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CHAPTER TWO³

“GRAFTING CAPABILITY”

ABSTRACT

Acquiring high-technology firms to gain access to their capabilities to innovate—that is, capability-based acquisitions—is a strategy that is not easy to achieve. Such capability-based acquisitions require firms to integrate various dispersed knowledge-based resources and thus share knowledge to transfer the capability in question. However, despite the growing number of capability-based acquisitions, an understanding regarding these knowledge sharing processes has remained absent. This study argues that having a grafting capability can be seen as a distinctive knowledge sharing ability of successful firms. The purpose of this research is, therefore, to reveal the building blocks of such a grafting capability to understand how to manage more successful capability-based acquisitions. More specifically, it is argued that prior acquisition experience, acquisition-specific tools and functions, and knowledge management tools and practices function as the building blocks of such a grafting capability.

³This chapter is a slightly adjusted version of Amiriany, N., Huysman, M., De Man, A. P., & Cloodt, M. 2012. Acquisition reconfiguration capability. *European Journal of Innovation Management*, 15(2): 177–191.

INTRODUCTION

Powerful determinants of firms' actions and the results of such actions are unique firm-level capabilities (Eisenhardt & Schoonhoven, 1996). This view, which emphasizes firm-level heterogeneity, broadly characterizes the resource-based view of the firm (Eisenhardt & Schoonhoven, 1996). According to the resource-based view, firms are compositions of resources that could create a competitive advantage if such resources are scarce, valuable, and reasonably durable (Spender, 1996; Wernerfelt, 1984). These resources—tangible or intangible, such as capital and technical know-how—can be defined as the strengths or advantages of the firm (Eisenhardt & Schoonhoven, 1996; Wernerfelt, 1984). By means of these resources, firms develop the needed capabilities to compete in the market and, thus, gain a competitive advantage. As a result, the degree to which a firm sustains its competitive advantage depends on other firms' ability to acquire the resources needed to execute an offensive strategy (Grant, 1996). Sustaining competitive advantage, therefore, requires idiosyncratic and not easily transferable resources (Grant, 1996).

Growing competition among high-technology firms⁴ has shifted the source of competitive advantage for these firms from market power and tangible assets to intangible resources such as knowledge and know-how (Collins & Smith, 2006). As a result, acquisitions aimed at getting access to capabilities that entail target firms' intangible resources (hereafter, "capability-based acquisitions") have become increasingly important vehicles for technology-based companies to gain a competitive advantage.

Particularly in high-technology industries⁵, companies buy other, often smaller, companies to gain new capabilities. Firms engage in capability-based acquisitions with the primary objective of transferring specific capabilities. Driving the need for these capabilities is increasing technological complexity, the importance of specialized skills and expertise, and fast-paced technological change. To transfer a target's capability, acquiring firms must transfer the knowledge underlying such capabilities; therefore, knowledge transfer (the acquisition and utilization of new sets of knowledge-based resources) is key to enhancing

⁴In line with Collins and Smith (2006), who use Milkovich's (1987) definition, high-technology firms are defined as companies that "emphasize invention and innovation in their business strategy, deploy a significant percentage of their financial resources to R&D, employ a relatively high percentage of scientists and engineers in their workforce, and compete in worldwide, short-life-cycle product markets" (p. 80).

⁵According to Ranft and Lord (2002), these industries include biotechnology, computer equipment, computer software, computer services, electronics, and telecommunication. Hatzichronoglou's (1997) study for the Organisation for Economic Co-operation and Development (OECD), defines these industries similarly but adds the aerospace industry to the list.

such capability-based acquisitions' performance (Bresman, Birkinshaw, & Nobel, 2010; Ranft & Lord, 2002). This need for knowledge, has made knowledge, especially tacit⁶, being idiosyncratic and not easily transferable, the most strategically-important resource which firms possess (Bresman et al., 2010; Grant, 1996). This critical role of knowledge has been emphasized by the knowledge-based view of the firm, an outgrowth of the resource-based view (Cloudt, 2005; Grant, 1996).

Because knowledge is the most strategically important resource organizational members possess, the integration of employees' specialized knowledge becomes the essence of a firm's capability (Grant, 1996). This integration takes place through the use of certain mechanisms, practices, and functions aimed at sharing knowledge. Within the context of capability-based acquisitions, this integration of knowledge, therefore, is one of the main objectives, in order to transfer target's capability. However, regardless of the contributions prior studies have made, an understanding of the actual knowledge sharing processes and their salient features has remained absent in the literature (Foss, 2007; Foss, Husted, & Michailova, 2010).

This study argues that in the context of capability-based acquisitions, a grafting capability is the ability necessary to help organizations reach successful acquisitions—that is, acquisitions in which the firms involved have been able to share knowledge and, thus, transfer the capability in question to innovate. Therefore, the aim of this study is to reveal the building blocks of such a grafting capability that successful firms have. Specifically, this study aims to understand how firms can build such a grafting capability and thus manage more successful capability-based acquisitions. Through reviewing the literature two questions are addressed: Which mechanisms, practices, and functions enable post-acquisition knowledge sharing? and, How can these mechanisms, practices, and functions enable the creation of a grafting capability resulting in more successful capability-based acquisitions?

Insight into the development of such a grafting capability is useful, given that most acquisitions fail to meet expectations (Barkema & Schijven, 2008; Hayward, 2002). For example, Puranam, Singh, and Zollo (2003) have demonstrated that failure rates in capability-based acquisitions may reach between 60 and 80 percent. Therefore, acquiring a firm does not guarantee that valuable knowledge will be successfully shared (e.g., Bresman et al., 2010). In other words, value creation through acquisitions is difficult (Inkpen, Sundaram, & Rockwood, 2000) or does not take place at all (Meschi & Metais, 2006). Given that

⁶ In the following section an explanation regarding different types of knowledge will be given.

acquisitions usually have implementation and post-acquisition performance problems (Vermeulen & Barkema, 2001), creating understanding regarding the building blocks of post-acquisition knowledge sharing processes and, thus, a grafting capability is vital. By revealing the building blocks of such a grafting capability, this study aims to contribute to literature within the field of strategic management and, more specifically, literature of the knowledge-based view of the firm, by helping to understand how the process of post-acquisition knowledge sharing within capability-based acquisitions takes place and, thus, how targets' capabilities can be transferred post-acquisition.

In the next sections, first, dynamic capabilities will be discussed, in order to explain the essence of a grafting capability. Second, an explanation of organizational knowledge will be given and different ways of managing organizational knowledge will be discussed along with their epistemological perspectives. Thereafter, most appropriate mechanisms, practices, and functions for knowledge sharing to create a grafting capability will be given. Finally, some concluding remarks are mentioned.

DYNAMIC CAPABILITIES

According to Teece, Pisano, and Shuen (1997), "dynamic capabilities" refer to two aspects of a firm's ability to generate knowledge. The term "dynamic" refers to firms' abilities to renew their competences in dynamically competitive environments. "Capabilities" refers to the key role of strategic management in properly adapting, integrating, and reconfiguring internal and external competences to react on dynamically competitive environments. Thus, dynamic capabilities pertain to "the firm's ability to integrate, build, and reconfigure internal and external competences⁷ to address rapidly changing environments" (Teece et al., 1997, p. 516). Capron and Anand (2007, p. 79) define dynamic capabilities as "the capacity of an organization to purposefully create, extend, or modify its resource base." Dynamic capabilities qualify as meta-competences that go beyond operational competences, enabling firms not only to invent but also to innovate profitably (Teece, 2007). Because maintaining competitive advantage is extremely difficult in dynamically competitive environments (Eisenhardt & Martin, 2000), having dynamic capabilities could help firms sustain their competitive advantage by continuously reconfiguring their resources (e.g.,

⁷Teece et al. (1997) mention that "when firm-specific assets are assembled in integrated clusters spanning individuals and groups so that they enable distinctive activities to be performed, these activities constitute organizational routines and processes. Examples include quality, miniaturization, and systems integration. Such competences are typically viable across multiple product lines, and may extend outside the firm to embrace alliance partners."

Grant, 1996). When paying attention to the dynamic aspect of high-technology industries' environment, having only static, unique, and valuable resources—as proposed by the resource-based and knowledge-based views—is not enough. Sustaining competitive advantage requires being able to adjust to the environment and, thus, having dynamic capabilities. Therefore, according to Teece et al. (1997), successful firms have been those in possession of dynamic capabilities.

One important type of dynamic capability that enhances firms' potential for growth is an acquisition-based dynamic capability (Capron & Anand, 2007). Acquisition-based dynamic capability is “the capacity of the firm to purposefully create, extend, or modify the firm's augmented resource base, which includes the resources of partners” (Capron and Anand, 2007, p. 79). This capability includes the ability to identify targets, negotiate deals, and manage the integration, and it comprises the knowledge, skills, systems, structures, and processes that a firm can use when engaged in capability-based acquisitions (Laamanen & Keil, 2008). According to Capron and Anand (2007), acquisition-based dynamic capability consists of three main capabilities: selection, identification, and acquisition reconfiguration. *Selection* is the capacity to recognize when an acquisition would be the most suitable strategic move for gaining new resources. *Identification* is the capacity to find and negotiate with the most suitable targets. *Acquisition reconfiguration* capability is “the capacity to reshape resources within the target and acquiring firms” (Capron and Anand, 2007, p. 82); it involves the capacity for combining resources from the acquired and the acquiring firm to create new resources (Capron and Anand, 2007). This reconfiguration capability is called a grafting capability throughout this paper, in order to highlight that the aim of such resource reconfiguration of capability-based acquisitions is to graft newly acquired capabilities onto their own organization.

In the context of capability-based acquisitions, transferring and integrating the acquired knowledge base into that of the acquiring company is one of the main objectives to enhance innovation (Cloudt, 2005). Therefore, having such grafting capability is of utmost importance for having successful capability-based acquisitions. In the post-acquisition phase of such capability-based acquisitions, managing the integration involves, especially, enhancing the integration of knowledge-based resources and, thus, sharing knowledge to transfer the capability in question. Enhancing post-acquisition knowledge sharing is one of the main roles of such a grafting capability, in line with Teece's (2007) assertion that knowledge integration is the source of micro-foundations of dynamic capabilities and an important aspect affecting

business performance. However, transferring and integrating the acquired knowledge is a complex process. Knowledge transfer and integration take place through knowledge sharing among the employees of the firms involved. Therefore, post-acquisition knowledge sharing processes could be seen as the building blocks of a grafting capability, because these processes enable the actual integration of knowledge. Post-acquisition knowledge sharing processes, however, differ from many other business processes because they have some unique salient features (Foss, 2007). An understanding of what these salient features are, however, is still missing from extant literature (Foss, 2007; Foss et al., 2010).

Understanding which mechanisms, practices, and functions firms use to share knowledge in the post-acquisition phase to integrate different kinds of specialized knowledge could help understand what the building blocks of a grafting capability are. However, identifying the building blocks of such dynamic capabilities—that is, grafting capability—will be inherently incomplete or their implementation will be difficult, because otherwise firms' dynamic capabilities would not create the expected competitive advantage they do (Teece, 2007). Thus, dynamic capabilities create competitive advantage for firms because they are not easy to imitate. However, even though dynamic capabilities are idiosyncratic and path-dependent in emergence, they do have certain commonalities across firms. These commonalities are evident because there are more and less effective ways of dealing with certain generic organizational challenges (Eisenhardt & Martin, 2000). Thus, best practices regarding dynamic capabilities exist (Eisenhardt & Martin, 2000). Before identifying such best practices, it is important to understand organizational knowledge and knowledge management, which are necessary for understanding the knowledge sharing processes and the way these processes could be affected. The next section focuses on these aspects.

ORGANIZATIONAL KNOWLEDGE AND ITS MANAGEMENT

A good understanding of the nature of knowledge and the way organizations can manage it is necessary to be able to enhance post-acquisition knowledge sharing. Polanyi (1967) makes a fundamental distinction between tacit and explicit organizational knowledge (Easterby-Smith & Prieto, 2008). According to Polanyi, explicit knowledge is codifiable and thus transmittable in formal and systematic language (Nonaka, 1994). Explicit knowledge is similar to “knowledge about” (Spender, 1996). Tacit knowledge, however, is personally held, rooted in action and involves commitment and involvement in a certain context (Nonaka, 1994). Tacit knowledge is related to experience (Spender, 1996). Articulating, capturing, and

distributing explicit knowledge is easy, but articulating, capturing, and distributing tacit knowledge is difficult (Easterby-Smith & Prieto, 2008).

According to Nonaka (1994), knowledge can exist only at the individual level. However, many other scholars argue that knowledge exists also in social groups (Hislop, 2009). From these two views, a different dichotomy of knowledge has developed that differentiates between individual and group knowledge (Hislop, 2009). On the one hand, documented systems of rules, operating procedures, and formalized routines are examples of “objectified knowledge,” which is explicit group knowledge at the organizational level (Hislop, 2009). On the other hand, informal routines, narratives, and shared understanding are examples of “collective knowledge,” which is the tacit knowledge of the group (Hislop, 2009). In other words, this classification is also based on the distinction between tacit and explicit knowledge. However, the difference is that the group socially constructs the tacit and explicit group knowledge.

To make use of their knowledge, organizations deal with many knowledge management–related issues (McKinlay, 2005). Knowledge management, based on the tacit and explicit distinction of knowledge, consists of two different approaches to identify, develop, and leverage knowledge in organizations. The tacit and explicit distinction of knowledge has enabled scholars to consider various adaptation mechanisms with diverse characteristics for different types of knowledge (Spender, 1996). In line with organizational knowledge, knowledge management scholars are divided into two camps: those concerned primarily with the technology of knowledge management and those concerned primarily with human processes of knowledge management (Easterby-Smith & Prieto, 2008). The technology side is interested in managing knowledge and the mechanisms that help in doing so—such as IT infrastructures, data warehouses, and virtual centers of expertise (Easterby-Smith & Prieto, 2008). The human side focuses more on social relations, cultural factors, and sense-making (Easterby-Smith & Prieto, 2008). In other words, the human side is concerned with knowledge embedded in routines, practices, and norms (Alvesson & Kärreman, 2001).

In a similar vein, Brown and Duguid (2000) make a distinction between process and practice. On the one hand, the process approach focuses on the way tasks are formally organized while being concerned with the structured coordination of people and explicit knowledge. On the other hand, the practice approach is concerned with the way tasks are actually performed. According to Brown and Duguid (2000), tasks that seem highly independent according to formal processes could be remarkably social in reality. To enhance

best practices, therefore, organizations should pay attention to the way such tasks occur in reality to capture the tacit knowledge created through improvisation, narratives, and communities that form such activities (Brown & Duguid, 2000). This does not mean that processes are not necessary, but to be effective, they must be based on practice. These contradictions in knowledge management suggest that technology is not the only vehicle for facilitating knowledge sharing (e.g., Agterberg, Van den Hooff, Huysman, & Soekijad, 2010; Brown & Duguid, 2000; Van den Hooff & Huysman, 2009). Knowledge management is not only a matter of building a large knowledge repository but also a way of “connecting people so they can think together” (Alvesson & Kärreman, 2001, p. 996).

These two approaches to knowledge management emerge from two different epistemological perspectives of knowledge (Easterby-Smith & Prieto, 2008): the objectivist and the practice-based (Hislop, 2009). The objectivist epistemology considers knowledge an entity that people possess but that can also exist autonomously in a codified form (Hislop, 2009). Such knowledge can exist in forms including documents, diagrams, or computer systems, or it can be embedded in physical artifacts such as machinery or tools (Hislop, 2009). According to this perspective, even tacit knowledge can be converted, to a certain degree, into explicit knowledge. This perspective acknowledges that much organizational knowledge is tacit; yet it is optimistic about the ability of the organization to convert this knowledge into an explicit form (Hislop, 2009). However, there are enormous difficulties in doing so (Hislop, 2009). The practice-based perspective, in contrast, emphasizes that knowledge is embedded within practice and thus not codifiable (Hislop, 2009). This perspective describes tacit and explicit knowledge as inseparable—embodied in people and socially constructed (Hislop, 2009). The way social practices are conducted cannot be made explicit, therefore, some tacit component will remain unknown (Schatzki, Cetina, & Savigny, 2001). As Polanyi (1966) states, “explicit knowledge must rely on being tacitly understood” (Gourlay, 2006), which means that there is always some tacit aspect that remains unknown. Thus, as Hassel (2007) mentions, only people can possess knowledge; codifying knowledge results only in creating information. It is important not to confuse information management with knowledge management (e.g., Spender, 2008). Therefore, the practice-based approach is especially necessary because codifying knowledge is limited (Hislop, 2009).

Many scholars argue that organizations evolve as their members accumulate knowledge, which happens mostly on a tacit level (Gourlay, 2006). The practice-based epistemology has its roots in philosophical perspectives such as interpretive philosophy (Hislop, 2009), which

emphasizes the role of employees in articulating knowledge and shaping and interpreting the organizational context (Empson, 2001), and social constructionism (Easterby-Smith & Prieto, 2008), which views knowledge as constructed from and through social relationships and interactions (Swan, Newell, Scarbrough, & Hislop, 1999). This latter view of knowledge emphasizes the importance of social coordination and (formal and informal) networking while trying to manage organizational knowledge (Swan et al., 1999). In the context of capability-based acquisitions, this distinction is important because future innovation requires interaction and cooperation among the experts of the firms involved. Therefore, to enhance post-acquisition knowledge sharing and capability transfer within capability-based acquisitions, it is important to consider the practice-based view and, more specifically, social constructionism.

THE BUILDING BLOCKS OF GRAFTING CAPABILITY

Acquisition Experience

Only a few studies have focused on the effect of acquisition experience (Laamanen & Keil, 2008). On the one hand, it is questionable whether acquisition experience would enhance performance, because acquisitions are heterogeneous, irregular, and vary in their outcomes (Hayward, 2002). On the other hand, according to Vermeulen and Barkema (2001), firms might learn from their acquisitions if such acquisitions are related to their own businesses. In line with this, Hayward (2002) also mentions that acquisition experience alone is not sufficient for superior performance; better-performing firms are those that acquire companies with similar businesses. In the same vein, Haleblan and Finkelstein (1999) mention that acquisition experience has an inverted U-shaped effect on acquisition performance, which is positive when firms acquire organizations that are similar to their prior acquisitions. Meschi and Metais (2006) report that acquisition experience affects acquisition performance, though this effect has a curvilinear distribution around the acquisition's announcement date. Thus, the acquisition performance of firms with acquisition experience arguably is better than that of firms with little or no such experience (e.g., Laamanen & Keil, 2008).

Having acquisition experience can lead to having the skills necessary to manage acquisitions in the right way (Hayward, 2002) and have a positive impact on post-acquisition knowledge sharing. Literature on this topic is contradictory though. It seems that there has not been much study on the effect of the acquisition experience on post-acquisition

knowledge sharing. Previous research (Haleblian & Finkelstein, 1999; Hayward, 2002; Laamanen & Keil, 2008; Meschi & Metais, 2006; Zollo & Singh, 2004) has revealed only the effect of acquisition experience on acquisition performance with regard to, for example, return on assets or shareholder value. Focusing on post-acquisition knowledge sharing within capability-based acquisitions, therefore, could reveal some other interesting findings in terms of the effect of acquisition experience and its importance for building a grafting capability.

Acquisition-Specific Tools and Functions

To improve the performance of acquisitions, firms must develop an organizational capability that helps implement acquisitions (e.g., Helfat et al., 2007; Zollo & Singh, 2004). In the context of capability-based acquisitions, organizations can improve acquisition performance by enhancing post-acquisition knowledge sharing and therefore the transfer of the capability in question. Thus, having an organizational implementation capability that enhances knowledge sharing could be an effective way to improve the performance of such acquisitions. Organizations can build this organizational capability by codifying past experience and creating mechanisms and procedures to share explicit knowledge. In other words, organizations can learn from their past acquisition experiences through deliberate learning mechanisms such as articulating and codifying their lessons learned (Zollo & Winter, 2002) and using knowledge gained from such deliberate learning efforts in subsequent acquisitions. This is quite in line with Laamanen and Keil (2008) stating that serial acquirers accumulate their experience through the development of acquisition programs that enhance their subsequent acquisition performance. Organizations can achieve this enhancement, for example, by creating standard mechanisms and procedures that increase post-acquisition knowledge sharing. Codifying experience using technology and creating formal procedures enables the application of experience and enhances the creation of routines, which help develop dynamic capabilities (Eisenhardt & Martin, 2000; Laamanen & Keil, 2008).

In their research, Laamanen and Keil (2008) found that serial acquirers—by accumulating their experiences and developing acquisition programs—tend to outperform other acquirers. In doing this, the frequency pattern with which the acquisitions are carried out matters because a stable frequency pattern ensures the accumulation of experience. Their findings are contrary to those of Zollo and Singh (2004) though, who found that experience accumulation was not significant, whereas the degree of codification had a strong impact on acquisition

performance. On the one hand, the nonsignificant effect of experience accumulation could be a result of firms' heterogeneity and the occurrence of negative transfer. Negative transfer occurs "when one's search for an analogous condition from the past leads to a reliance on a situation that is superficially but not structurally similar to the current situation" (Helfat et al., 2007, p. 61). It is especially difficult for less experienced acquirers to judge the similarity of the target firm against previous ones (Helfat et al., 2007) and make sure that no negative transfer occurs. On the other hand, the positive effect of the degree of codification and articulation of acquisition experience mentioned by Zollo & Singh (2004), and thus the use of IT-based mechanisms and procedures for sharing knowledge in the post-acquisition phase, could result from the existence of acquisition implementation knowledge within the firm.

Zollo and Singh (2004) explain that the acquirer can learn to manage post-acquisition integration through experience accumulation and codification of explicit knowledge in manuals, systems, and other tools. Such activities aimed at knowledge codification and articulation may become superior mechanisms to accumulate expertise when tasks' frequency and homogeneity are reduced (Zollo & Winter, 2002). Therefore, acquiring firms may not be a daily task of the organization, but it does not necessarily mean that no learning benefits will occur in the codification process. This is because codification efforts force employees to draw explicit conclusions regarding their experience (Zollo & Winter, 2002). Through codifying past experience and creating certain IT-based mechanisms and procedures to share codified knowledge, the acquirer might be able to enhance knowledge sharing and improve acquisition performance. Such learning mechanisms for knowledge articulation and codification could enable the creation of dynamic capabilities (Easterby-Smith & Prieto, 2008). Therefore, such tools could be seen as the building blocks of a grafting capability.

The above mentioned tools regarding the management of acquisitions are created and used by specific functions introduced to manage acquisitions, such as an integration manager or an mergers and acquisitions (M&A) team (e.g. Inkpen et al., 2000; Zollo & Winter, 2002). The importance of such functions has already been noticed in the context of alliances. For example, Heimeriks (2008) mentions that the existence of alliance managers, alliance specialists, and alliance departments could be vital aspects for the alliance management process. It is also probable that the acquisition functions, analogous to the alliance functions, have a positive effect on the performance of acquisitions, because they influence which mechanisms and practices organizations will use for post-acquisition knowledge sharing

(Capron and Anand, 2007). Furthermore, because firms' acquisition experiences are partly embedded within such functions, they also have an important role in organizational acquisition memory.

Knowledge Management Tools and Practices

Many scholars have noted that knowledge management tools and practices are the building blocks of dynamic capabilities (Easterby-Smith & Prieto, 2008). On the one hand, using knowledge management tools has been mentioned to be important for enhancing knowledge sharing and thus for developing dynamic capabilities (e.g., Zollo & Winter, 2002). Some examples of such tools are intranets, groupware technology, searchable electronic databases, manuals, blueprints, spreadsheets, and project management software (e.g., Hislop, 2009; Zollo & Winter, 2002). However, firms use such tools to enhance sharing explicit knowledge. On the other hand, according to Grant (1996), organizations can share tacit knowledge through two mechanisms: direction and routines. Direction involves converting tacit knowledge into explicit knowledge through rules, directives, formulae, and expert systems. However, this transformation of tacit knowledge inherently means some knowledge will be lost, because not all tacit knowledge can be converted. Therefore, using such tools only partly addresses the knowledge organizations mean to share. Given that knowledge that is meant to be shared by means of capability-based acquisitions is usually of a highly ambiguous nature and tacit, personal interactions are extremely important in the post-acquisition phase (Ranft, 1997). Therefore, organizational routines, the second type of mechanism Grant (1996) mentions, solve the problem of losing tacit knowledge. By using routines, there is no need to transform knowledge into an explicit form, because knowledge integration through routines takes place in coordinated work arrangements based on informal procedures and commonly understood roles and interactions among specialists.

Lawson and Samson (2001) and Verona and Ravasi (2003) have described physical, technical, structural, and managerial systems and cultural norms and values as important aspects for developing dynamic capabilities (Easterby-Smith & Prieto, 2008). This is, however, a broad description. More specifically, Easterby-Smith and Prieto (2008) have defined skill development and mentoring as practices that enable the development of capabilities. Collins and Smith (2006) have mentioned that team-based work design and job rotation are also important for enhancing knowledge sharing, because such activities facilitate the creation of social capital. Eisenhardt and Martin (2000) note knowledge management

practices such as cross-functional teams, the creation of social bonds among managers, experiential activities, routine use of brainstorming sessions, and group problem solving as important for developing certain dynamic capabilities. Zollo and Winter (2002) reveal that discussions, debriefing sessions, workshops, seminars, and performance evaluation processes could act as mechanisms to help articulate tacit knowledge to enhance the organizational capability development process. However, as with regard to knowledge management tools and practices, acquisition-specific functions help give directions and make decisions regarding which tools and practices to use and how to use them to enhance post-acquisition knowledge sharing. Therefore, such functions also affect the impact that knowledge management tools and practices have on post-acquisition knowledge sharing and, thus, capability transfer.

As mentioned in the previous section, social interactions are fundamental for capability-based acquisitions to share tacit knowledge. This is in line with Prieto and Easterby-Smith (2006), who assert that generating dynamic capabilities requires knowledge management to focus on people and social processes. In other words, when compared with technological aspects, social aspects are probably more important for creating a grafting capability to enhance post-acquisition knowledge sharing and transferring the capability in question. The knowledge underlying the capabilities to be transferred by means of capability-based acquisitions is highly tacit and embedded in employees' routines and, thus, in their actual practice. Transferring such knowledge requires involved employees to interact in the actual practice and be involved in learning-by-doing to understand the complexity of the capability in question. Therefore, for firms involved in capability-based acquisitions, practice-based approaches such as site tours, job rotation, sharing of best practices, mentoring, project teams, training, workshops, and cross-functional committees will probably lead to sharing more relevant (tacit) knowledge than tools.

Research Model

Taken together, the above-mentioned results in the following research model which is depicted below:

Figure 1. Building blocks of grafting capability

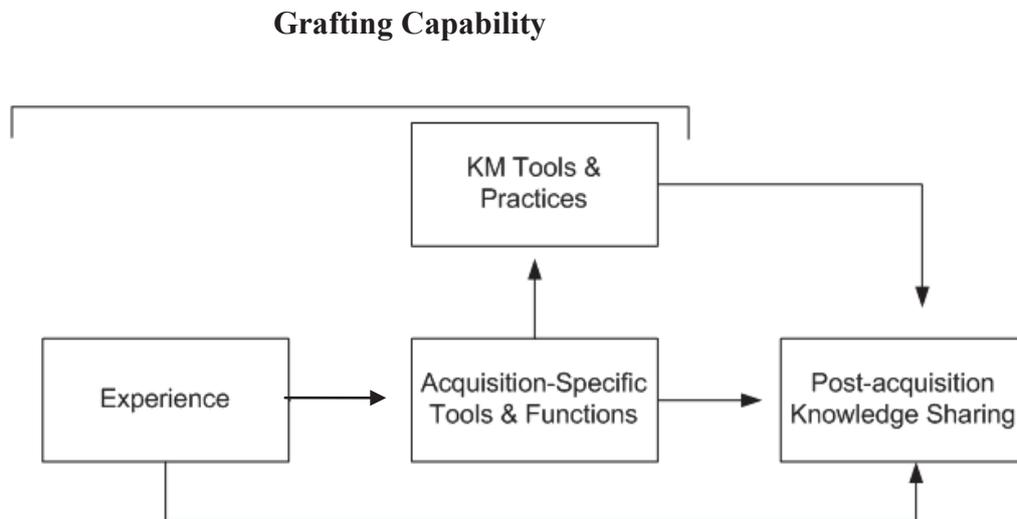


Figure 1 illustrates primarily how the three main independent variables (acquisition experience, acquisition-specific tools and functions, and knowledge management tools and practices) affect the dependent-variable post-acquisition knowledge sharing. The model also recognizes that acquisition-specific tools and functions mediate the effect of acquisition experience on post-acquisition knowledge sharing and affect the choice and use of knowledge management tools and practices.

The central reasoning is that, first, acquisition experience within the firm enhances post-acquisition knowledge sharing. Second, acquisition-specific tools and functions, such as acquisition repository and retrieval systems and an M&A team, affect post-acquisition knowledge sharing through, respectively, codification of acquisition knowledge and post-acquisition decision making. Acquisition-specific functions also affect the choice and use of knowledge management tools and practices and therefore the impact of such tools and practices on post-acquisition knowledge sharing. Third, knowledge management tools and practices have a direct effect on post-acquisition knowledge sharing. However, it is likely that when involved in capability-based acquisitions, the effect of knowledge management practices is greater than that of tools, because interaction between experts is necessary for

sharing relevant (tacit) knowledge. However, the relationships proposed in this model need empirical testing.

CONCLUDING REMARKS

The success of capability-based acquisitions depends on being able to share knowledge and in turn transfer the capability in question—to innovate. Despite the growing number of capability-based acquisitions, an understanding of how successful firms carry out their post-acquisition knowledge sharing activities is missing. There is clearly a need for more research on knowledge sharing during capability-based acquisitions. This study argues that the existence of a grafting capability can be seen as a unique knowledge sharing ability that successful firms involved in capability-based acquisitions possess. Therefore, increasing understanding of the building blocks of such a grafting capability would help understand how to manage capability-based acquisitions more successfully. This study has laid a foundation for future empirical research by creating a conceptual model that describes acquisition experience, acquisition-specific tools and functions, and knowledge management tools and practices as the building blocks of such a grafting capability.

Enhancing post-acquisition knowledge sharing is not always an easy task, because organizations should combine various knowledge-based resources. Specifically, it is proposed that having acquisition experience could affect post-acquisition knowledge sharing positively. Acquisition-specific tools and functions can also mediate the effect of this experience though. On the one hand, acquisition-specific tools contain firms' codified acquisition experience knowledge which can be used in subsequent acquisitions. Thus, such tools function as the explicit organizational acquisition memory. On the other hand, acquisition-specific functions accumulate firms' acquisition experience and therefore act as their tacit acquisition memories.

Given that having merely acquisition experience and using acquisition-specific tools and functions are not enough to enhance post-acquisition knowledge sharing optimally, organizations should take into account the importance of knowledge management tools and practices. Employees can use knowledge management tools to enhance sharing of explicit knowledge. However, given that the knowledge of interest within capability-based acquisitions is usually highly ambiguous and thus tacit, using tools only is not enough. Social interaction among the experts of the firms involved in the acquisition is also necessary. Therefore, the assumption is that using knowledge management practices would have a

greater positive effect on post-acquisition knowledge sharing than tools. In addition, this study argues that because acquisition-specific functions decide which knowledge management tools and practices to use and how to use them, such functions also affect the impact of knowledge management tools and practices. The value of this conceptual model, however, should be tested by future empirical research.

Knowledge sharing processes cannot be understood only by conducting quantitative research since it is the micro-processes embedded in these knowledge sharing processes that scholars are still puzzling over. Therefore, combining both quantitative and qualitative ethnographic research is advisable. For example, it is possible to survey practitioners (e.g., M&A managers and R&D employees) to reach many respondents and to conduct a case study to gain in-depth and rich data. The richness of the case study data could reinforce the survey data and enhance our understanding of the micro-processes of knowledge sharing and, thus, the creation of a grafting capability.

Last but not least, even though it is possible to create best practices for a grafting capability, capability-based acquisitions might be too idiosyncratic and situation-specific to provide a general causal explanation to guide us as we search for means to enhance post-acquisition knowledge sharing. Therefore, scholars conducting future research should take into account the existence of organizational idiosyncrasies in this field of research.

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