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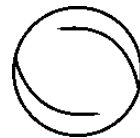
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Abstract

Drawing on two in-depth case studies, this paper develops a conceptual model of how absorptive capacity routines and their underlying processes of evolution influence the efficiency of management innovation adaptation processes. The model highlights three important relations. First, although different configurations of absorptive capacity routines can lead to the successful implementation of the same management innovation – namely the reconfiguration of firms' value chains through sourcing of business services from offshore countries – the sequence of developing routines, their adequacy, and the interdependencies fit between routines partly explain how rapidly and seamlessly a firm is able to implement a management innovation. Second, we identify managerial attention and organizational legitimacy as two critical and interrelated sources of variation of the efficiency in the process of adopting and adapting management innovations. Finally, attention direction by a top-level internal change agent is more effective than local problemistic search to foster managerial attention and organizational legitimacy to both the management innovation to be adopted, and the need to develop and put into practice an appropriate set of absorptive capacity routines.

Keywords

absorptive capacity routines, global sourcing of business services, management innovation, managerial attention, organizational legitimacy, process efficiency

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Introduction

Innovation studies have long focused on technological innovations (e.g., Geroski, 2000), their nature (e.g., Pavitt, 1984), and the processes underlying their development, from invention to diffusion (e.g., Rogers, 1962). More recently, scholars have further distinguished the typologies of innovation, investigating innovation in services (Miles, 1999), organizational and management innovation (Birkinshaw, Hamel & Mol, 2008; Damanpour, 1991; Massini, Lewin, Numagami & Pettigrew, 2002; Pettigrew et al., 2003) and new business models (Chesbrough, 2010; Zott & Amit, 2007). But in comparison to technological innovation, management innovation remains under-researched (Crossan & Apaydin, 2010; Volberda, Van Den Bosch & Heij, 2013).

For instance, although the notion of absorptive capacity (AC) (Cohen & Levinthal, 1990) as an enabler of innovation has now been fully accepted in the management literature (Lane, Koka & Pathak, 2006), most studies on AC have been undertaken in the context of technological innovations. Moreover, whether in management or technological innovation contexts, recent routine-based models of AC (e.g. Lewin, Massini & Peeters, 2011) are still missing empirical applications. And despite the vast literature on AC, we know very little about the processes underlying the evolution of firm-specific configurations of AC routines, and whether those underlying processes matter for the routines' performance. This study therefore offers the first attempt to link AC routines, and the processes underlying their evolution, to the impact of AC routines on innovation performance, with a focus on management innovation processes. In addition, by studying two companies with very different adoption trajectories for the same management innovation, we are able to look beyond the determinants of success or failure with the adoption of an innovation –traditionally the focus of adoption studies (e.g., Dodgson, Gann & Salter, 2008; Schilling, 2008; Tidd & Bessant, 2009) – to research the efficiency of management innovation processes in terms of time and effort to achieve satisfactory outcome.

The analysis presented in the paper derives from an in-depth comparative study of two large multinational companies headquartered in the United States, leaders in their respective sectors (i.e. electric motors and industrial processes, and Internet and networking technologies). The specific management innovation which is the focus of this paper is the recent and rapidly growing practice involving the reconfiguration of firms' value chain through global sourcing of business services from offshore locations – i.e. 'global sourcing'. Both companies initiated global sourcing of business services in 2001 when the practice was still in its infancy, and both companies succeeded in adopting the innovation. But for one company, adopting and adapting to fit the new practice to the organization (Ansari, Fiss & Zajac, 2010) was relatively seamless and rapid, while this was much longer and more painful for the other company. The comparative case study suggests that the difference in efficiency of the implementation process is due to the fact that, in one of the companies, the new practice lacked the managerial attention and organizational legitimacy that allowed the other company to quickly and smoothly develop the AC routines needed to drive the adoption and adaptation process. Indeed, we observe that attention direction (Ocasio, 1997) by a top- or C-level internal change agent¹ in one company has been more effective than bottom-up local problemistic search at the other company to optimize the sequence of development of AC practised routines as well as their adequacy and interdependency fit (Caspin-Wagner, Lewin, Massini & Peeters, 2013). The reason is that attention-direction efforts, as opposed to problemistic search processes, allow channelling the attention of organizational members towards the process of adopting a management innovation and the need to optimize the configuration of AC routines. Moreover, the organizational level (C-level versus local) where the attention-direction efforts of internal change agents originate directly relates to the organizational legitimacy of attending the innovation process.

Importantly, similarly to Tuckman's (1994) account of the adoption of Total Quality Management (see also Mueller & Carter, 2005), and to the notion of soft domination in Courpasson (2000), the effect we observe does not result from the formal power of a C-level executive to decide on and impose a course of actions. What we observe results from the ability of the attention-direction change agent to create an organizational context that encourages and facilitates local initiatives to experiment with the management innovation. The C-level attention-direction process we document does not prevent local variation and problemistic search. It fosters it and adds to it.

The model we propose therefore points to a limitation of the equifinality of firm-specific AC routines (see also Lewin et al., 2011) and the crucial role that managerial attention and organizational legitimacy plays to explain differences in the implementation efficiency of management innovation processes. Specifically, equifinality of AC routines overlooks two sources of variation in the efficiency of management innovation processes. The first one originates from the AC practised routines themselves: how adequate they are for the purpose of the particular management innovation, the sequence of their development, and their interdependencies fit. The second source of variation results from the processes underlying the evolution of AC routines, which we find matter for the efficiency of the routines. In particular, C-level attention direction is more effective than local problemistic search, not because a C-level internal change agent is able to impose and control progress towards a certain course of actions, but because C-level attention direction is better at generating managerial attention and organizational legitimacy both for the management innovation to be adopted and for the need to develop and put into practice an appropriate set of AC routines. Hence, like other papers in the themed section, we contribute to the conversation on the role of managers as internal change agents in innovation adoption processes (e.g. Birkinshaw et al., 2008; Burgelman, 1983; Howell & Higgins, 1990). We show that internal change agents may not only serve different roles at different stages in the innovation adoption process (Birkinshaw et al., 2008), but that their influence depends also on their level in the organization. This is because the C-level versus local level at which internal change agents operate affects their ability to foster the legitimacy of the innovation and the attention that it receives in the organization. Finally, our study reveals that in addition to the agenda-setting process that Birkinshaw et al. (2008) highlight, the practice of AC routines – external AC routines especially – is a channel for internal and external agents to jointly influence innovation adoption processes.

The next section of the paper reviews relevant literature on management innovation and AC routines and capabilities. It is followed by a description of the specific management innovation considered in this paper, the case study methodology and data collection. The fourth section documents the AC routines that were critical in the implementation of the global sourcing management innovation at both companies. The fifth section compares the configurations of AC routines and the processes that guided their evolution in the two cases. In the sixth section we interpret the findings and propose a model of how AC routines and underlying evolution processes impact the time efficiency of adopting and adapting a management innovation. We conclude the paper with a discussion of the study's contribution to organization research.

Theoretical Background

Efficiency of management innovation processes

In this paper we follow Birkinshaw et al.'s (2008) conceptualization of management innovation as a particular type of organizational change that concerns the management of the adopting organization and is intended to enhance firm performance (see also Damanpour, 1991). Management innovations can take the form of new management practices, processes, structures or techniques. In

comparison to technical innovations, management innovations tend to require greater adaptation to the specific innovating organization (see also Ansari et al., 2010), for two reasons: their intangible nature leaves more room for the subjective interpretation of organizational members; and they are characterized by high uncertainty of organizational outcomes (Birkinshaw et al., 2008; Damanpour, 1991). Moreover, product and process innovations have traditionally been measured in terms of probability of success (e.g. Sheremata, 2000), percentage of sales from new products (e.g. Laursen & Salter, 2006) and degree of innovativeness (e.g. Ettlie, Bridges & O'Keefe, 1984). Only a few authors have looked into the efficiency of the process of innovation (e.g. Bstieler, 2005; Tatikonda & Montoya-Weiss, 2001), referring for instance to the development and launch of new products with respect to firms' timing objectives. But the adoption and adaptation process of an innovation is an important dimension of innovation performance, especially in the case of intangible organization-specific management innovation (Birkinshaw et al., 2008; Damanpour & Aravind, 2011).

The efficiency of the innovation process differs from the concepts of time-to-market (e.g. Cohen, Eliashberg & Ho, 1996; Dougherty, 1992; Gatignon, Tushman, Smith & Anderson, 2002) and early versus late adopters (e.g. Lewin & Massini, 2003; Massini, Lewin & Greve, 2005), which respectively address the product development time until market launch and difference between innovators and imitators in a population of adopters. Efficiency of the innovation process refers to the time and organizational effort needed to achieve a satisfactory outcome. It encompasses the idea that successful adoption and implementation of an innovation is time-dependent as a result of organizational and managerial factors rather than because of firms' technological, engineering and marketing capabilities. In this paper we provide empirical evidence of some of these organizational factors and develop a conceptual framework for their effect on the efficiency of management innovation processes.

AC routines, capabilities and innovation

In the last decade, the role of AC in developing new knowledge and innovation has been widely accepted in the management literature. AC is defined as the 'ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends' (Cohen & Levinthal, 1990, p. 128). Cohen and Levinthal further argue that AC mediates speed, frequency and magnitude of innovation and that the evolution of a firm's AC capabilities has a strong path dependency on the firm's prior R&D investment and knowledge base. The exponential growth of citations to the seminal papers by Cohen and Levinthal (1989, 1990) shows a clear consensus among innovation, organization and management scholars that AC is a fundamental requisite for innovation and change (e.g. Ahuja & Katila, 2001; Hill & Rothaermel, 2003; Lenox & King, 2004; Rothaermel & Alexandre, 2009; Tsai, 2001; see Lewin, Massini & Peeters, 2008, for a review).

Recent theoretical developments have described AC as a firm capability consisting of a bundle of organizational routines (e.g., Lane et al., 2006; Lewin et al., 2011; Volberda, Foss & Lyles, 2010; Zahra & George, 2002). Of particular interest to the present study is the routine-based model of Lewin et al. (2011), which serves as guide for the empirical part of the paper (see Figure 1). The authors develop a taxonomy of internal and external AC meta-routines (Feldman & Pentland, 2003; Nelson & Winter, 1982), expressed in organizations in the form of practised routines that underlie firms' AC capabilities. According to Lewin et al. (2011), meta-routines are higher-level routines that define the general, abstract purpose of routines and their conceptual foundation. They are expressed by practised routines in the form of habits, rules, standard operating procedures or heuristics (Cyert & March, 1963, March & Simon, 1958, Nelson & Winter, 1982; Simon, 1947) that are firm-specific, idiosyncratic and observable. Internal AC meta-routines involve the regulation of activities related to managing internal variation, selection and retention processes. They

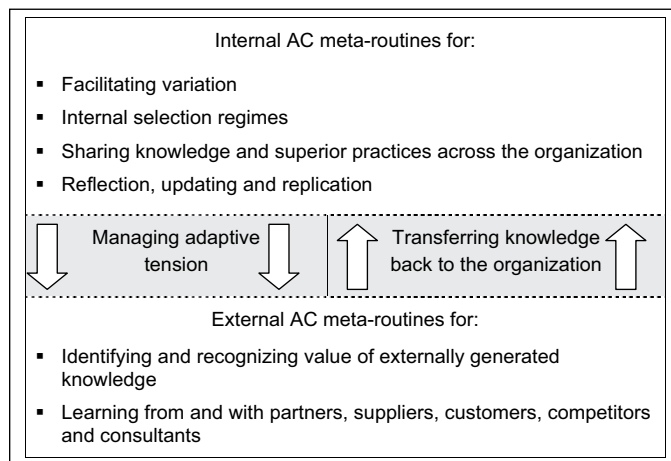


Figure 1. A Taxonomy of Internal and External AC Meta-routines.

Source: Adapted from Lewin, Massini and Peeters (2011).

include routines (formal and informal) for *facilitating variation* and enabling the emergence of new ideas within organizations; for selecting ideas for further development (design of *selection regime*); for *sharing, combining and recombining knowledge and superior practices* across the organization; and for *reflecting on, updating and replacing established practices*. External AC meta-routines are consistent with other recent models of AC, which focus on external sources of innovation and knowledge. They include routines for *identifying external knowledge* and for *learning from and with external organizations*. The taxonomy further includes two meta-routines at the interface between internal and external dimensions of AC. On the one hand, *managing adaptive tension* determines the strategic need for stimulating internal innovation processes and exploration of new ideas and good practices, in response to the innovative performance of the focal firm relative to other firms in the environment. On the other hand, the assimilation of externally acquired knowledge requires routines for *transferring the knowledge back to the organization*.

In the growing literature on AC capabilities and routines, the organizational processes underlying the evolution of AC routines remain under-explored. This paper presents empirical evidence on the evolution of AC routines in organizations, and more specifically on the consequences of firm-specific underlying processes within different organizations for the effectiveness of AC routines for adopting a management innovation.

The Empirical Context of Management Innovation: Global Sourcing of Business Services

The empirical part of the paper focuses on global sourcing of business services, i.e. the management practice that entails unbundling business services, processes and functions, and sourcing them offshore in support of domestic or global operations, either through captive organizations (*captive offshoring*) or through contractual arrangements with third-party providers in offshore locations (*offshore outsourcing*) (Apte & Mason, 1995; Doh, 2005; Kenney, Massini & Murtha, 2009; Manning, Massini & Lewin, 2008). Following early experiments in the 1990s, the practice has diffused quite rapidly, with firms initiating global sourcing across an increasingly diverse set of host countries and functional areas of the value chain (Jensen & Pedersen, 2011). Increasingly,

firms are considering 'slicing' their value chains (Contractor, Kumar, Kundu & Pedersen, 2010) to best locate every process (or bundle of processes) strategically, organizationally and for cost efficiency.

The reconfiguration of firms' value chains through global sourcing is more than just a change in the organization (Volberda et al., 2013). It requires managers to learn to coordinate globally dispersed value chain activities and develop new structures and processes to govern relationships with external providers and integrate externally sourced services with the services performed in house (e.g. Kumar, Van Fenema & Von Glinow, 2009). It is initiated in order to meet various organizational goals (Lewin & Peeters, 2006) and, although not always successful, has been found to have positive organizational outcomes in terms of, for instance, (1) cost reductions, access to qualified personnel, and flexibility gains (e.g. Contractor et al., 2010; Lewin, Massini & Peeters, 2009; Roza, Van Den Bosch & Volberda, 2011), (2) international competitiveness (Di Gregorio, Musteen & Thomas, 2009) and (3) technological innovation performance (Nieto & Rodríguez, 2011). It follows that global sourcing fits the definition of a management innovation as a new practice intended to enhance firm performance (see also Birkinshaw et al., 2008; Damanpour, 1991; Mol & Birkinshaw, 2009; Zbaracki, 1998).² But with the exception of anecdotal evidence, comprehensive research has yet to be undertaken on understanding the processes that account for why some companies have been highly effective in initiating and implementing this management innovation throughout their organization. The model we develop contributes to filling this gap.

Methodology

The paper reports on a comparative in-depth study involving two US-based multinationals, leaders in the electric motors and industrial processes sector and the Internet and networking technologies sector, respectively. Because the companies have not authorized disclosure of their identity, they are renamed Anderson and WorldLink. Specific individuals are referred to only by their job titles. The case study methodology allowed us to observe the evolution of AC routines and to track, in some cases almost in real time, their formation, adaptation and transformation.

Selection of cases

Potential company cases for this research were identified from participants in the workshops undertaken by the Offshoring Research Network research programme, an international network of scholars who since 2005 have collaborated on tracking and studying the dynamics and trends in global services sourcing. Unlike deductive studies based on random samples, in theory-building case studies the sample is chosen based on expected contribution to the building of theory (Eisenhardt, 1989b). As the inclusion of 'polar-types' in the sample constitutes a particularly powerful method for uncovering patterns and relationships within the data (Eisenhardt & Graebner, 2007), the theoretical sampling strategy that guided the selection of the cases was to choose two companies that shared important characteristics but at the same time differed significantly in the key construct of the study: time and organizational efforts to implement the global sourcing management innovation. The companies are both multinationals headquartered in the United States and leaders in their respective industries. Although the main industries in which the two companies operate are different, both cases concern global sourcing of service functions with strong technological content, which the companies initiated at a relatively early stage of the recent offshoring trend (2001). We also chose these particular two cases because the richness of data we could collect would allow tracing back AC routines associated with initial decisions to offshore and subsequent implementation of decisions, as well as the evolution of AC routines over time.

The quotes below from the management of both companies illustrate that, at the time of the interviews, both companies were highly satisfied with the outcome of their offshoring programme and can therefore be considered to have successfully implemented the management innovation:

We find that offshoring implementations continually exceed service-level expectations. People at SPM [the service provider] are very good people, partly because of a very good selection process. They are also excited about what they are doing. (CEO, Anderson Motor Equipment)

I am very satisfied with the transformations that have brought customer satisfaction to a very respectable and consistent level. I am also pleased that this has been achieved without increasing the cost of delivering the quality of technical support customers expect, which would have been the case had we followed the recommendation I was given when I joined the company to give up on offshoring and bring all technical support back in-house. I am also satisfied with the learning experience TS [Technical Services] has gone through, facing and resolving problems and challenges with realism and determination. (Head of Global Technical Services, WorldLink)

But although both firms eventually succeeded in implementing the global sourcing management innovation, their journeys to success, in terms of adoption and adaptation process, were very different. As described in the presentation of the case study material below, while WorldLink required significant time to achieve satisfactory results and went through a long and painful trial-and-error sequence, the process of adaptation at Anderson was much more organic, seamless and faster.

Presentation of the cases

Case study 1. Anderson Company is a public company that was founded in Chicago, Illinois, at the turn of the 20th century. At the time of the interviews the company employed more than 100,000 employees at approximately 240 locations in more than 145 countries. Anderson first adopted offshoring in 2001 as part of its 'E-Business Initiative', a larger strategic initiative aimed at understanding how IT and e-commerce could enable growth and improved services to customers. This was critical to a company whose historical focus on costs had limited the possibilities to develop new technologies as well as the importance it attributed to the customer in its management processes. Two programmes launched under the E-Business Initiative involved global sourcing. First, the customer support programme aimed to add new dimensions to Anderson's existing customer support activities, which could not be developed in a high-cost country like the US. Second, the engineering programme aimed at a substantial increase in Anderson's capacity to develop new products and technologies by adding lower-cost engineers to the existing engineering headcount of the company.

The customer support programme led Anderson to start sourcing technical support and other customer-related activities in the Philippines. Satisfaction with the initial experiments led to the programme's rapid expansion into other business processes in the areas of finance, accounting, and marketing and sales support activities. As part of the engineering programme, Anderson also started sourcing engineering activities in India and China. Early successes with these initiatives helped global sourcing gain acceptance and continue to diffuse smoothly across the divisions of the company.

Because the drive for the adoption of offshoring came from a corporate-wide initiative, we collected extensive data at that level of analysis. But because of the very large company size, we decided to focus particularly on one division that was a pioneer in the implementation of offshoring. Anderson Motor Equipment (AME), one of the 60 divisions of Anderson Company, is a leading manufacturer of electric motors, with applications in homes, businesses and manufacturing

processes. At the time of the interviews it employed more than 10,000 people producing approximately 300,000 motors daily in 21 locations.

Case study 2. WorldLink is a US east coast IT company created in the mid-1980s. In the 1990s, WorldLink engineers became leaders in the development of internet protocol (IP)-based networking technologies. When we conducted the study, WorldLink had more than 45,000 employees worldwide. Internally it is organized around 'technology groups' that are in turn organized in 'business units', each with profit and loss responsibility. Although some of the routines that will be discussed apply to the whole company, the present study focuses more particularly on the Technical Services (TS) organization, which supports all technology groups. Before TS began offshoring customer support services in 2001, WorldLink had already offshored the manufacturing of several components, but no service activities. After the burst of the dot.com bubble, WorldLink faced the challenge of dramatically reducing costs of its technical assistance centres (TACs). To deliver the expected lower costs, SPM, an international provider of business and technical services they were working with in the US, came up with a proposition to source part of WorldLink's TAC activities in Costa Rica. Out of necessity, WorldLink accepted the proposition. That was the beginning of global sourcing for WorldLink Technical Services. Soon after, other technical support centres opened in Mexico, India, the Philippines, Hungary and Jordan.

However, the rapid reduction in the cost of technical support activities came at the expense of customer satisfaction. Complaints were mounting, and the problem eventually came to the attention of the company's CEO, who urged the senior vice-president of technical support services to find a solution. Among managers in the technical support organization, the view had developed that service quality problems had resulted from the move to a global sourcing model without much control on the work practices of offshore service providers, and that if they reverted to their previous way of working they would be fine again. But an independent consultant who thoroughly analysed the situation concluded that they were experiencing 'management problems, not management in terms of individuals but management process problems' (independent consultant, WorldLink). That realization led to a major corrective plan that eventually proved the adoption of global sourcing to be a success from both cost savings and customer satisfaction perspectives – but only after a long and painful implementation process of more than three years.

Data collection

The design and implementation of data collection in the two cases followed the work of Bourgeois and Eisenhardt (1988), Eisenhardt and Bourgeois (1988) and Eisenhardt (1989a, 1989b). In both cases we interviewed multiple key informants involved in adoption of global sourcing both from decision-making and implementation standpoints in the US and at offshore sites. Interviewing informants at multiple hierarchical levels in the companies, different functional areas and geographic locations allows crosschecking and verifying the accuracy of the data collected, provides diversity of perspectives and minimizes biases (Eisenhardt & Graebner, 2007). It also leads to richer and more reliable emergent theory and validation of conceptual frameworks (Davis & Eisenhardt, 2011; Eisenhardt, 1989b).

Thanks to the support of the high-level management at both companies, we were able to interview 61 people (21 at Anderson and 40 at WorldLink) in different parts of the organizations, from front-line managers to senior managers up to the CEOs. Certain key informants were interviewed several times. Interviews followed a semi-structured protocol, which allowed probing for the same information from different interviewees, and mitigated informant bias by focusing interviews on relating chronologies of objective events, behaviours and facts (Davis & Eisenhardt, 2011), but

also allowed for some digression on specific issues that emerged during the discussion. Each interview lasted approximately one hour.

Of the three researchers involved in the study, two conducted the interviews and site visits during 2005 and 2006. Both took part in all discussions, with one mainly responsible for taking notes and the other leading the interviews. In addition to written notes and observations, each interview was recorded and transcribed. After each visit the two researchers exchanged views on what had been discussed during the meetings, how they interpreted what they had learned, and how they could link that to AC routines. The third researcher did not take part in site visits and helped maintain objective external interpretation of the other two researchers' findings.

To avoid biasing our findings with recollections of informants who attempt to rewrite history and embellish reality (Miles, 1979), we disclosed the ultimate objective of the study – i.e. to uncover firms' AC routines (or lack of AC routines) pertaining to the adoption of and success with the global sourcing management innovation – only after the interviews had been conducted. At the beginning of each interview, informants were told that the purpose of the study was to understand the then recent phenomenon of global sourcing of business services and global sourcing decisions and processes. The informants at both companies openly shared with us information about the decisions to initiate global sourcing of various activities, the reasons for and context of these decisions, the trial-and-error and learning processes in implementing the decisions, and how decisions and their implementation evolved over time. We took great care to triangulate the information by discussing same event with different persons and referring to internal archival data (presentations, reports and memos) when available. Finally, we travelled to offshore locations (India, China and the Philippines) and interviewed informants in those locations, including at the service providers' premises when appropriate. To complement the site visits and interviews we collected additional material providing both quantitative and qualitative information on the specific relocated projects (type, size, location, partner, activities, etc.), their performance (team evaluations, customer satisfaction surveys, etc.) and the organizational routines put in place to support the global sourcing innovation.

Comparison of the cases

In line with the objective of our study, the case study material was used to compare the two company cases on two main dimensions. First, using Lewin et al.'s (2011) typology as a guiding framework, we systematically identified, classified and compared the actual AC practised routines (or absence of AC routines) that played a role in the implementation process of the management innovation. Second, we documented and compared the underlying processes that resulted in adapting the configuration of AC routines at both companies over time, and related the observed differences and similarities to the overall efficiency of implementing the management innovation. Finally, we paid close attention to the role that organizational antecedents may have played in explaining the different dynamics observed.

AC Routines for Implementing Global Sourcing of Services

As a way to track and report the development and evolution of the AC routines, we distinguish between routines that were implemented *early* in the process of adopting global sourcing in 2001 and 2002 or that were already in place when it was first decided to adopt global sourcing, from routines that were developed at a *later* stage (between 2003 and 2006) as the companies were accumulating experience, and one was struggling to achieve expected benefits (WorldLink) while the other was satisfied with the outcomes and was seeking to diffuse the new practice (Anderson). To

contain the scope of the paper and ensure sufficient focus, we restrict our study to AC routines that played a significant role in the implementation of the particular global sourcing management innovation under scrutiny. The AC routines discussed below are synthesized in Table 1.

Early-stage AC routines at Anderson

As part of the two corporate-wide programmes involving global sourcing, senior managers at Anderson developed a shared understanding and agreement that the intent and opportunity of improving customer services and growing the company business would guide whether the company was to adopt global sourcing in a particular division or functional area, and what exact activities would be sourced offshore. All opportunities were evaluated against that criterion of growth and better service, which turned out to be a critical element of internal selection regime routines. Several interviewees shared with us this common understanding, as reflected in the following two quotes (among others):

Offshoring³ has always been considered as an engine of growth and not a mere means to cut costs by replacing high-paid by low-paid jobs. Offshoring enables us to do things we would not be able to do otherwise. And this eventually changes our business model. (Executive VP of Anderson Company and CEO of the Electric Motor division AME)

The objective is to be available for customers. There are a number of things we do and that we would not normally do. For example, we run an order status report. People at SPM go through orders and try to identify where there may be some trouble with manufacturing. If they identify an issue they proactively contact manufacturing. This is something we would normally not have time to do but we are now making time to improve the service level. (AME Director of Customer Service)

The routine for selecting global sourcing projects based on their capacity to improve customer service or grow the business complemented another internal routine aimed at facilitating variation by encouraging managers to consider and explore global sourcing in their respective divisions. From the beginning the company maintained the historical rule to keep the ratio of engineering costs to sales constant. With the cost of engineering constantly increasing while demand in most traditional sectors of the company was stagnating, that ratio created very tough constraints on the possibilities to recruit people to work on new technologies and new projects to grow the business, unless divisions' managers reorganized engineering work to leverage the large pool of low-cost qualified engineers in emerging economies. The VP and chief technology officer (CTO) of AME division described how the constant engineering cost to sales ratio fostered the adoption and diffusion of global sourcing throughout the company:

Over the last years before 2001, fiscal responsibilities had forced [AME] business leaders to do more with less. So basically they had two options. Either they continued to do their job with fewer people, or they could have more people, but not in the US. This was the 'carrot' that made people interested in offshoring. ... Since the beginning offshoring has been presented as an engine of growth.

Another routine for facilitating variation was to make it as easy as possible for managers of all Anderson's divisions to pilot a small-scale project using a common infrastructure at their service provider's premises in the Philippines. So whenever a manager wanted to pilot a two- or three-person project, the provider organized a process of rotating employees for the new team to benefit from the experience of employees who had already worked on other (similar if possible) projects for the company. The routine was adopted very early in the process of implementing global sourcing, and was still in use at the time of the interviews. Besides facilitating variation, the routine is

Table 1. Examples of Practised AC routines at Anderson and WorldLink.

	Anderson	WorldLink
Early stage	<ul style="list-style-type: none"> Improving services and/or growing business as shared objective driving all global sourcing decisions^{Int} Use of constant ratio of engineering costs to sales as metric to foster global sourcing initiatives^{Int} Rotation of employees within common offshore infrastructure to facilitate global sourcing, share knowledge and learn from vendors^{Int, Ext} Regular tours of offshore locations for managers and executives to identify global sourcing opportunities^{Ext, Int} 	<ul style="list-style-type: none"> Uniform performance metric based on target revenue per head indirectly fostering global sourcing^{Int} Distance from customers as initial selection rule for global sourcing^{Int} (but quickly abandoned) Cost-saving opportunities as only and very rough selection rule for global sourcing^{Int} Extensive routines for learning from customers: systematic customer satisfaction surveys, annual customer advisory board and regular meeting between CEO and major customers^{Ext}
Later stage	<ul style="list-style-type: none"> Job vacancies triggering systematic exploration of new opportunities to reorganize through global sourcing^{Int} Economic efficiency as decision rule for global sourcing^{Int} Corporate-wide weekly email to share knowledge on current and potential global sourcing initiatives and diffuse relevant information^{Ext, Int} Systematic reflection on past initiatives and discussion of future global sourcing plans at annual planning meetings^{Int} Continuous scanning of the environment for relevant information (articles, conferences, meetings with providers and experts, etc.)^{Ext} Systematic study of opportunities to further develop and leverage capabilities in the Philippines^{Ext} Use of constant ratio of engineering costs to sales as metric to foster global sourcing initiatives^{Int} Rotation of employees within common offshore infrastructure to facilitate global sourcing and learn from vendors^{Ext, Int} Organization of tours of offshore locations for managers and executives to identify global sourcing opportunities^{Ext, Int} 	<ul style="list-style-type: none"> Extensive routines for learning from customers: new random customer satisfaction surveys, annual customer advisory board and regular meeting between CEO and major customers^{Ext} Use of direct feedback, communication and reporting channels to learn from and with offshore sister units^{Ext} Identification, experimentation with and sharing of superior global sourcing practices by Best Practices Team^{Ext, Int} Clear definition of core activities that cannot be offshored^{Int} Replication of best practices by Global Consistency Team^{Int}

Reflecting Lewin et al.'s (2011) terminology, routines^{Ext} and routines^{Int} denote external and internal practised AC routines, respectively. Routines^{Ext, Int} denote multifaceted practised routines that serve both internal and external absorptive capacity capabilities.

also a powerful mechanism with which to learn from Anderson's third-party vendor and share knowledge across divisions. The following quote that concluded a meeting with managers of AME describes the context and functioning of the routine:

The very good relationship Anderson has built with SPM enables smaller initiatives to take place. We would not get that without the framework of a broader relationship. ... The VP in charge of the E-business Initiative] understood that it was important to work on the general agreement so that, as other divisions want to join, they just have to worry about implementing the function: no price issue, no recruitment issue. Anderson plays a very important role in providing infrastructure, processes, contracts and so on. ... It [the master agreement with SPM] also allows the cost model to be replicated across divisions, departments and functions. Finally, it reduces the time to benefit from global sourcing. When we start, we benefit from the experience of others. For example, we will not start with all 'green' staff [new recruits]. Instead, we will hire a few people who have already some experience in doing the function in question for another division of the company. This is much more than cross training!

In the area of engineering, the CTO of AME reported another example of that same routine of employee rotation within a common infrastructure:

In South China, a power supply company of Anderson had a large facility doing electronics engineering. We found space inside their operation and hired some of their engineers. As a result, AME started doing electronics engineering specifically in that operation. We were able to leverage other Anderson's infrastructure and this is quite unique to our situation.

In terms of external absorptive capacity, a routine that facilitated early implementations of global sourcing is the organization of tours for managers to identify and learn about opportunities available at various offshore locations and with various providers, and transfer this external knowledge back to the organization. In 2000, a VP of Anderson Company became aware of the call centres business in India. He started touring the country and in 2001, when he took the leadership of the E-Business Initiative, he launched the company's first offshore call centre in India. He was deeply convinced that, to get the leadership to buy into global sourcing, they had to travel in these countries. So he started organizing visits of companies and universities for managers to understand the potential of what could be done offshore. He described the rationale for organizing these tours: 'You have to touch it to realize it's true, that these people really have good skills. After that leaders cannot say anymore that they do not believe it' (senior VP and CTO of Anderson). This led several managers to travel to potential offshore countries. In that same year, for instance, the CTO of AME toured China and other possible offshore locations including India and Mexico. He spent four weeks on the road, visiting companies, universities and governmental agencies. The trip gave him a good understanding and appreciation of the technical capabilities available in various offshore locations, the management challenges that could arise, and possible culture clashes.

By showcasing Anderson's fast-growing capabilities offshore as well as other opportunities offered at offshore locations, the trips quickly started adding other internal dimensions of AC capabilities by triggering internal knowledge sharing as well as reflection, updating and replication processes when managers, upon return, started reconsidering and improving their own business units' approach to global sourcing.

Later-stage AC routines at Anderson

As offshoring was gaining acceptance and buy-in within the company, the informal encouragement that managers were receiving to pilot small-scale global sourcing projects using the shared

infrastructures offshore as a way to facilitate variation underwent a metamorphosis. It became a systematic scrutiny of job vacancies to identify new opportunities for reorganizing the activities of a department by sourcing certain tasks offshore, including in areas where the company had not used global sourcing previously. In parallel, internal selection criteria for global sourcing based on growth and improved customer services were taken to the next level, with economic efficiency (i.e. where and how it is most efficient to perform an activity) becoming the ultimate criterion to decide whether global sourcing reorganizations made sense. The CTO of AME illustrated the new routine for facilitating variation and selecting projects in the context of engineering services:

The process of moving engineering jobs offshore relies mainly on natural attrition. When someone decides to leave the company or someone retires in the US or Europe, we look at that job and decide where the best location is for that job. It could be the UK, Italy, India, the Philippines ... or exactly where it was. We make a conscious decision based on skill requirements and other criteria because today we have the possibility to decide where the best location is. But when someone leaves in a high-cost country it doesn't necessarily mean that this job will be moved to a low-cost country. Regional operations provide the critical mass because without that it would be very difficult to put just a few resources at a satellite location.

With the diffusion of global sourcing the company has also seen the development of new routines aimed at sharing knowledge and best practices across the organization. A representative example is the 'Monday morning' corporate-wide email meant to share with the entire community the new initiatives undertaken by any division of the company, successful practices, and updates on previous accounts. The CTO and SVP of Anderson described the Monday morning corporate-wide email he sends out:

It intends, among other things, to share offshoring best practices internally by diffusing stories of initiatives that the various businesses have undertaken. I summarize what I have learned over the last week on what various businesses are doing in terms of offshoring or I give an update on a story I have told about a few weeks or months before.

Accompanying that practice, a reflection on past initiatives and a discussion of future plans are systematically introduced in the agenda of the company annual planning meetings. Far from selection of initiatives and decisions based on strict goals and criteria for global sourcing, those meetings became a venue for sharing and cross learning that can lead to the adaptation of routines and practices. The CTO and SVP of Anderson also discussed the annual planning meetings he chairs:

Because Anderson is so diverse, there are many different good offshoring examples by different businesses, involving different functions at different locations. We have a long list of best practices to share when we get together at planning meetings. I lead the sessions with an update of what has been going on in the last year and many people discuss what they are doing in their particular business. You hear the excitement of people who have done a particular activity and you get to think: maybe I'll try that as well.

The internal knowledge shared and reflected upon through these routines is complemented with knowledge coming from the company's external environment that is identified thanks to continuous scanning of the environment carried out by the CTO and SVP of Anderson and his team. The information can come from any source (articles, conferences, meetings, visits, etc.) and is transferred to and shared within the organization through the same weekly corporate-wide email used for sharing knowledge about the various divisions' global sourcing initiatives. Anderson also initiated a series of boundary-spanning routines to continuously explore better or new ways for the company to leverage its strategic partnership with SPM in the Philippines, or develop new

capabilities in the Philippines outside of the partnership. This extensive effort is led by a person that Anderson recruited from its vendor. She had already developed knowledge about the service providers' environment in the Philippines and at the same time was familiar with Anderson's activities. As one example among many boundary-spanning routines, she meets every Anderson manager who considers sourcing a new activity in the Philippines and offers advice on the best way to proceed, given Anderson's existing capabilities in the country. If necessary she recommends the development of new capabilities with the existing partner, with another provider, or through the captive subsidiary that the company owns in the Philippines.

As shown in Table 1, early routines related to the engineering costs-to-sales metric, the rotation of personnel among offshoring projects, and the organization of tours to offshore locations remained in place and continued to be extensively practised.

Early-stage AC routines at WorldLink

Similar to Anderson's constant ratio of engineering costs to sales, WorldLink too had a metric that indirectly fostered the adoption of global sourcing. Every year, the CEO sets a uniform performance metric based on target revenue per head that drives evaluations across the company:

At the time the metric was introduced [1992] WorldLink was around \$450,000 [revenue per head]. The first stage was to get to \$750,000, and in 2001 the objective of \$1 million per employee was set. (senior director of support chain management at WorldLink)

Encouraging global sourcing was not the goal of the metric, but the message to management was that activities not critical to WorldLink core competencies should be outsourced. The performance metric gave rise to an informal selection rule for outsourcing based on the distance of a particular activity from the company's customers. A maxim arose at the time: 'If you are more than two steps away from the customer, what you are doing probably should be outsourced' (former senior VP at WorldLink).

The performance metric and resulting informal selection rule guided the adoption of outsourcing before the company evolved to an offshore model. At the beginning of adopting offshoring it continued to influence decisions, but the selection routine was soon abandoned and the company started rushing into global sourcing primarily to save costs, often irrespective of the distance to customer. Rapid diffusion of global sourcing of technical services through the opening of new centres in Mexico City, New Delhi and the Philippines was based only on the average cost per case that could be achieved in these countries. In other words, as long as it helped reach the target revenue per head by reducing headcount, customer services were relocated. All global sourcing initiatives continued to be driven by domestic vendors that WorldLink was pushing very hard to reduce costs, so that they had no choice but to propose an offshore delivery model. This rough and mechanistic selection regime routine turned out to be a disaster for WorldLink. It led the company to almost abandon global sourcing and revert to an in-house delivery model or traditional domestic outsourcing model. A senior manager of technical support recalled:

During the downturn of the economy in 2001, we were really up against a financial wall. ... We really needed to be aggressive and get as many cases solved economically for the dollars we could. ... It only got worse when we dealt with this [outsourcing] international. When we tried to decide what cases were going to be offshored, the guys in Europe would say 'these ten cases'. The guys in North Carolina would say 'these ten cases' and the guys in Australia would say 'these ten cases'. ... We had a lot of inefficiencies because we really didn't know.

Fortunately, deeply rooted external AC routines for learning from and with independent consultants and the company's customers (e.g. customer satisfaction surveys, regular meetings between the CEO and major customers, and the annual customer advisory board) made the company realize that something was wrong with their approach to implementing global sourcing. This led to a series of corrective actions and the development of a set of AC routines that enabled the successful implementation of global sourcing.

Later-stage AC routines at WorldLink

WorldLink went through a complete revision of how it measured customer satisfaction with the technical support services, and acted on the direct feedback they received. They had realized that their measures had not been adapted for more than 10 years and no longer reflected the elements of service that were important to customers. A new metric, associated survey and follow-up processes proved a significant turning point in the way the company solicited and used customer feedback.

A major change in the reporting structure and management processes between offshore service providers and onshore technical support centres resulted in new routines for learning from and with the company's vendors. Each offshore centre was associated with an onshore 'sister' centre. The centres were organized exactly the same way by technology units, so offshore employees of one unit reported to the same onshore unit manager as onshore employees. The reorganization of management processes created a channel of direct communication and feedback between the offshore teams and their onshore managers through weekly conference calls and monthly visits to the offshore centres, during which managers met with local managers and employees and ran several reviews. The new communication and feedback routines also served to transfer external knowledge from the providers into WorldLink. For the independent consultant who studied the customer dissatisfaction problem and recommended corrective actions, before these changes were implemented, routines for knowledge exchange between onshore and offshore teams simply did not exist:

There was a real schism between offshore out-task centres and domestic out-task centres. You talked to people internally. You said, 'Well, what was it like when it was in Austin and Denver?' And they would say, 'Well, I'd be in Austin twice a month.' And so, 'What is it like in Mexico?' Answer: 'I've never been there!' So it didn't take a rocket scientist to say it was pretty clear that part of this significant divergence in terms of customer experience was manifested by the human dimension, which was just that the relationship didn't exist anymore the way it had.

In parallel with these external routines, the company also developed a series of internal routines aimed at facilitating variation, sharing knowledge and replicating best practices. These routines were formalized and institutionalized with the creation of two dedicated teams of three people each: the 'best practices' team and the 'global consistency' team. The best practices team's routines were meant to identify best practices within WorldLink, at the offshore centres and in the industry as a whole that could be applied to WorldLink technical support activities. As such, they constituted another channel for identifying valuable external knowledge, learning from partners and transferring knowledge back to the organization. Team participation was organized on an 18-month rotational basis. To maximize knowledge sharing across the organization, members came from within the company and ultimately went back to their respective divisions. Typically people joined the group because they had a good practice that they had tried to champion from the operations side but lacked the time or the resources to get it adopted worldwide. Beyond sharing best practices, the

team also facilitated variation by encouraging people to experiment with new ideas. The scope of the team has therefore intentionally been made very broad:

We have received little restriction in terms of scope, which, I think, is potentially going to lead to an increased lag time coming to a deliverable, but it has been part of the excitement, part of the discovery process for us to make sure that no potential solution is left out. (Member of the Best Practices team at WorldLink)

Replication of best practices was then handed over to the global consistency team, which was in charge of ensuring consistent quality of service across all technical support centres. Once a best practice was identified, the team worked with the relevant stakeholders to define policies and processes that had to be applied at all centres, whether onshore, offshore, in-house or outsourced. Finally, the senior director of support chain management reintroduced a routine for selecting the new areas where global sourcing would be implemented. Or more precisely, he clearly defined the activities that would not be sourced offshore because they would require too much interaction between onshore and offshore engineers, because they involved WorldLink's most important customers, or because they related to new technologies that were not stable enough:

My view of the core competency is three things: technical, high-end technical skills, the high-end valued customers and the brand new technologies. Those are here to stay. We need to do those things. We can't outsource that. Everything else I think is eligible for outsourcing.

Comparing Anderson and WorldLink

The configuration of AC routines at Anderson and WorldLink

The discussion of early- and later-stage AC practised routines at both companies (summarized in Table 1) leads to three main observations. First, when initiating global sourcing in 2001, WorldLink not only had fewer AC routines compared to Anderson, but most AC routines were adaptations of more traditional operational routines that had been developed for other purposes and therefore were less directly useful to the implementation of global sourcing (e.g. uniform performance metric and distance from customer as informal selection rule). Moreover, the distance from customer rule was quickly abandoned as the company started to focus on cost savings possibilities. Anderson, on the other hand, took care of reinterpreting its existing AC routines or developing new AC routines targeted at the adoption of the global sourcing management innovation.

Second, the interdependency fit among AC routines at Anderson was better than at WorldLink because of AC practised routines serving multiple purposes (i.e. meta-routines) or AC routines that mutually reinforce each other's action in the adoption process of global sourcing. Among the AC practised routines that serve multiple purposes is the case of the tours of offshore locations organized to learn about global sourcing opportunities and challenges, bring that knowledge back to the organization, and share knowledge internally to foster the update of practices based on what managers have observed in other business units or even at other companies. Similarly, the rotation of employees helps Anderson to facilitate variation, learn from the offshore partners and share knowledge across divisions. Also, the corporate-wide weekly email is a powerful routine for bringing external knowledge back to the organization while at the same time sharing knowledge and best practices internally.

We also observe a number of AC routines that mutually reinforce each other's action, like job vacancies at Anderson triggering a systematic exploration of new opportunities to reorganize the

concerned activity through global sourcing. In itself, the routine is an effective way to encourage variation and experimentation with global sourcing. But its effectiveness is reinforced by another AC routine that involves using an economic efficiency criterion to decide whether the reorganization should take place. In other words, the former AC routine ensures that managers consider the possibility of global sourcing on a systematic basis, while the latter AC routine provides a selection rule to decide whether to initiate global sourcing of a particular activity. With only the first routine, Anderson managers might consider global sourcing but not know when to adopt it. With only the second routine, they might have a decision rule but not know when to apply it. Having both, Anderson benefits from their mutually reinforcing action.

The third and last observation concerns the sequence of development of the AC routines that may have been more appropriate in the case of Anderson than WorldLink. When Anderson started looking at how global sourcing could help foster growth and improve the customer side of the company, it paid a lot of attention to internal AC routines meant to encourage all managers in the organization to consider global sourcing, make it easy to try a pilot project, and find appropriate selection criteria for deciding whether to initiate global sourcing of a particular activity. Then progressively, as they were building experience, they sought to share that experience within the organization and started reflecting on what was being done and possibly updating their approach. Over time, Anderson also developed increasingly sophisticated external AC routines for learning from its external environment and bringing the knowledge back in house. With the diffusion of global sourcing there was indeed more and more relevant information available outside the firm – for instance, from professional associations, both in the United States and at offshore locations, that published studies on the topic. The pace and sequence of development of AC routines at Anderson matched the evolution of the external environment of the company.

In the case of WorldLink, their most useful AC routines when they started adopting the global sourcing management innovation were meant to learn from the external environment – customers in particular. The first AC routines that developed after the correction plan were also external, not only for learning from customers but also for improving the collaboration and communication channels with their providers. Only much later, and only to a limited extent, did they started paying attention to internal AC routines.

The evolution of AC routines at Anderson and WorldLink

Most of the AC routines that helped Anderson successfully implement the global sourcing management innovation can be traced back, directly or indirectly, to the actions of the CTO and Senior VP who took the leadership of the e-business initiative. He has played a critical role in developing a vision of global sourcing for the company, which evolved into the corporate-wide understanding and agreement that it was to be used as an engine of growth and improved customer service. Although he had no past experience with global sourcing, he understood very early on that developing a strategic partnership with a carefully selected third-party service provider would be key to fostering the adoption and diffusion of offshoring. He took on the negotiation of the master service agreement with SPM in the Philippines that would provide the framework and infrastructure to which the various divisions of Anderson could then easily ‘bolt on’ as they undertook new global sourcing initiatives, and thanks to which, through employee rotation, they could benefit from the past experience of Anderson and its provider. After Anderson initiated global sourcing, the senior VP systematically included discussions about global sourcing in the annual planning meetings. He started the series of tours for managers to learn about opportunities offshore, and participated in many of them. In addition, he took the concept of gatekeeping to another level as he literally, and personally, scouted the world looking for relevant information coming from both inside and

outside the organization. Interesting articles he had read, summaries of conferences he had attended, insight from experts he had met, notes on countries, cities or providers he had visited, reports on all the visits he made to Anderson offshore centres— everything was carefully stored and shared with the whole company through his Monday morning email. With that weekly emailing, he created a powerful and effective knowledge repository as well as a vehicle for corporate-wide knowledge sharing on global sourcing, which avoided ‘reinventing the wheel’ when a manager was considering implementing offshoring for the first time. A quote by a marketing manager at AME illustrates this point: ‘There is a strong leadership by [CTO and senior VP of Anderson]. Others also push the idea of offshoring inside the company. Everybody knows about it, about the capabilities that have been added.’

But the CTO and senior VP’s idea of his role was not that of imposing a particular action or behaviour on managers, which would have resulted in a decrease in variation and eventually the weakening of Anderson’s variation, selection and retention routines. By preempting the barriers to individual managers not considering global sourcing, and by making sure that all relevant information and knowledge about global sourcing was available, accessible and understandable across the entire organization, he developed an organizational context that encouraged variation. His vision was that global sourcing was an opportunity to be explored by all, but that in the end selection should happen at the local level by the owners of individual processes. This approach was widely shared across the company, as reflected in the CEO of AME’s open approach to fostering the implementation of global sourcing (and other new practices):

I never ask to implement a specific practice. But if not that practice, better something than nothing, and better to be able to show the other thing you do instead is as good, or even better.

These actions of the senior VP of Anderson directed the attention of the organization towards the adoption of global sourcing and built the organizational legitimacy of the management innovation. As a result, and in contrast to WorldLink, very early on the adoption of the global sourcing management innovation at Anderson became a shared and legitimate objective that received substantial and critical attention from organizational members. And part of that attention was specifically directed at the early development and continuous refinement of an adequate set of AC routines.

WorldLink, on the other hand, started offshoring with very few AC routines and, as a manager reported, the adoption of offshoring was given very little visibility in the company:

Within WorldLink there’s that special group over there doing the outsourcing, so leave them alone. So it was interesting. Now, we’re becoming very open and well known and understood by a lot of the groups, which is good.

When the CEO urged that a solution be found to the problem of major customer complaints, it was the first time global sourcing appeared on the table of any C-level executive in the company. But starting then, thanks to problemistic search by individual managers at various levels, the company experienced a process of learning by doing and progressively implemented practised AC routines appropriate to successfully implement offshoring. A recently recruited VP, a senior director from another division, and an independent consultant were critical in reflecting on problems and initiating new AC routines. Local problemistic search by a young manager who was charged with the responsibility of managing the worst-performing offshore technical support centre has also been decisive. As he explained, when he took over the management of the offshore technical support centre, he was informed about the routines used by his predecessor. But using the freedom he was given to not perpetuate old practices, he completely reinterpreted how offshore teams and

onshore–offshore relationships were to be handled, modifying and creating new routines as needed. With respect to external AC routines, for instance, he changed the routine for gathering information from the offshore partner and bringing it back to WorldLink:

So I think for me, I came in with the approach of almost the other way around [compared to what used to be] where I would get my day-to-day information and understand what's going on from the people on the front lines and my team managers as opposed to the senior management who I felt was actually very disconnected from the day-to-day.

With the support of the best practice and global consistency teams, the new AC routines he put in place were then used as examples of superior practices to share with the managers of other technical support centres.

The WorldLink case also revealed an evolution from pure problemistic search to local attention direction when the responsibility of implementing the corrective actions was given to a senior director. The fact that the problemistic search for solutions resulted in having a person in charge ensured greater coherence in the implementation of global sourcing and more attention towards the development of appropriate AC routines. But because he was a senior director within the Technical Services organization, his efforts to implement the management innovation did not reach the same visibility and legitimacy in the organization as did those of the CTO and senior VP in the case of Anderson. As a result, he was unable to leverage the knowledge of other divisions in the company, and the new AC routines he helped implement did not reach other divisions of WorldLink beyond the Technical Services division. It follows that, if attention direction is indeed more effective than problemistic search, the performance effect further depends on the formal organization level and position of the attention-directing change agent, with a C-level executive having greater and more far-reaching potential impact than bottom-up attention direction by a local director or manager.

Importantly, the C-level attention direction described here is different from 'command and control' processes whereby a company executive imposes a vision and controls local decisions and actions to fit with the vision. For instance, the annual strategic planning meetings we discussed earlier were not meant to select projects or set offshoring goals with metrics and required actions, nor was the weekly email meant to impose any specific course of action. Both sought to encourage managers to approach global sourcing in an informed way (using all knowledge available from initiatives taking place across the organization) and a coherent way (maximizing synergies and minimizing conflicts between local initiatives). In other words, the attention direction did not supplant local search, but fostered coherent and informed local trials.

Summarizing our observations, Figure 2 shows that C-level attention direction is more effective than local problemistic search to foster managerial attention to and organizational legitimacy of a management innovation. It also illustrates that C-level attention direction in the case of Anderson did not supplant problemistic search and local attention direction by lower-level managers and directors, but provided a shared vision and framework for local actions to contribute to the common and legitimate innovation objective. Finally, it reflects how the evolution of WorldLink from pure problemistic search to local attention direction improved the managerial attention towards the offshoring management innovation and configuration of AC routines without reaching the level of organizational legitimacy we observed in the case of Anderson.

The role of organizational antecedents

As we conducted the interviews and interpreted the case study material, it became clear that organizational antecedents (Feldman & Pentland, 2003) such as organizational structure and culture

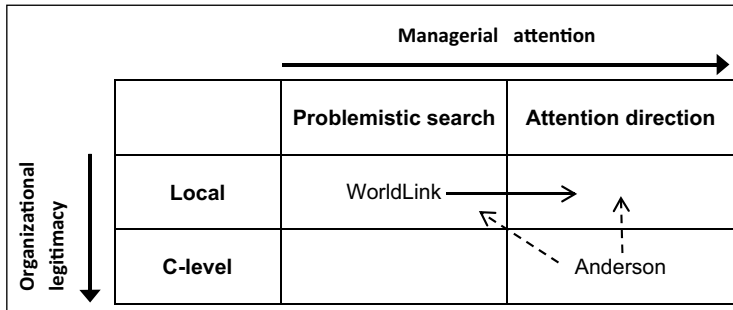


Figure 2. Attentional and Legitimation Processes at Anderson and WorldLink.

(Lewin et al., 2011; Volberda et al., 2010) were central to understanding the efficiency of management innovation processes. They influenced not only the specific AC practised routines for global sourcing, but also the likelihood of C-level attention direction taking place.

In terms of corporate culture, WorldLink has always been a customer-centric company. It was one of the first to create a ‘customer advocacy’ division that encompassed and integrated all functions affecting the company’s customers, both directly and indirectly. As shown in Table 1, the customer orientation is concretely reflected in the importance the company assigns to external AC routines for learning from and with customers, such as the customer satisfaction surveys, the regular meetings of the CEO with major corporate clients, and the annual meetings of the customer advisory board that has the unique purpose of soliciting feedback from customers. The following quote from WorldLink’s CEO discussing his regular meetings with customers reflects the company’s customer-oriented culture: ‘I keep my fingers on the pulse very tightly about what our customers say about everything we do.’

Moreover, with WorldLink evolving from a small entrepreneurial high-tech start-up to a large multinational in just a few years, founding conditions and extremely rapid growth may partly explain the lack of formal AC routines, in particular, AC routines for sharing information across business units and functions:

I don’t feel there’s a lot of ‘not invented here’ – so the people being reluctant to accept other’s ideas and more than likely to create their own. I don’t see that. I see just a pure lack of communication. It’s not that the people are unwilling; they’re just not communicating enough. ... We don’t reject, we just don’t become aware of each other. (VP at WorldLink)

Sharing of ideas and practices is thus more the result of informal ties between organizational members than the result of formal routines to share information on a systematic basis. The lack of formal sharing routines is also the result of the silo structure of WorldLink. That structure prevented knowledge and information on global sourcing from being transferred from other divisions to Technical Services when they needed it (including from the manufacturing division that already had experience with global sourcing), and it prevented the experience that Technical Services accumulated from being fed back to other divisions. In such a silo structure, the emergence or appointment of a C-level attention-direction change agent was also unlikely.

Together with the company’s customer orientation, WorldLink’s entrepreneurial culture of empowerment and ‘trying-failing-learning-retrying’ helps explain the rush to adopt global sourcing and subsequent period of problemistic search to adapt behaviours and develop AC routines in response to negative customer feedback. As the following quote by the manager of a WorldLink

Technical Support service centre illustrates, in such a culture the trial-and-error process they went through may in fact become a source of pride:

I think that is a success that we've been able to despite all these problems, you know, kind of hold things together. I think that's absolutely a success. There's a lot of mistakes we've made on the way, and we've learned from them, and we do our best to correct them, but I think that is the biggest success – is that we've been able to maintain and make progress, and even grow despite all those things.

The deeply embedded culture of continuous improvement and cost containment supported by extensive planning made things very different at Anderson. For the CEO of AME, this played a major role in the way they approached and adopted global sourcing:

Another important factor is our very formal planning process. We spend a lot of time discussing plans. You have to plan exactly what will be done where, month by month. But you also have to be very action-oriented.

Planning for continuous improvement and cost containment is coupled with formal incentives for sharing at all levels. At Anderson, when a strategic initiative to improve processes and cut costs is identified, a champion is given responsibility to look inside and outside for ways to achieve the objectives, and people work together to reach common objectives. Both experimentation with more efficient ways of doing things and sharing of the best practices across the organization are encouraged. The following quote by a marketing manager illustrates Anderson's collaborative culture:

This is in the culture of Anderson that if some division has already made the start-up investment, other divisions can just bolt on and pay the marginal cost. One thing that Anderson really grades people on in the internal review process is collaboration. People would always share with others. People you work with get credit for you doing well and you get credit for what you do well. It is a very collaborative culture.

As the CTO of AME explained, more informal processes complement the formal structure and incentives for collaboration:

Even though it is not formalized as a rule, every engineer in Asia tends to talk on a weekly basis with engineers in the US or in Italy. So if you ask engineers in China to name 5 engineers in the US with whom they are working with to solve problems you will probably find they can name 20 of them! Collaboration appears bottom-up, without formal structure for that. AME is a big company but with relatively small sub-units. So engineers have to work cross-locationally on problems. The social structure is rather informal. The only formal interaction is every quarter when I go there: engineers spend one day all together on project reviews, we have a good dinner, drink beers and have a good time.

A company with a strong culture of sharing, as exemplified by Anderson, will have several examples of organizational routines achieving this purpose, whether it is sharing start-up investment, knowledge or human resources as we saw here, or sharing any other asset. Since AC routines are a subset of organizational routines, when it comes to implementing a particular management innovation, we can expect to observe the development of sophisticated AC routines for sharing knowledge, information and superior practices about that innovation. Specifically, combination-recombination building on people's practices as well as creating shared resource centres for faster and smoother transmission of information and experience have long been key capabilities of Anderson. When they

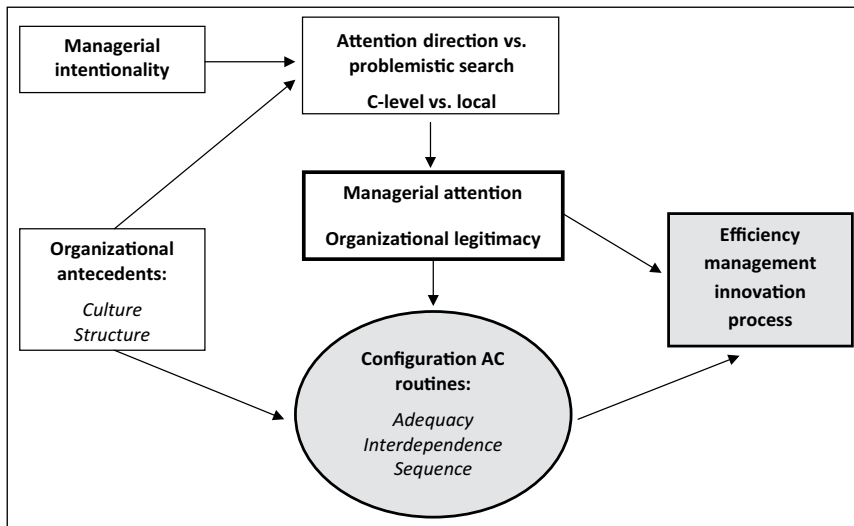


Figure 3. From AC Routines to Time-Efficient Management Innovation.

started implementing global sourcing, those deeply grounded capabilities were reinterpreted and translated into practised AC routines for sharing and combining knowledge and resources in the particular context of the global sourcing management innovation.

AC Routines and the Efficiency of Management Innovation Processes: A Model

The framework in Figure 3 depicts the factors and relations that we have identified to contribute to explaining heterogeneity in the time and effort needed to successfully implement a management innovation.

In line with Lewin et al.'s (2011) typology of routines that underlie firm AC capabilities, the two cases studied are characterized by a number of similar AC meta-routines (e.g. enhancing variation, selection, knowledge sharing) that are expressed through very different practised AC routines. The equifinality of AC practised routines allows different companies to achieve similar objectives, such as successfully implementing the global sourcing management innovation, in different ways (see also Eisenhardt & Martin, 2000).

But equifinality does not mean that any routine or any combination of routines will be equally effective at any time in the process of implementing a management innovation. Through the cases, we observed that certain AC routines were more important in early stages of implementing global sourcing, while other AC routines were more important at a later stage, when firms were seeking to refine and diffuse the management innovation. This is consistent with Brown and Eisenhardt's (1998) and Eisenhardt and Martin's (2000) idea of 'sequenced steps' in developing capabilities. In the early stages, internal routines meant to facilitate variation and manage selection regimes are likely to be critical. But at later stages, once the company has been experimenting with the innovation for some time and starts refining, adapting and diffusing the innovation to other areas in the organization, being able to share knowledge and superior practices (Szulanski, 1996, 2000) becomes a key capability, which may be even more difficult to develop than generating variation. The sequence of the development of AC routines at Anderson fits this progressive evolution from

variation and selection routines to sharing and replication routines. At WorldLink, they realized and acted upon the need to improve the selection of areas in which to implement global sourcing, and the need to share knowledge internally much later.

In addition, when Anderson and WorldLink started sourcing business services offshore in 2001, the practice was still in its infancy, with limited opportunity to learn from external change agents in the firm environment. External AC routines, whereby internal and external change agents jointly foster the adoption of an innovation (Lewin et al., 2011), were not as critical in the early stage. Subsequently, as offshoring became more widespread, learning from the external environment (e.g. about best practices developed by other firms and experienced service providers) and bringing that knowledge back to the organization became more important. But apart from feedback from customers and internal clients, WorldLink, in contrast to Anderson, did not develop formal, or informal, routines to learn from its external environment. Moreover, in line with the relational view of buyer–supplier relationships (e.g. Dyer & Nobeoka, 2000; Dyer & Singh, 1998), the fact that SPM was considered a strategic partner of Anderson was also a key resource to fuel the AC of the company. To exploit that external source of knowledge, Anderson practised more and more sophisticated external AC routines. Such evolution did not take place in WorldLink. Hence, although the focus of the study is primarily on internal change agents, we also uncover external AC practised routines as an important channel for external and internal change agents to jointly contribute to the efficiency of innovation adoption processes, beyond the innovation agenda-setting process discussed in Birkinshaw et al. (2008).

Finally, over time the number of AC routines targeted at implementing global sourcing increased in both companies, but Anderson was better at developing interdependent and multifaceted routines that could serve multiple purposes, both internal and external (e.g. rotation of employees offshore, organizing tours to offshore locations, and corporate-wide awareness-building through weekly emails).

Our findings also suggest that managerial attention towards the management innovation and organizational legitimacy of the innovation play a central role in explaining differences in the efficiency of management innovation processes. Managerial attention and legitimacy have both direct and indirect effects, as they help generate support and focus time and effort of organizational members not only towards the innovation itself, but also towards the development of an appropriate configuration of AC routines. Without legitimacy and managerial attention, important interdependencies among AC routines may go unnoticed and damage the efficiency of the innovation process.

Birkinshaw et al. (2008) argue that, because of the intangibility, uncertainty and ambiguity of management innovations, building legitimacy of the innovation is a critical aspect of the theorization and labelling phase of the management innovation process. The authors build on Suchman's (1995) definition of legitimacy as the perception that the actions of an entity conform to the socially constructed system of values, norms and beliefs of its environment, and they stress the role of external change agents, such as consultants, in building the legitimacy of an innovation. Similar to Van Dijk, Berends, Jelinek, Romme and Weggeman (2011) reporting on legitimacy issues in radical product innovations, our study points to a more internal form of legitimacy that refers to the perception by organizational members that a new practice is desirable, given the values and strategic objectives of the organization (see also Drori & Honig, 2013). In line with Suchman (1995), we argue that organizational legitimacy and the internal change agents who contribute to it increase the chances that organizational members support and allocate resources to the adoption of the new practice and the development of an appropriate set of AC routines.

The importance of the structuration of attention in organizations was already at the centre of research on firm behaviour in the works of Simon (1947), March and Simon (1958) and Cyert and March (1963). More recently, Ocasio (1995, 1997) gave it a new impetus by developing

the ‘attention-based view’ of the firm that explains firm behaviour by the way firms distribute and regulate attention of decision-makers (see also Scott, 1992). Ocasio defines organizational attention as the ‘focus of time and effort by the firm on a particular set of issues, problems, opportunities, and threats, and on a particular set of skills, routines, programs, projects, and procedures’ (Ocasio, 1997, p. 188). In the attention-based view of the firm, what decision-makers do depends on the issues they attend to, which, in turn, depend on the situation they find themselves in, and hence on the way the firm distributes attention. In that regard, the two cases studied here show that, in contrast to WorldLink’s problemistic search approach (e.g. Cyert & March 1963), attention direction (e.g. Ocasio, 1997; Simon, 1947) by the CTO and senior VP of Anderson has been a more effective mechanism for building the legitimacy of the global sourcing innovation and ensuring sufficient managerial attention towards a common innovation objective. Compared to pure local problemistic search, local attention direction already constitutes a more effective mechanism for generating managerial attention towards the innovation. But because of limited visibility and scope of influence, attention direction by a local manager will not have the same organizational legitimization impact as attention direction by a C-level internal change agent. Moreover, whereas problemistic search is a common pattern of behaviours that can be found in most organizations, we find that the likelihood of C-level attention direction depends on the culture and structure of the organization.

Importantly, although we find that the C-level locus of attention regulation (Ocasio, 1997) is associated with stronger legitimacy and visibility of the initiation and implementation of a management innovation compared to lower-level attention direction or local problemistic search, the positive effect of C-level attention direction does not derive from formal decision power of the internal change agent. In our study, the C-level position involves the chief technology officer, who is acknowledged to be expert with the application of information and communication technologies but whose position is not associated with top-down power of imposing practices and behaviours on organizational members. We illustrate that the effectiveness of the C-level internal change agent results from his ‘bully pulpit’ ability to articulate, champion and develop a corporate-wide organizational context that encourages variation and facilitates the adoption of the new management practice by organizational members.

Finally, the presence or absence of C-level attention direction towards the development of an effective configuration of AC routines further depends on the managerial intentionality (e.g. Hutzschenreuter, Pedersen & Volberda, 2007) driving the adoption of the management innovation. First, managers at Anderson intended to use global sourcing as a way to fundamentally transform the organization. They had much higher aspiration levels (Hutzschenreuter et al., 2007) than WorldLink’s managers, whose objectives were centred on reducing the cost of technical support services. Moreover, the adoption of global sourcing by Anderson was a deliberate move by management, who identified the management innovation as an appropriate way to reach the company’s stretch goals of renewed growth and customer orientation. In the case of WorldLink, in contrast, managers did not intentionally adopt global sourcing because it reflected the strategy of the organization. Adoption of global sourcing has been a forced move resulting from the burst of the dot.com bubble in 2001, and a reactive move following the suggestion of external service providers that WorldLink pushed for cost reductions. The emergence or appointment of a C-level attention-directing change agent was therefore hindered not only by the entrepreneurial initiative-taking culture and the silo structure of the organization, but also by the lack of strategic intent to adopt global sourcing as part of the company’s strategy.

Concluding Remarks

The comparative case study we present in the paper suggests that timely implementation of a management innovation is enabled by an appropriately developed set of AC routines that takes

advantage of their interdependencies. While some firms may have such routines already in place when they contemplate implementing a management innovation, or are able to quickly reinterpret existing AC routines or develop new ones, other firms may go through a long, and sometime painful, trial-and-error process. In that context, attention direction seems to be a more efficient way to foster an appropriate configuration of AC routines than problemistic search. Moreover, the organizational level of internal change agents from whom the attention-direction efforts originate seems to also matter, not because of their formal control and decision power, but because their level in the organization is directly related to their ability to create legitimacy for attending the innovation process and adopting AC routines such as sharing of information and managing variation, replication and retention. Pointing to managerial attention and organizational legitimacy stresses yet again that managers are the central actors of organizations, and as such have huge influence on the outcome of innovation processes (see also Volberda et al., 2013).

To conclude, this paper constitutes an attempt to link AC routines and their evolution processes to the innovation performance impact of the AC routines, with a focus on the efficiency of management innovation processes. From a methodological point of view we show that AC routines can be studied empirically by researching firm-specific expression of AC practised routines and mapping them to the meta-routines that make up firms' AC capability (see Lewin et al., 2011, for a taxonomy of AC meta-routines). Doing so allows uncovering critical differences in their adequacy, sequence of development and interdependencies fit (Caspin-Wagner et al., 2013). These, in turn, help explain how rapidly and seamlessly a firm is able to successfully implement a new management practice.

Although the model we propose should be generalizable to other management innovation contexts, the actual practised AC routines developed by a firm are context-specific. Had we studied another example of management innovation, the observed practised AC routines therefore would have been different. Moreover, the need to achieve fit between the management innovation and the adopting organization is central to our findings. But the likelihood of misfit, and resulting need to achieve fit, is likely to diminish with the diffusion of the innovation in the population (Ansari et al., 2010). We therefore expect managerial attention and organizational legitimacy to be key drivers of the adoption and adaptation process of early adopters, but much less so in the case of companies that adopt an innovation later and can learn from and imitate the experience of early adopters in solving the uncertainties surrounding the implementation of the innovation (Fligstein, 1985; Terlaak & Gong, 2008).

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Notes

1. We follow Birkinshaw et al.'s definition (2008) of internal change agents as the employees of the innovative firm proactive in creating interest in, experimenting with and validating a management innovation.
2. The idea that new sourcing practices constitute examples of management innovation was suggested in Bonazzi and Antonelli (2003).
3. Offshoring is the terminology used at AME company to refer to the relocation of services offshore.

References

- Ahuja, G., & Katila, R. (2001). Technological acquisitions and the innovation performance of acquiring firms: A longitudinal study. *Strategic Management Journal*, 22, 197–220.
- Ansari, S. M., Fiss, P. C., & Zajac, E. J. (2010). Made to fit: How practices vary as they diffuse. *Academy of Management Review*, 35, 67–92.

- Apte, U. M., & Mason, R. O. (1995). Global disaggregation of information-intensive services. *Management Science*, 41, 1250–1262.
- Birkinshaw, J. M., Hamel, G., & Mol, M. (2008). Management innovation. *Academy of Management Review*, 33, 825–845.
- Bonazzi, G., & Antonelli, C. (2003). To make or to sell? The case of in-house outsourcing at Fiat Auto. *Organization Studies*, 24, 575–594.
- Bourgeois, L. J. III, & Eisenhardt, K. M. (1988). Strategic decision processes in high velocity environments: Four cases in the microcomputer industry. *Management Science*, 34, 816–835.
- Brown, S. L., & Eisenhardt, K. M. (1998). *Competing on the edge: Strategy as structured chaos*. Boston, MA: Harvard Business School Press.
- Bstieler, L. (2005). The moderating effect of environmental uncertainty on new product development and time efficiency. *Journal of Product Innovation Management*, 22, 267–284.
- Burgelman, R. A. (1983). A process model of internal corporate venturing in the diversified major firm. *Administrative Science Quarterly*, 28, 223–244.
- Caspin-Wagner, K., Lewin, A. Y., Massini, S., & Peeters, C. (2013). The underexplored role of managing interdependencies fit in organization design and performance. *Journal of Organization Design*, 2, 34–41.
- Chesbrough, H. (2010). Business model innovation: Opportunities and barriers. *Long Range Planning*, 43, 354–363.
- Cohen, M. A., Eliashberg, J., & Ho, T-H. (1996). New product development: The performance and time-to-market tradeoff. *Management Science*, 42, 173–186.
- Cohen, W. M., & Levinthal, D. A. (1989). Innovation and learning: The two faces of R&D. *Economic Journal*, 99, 569–596.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35, 128–152.
- Contractor, F. J., Kumar, V., Kundu, S. K., & Pedersen, T. (2010). Reconceptualizing the firm in a world of outsourcing and offshoring: The organizational and geographical relocation of high-value company functions. *Journal of Management Studies*, 47, 1417–1433.
- Courpasson, D. (2000). Managerial strategies of domination: Power in soft bureaucracies. *Organization Studies*, 21, 141–161.
- Crossan, M. M., & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of Management Studies*, 47, 1154–1191.
- Cyert, R. M., & March, J. G. (1963). *A behavioral theory of the firm*. Oxford: Blackwell.
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34, 555–590.
- Damanpour, F., & Aravind, D. (2011). Managerial innovation: Conceptions, processes, and antecedents. *Management and Organization Review*, 8, 423–454.
- Davis, J. P., & Eisenhardt, K. M. (2011). Rotating leadership and collaborative innovation: Recombination processes in symbiotic relationships. *Administrative Science Quarterly*, 56, 159–201.
- Di Gregorio, D., Musteen, M., & Thomas, D. E. (2009). Offshoring as a source of international competitive advantage for SMEs. *Journal of International Business Studies*, 40, 969–988.
- Dodgson, M., Gann, D., & Salter, A. (2008). *The management of technological innovation*. New York: Oxford University Press.
- Doh, J. P. (2005). Offshore outsourcing: Implications for international business and strategic management theory and practice. *Journal of Management Studies*, 42, 695–704.
- Dougherty, D. (1992). Interpretive barriers to successful product innovation in large firms. *Organization Science*, 3, 179–202.
- Drori, I., & Honig, B. (2013). A process model of internal and external legitimacy. *Organization Studies*, 34, 345–376.
- Dyer, J. H., & Nobeoka, K. (2000). Creating and managing a high-performance knowledge-sharing network: The Toyota case. *Strategic Management Journal*, 21, 345–367.
- Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, 23, 660–679.

- Eisenhardt, K. M. (1989a). Building theory from case study research. *Academy of Management Review*, 14, 532–550.
- Eisenhardt, K. M. (1989b). Making fast strategic decisions in high-velocity environments. *Academy of Management Journal*, 32, 543–576.
- Eisenhardt, K. M., & Bourgeois, L. J. III (1988). Politics of strategic decision making in high-velocity environments: Toward a midrange theory. *Academy of Management Journal*, 31, 737–770.
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50, 25–32.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21, 1105–1121.
- Ettlie, J. E., Bridges, W. P., & O’Keefe, R. D. (1984). Organization strategy and structural differences for radical versus incremental innovation. *Management Science*, 30, 682–695.
- Feldman, M. S., & Pentland, B. T. (2003). Reconceptualizing organizational routines as a source of flexibility and change. *Administrative Science Quarterly*, 48, 94–118.
- Fligstein, N. (1985). The spread of the multidivisional form among large organizations, 1919–1979. *American Sociological Review*, 50, 377–391.
- Gatignon, H., Tushman, M. L., Smith, W., & Anderson, P. (2002). A structural approach to assessing innovation: Construct development of innovation locus, type, and characteristics. *Management Science*, 48, 1103–1122.
- Geroski, P. (2000). Models of technology diffusion. *Research Policy* 29, 603–625.
- Hill, C. W. L., & Rothaermel, F. T. (2003). The performance of incumbent firms in the face of radical technological innovation. *Academy of Management Review*, 28, 257–274.
- Howell, J. M., & Higgins, C. A. (1990). Champions of technological innovation. *Administrative Science Quarterly*, 35, 317–341.
- Hutzschenreuter, T., Pedersen, T., & Volberda, H. W. (2007). The role of path dependency and managerial intentionality: A perspective on international business research. *Journal of International Business Studies*, 38, 1055–1068.
- Jensen, P. D. Ø., & Pedersen, T. (2011). The economic geography of offshoring: The fit between activities and local context. *Journal of Management Studies*, 28, 352–372.
- Kenney, M., Massini, S., & Murtha, T. P. (2009). Offshoring administrative and technical work: Do we need a new theory for this? *Journal of International Business Studies*, 40, 887–900.
- Kumar, K., Van Fenema, P. C., & Von Glinow, M. A. (2009). Offshoring and the global distribution of work: Implications for task interdependence theory and practice. *Journal of International Business Studies*, 40, 642–667.
- Lane, P. J., Koka, B., & Pathak, S. (2006). The reification of absorptive capacity: A critical review and rejuvenation of the construct. *Academy of Management Review*, 31, 833–863.
- Laursen, K., & Salter, A. (2006). Open for innovation: The role of openness in explaining innovation performance among U.K. manufacturing firms. *Strategic Management Journal*, 27, 131–150.
- Lenox, M. J., & King, A. (2004). Prospects for developing absorptive capacity through internal information provision. *Strategic Management Journal*, 25, 331–345.
- Lewin, A. Y., & Massini, S. (2003). Knowledge creation and organizational capabilities of innovating and imitating firms. In H. Tsoukas & N. Mylonopoulos (Eds.), *Organizations as knowledge systems: Knowledge, learning and dynamic capabilities*. London: Palgrave Macmillan.
- Lewin, A. Y., Massini, S., & Peeters, C. (2008). The configuration of internal and external practiced routines of absorptive capacity: A new perspective. *Centre Emile Bernheim* WP08/010.
- Lewin, A. Y., Massini, S., & Peeters, C. (2009). Why are companies offshoring innovation? The emerging global race for talent. *Journal of International Business Studies*, 40, 901–925.
- Lewin, A. Y., Massini, S., & Peeters, C. (2011). Microfoundations of internal and external absorptive capacity routines. *Organization Science*, 22, 81–98.
- Lewin, A. Y., & Peeters, C. (2006). Offshoring administrative and technical work: Business hype or the onset of fundamental strategic and organizational transformation? *Long Range Planning*, 39, 221–239.

- Manning, S., Massini, S., & Lewin, A. Y. (2008). A dynamic perspective on next-generation offshoring: The global sourcing of science and engineering talent. *Academy of Management Perspectives*, 22(3), 35–54.
- March, J. G., & Simon, H. A. (1958). *Organizations*. New York: Wiley.
- Massini, S., Lewin, A. Y., & Greve, H. R. (2005). Innovators and imitators: Organizational reference groups and adoption of organizational routines. *Research Policy*, 34, 1550–1569.
- Massini, S., Lewin, A. Y., Numagami, T., & Pettigrew, A. (2002). The evolution of organisational routines among large Western and Japanese firms. *Research Policy*, 31, 1333–1348.
- Miles, I. (1999). Foresight and services: Closing the gap? *Service Industries Journal*, 19(2), 1–27.
- Miles, M. B. (1979). Qualitative data as an attractive nuisance: The problem of analysis. *Administrative Science Quarterly*, 24, 590–601.
- Mol, M. J., & Birkinshaw, J. (2009). The sources of management innovation: When firms introduce new management practices. *Journal of Business Research*, 62, 1269–1280.
- Mueller, F., & Carter, C. (2005). The scripting of total quality management within its organizational biography. *Organization Studies*, 26, 221–247.
- Nelson, R. R., & Winter, S. G. (1982). *An evolutionary theory of economic change*. Cambridge, MA: Belknap Press/Harvard University Press.
- Nieto, M. J., & Rodríguez, A. (2011). Offshoring of R&D: Looking abroad to improve innovation performance. *Journal of International Business Studies*, 42, 345–361.
- Ocasio, W. (1995). The enactment of economic adversity: A reconciliation of theories of failure-induced change and threat rigidity. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior*, 17, 287–331. Greenwich, CT: JAI Press.
- Ocasio, W. (1997). Towards an attention-based view of the firm. *Strategic Management Journal*, 18, 187–206.
- Pavitt, K. (1984). Sectoral patterns of technical change: Towards a taxonomy and a theory. *Research Policy*, 13, 343–373.
- Pettigrew, A. M., Whittington, R., Melin, L., Sanchez-Runde, C., Van Den Bosch, F., Ruigrok, W., & Numagami, T. (2003). *Innovative forms of organizing: International perspectives*. London: SAGE Publications.
- Rogers, E. M. (1962). *Diffusion of innovations*. London: Free Press.
- Rothaermel, F. T., & Alexandre, M. T. (2009). Ambidexterity in technology sourcing: The moderating role of absorptive capacity. *Organization Science*, 20, 759–780.
- Roza, M., Van Den Bosch, F. A. J., & Volberda, H. W. (2011). Offshoring strategy: Motives, functions, locations, and governance modes of small, medium-sized and large firms. *International Business Review*, 20, 314–323.
- Schilling, M. A. (2008). *Strategic management of technological innovation* (2nd ed.). Boston: McGraw-Hill.
- Scott, W. R. (1992). *Organizations: Rational, natural, and open systems* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.
- Sheremata, W. A. (2000). Centrifugal and centripetal forces in radical new product development under time pressure. *Academy of Management Review*, 25, 389–409.
- Simon, H. A. (1947). *Administrative behavior*. New York: Macmillan.
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20, 571–610.
- Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal*, 17, 27–43.
- Szulanski, G. (2000). The process of knowledge transfer: A diachronic analysis of stickiness. *Organizational Behavior and Human Decision Processes*, 82(1), 9–27.
- Tatikonda, M. V., & Montoya-Weiss, M. M. (2001). Integrating operations and marketing perspectives of product innovation: The influence of organizational process factors and capabilities on development performance. *Management Science*, 47, 151–172.
- Terlaak, A., & Gong, Y. (2008). Vicarious learning and inferential accuracy in adoption processes. *Academy of Management Review*, 33, 846–868.
- Tidd, J., & Bessant, J. (2009). *Managing innovation: Integrating technological, market and organizational change* (4th ed.). Chichester: Wiley.

- Tsai, W. (2001). Knowledge transfer in interorganizational networks: Effects of network position and absorptive capacity on business-unit innovation and performance. *Academy of Management Journal*, 44, 996–1004.
- Tuckman, A. (1994). The yellow brick road: Total Quality Management and the restructuring of organizational culture. *Organization Studies*, 15, 727–751.
- Van Dijk, S., Berends, H., Jelinek, M., Romme, A. G. L., & Weggeman, M. (2011). Micro-institutional affordances and strategies of radical innovation. *Organization Studies*, 32, 1485–1513.
- Volberda, H. W., Foss, N. J., & Lyles, M. A. (2010). Perspective—Absorbing the concept of absorptive capacity: How to realize its potential in the organization field. *Organization Science*, 21, 931–951.
- Volberda, H. W., Van Den Bosch, F. A. J., & Heij, C. V. (2013). Management innovation: Management as fertile ground for innovation. *European Management Review*, 10, 1–15.
- Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27, 185–203.
- Zbaracki, M. J. (1998). The rhetoric and reality of total quality management. *Administrative Science Quarterly*, 43, 602–638.
- Zott, C., & Amit, R. (2007). Business model design and the performance of entrepreneurial firms. *Organization Science*, 18, 181–199.

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