. 1993. Creating readiness for organizational change. ***Human Relations***, 46(6): 681.

Armenakis, A. A., & Bedeian, A. G. 1999. Organizational change: A review of theory and research in the 1990s. ***Journal of Management***, 25(3): 293-315.

Bandura, A. 1982. Self-efficacy mechanism in human agency. ***American psychologist***, 37(2): 122.

Barney , J. 1991. The resource-based model of the firm - origins, implications, and prospects. ***Journal of Management***, 17(1): 97.

Barney, J. B. 1996. The resource-based theory of the firm. ***Organization Science***, 7(5): 469-469.

Becker, M. C. 2004. Organizational routines: A review of the literature. ***Industrial and Corporate Change***, 13(4): 643-678.

Becker, M. C., Lazaric, N., Nelson, R. R., & Winter, S. G. 2005. Applying organizational routines in understanding organizational change. ***Industrial and Corporate Change***, 14(5): 775-791.

Benders, J., & van Veen, K. 2001. What's in a fashion? interpretative viability and management fashions. ***Organization The Interdisciplinary Journal of Organizationory and Society***, 8(1): 33.

Birkinshaw, J., Hamel, G., & Mol, M. 2008. Management innovation. ***Academy of Management.The Academy of Management Review***, 33(4): 825.

Blau, J. R., & McKinley, W. 1979. Ideas, complexity, and innovation. ***Administrative Science Quarterly***, 24(2): 200-219.

Blau, P. M. 1970. A formal theory of differentiation in organizations. ***American Sociological Review***, 35(2): 201.

Boer, H., & During, W. 2001. Innovation, what innovation? A comparison between product, process and organizational innovation. ***International Journal of Technology Management***, 22(1-3): 83.

Chandler, A.D. 1962. ***Strategy and structure: Chapters in the history of the american enterprise***. Cambridge: MIT Press.

Clark, T. 2004. The fashion of management fashion: A surge too far? ***Organization The Interdisciplinary Journal of Organizationory and Society***, 11(2): 297.

Cole, R. 1986. The macropolitics of organizational change: A comparative analysis of the spread of small-group activities. ***Administrative Science Quarterly***, 30(4): 560.

Coleman, J.S. 1990. ***Foundations of social theory***. Cambridge: The Belknap Press of Harvard University Press.

Coleman, J. S. 1993. The design of organizations and the right to act. ***Sociological Forum***, 8(4): 527-546.

Colman, A.M. 2006. ***A dictionary of psychology*** (2nd ed. ed.). Oxford: Oxford University Press.

Colombo, M. G., & Delmastro, M. 2002. The determinants of organizational change and structural inertia: Technological and organizational factors. ***Journal of Economics & Management Strategy***, 11(4): 595-635.

Cyert, R.M., & March, J.G. 1963. ***A behavioral theory of the firm***. New Jersey: Prentice-Hall.

Damanpour, F., & Aravind, D. 2006. Product and process innovations: A review of organizational and environmental determinants. In J. Hage & M. Meeus (Ed.), ***Innovation, science, and institutional change***: 38. Oxford: Oxford University Press.

Damanpour, F., & Schneider, M. 2009. Characteristics of innovation and innovation adoption in public organizations: Assessing the role of managers. ***Journal of public administration research and theory***, 19(3): 495-522.

Damanpour, F., Walker, R., & Avellaneda, C. 2009. Combinative effects of innovation types and organizational performance: A longitudinal study of service organizations. ***The Journal of management studies***, 46(4): 650.

Damanpour, F. 1991. Organizational innovation: A meta-analysis of effects of determinants and moderators. ***Academy of Management Journal***, 34(3): 555-590.

Damanpour, F. 1996. Organizational complexity and innovation: Developing and testing multiple contingency models. ***Management Science***, 42(5): 693.

Damanpour, F., & Evan, W. M. 1984. Organizational innovation and performance: The problem of "organizational lag". ***Administrative Science Quarterly***, 29(3): 392-409.

Damanpour, F., Szabat, K. A., & Evan, W. M. 1989. The relationship between types of innovation and organizational performance. ***Journal of Management Studies***, 26(6): 587-601.

Dewar, R. D., & Dutton, J. E. 1986. The adoption of radical and incremental innovations: An empirical analysis. ***Management Science***, 32(11): 1422-1433.

Edquist, C., Hommen, L., & McKelvey, M. 2001. ***Innovation and employment: Process versus product innovation***. Cheltenham: Edward Elgar Publishing Limited.

Eggers, J., & Kaplan, S. 2009. Cognition and renewal: Comparing CEO and organizational effects on incumbent adaptation to technical change. ***Organization Science***, 20(2): 461-477.

Ehigie, B. O., & McAndrew, E. B. 2005. Innovation, diffusion and adoption of total quality management (TQM). ***Management Decision***, 43(6): 925-940.

Eisenhardt, K., & Martin, J. 2000. ***Dynamic capabilities: What are they?***. Hoboken, NJ: Wiley Sons.

Ettlie, J., Bridges, W., & OKeefe, R. 1984. Organization strategy and structural differences for radical versus incremental innovation. ***Management Science***, 30(6): 682.

Felin, T., & Foss, N. J. 2005. Strategic organization: A field in search of micro-foundations. ***Strategic Organization***, 3(4): 441-455.

Fligstein, N. 1985. The spread of the multidivisional form among large firms, 1919-1979. ***American Sociological Review***, 50(3): 377-391.

Ford, J. D., Ford, L. W., & McNamara, R. T. 2002. Resistance and the background conversations of change. ***Journal of Organizational Change Management***, 15(2): 105-121.

Foss, N. 2007. The emerging knowledge governance approach: Challenges and characteristics. ***Organization The Interdisciplinary Journal of Organizationory and Society***, 14(1): 29.

Foss, N. J. 2003. Selective intervention and internal hybrids: Interpreting and learning from the rise and decline of the oticon spaghetti organization. ***Organization Science***, 14(3): 331-349.

Garcia, R., & Calantone, R. 2002. ***A critical look at technological innovation typology and innovativeness terminology: A literature review***No longer published by Elsevier.

Gavetti, G. 2005. Cognition and hierarchy: Rethinking the microfoundations of capabilities' development. ***Organization Science***, 16(6): 599-617.

Giangreco, A., & Peccei, R. 2005. The nature and antecedents of middle manager resistance to change: Evidence from an italian context. ***International Journal of Human Resource Management***, 16(10): 1812-1829.

Gill, J., & Whittle, S. 1993. Management by panacea: Accounting for transience. ***The Journal of management studies***, 30(2): 281.

Greenwood, R., & Hinings, C. R. 1996. Understanding radical organizational change: Bringing together the old and the new institutionalism. ***Academy of Management Review***, 21(4): 1022-1054.

Guler, I., Guillén, M. F., & Macpherson, J. M. 2002. Global competition, institutions, and the diffusion of organizational practices: The international spread of ISO 9000 quality certificates. ***Administrative Science Quarterly***, 47(2): 207-232.

Hall, R.H. 1977. ***Organizations: Structure and process***. Englewood Cliffs: Prentice Hall.

Hambrick, D. C., & Mason, P. A. 1984. Upper echelons: The organization as a reflection of its top managers. ***The Academy of Management Review***, 9(2): 193-206.

Hamel, G. 2006. The why, what, and how of management innovation. ***Harvard business review***, 84(2): 72-84.

Hamel, G. 2007. ***The future of management***Harvard Business School Press.

Helfat, C.E., Finkelstein, S., Mitchell, W., Peteraf, M.A., Singh, H., Teece, D.J., & Winter, S.G. 2007. ***Dynamic capabilities: Understanding strategic change in organizations***. Malden, MA.: Blackwell Publishing.

Helfat, C., & Peteraf, M.A. (Eds.). 2010. ***Cognitive capabilities and the microfoundations of dynamic managerial capabilites***Conference Paper, August 2010, Academy of Management Conference, Montreal, Canada.

Helfat, C., & Peteraf, M. 2009. Understanding dynamic capabilities: Progress along a developmental path. ***Strategic organization***, 7(1): 91-102.

Imai, K., Ikujiro, N., & Takeuchi, H. 1985. Managing the new product development process: How japanese companies learn and unlearn. In R.H. Hayes, K. Clark, & C. Lorenz (Ed.), ***The uneasy alliance: Managing the productivity-technology dilemma***: 337-375. Boston: Harvard Business School Press.

Jackson, B. 1996. Re-engineering the sense of self: The manager and the management guru. ***The Journal of management studies***, 33(5): 571.

James, H.S.J., Klein, P.G., & Sykuta, M.E. (Eds.). 20th February 2010. ***The adoption, diffusion, and evolution of organizational form: Insights from the agrifood sector***Working Paper, University of Missouri.

Kieser, A. 1997. Rhetoric and myth in management fashion. ***Organization The Interdisciplinary Journal of Organizationory and Society***, 4(1): 49.

Kimberly, J. R., & Evanisko, M. J. 1981. Organizational innovation: The influence of individual, organizational, and contextual factors on hospital adoption of technological and administrative innovations. ***Academy of Management Journal***, 24(4): 689-713.

Knudsen, T., & Levinthal, D. A. 2007. Two faces of search: Alternative generation and alternative evaluation. ***Organization Science***, 18(1): 39-54.

Kossek, E. E. 1987. Human resources management innovation. ***Human resource management***, 26(1): 71-92.

Lazonick, W. 2010. The chandlerian corporation and the theory of innovative enterprise. ***Industrial and Corporate Change***, 19(2): 317-349.

Levinthal, D. A. 1997. Adaptation on rugged landscapes. ***Management Science***, 43(7): 934-950.

Light, P.C. 1998. ***Sustaining innovation: Creating nonprofit and government organizations that innovate naturally***. San Fransisco: Jossey-Bass.

March, J. G. 1996. Continuity and change in theories of organizational action. ***Administrative Science Quarterly***, 41(2): 278-287.

Massini, S., Lewin, A. Y., & Greve, H. R. 2005. Innovators and imitators: Organizational reference groups and adoption of organizational routines. ***Research Policy***, 34(10): 1550-1569.

Meeus, M., & Edquist, C. 2006. Introduction to part I. In J. Hage & M. Meeus (Ed.), ***Innovation, science, and institutional change***: 23. New York: Oxford University Press.

Meyer, A.G., Goes, J.B., & Brooks, G.G. 1993. Organizational reacting to hyperturbulence. In G.P. Huber & W. Glick (Ed.), ***Organizational change and redesign: Ideas and insights for improving performance***: 66-111. New York: Oxford University Press.

Meyer, C. B., & Stensaker, I. G. 2006. Developing capacity for change. ***Journal of Change Management***, 6(2): 217-231.

Meyer, J. P., Srinivas, E. S., Lal, J. B., & Topolnytsky, L. 2007. Employee commitment and support for an organizational change: Test of the three-component model in two cultures. ***Journal of Occupational & Organizational Psychology***, 80(2): 185-211.

Mintzberg, H., & Westley, F. 1992. Cycles of organizational change. ***Strategic Management Journal***, 13: 39-59.

Mol, M., & Birkinshaw, J. 2009. The sources of management innovation: When firms introduce new management practices. ***Journal of business research***, 62(12): 1269.

Mol, M., & Birkinshaw, J. 2007. ***Giant steps in management: Innovations that change the way you work***. Harlow: Financial Times Prentice Hall.

Nelson, R.R., & Winter, S.G. 1982. ***An evolutionary theory of economic change***. Cambridge: Belknap Press.

Nickerson, J. A., & Zenger, T. R. 2004. A knowledge-based theory of the firm--the problem-solving perspective. ***Organization Science***, 15(6): 617-632.

Ocasio, W. 1997. Towards an attention-based view of the firm. ***Strategic Management Journal***, 18: 187.

Oreg, S. 2003. Resistance to change: Developing an individual differences measuer. ***Journal of Applied Psychology***, 88(4): 680-693.

Palmer, I., & Dunford, R. 2008. Organizational change and the importance of embedded assumptions. ***British Journal of Management***, 19: S20-S32.

Pelz, D., & Munson, F. 1982. Originality level and the innovating process in organizations. ***Human Systems Management***, 3(3): 173-187.

Penrose, E.T. 1959. ***The theory of the growth of the firm***. Oxford: Oxford University Press.

Pettigrew, A. M., Woodman, R. W., & Cameron, K. S. 2001. Studying organizational change and development: Challenges for future research. ***Academy of Management Journal***, 44(4): 697-713.

Pfeffer, J. 1981. ***Power in organizations***. Marshfield: Pitman.

Pfeffer, J. 1992. Understanding power in organizations. ***California Management Review***, 34(2): 29-50.

Pierce, J.L., Boerner, C.S., & Teece, D.J. 2008. Dynamic capabilities, competence and the behavioral theory of the firm. In D.J. Teece (Ed.), ***Technological know-how, organizational capabilities, and strategic management***: 53-68. New Jersey: World Scientific.

Pitelis, C. N. 2007. A behavioral resource-based view of the firm: The synergy of cyert and march (1963) and penrose (1959). ***Organization Science***, 18(3): 478-490.

Poole, M.S., & Van de Ven, A.H. (Eds.). 2004a. ***Handbook of organizational change and innovation***. Oxford: Oxford University Press.

Poole, M.S., & Van de Ven, A.H. 2004b. Theories of organizational change and innovation processes. In M.S. Poole & A.H. Van de Ven (Ed.), ***Handbook of organizational change and innovatoin***: 374-398Oxford University Press.

Reger, R. K., Gustafson, L. T., Demarie, S. M., & Mullane, J. V. 1994. Reframing the organization: Why implementing total quality is easier said than done. ***Academy of Management Review***, 19(3): 565-584.

Reichers, A. E., Wanous, J. P., & Austin, J. T. 1997. Understanding and managing cynicism about organizational change. ***Academy of Management Executive***, 11(1): 48-59.

Rogers, E.M., & Shoemaker, F.F. 1971. ***Communication of innovations: A cross-cultural approach***. New York: Macmillan.

Rogers, E.M. 2003. ***Diffusion of innovations*** (5th ed.). London: Simon & Schuster.

Salancik, G. R., & Pfeffer, J. 1977. Who gets power - and how they hold on to it. ***Organizational Dynamics***, 5(3): 3-21.

Sanchez, R. 2000. Modular architectures, knowledge assets and organizational learning: New management processes for product creation. ***International Journal of Technology Management***, 19(6): 610-629.

Sanchez, R., & Mahoney, J. 1996. Modularity, flexibility, and knowledge management in product and organization design. ***Strategic Management Journal***, 17: 63-76.

Santos, M. V., & Garcia, M. T. 2006. Organizational change: The role of managers' mental models. ***Journal of Change Management***, 6(3): 305-320.

Scott, W.R. 1995. ***Institutions and organizations***. Thousand Oaks: Sage Publications.

Simon, H.A. 1947. ***Administrative behavior: A study of decision-making processes in administrative organizations***. Chicago: Macmillan.

Simon, H. A. 1962. The architecture of complexity. ***Proceedings of the American Philosophical Society***, 106(6): 467-482.

Stieglitz, N., & Heine, K. 2007. Innovations and the role of complementarities in a strategic theory of the firm. ***Strategic Management Journal***, 28(1): 1-15.

Strebel, P. 1996. Why do employees resist change? ***Harvard business review***, 74(3): 86-92.

Suddaby, R. 2010. Construct clarity in theories of management and organization. ***The Academy of Management Review***, 35(3): 346-357.

Teece, D. J. 1980. The diffusion of an administrative innovation. ***Management Science***, 26(5): 464-470.

Teece, D. J. 2007. Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. ***Strategic Management Journal***, 28(13): 1319-1350.

Teece, D. J., Pisano, G., & Shuen, A. 1997. Dynamic capabilities and strategic management. ***Strategic Management Journal***, 18(7): 509-533.

Teece, D., & Pisano, G. 1994. The dynamic capabilities of firms: An introduction. ***Industrial & Corporate Change***, 3(3): 537-556.

Tidd, J., Bessant, J., & Pavitt, K. 2001. ***Managing innovation, integrating technological, market and organizational change***. Chichester: J. Wiley and Sons.

Tornatzky, L., & Klein, K. 1982. Innovation characteristics and innovation adoption-implementation: A meta-analysis of findings. ***IEEE Transactions on Engineering Management***, 29(1): 28.

Tushman, M., & Anderson, P. 1986. Technological discontinuities and organizational environments. ***Administrative Science Quarterly***, 31(3): 439.

Urabe, K., Child, J., & Kagono, T. 1988. ***Innovation and management: International comparisons***. Berlin: de Gruyter.

Utterback, J., & Abernathy, W. 1975. A dynamic model of process and product innovation. ***The International Journal of Management Science***, 3(6): 639.

Vise, D.A., & Malseed, M. 2005. ***The google story***. New York: Delacorte Press.

Weick, K. E., & Quinn, R. E. 1999. Organizational change and development. ***Annual Review of Psychology***, 50(1): 361.

Weick, K. E., & Roberts, K. H. 1993. Collective mind in organizations: Heedful interrelating on flight decks. ***Administrative Science Quarterly***, 38(3): 357-381.

Wernerfelt, B. 1984. A resource-based view of the firm. ***Strategic Management Journal***, 5(2): 171-180.

Winter, S. G. 2000. The satisficing principle in capability learning. ***Strategic Management Journal***, 21(10): 981.

Winter, S. G. 2003. Understanding dynamic capabilities. ***Strategic Management Journal***, 24(10): 991-995.

Wolfe, R. 1994. Organizational innovation - review, critique and suggested research directions. ***The Journal of management studies***, 31(3): 405.

Zbaracki, M. 1998. ***The rhetoric and reality of total quality management***. Ithaca, N.Y.: Cornell University, Johnson Graduate School.

Zollo, M., & Winter, S. G. 2002. Deliberate learning and the evolution of dynamic capabilities. ***Organization Science***, 13(3): 339-351.

-

SMG – Working Papers
www.cbs.dk/smg
2003

2003-1: Nicolai J. Foss, Kenneth Husted, Snejina Michailova, and Torben Pedersen: Governing Knowledge Processes: Theoretical Foundations and Research Opportunities.

2003-2: Yves Doz, Nicolai J. Foss, Stefanie Lenway, Marjorie Lyles, Silvia Massini, Thomas P. Murtha and Torben Pedersen: Future Frontiers in International Management Research: Innovation, Knowledge Creation, and Change in Multinational Companies.

2003-3: Snejina Michailova and Kate Hutchings: The Impact of In-Groups and Out-Groups on Knowledge Sharing in Russia and China CKG Working Paper.

2003-4: Nicolai J. Foss and Torben Pedersen: The MNC as a Knowledge Structure: The Roles of Knowledge Sources and Organizational Instruments in MNC Knowledge Management CKG Working Paper.

2003-5: Kirsten Foss, Nicolai J. Foss and Xosé H. Vázquez-Vicente: "Tying the Manager's Hands": How Firms Can Make Credible Commitments That Make Opportunistic Managerial Intervention Less Likely CKG Working Paper.

2003-6: Marjorie Lyles, Torben Pedersen and Bent Petersen: Knowledge Gaps: The Case of Knowledge about Foreign Entry.

2003-7: Kirsten Foss and Nicolai J. Foss: The Limits to Designed Orders: Authority under "Distributed Knowledge" CKG Working Paper.

2003-8: Jens Gammelgaard and Torben Pedersen: Internal versus External Knowledge Sourcing of Subsidiaries - An Organizational Trade-Off.

2003-9: Kate Hutchings and Snejina Michailova: Facilitating Knowledge Sharing in Russian and Chinese Subsidiaries: The Importance of Groups and Personal Networks Accepted for publication in *Journal of Knowledge Management.*

2003-10: Volker Mahnke, Torben Pedersen and Markus Verzin: The Impact of Knowledge Management on MNC Subsidiary Performance: the Role of Absorptive Capacity CKG Working Paper.

2003-11: Tomas Hellström and Kenneth Husted: Mapping Knowledge and Intellectual Capital in Academic Environments: A Focus Group Study Accepted for publication in *Journal of Intellectual Capital* CKG Working Paper.

2003-12: Nicolai J Foss: Cognition and Motivation in the Theory of the Firm: Interaction or "Never the Twain Shall Meet"? Accepted for publication in *Journal des Economistes et des Etudes Humaines* CKG Working Paper.

2003-13: Dana Minbaeva and Snejina Michailova: Knowledge Transfer and Expatriation Practices in MNCs: The Role of Disseminative Capacity**.**

2003-14: Christian Vintergaard and Kenneth Husted: Enhancing Selective Capacity Through Venture Bases**.**

2004

2004-1: Nicolai J. Foss: Knowledge and Organization in the Theory of the Multinational Corporation: Some Foundational Issues

2004-2: Dana B. Minbaeva: HRM Practices and MNC Knowledge Transfer

2004-3: Bo Bernhard Nielsen and Snejina Michailova: Toward a Phase-Model of Global Knowledge Management Systems in Multinational Corporations

2004-4: Kirsten Foss & Nicolai J Foss: The Next Step in the Evolution of the RBV: Integration with Transaction Cost Economics

2004-5: Teppo Felin & Nicolai J. Foss: Methodological Individualism and the Organizational Capabilities Approach

2004-6: Jens Gammelgaard, Kenneth Husted, Snejina Michailova: Knowledge-sharing Behavior and Post-acquisition Integration Failure

2004-7: Jens Gammelgaard: Multinational Exploration of Acquired R&D Activities

2004-8: Christoph Dörrenbächer & Jens Gammelgaard: Subsidiary Upgrading? Strategic Inertia in the Development of German-owned Subsidiaries in Hungary

2004-9: Kirsten Foss & Nicolai J. Foss: Resources and Transaction Costs: How the Economics of Property Rights Furthers the Resource-based View

2004-10: Jens Gammelgaard & Thomas Ritter: The Knowledge Retrieval Matrix: Codification and Personification as Separate Strategies

2004-11: Nicolai J. Foss & Peter G. Klein: Entrepreneurship and the Economic Theory of the Firm: Any Gains from Trade?

2004-12: Akshey Gupta & Snejina Michailova: Knowledge Sharing in Knowledge-Intensive Firms: Opportunities and Limitations of Knowledge Codification

2004-13: Snejina Michailova & Kate Hutchings: Knowledge Sharing and National Culture: A Comparison Between China and Russia

2005

2005-1: Keld Laursen & Ammon Salter: My Precious - The Role of Appropriability Strategies in Shaping Innovative Performance

2005-2: Nicolai J. Foss & Peter G. Klein: The Theory of the Firm and Its Critics: A Stocktaking and Assessment

2005-3: Lars Bo Jeppesen & Lars Frederiksen: Why Firm-Established User Communities Work for Innovation: The Personal Attributes of Innovative Users in the Case of Computer-Controlled Music

2005-4: Dana B. Minbaeva: Negative Impact of HRM Complementarity on Knowledge Transfer in MNCs

2005-5: Kirsten Foss, Nicolai J. Foss, Peter G. Klein & Sandra K. Klein: Austrian Capital

Theory and the Link Between Entrepreneurship and the Theory of the Firm

2005-1: Nicolai J. Foss: The Knowledge Governance Approach

2005-2: Torben J. Andersen: Capital Structure, Environmental Dynamism, Innovation Strategy, and Strategic Risk Management

2005-3: Torben J. Andersen: A Strategic Risk Management Framework for Multinational Enterprise

2005-4: Peter Holdt Christensen: Facilitating Knowledge Sharing: A Conceptual Framework

2005-5 Kirsten Foss & Nicolai J. Foss: Hands Off! How Organizational Design Can Make Delegation Credible

2005-6 Marjorie A. Lyles, Torben Pedersen & Bent Petersen: Closing the Knowledge Gap in Foreign Markets - A Learning Perspective

2005-7 Christian Geisler Asmussen, Torben Pedersen & Bent Petersen: How do we Capture "Global Specialization" when Measuring Firms' Degree of internationalization?

2005-8 Kirsten Foss & Nicolai J. Foss: Simon on Problem-Solving: Implications for New Organizational Forms

2005-9 Birgitte Grøgaard, Carmine Gioia & Gabriel R.G. Benito: An Empirical Investigation of the Role of Industry Factors in the Internationalization Patterns of Firms

2005-10 Torben J. Andersen: The Performance and Risk Management Implications of Multinationality: An Industry Perspective

2005-11 Nicolai J. Foss: The Scientific Progress in Strategic Management: The case of the Resource-based view

2005-12 Koen H. Heimeriks: Alliance Capability as a Mediator Between Experience and Alliance Performance: An Empirical Investigation Into the Alliance Capability Development Process

2005-13 Koen H. Heimeriks, Geert Duysters & Wim Vanhaverbeke: Developing Alliance Capabilities: An Empirical Study

2005-14 JC Spender: Management, Rational or Creative? A Knowledge-Based Discussion

2006

2006-1: Nicolai J. Foss & Peter G. Klein: The Emergence of the Modern Theory of the Firm

2006-2: Teppo Felin & Nicolai J. Foss: Individuals and Organizations: Thoughts on a Micro-Foundations Project for Strategic Management and Organizational Analysis

2006-3: Volker Mahnke, Torben Pedersen & Markus Venzin: Does Knowledge Sharing

Pay? An MNC Subsidiary Perspective on Knowledge Outflows

2006-4: Torben Pedersen: Determining Factors of Subsidiary Development

2006-5 Ibuki Ishikawa: The Source of Competitive Advantage and Entrepreneurial Judgment in the RBV: Insights from the Austrian School Perspective

2006-6 Nicolai J. Foss & Ibuki Ishikawa: Towards a Dynamic Resource-Based View: Insights from Austrian Capital and Entrepreneurship Theory

2006-7 Kirsten Foss & Nicolai J. Foss: Entrepreneurship, Transaction Costs, and Resource Attributes

2006-8 Kirsten Foss, Nicolai J. Foss & Peter G. Klein: Original and Derived Judgement: An Entrepreneurial Theory of Economic Organization

2006-9 Mia Reinholt: No More Polarization, Please! Towards a More Nuanced Perspective on Motivation in Organizations

2006-10 Angelika Lindstrand, Sara Melen & Emilia Rovira: Turning social capital into business? A study of Swedish biotech firms' international expansion

2006-11 Christian Geisler Asmussen, Torben Pedersen & Charles Dhanaraj: Evolution of Subsidiary Competences: Extending the Diamond Network Model

2006-12 John Holt, William R. Purcell, Sidney J. Gray & Torben Pedersen: Decision Factors Influencing MNEs Regional Headquarters Location Selection Strategies

2006-13 Peter Maskell, Torben Pedersen, Bent Petersen & Jens Dick-Nielsen: Learning Paths to Offshore Outsourcing - From Cost Reduction to Knowledge Seeking

2006-14 Christian Geisler Asmussen: Local, Regional or Global? Quantifying MNC Geographic Scope

2006-15 Christian Bjørnskov & Nicolai J. Foss: Economic Freedom and Entrepreneurial Activity: Some Cross-Country Evidence

2006-16 Nicolai J. Foss & Giampaolo Garzarelli: Institutions as Knowledge Capital: Ludwig M. Lachmann's Interpretative Institutionalism

2006-17 Koen H. Heimriks & Jeffrey J. Reuer: How to Build Alliance Capabilities

2006-18 Nicolai J. Foss, Peter G. Klein, Yasemin Y. Kor & Joseph T. Mahoney: Entrepreneurship, Subjectivism, and the Resource – Based View: Towards a New Synthesis

2006-19 Steven Globerman & Bo B. Nielsen: Equity Versus Non-Equity International Strategic Alliances: The Role of Host Country Governance

2007

2007-1 Peter Abell, Teppo Felin & Nicolai J. Foss: Building Micro-Foundations for the Routines, Capabilities, and Performance Links

2007-2 Michael W. Hansen, Torben Pedersen & Bent Petersen: MNC Strategies and Linkage Effects in Developing Countries

2007-3 Niron Hashai, Christian G. Asmussen, Gabriel R.G. Benito & Bent Petersen: Predicting the Diversity of Foreign Entry Modes

2007-4 Peter D. Ørberg Jensen & Torben Pedersen: Whether and What to Offshore?

2007-5 Ram Mudambi & Torben Pedersen: Agency Theory and Resource Dependency Theory: Complementary Explanations for Subsidiary Power in Multinational Corporations

2007-6 Nicolai J. Foss: Strategic Belief Management

2007-7 Nicolai J. Foss: Theory of Science Perspectives on Strategic Management Research: Debates and a Novel View

2007-8 Dana B. Minbaeva: HRM Practices and Knowledge Transfer in MNCs

2007-9 Nicolai J. Foss: Knowledge Governance in a Dynamic Global Context: The Center for Strategic Management and Globalization at the Copenhagen Business School

2007-10 Paola Gritti & Nicolai J. Foss: Customer Satisfaction and Competencies: An Econometric Study of an Italian Bank

2007-11 Nicolai J. Foss & Peter G. Klein: Organizational Governance

2007-12 Torben Juul Andersen & Bo Bernhard Nielsen: The Effective Ambidextrous Organization: A Model of Integrative Strategy Making Processes.

2008

2008-1 Kirsten Foss & Nicolai J. Foss: Managerial Authority When Knowledge is Distributed: A Knowledge Governance Perspective

2008-2 Nicolai J. Foss: Human Capital and Transaction Cost Economics.

2008-3 Nicolai J. Foss & Peter G. Klein: Entrepreneurship and Heterogeneous Capital.

2008-4 Nicolai J. Foss & Peter G. Klein: The Need for an Entrepreneurial Theory of the Firm.

2008-5 Nicolai J. Foss & Peter G. Klein: Entrepreneurship: From Opportunity Discovery to Judgment.

2008-6 Mie Harder: How do Rewards and Management Styles Influence the Motivation to Share Knowledge?

2008-7 Bent Petersen, Lawrence S. Welch & Gabriel R.G. Benito: Managing the Internalisation Process – A Theoretical Perspective.

2008-8 Torben Juul Andersen: Multinational Performance and Risk Management Effects: Capital Structure Contingencies.

2008-9 Bo Bernard Nielsen: Strategic Fit and the Role of Contractual and Procedural Governance in Alliances: A Dynamic Perspective.

2008-10 Line Gry Knudsen & Bo Bernhard Nielsen: Collaborative Capability in R&D Alliances: Exploring the Link between Organizational and Individual level Factors.

2008-11 Torben Juul Andersen & Mahesh P. Joshi: Strategic Orientations of Internationalizing Firms: A Comparative Analysis of Firms Operating in Technology Intensive and Common Goods Industries.

2008-12 Dana Minbaeva: HRM Practices Affecting Extrinsic and Intrinsic Motivation of Knowledge Receivers and their Effect on Intra-MNC Knowledge Transfer.

2008-13 Steen E. Navrbjerg & Dana Minbaeva: HRM and IR in Multinational Corporations: Uneasy Bedfellows?

2008-14 Kirsten Foss & Nicolai J. Foss: Hayekian Knowledge Problems in Organizational Theory.

2008-15 Torben Juul Andersen: Multinational Performance Relationships and Industry Context.

2008-16 Larissa Rabbiosi: The Impact of Subsidiary Autonomy on MNE Knowledge Transfer: Resolving the Debate.

2008-17 Line Gry Knudsen & Bo Bernhard Nielsen: Organizational and Individual Level Antecedents of Procedural Governance in Knowledge Sharing Alliances.

2008-18 Kirsten Foss & Nicolai J. Foss: Understanding Opportunity Discovery and Sustainable Advantage: The Role of Transaction Costs and Property Rights.

2008-19 Teppo Felin & Nicolai J. Foss: Social Reality, The Boundaries of Self-fulfilling Prophecy, and Economics.

2008-20 Yves Dos, Nicolai J. Foss & José Santos: A Knowledge System Approach to the Multinational Company: Conceptual Grounding and Implications for Research

2008-21 Sabina Nielsen & Bo Bernhard Nielsen: Why do Firms Employ foreigners on Their Top Management Teams? A Multi-Level Exploration of Individual and Firm Level Antecedents

2008-22 Nicolai J. Foss: Review of Anders Christian Hansen's "Uden for hovedstrømmen – Alternative strømninger i økonomisk teori"

2008-23 Nicolai J. Foss: Knowledge, Economic Organization, and Property Rights

2008-24 Sjoerd Beugelsdijk, Torben Pedersen & Bent Petersen: Is There a Trend Towards Global Value Chain Specialization? – An Examination of Cross Border Sales of US Foreign Affiliates

2008-25 Vikas Kumar, Torben Pedersen & Alessandro Zattoni: The performance of business group firms during institutional transition: A longtitudinal study of Indian firms

2008-26 Sabina Nielsen & Bo B. Nielsen: The effects of TMT and Board Nationality Diversity and Compensation on Firm Performance

2008-27 Bo B. Nielsen & Sabina Nielsen: International Diversification Strategy and Firm Performance: A Multi-Level Analysis of Firm and Home Country Effects

2009

2009-1 Nicolai J. Foss: Alternative Research Strategies in the Knowledge Movement: From Macro Bias to Micro-Foundations and Multi-Level Explanation

2009-2 Nicolai J. Foss & Peter G. Klein: Entrepreneurial Alertness and Opportunity Discovery: Origins, Attributes, Critique

2009-3 Nicolai J. Foss & Dana B. Minbaeva: Governing Knowledge: The Strategic Human Resource Management Dimension

2009-4 Nils Stieglitz & Nicolai J. Foss: Opportunities and New Business Models: Transaction Cost and Property Rights Perspectives on Entrepreneurships

2009-5 Torben Pedersen: Vestas Wind Systems A/S: Exploiting Global R&D Synergies

2009-6 Rajshree Agarwal, Jay B. Barney, Nicolai J. Foss & Peter G. Klein: Heterogeneous Resources and the Financial Crisis: Implications of Strategic Management Theory

2009-7 Jasper J. Hotho: A Measure of Comparative Institutional Distance

2009-8 Bo B. Nielsen & Sabina Nielsen: The Impact of Top Management Team Nationality Diversity and International Experience on Foreign Entry Mode

2009-9 Teppo Felin & Nicolai Juul Foss: Experience and Repetition as Antecedents of Organizational Routines and Capabilities: A Critique of Behaviorist and Empiricist Approaches

2009-10 Henk W. Volberda, Nicolai J. Foss & Marjorie E. Lyles: Absorbing the Concept of Absorptive Capacity: How To Realize Its Potential in the Organization Field

2009-11 Jan Stentoft Arlbjørn, Brian Vejrum Wæhrens, John Johansen & Torben Pedersen: Produktion i Danmark eller offshoring/outsourcing: Ledelsesmæssige udfordringer

2009-12 Torben Pedersen: The 30 Largest Firms in Denmark

2010

2010-1 Dana B. Minbaeva, Kristiina Mäkelä & Larissa Rabbiosi: Explaining Intra-organizational Knowledge Transfer at the Individual Level

2010-2 Dana B.Minbaeva & Torben Pedersen: Governing Individual Knowledge Sharing Behavior

2010-3 Nicolai J. Foss & Peter G. Klein: Alertness, Judgment, and the Antecedents of Entrepreneurship

2010-4 Nicolai J.Foss & Joseph T.Mahoney: Exploring Knowledge Governance

2010-5 Jasper J. Hotho, Florian Becker-Ritterspach & Ayse Saka-Helmhout: Enriching Absorptive Capacity Through Social Interaction

2010-6 Nicolai J. Foss & Bo B. Nielsen: Researching Collaborative Advantage: Some Conceptual and Multi-level Issues

2010-7 Nicolai J. Foss & Nils Stieglitz: Modern Resource-Based Theory(ies)

2010-8 Christian Bjørnskov & Nicolai J. Foss: Do Economic Freedom and Entrepreneurship Impact Total Factor Productivity?

2010-9 Gabriel R.G. Benito, Bent Petersen & Lawrence S. Welch: Mode Combinations and International Operations: Theoretical Issues and an Empirical Investigation

2011

2011-1 Peter D. Ørberg Jensen & Bent Petersen: Human Asset Internalization and Global Sourcing of Services – A Strategic Management Analysis on Activity-level

2011-2 Mie Harder: Management Innovation Capabilities: A Typology and Propositions for Management Innovation Research