



## Critical processes of knowledge management: An approach toward the creation of customer value



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### ARTICLE INFO

#### Article history:

Received 29 October 2015

Accepted 1 March 2016

Available online 26 April 2016

#### JEL classification:

M10

M15

M19

M29

#### Keywords:

Dynamic capability

Knowledge management

Knowledge management processes

Customer value

Microfoundations of dynamic capabilities

### ABSTRACT

The aim of this article is to contribute to the literature by identifying and analyzing possible combinations between critical knowledge management processes (absorptive capacity, knowledge transfer and knowledge application), which will result in the creation of superior customer value. The main research question this work addresses is: given that customers are demanding each day a greater value, how can organizations create more value to customers from their knowledge management processes and the combination of them? We propose that the combination of the three knowledge management processes builds a dynamic or higher-order capability that results in the creation of superior value for customers.

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## 1. Introduction

In recent years of high turbulence of the environment, firms and organizations in general must pay special attention to those strategies or management processes with a greater likelihood of ensuring their success and of helping them achieve sustainable competitive advantages over time. Customer focus and the value that organizations are able to offer him or her constitute key elements to achieve such sustainable advantages.

Thus, the aim of this study is to develop a model that brings a better understanding on how a company can offer greater value to the customers, through its knowledge management (KM) processes. In particular, the research question this work aims to address is: given that customers are demanding each day a greater value, how can organizations create more value to customers from their KM processes and the combination of them?

In this line, KM becomes a key management capacity in order to create customer value. The importance of this capacity roots on

the consideration of knowledge as a key strategic resource (Grant, 1996; Van den Hooff & Huysman, 2009). Thus, if firms want to take advantage of the knowledge they possess, they have to know how knowledge is created, shared and used within the company (Ipe, 2003).

The existing literature suggests that enterprises that apply KM processes are especially looking to deliver superior value to the customers. Nevertheless, the key is not its static analysis at any point in time; the recombination of the processes should be recurrent and sustainable. According to Sirmon, Hitt, and Ireland (2007), having highly valuable or rare resources and capabilities is not sufficient to obtain competitive advantages or to create value; companies must also be able to manage them effectively. Therefore, the creation of value can also occur by recombining existing resources and capacities (Morrow, Sirmon, Hitt, & Holcomb, 2007). Organizational capacities have to be able to be reconfigured to allow the company to create value over time.

This research explores customer value creation through the organizational capacity of KM, and proposes that recombination processes constitute themselves a higher-order capacity which contributes to increase customer value. On this basis, and relying on the existing literature on the subject, this study intends to establish how companies can develop these higher-order or dynamic

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<sup>1</sup> This research was supported by a grant from VPPI-US.

capabilities (DC), thus being able to offer a superior customer value. For this reason, we analyze how absorptive capacity (ACAP), knowledge transfer (KT) and knowledge application (KA) combine and relate to each other; establishing a knowledge cycle that will constitute a dynamic capability, and hence contribute to provide customers with superior value.

Section 2 presents the theoretical framework. Details of the proposed model are shown in Section 3 and the theoretical contributions and managerial implications are discussed in Section 4, which is followed by our general conclusions in Section 5.

## 2. Theoretical background

According to Martelo-Landroguez, Barroso, and Cepeda (2011), understanding how organizations are able to generate and maintain a competitive advantage becomes something fundamental in the field of strategic management (Zott, 2003). According to the resource-based view (RBV), the differences in performance between companies are due to their specific sets of resources and capabilities. Therefore, such resources and capabilities are understood as the source of competitive advantage (Helfat & Peteraf, 2003). The RBV assumes that resources and capabilities are distributed heterogeneously among companies and that such heterogeneity can be maintained over time (Ambrosini & Bowman, 2009; McKelvie & Davidsson, 2009; Wang & Ahmed, 2007).

At the current period of widespread crisis, characterized by a significant shortage of resources in all sectors, organizations need more than ever to be able to distribute their available resources among the distinct alternatives, to try to adapt in the best way and as quickly as possible to the turbulence of the environment (Fowler, King, Marsh, & Victor, 2000; Prahalad & Ramaswamy, 2004). Therefore, organizations must develop DC in order to evolve, advance, grow, adapt, and, ultimately, survive. By means of such DC development, the company will be prepared and able to sit some firm foundations that support its strategy (Helfat & Martin, 2015).

The literature proposes numerous definitions of DC. DC is a concept that has been reached through a terminological evolution of different authors over time. Teece, Pisano, and Shuen (1997) were the first to coin this concept and defined it as the ability of the company to integrate, build, and reconfigure internal and external competencies to manage rapidly-changing environments. Cepeda and Vera (2007) and Zahra, Sapienza, and Davidsson (2006) refer to DC as the processes to reconfigure a firm's resources and operational routines in the manner envisioned and deemed appropriate by its principal decision makers.

As an extension of the RBV and as a forerunner of the DC approach, we found in the literature the knowledge-based view (KBV). The authors supporting the KBV (Nonaka, 1994; Grant, 1996) essentially consider that the main aim of the company is to create and apply knowledge. According to this approach, firms are knowledge stores. Hence the importance of accessing this knowledge, creating within the company an enabling environment to knowledge acquisition, and considering knowledge as an asset (Davenport, De Long, & Beers, 1998).

The problem inherent to the RBV is that it fails to adequately explain how and why many companies reach competitive advantages in situations of fast and unpredictable change. In such markets, where the competitive landscape is changing, DC become a source of sustainable competitive advantages. The management of knowledge resources, in particular, is especially critical in such markets (Eisenhardt & Martin, 2000). While the RBV emphasizes the collection of resources (Barney, 1991), the DC approach focuses on the renewal of these resources through their reconfiguration into new functional skills (Eisenhardt & Martin, 2000; Teece et al., 1997).

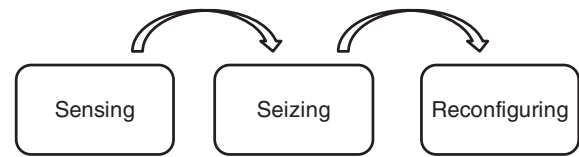


Fig. 1. Sequence of the microfoundations of dynamic capabilities.

### 2.1. Microfoundations of dynamic capabilities

The microfoundations of DC (Teece, 2007) are defined as a set of tasks that the company must address in order to develop DC. Such tasks are called sensing, seizing, and reconfiguring. The DC approach suggests that to identify new opportunities (i.e., sensing); to effectively organize them (i.e., seizing); and to adopt them (i.e., reconfiguring), is more relevant than strategy itself; strategy being understood as the behavior to ward off competitors, raise entry barriers, and exclude potential new rivals (Helfat & Peteraf, 2015; Teece, 2007). In this sense, other authors (Helfat & Peteraf, 2009; Teece, 2009) suggest that companies need to align their resources with the market's needs through the perception of opportunities or threats (sensing), the valuation of opportunities and the management of the threats (seizing), and the reconfiguration of the resources (reconfiguring).

First, companies need to focus on the activities of perception (sensing), to find out new opportunities. To do this, managers must scan, learn and interpret all the existing information (Cohen & Levinthal, 1990). These tasks will enable the discovery of latent opportunities and will generate new opportunities. Firms will have to carry out these activities intentionally and systematically, not leaving matters to chance. Now more than ever, managers need to find the way to better understand all the information available. Therefore, they will have to filter and identify the relevant information upon which to focus their attention (Ocasio, 1997).

When a new opportunity has been detected, the next step will be to assess the opportunity, which is seizing. To do this, it is necessary to determine the business model, understand resource needs and make decisions to invest in technology or other resources required, while allowing others to make the appropriate changes. Due to the fact that numerous functional areas are involved, it is necessary to achieve an important coordination of activities that affect these various functional areas, and also the associated investments that should be made simultaneously and not sequentially, especially if companies are shortening times of commercialization of new products or services (Teece, 2007). After assessing the opportunity, the reconfiguration of resources (reconfiguring) becomes necessary. Reconfiguring involves the reallocation of resources so that the new combination increases the value of the company. This reconfiguration gives the company the ability to adapt to changes in the environment, to dispose of obsolete routines and to allow increased and sustainable results.

Fig. 1 graphically represents the sequence of activities or tasks that must be carried out within the organization.

### 2.2. Knowledge management: critical processes

KM has been a widely examined topic in the management literature for many years. For a long time, companies wanted to "know what they know" (i.e., to bring to conscious level what the company knows how to do, but which up to a certain time had never stopped to analyze). Additionally, they intended to go beyond wondering how they are able to make the best use of the knowledge they possess (Macintosh, 1997).

Knowledge is considered the most important asset that organizations have (Drucker, 1985) and the most significant economic

resource. Therefore, important efforts are being made in order to be able to determine how to acquire it, represent it, retain it and manage it. The key is to know how to combine knowledge in order to ensure that the firm achieves sustainable competitive advantages (González-Loureiro, Vila, & Schiuma, 2015). Alavi and Leidner (2001) indicate that companies' difficulties in maintaining, locating and applying knowledge has led them to develop systematic procedures to manage it.

Recent works (Martelo-Landroguez et al., 2011) highlight the popularity of KM, which has grown both at the academic level and among professionals. One of the most addressed aspects in KM literature is the processes that comprise KM. Following an exhaustive review of the existing literature, this study considers the following KM processes to be critical:

**Absorptive capacity:** this involves developing new knowledge or replacing the existing one (Pentland, 1995). It includes performances of searching for new information and knowledge, both inside and outside the organization, leading in turn to new knowledge generation (Cepeda, Cegarra, & Jimenez, 2012; Chen & Edgington, 2005).

ACAP was initially defined as the firm's ability to recognize the value of new external knowledge, assimilating and applying it to commercial purposes (Cohen & Levinthal, 1990). Zahra and George (2002) later extended the ACAP concept, broadly defining it as a set of organizational routines and processes through which firms acquire, assimilate, transform and exploit knowledge in order to shape a dynamic organizational capability.

Several studies propose that the ability to exploit effectively external knowledge is a critical factor for the companies that have an interest in achieving innovation outcomes and higher benefits (Cohen & Levinthal, 1990). A company's ACAP performs as the enabler that permits turning knowledge into new products, services, or processes to support innovation and, therefore, the firm's ability to restrict competitive forces (Leal-Rodríguez, Roldán, Ariza-Montes, & Leal-Millán, 2014; Newey & Zahra, 2009).

**Knowledge transfer:** this concept refers to the knowledge exchange that occurs between individuals or groups of individuals, from individuals to explicit sources, and from a group to the organization (Alavi & Leidner, 2001). However, knowledge transfer has many motivational and perceptible obstacles, or "stickiness" (Szulanski, 1996). For instance, employees may resist receiving new knowledge from other groups, departments or sections because it is not related to their prior knowledge. To assist firms overcome these obstacles, researchers in KM have investigated the numerous facilitators of knowledge transfer (Chang, Gong, & Peng, 2012).

Among these, social capital has been taking much consideration (Kang & Hau, 2014; Kang & Kim, 2013). Knowledge transfer, conceptualized as reciprocal exchanges of organizational knowledge between a source and a recipient unit, includes two agents or components: a source and a recipient. Social capital theory suggests that social relationships can stimulate and facilitate knowledge activities of both the source and the recipient. From a knowledge source's perspective, good social relationships among employees can increase trust, thus facilitating knowledge transfer. From the recipient's viewpoint, good social relationships with coworkers facilitate the access to different and varied knowledge. However, recipients who lack prior associated knowledge may have trouble learning the source's knowledge and fight accepting it. "This lack of prior knowledge and resistance to learning new knowledge at the individual level will lead to a low absorptive capacity" (Kang & Hau, 2014, p. 759).

**Knowledge application:** this is a particularly relevant process, since the basis of organizational competitive advantages does not reside in knowledge itself, but in its application (Alavi & Leidner, 2001).

KA is a complex process because it is a loop process. On the one hand, for KA to take place, a prior phase of ACAP is required and transfer mechanisms are essential for storing and sharing knowledge. On the other hand, when the individuals apply their knowledge, through a process of feedback, they are able to check the results of that applied knowledge and the deviations from the objectives of such application. As a consequence, this process will generate new knowledge that may again be stored and transferred. Therefore, KA involves the internalization of knowledge in the company.

Following Martelo-Landroguez et al. (2011), if an organization wants to capitalize on the knowledge that it possesses, that organization must understand how knowledge is created, shared, and applied (Ipe, 2003). These processes are fundamental and essential for the adequate and effective management of organizational knowledge. As these processes do not constitute a linear sequence, all or only some of them could be involved (Alavi & Leidner, 2001).

### 2.3. Customer value

Any organization that seeks to remain on the market should in some way or another consider their customers and will therefore try to introduce into the market an offer of products or services that provide a certain customer value. According to some authors (Drucker, 1985; Porter, 1985; Slater & Narver, 1998), the value created for customers and the ability to manage it have been recognized for a long time as essential elements of the business strategy of companies.

To determine what the customer wants from a product and/or service also helps the company to make its value proposition (Martelo-Landroguez et al., 2011; Martelo-Landroguez & Cepeda, 2016). During the last decades, companies have been in a new complex competitive environment, in which increasingly more customers ask for consistent value creation (Sanchez, Iniesta, & Holbrook, 2009). This situation has resulted in a growing interest in creating and delivering greater customer value (Smith & Colgate, 2007; Wang, Lo, Chi, & Yang, 2004).

According to the KBV, knowledge is a critical input to value creation processes and KM refers to a firm's capability to use and combine various sources of knowledge that could transform tangible resources into value in the form of product or process innovations (Holsapple & Wu, 2008; Kiessling, Richey, Meng, & Dabic, 2009). Following Damanpour and Gopalakrishnan (2001), innovation is also considered a critical element when attempting to reach and sustain competitive advantages, being product/service innovation a key component of firm's value creation and value appropriation processes. These authors argue that innovative firms tend to be more flexible and adaptable to changes, and hence, are more able to exploit opportunities than their competitors are. Firms that foster an innovative approach can deal better with the currently highly dynamic environment, and are thus able to achieve and sustain long-term competitive advantages. In this vein, proactively embracing innovation contributes to differentiating the firm from its competitors, contributing hence to improve its business performance and market value (García-Zamora, González-Benito, & Muñoz-Gallego, 2013; Jansen, Van den Bosch, & Volberda, 2006).

### 3. Proposed model

In our proposed research model (Fig. 2), we intend to show how the combination of the proposed KM processes, considered critical, constitute a dynamic capability. We also show that this combination of processes conducts to creating customer value.

This model is based on the KBV as a precursor of the DC approach. KBV identifies knowledge as the most strategically important resource (Alavi & Leidner, 2001; Grant, 1996). From this approach,

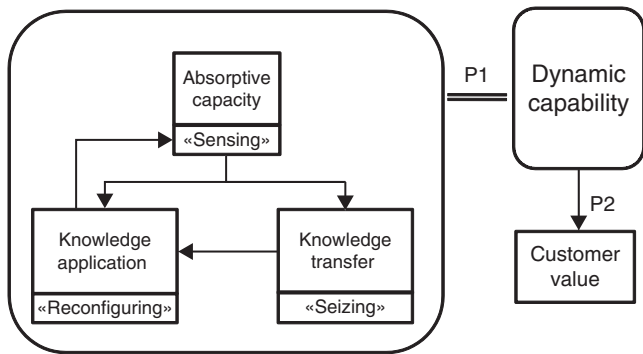


Fig. 2. Proposed model.

we pay attention to understanding the relationship between KM processes and organizational capabilities, the relevance of different processes that enable the creation, exchange and use of knowledge, and the interrelationship with the microfoundations of DC. Likewise, we theoretically propose how these combined processes develop DC in the companies, as well as how these relationships generate superior customer value, and all this in order to achieve superior business performance (Decarolis & Deeds, 1999).

### 3.1. Relationship between KM processes

Research on KM often refers to internal knowledge processes; however, ACAP focuses on the firm's use of external knowledge. In turbulent environments, companies tend to deeply rely on external knowledge (Droge, Calantone, & Harmancioglu, 2008). Given that the accumulation of knowledge is not only the result of internal development, but also of the assimilation of external knowledge, the ACAP of a company is critical to its success (Martelo-Landroguez & Cegarra, 2013).

The first authors to use the concept of ACAP were Cohen and Levinthal (1990). Developing and maintaining ACAP becomes critical for the survival and success of a company in the long term, since such capacity can reinforce, complement or reorient the knowledge base of the company. However, it is necessary to know what to do with this newly acquired knowledge. Knowledge is acquired in order to apply it; therefore, it is essential that such knowledge reaches the whole organization (Ipe, 2003). The sharing and dissemination of knowledge through the process of knowledge transfer (KT) is crucial. Our proposed model (Fig. 2) represents the relationship between ACAP and KT. Once knowledge is absorbed, it may be transferred to the rest of the organization, contributing to developing into a dynamic capability.

KT essentially involves the act of making knowledge available to others within the organization (Ipe, 2003). To ensure that knowledge might be available, individuals and departments must be involved in the process of KT (De Vries, Van den Hooff, & De Ridder, 2006). KT is understood as an effective way of improving the knowledge that a company has on their competitors and the industry, and to acquire local knowledge (Gold, Malhotra, & Segars, 2001). In fact, KT is one of the most critical processes within the KM topic and is considered to be a key phase for its success. To remain competitive within the marketplace, companies should share their organizational knowledge and skills throughout the firm (Gold et al., 2001).

Organizational competitive advantage does not lie on knowledge itself, but on its application (Alavi & Leidner, 2001). Without the application or utilization of knowledge (KA), the previous processes have little purpose. Knowledge is generated or acquired and shared to be applied and to make the company more competitive. Our model also establishes this relationship between KT and KA. For instance, when a company hires a director of R&D for developing

apps for mobile phones, the company is acquiring new knowledge. The manager will share his/her knowledge with all the team members in order to develop new innovative apps that work in the market. It is in this development that the previously acquired and shared knowledge is applied. Therefore, the KA is the ultimate goal of KM.

Following Martelo-Landroguez et al. (2011), if an organization wants to capitalize on its knowledge, that organization must understand how the generation, sharing, and application of knowledge occur. By virtue of KA, the organization can have feedback about if that knowledge is indeed needed, or if the circumstances of the environment have changed, meaning that the ACAP process has become obsolete and requires a renovation. This relationship between ACAP and KA is represented in the model.

KM processes, according to Alavi and Leidner (2001), do not necessarily follow a linear order. For example, after acquiring knowledge a company can directly apply it without previously transferring it to the rest of the organization. In our model, we represent the case of the relationship between ACAP and KA. After being absorbed, knowledge can be applied directly without having to be transferred to the rest of the organization. Once these processes and their interrelationships have been analyzed, and following our proposed model (Fig. 2), we will focus on analyzing the microfoundations of DC. That is to say, tasks that companies must carry out in order for them to be able to develop DC; and how the proposed KM processes are related to these microfoundations.

### 3.2. Microfoundations of DC and KM processes

Both organizational processes and operational capabilities can lead to develop and deploy a dynamic capability in a company. KM – which covers organizational learning, knowledge sharing and integration – is a critical capacity for the development of DC. KM is particularly useful to perceive and assess opportunities, as well as to reconfigure the firm's resources and capabilities. This study focuses on three KM processes (ACAP, KT, and KA) that we consider critical regarding company results, and a key element of DC (Teece, 2007).

KM is able to perceive (sensing) technological opportunities in the market. As we have already indicated, sensing requires companies to be able to absorb all the information and knowledge that surrounds it, in order to reach its effective implementation and thus achieve superior organizational results. Therefore, in order to develop DC, companies must enhance their ACAP, this being understood as “the set of organizational routines and processes by which firms acquire, assimilate, transform, and exploit knowledge” (Leal-Rodríguez et al., 2014, p. 894). This process allows companies to identify these opportunities and threats when developing DC (Helfat & Peteraf, 2009, 2015; Teece, 2007, 2009).

Once a new opportunity is detected, the next step deals with its rating or weighting (seizing). KM also allows the assessment (seizing) of opportunities. To analyze and assess the opportunity or threat detected for each of the functional areas involved, the knowledge generated necessarily has to be transferred to everyone within the organization, or at least to all the functional areas involved. Thus, KT processes become key elements while correctly assessing (seizing) the opportunity or threat. If, for example, the marketing department of a company detects that a competitor is developing a new product or service that enhances and includes some relevant innovation with respect to itself, the department should transfer this pertinent knowledge to the rest of the organization. Thus, other departments such as finance, production, and logistics can acknowledge the threat and start to develop some modifications on their product/service to offset the competitor. Without KT, such a valuation (seizing) of the threat could not be carried out and, hence the development of DC would not be possible.



After assessing the opportunity, organizations have to make decisions (i.e., do we remain as we are? Or do we make decisions to change things?). A reconfiguration (reconfiguring) of resources and capabilities implies the reallocation of resources so that the new combination will increase the company's value. This reconfiguration enables managers to better adapt to the changes in the environment, discard obsolete routines, and to obtain improvements in the growth and sustainability of results (Karna, Richter, & Riesenkampff, 2015). These tasks of resources reconfiguration (reconfiguring) necessarily imply managerial decisions to be based on the received, and in its case, transferred knowledge, so that the KA process produces this reconfiguration or new combination of resources and capacities, and a close relationship is established between this reconfiguration and KA process.

For an organization's base of resources and capabilities to be permanently updated and renewed as a result of these reconfiguration tasks, it is necessary to maintain a direct connection with the managers for them to receive from the environment all the changes and demands that they need. This way, every new configuration of resources and capabilities serves the organization as feedback to the cycle of renewal of resources and capabilities. Continuing with the example of the marketing department previously stated, once the knowledge of the threat is transferred to the different departments of the company, they will have to make decisions to be able to keep on competing with this market rival. They therefore need to apply this knowledge by means of decision making and by adopting a new reconfiguration of their resources so that they improve the firm's results.

Thus, according to our model (Fig. 2), three processes of KM are closely related to the microfoundations of DC.

**Proposition 1.** *The combination and interrelation between KM processes (absorptive capacity, knowledge transfer, and knowledge application) constitute a dynamic capability.*

This study raises that relations between KM processes generate a knowledge cycle in such a way that the more dynamism the cycle has and the more quickly the knowledge acquired is processed, transferred and applied, the more quickly the company will develop effective DC, and hence, achieve superior business performance.

### 3.3. KM processes and customer value

Recent studies address how KM processes and customer value are related (Gebert, Geib, Kolbe, & Brenner, 2003; Rezgui, 2007). These authors understand that knowledge and KM processes are sources of value creation for the customer, or have the capacity to create it (Vorakulpipat & Rezgui, 2008). This study focuses on the inside of the organization to see how certain internal processes affect the creation of value for the customer.

From this point of view, KM processes are perceived as those processes that allow companies to use what they know to create customer value (Vorakulpipat & Rezgui, 2008). Identifying knowledge as a key resource for organizational success confirms the need for processes that enable individual and collective knowledge creation, transfer, and leverage (Ipe, 2003).

According to the KBV, a firm's existing knowledge base sets up its scope and ability to understand and apply new knowledge to decision-making, problem-solving, or innovation (Ahuja & Katila, 2001). Firms carry out a number of internal processes aiming at creating and capturing value from the market. Therefore, these processes are critical to organizational success (Chou, 2005; Van den Hooff & Huysman, 2009). Without them, companies may not take advantage of the knowledge they possess (Bettis, Ethiraj, Gambardella, Helfat, & Mitchell, 2016; Ipe, 2003).

Technology and software companies, for instance will likely have online forums to resolve questions or technical problems for

customers. These are internal processes that create new knowledge from the problems others have had and that is stored and available for those who may need it in the future. Knowledge is hence shared and transferred among the members of the forum, both between the company and its customers, and customers among themselves.

According to Grant (1996), the critical source of competitive advantage is the integration of knowledge and not knowledge itself. The processes through which companies integrate knowledge are fundamental to their ability to create and sustain competitive advantage. In general, using organizational knowledge in a company's processes, products, and services is necessary. If a company cannot easily find the adequate knowledge in the right way, this company struggles to maintain its competitive advantage (Bhatt, 2001).

Organizational members possess, acquire, and accumulate knowledge through experimentation, the observation of stimuli, and the interpretation of the results. Ravasi and Verona (2001) point out that a knowledge base always exists in a firm, either as individual or collective knowledge, in firm routines, databases, knowledge bases, intranet, etc.

**Proposition 2.** *KM processes are positively related with customer value.*

## 4. Theoretical contributions and managerial implications

Our study contributes to the existing literature in different ways. First of all, we highlight the use in the study of the concept of DC. On this basis, we propose that companies are able to compete in the market not only by their ability to exploit their resources and existing capabilities, but also thanks to their ability to renew and develop their organizational capabilities (Teece et al., 1997). Secondly, the combination of KM processes (ACAP, KT and KA) is our proposal to DC development. From these critical KM processes, and given its special relevance to renew knowledge in a systematic way (through sensing, seizing, and reconfiguration tasks), organizations deploy DC. This continuous and systematic cycle of knowledge renewal makes the company reconfigure and renew its knowledge base in a permanent way, from the constant scanning of the environment (sensing – ACAP), the dissemination through the organization of the acquired knowledge (seizing – KT), and its subsequent implementation resulting in a new reconfiguration (reconfiguring – KA). This systematic and permanent renewal is what we have identified as a DC. Thirdly, in this study we relate internal organizational processes, such as KM processes, and how these processes affect the value created for the customers: a key variable for companies in order to achieve better results and be more competitive.

Finally, our study tries to respond to the calls in the literature on DC, requesting less abstract developments and more operations that help managers. This objective should be done through processes that can be administered directly and not through more or less abstract variables that sometimes limit the manager's capacity for action (Laaksonen & Peltoniemi, 2012).

In terms of managerial implications, our work could improve the current management of enterprises by allowing firms to enhance their results and reach superior performance. First, this work aims to show managers how they can create an appropriate environment in companies so that they can manage all the knowledge at their fingertips, for instance, developing information and business intelligence systems that meet all the tasks of KM processes, and that help them to generate customer value as a means to achieve better results.

Second, our goal is to provide a guide for executives and managers regarding the firm's orientation toward the development of DC, and how to create customer value. Organizations must rely on a permanent process of change and adaptation, designing

flexible structures that shorten decision-making processes and their implementation.

Finally, both for academics and professionals, this work presents the identification of DC and the creation of customer value as key factors to improve the management of organizations and thereby the achievement and sustainment of competitive advantages over time.

## 5. Conclusions, limitations and future research

In this study, we argue that companies acting in a tremendously competitive and changing environment need to be especially aware of the need to generate superior customer value. To create this value, firms ought necessarily to combine and properly renew their organizational capabilities, which must be customer-focused and able to permanently adapt to their environment changes. The dynamism and the uncertainty inherent to markets actively hinder the sustaining of competitive advantages over time. Therefore, companies must continuously create new customer value while maintaining the value created in previous periods (Eisenhardt & Martin, 2000; Morrow et al., 2007; Sirmon et al., 2007).

This study offers a way to develop DC and to help companies to focus on the customer through the combination and interrelationship of three critical KM processes: ACAP, KT, and KA. Our model presents these processes as a knowledge cycle or spiral that constitutes a DC in itself, and that generates synergies in the organization that create customer value; thus significantly predisposing the organization to achieve better results and maintain sustainable advantages.

As a limitation to our work, it focuses on three KM processes that we have considered critical due to their special interrelation with the microfoundations of DC and its effect on customer value; however, several more processes could have been included, and other capabilities could have been considered. Another limitation is that this study involves a theoretical model proposition, which is not empirically validated. In this vein, future research will carry out an empirical testing of this model to prove its validity and impact on organizational management and performance.

## References

- Ahuja, G., & Katila, R. (2001). Technological acquisitions and the innovation performance of acquiring firms: A longitudinal study. *Strategic Management Journal*, 22(2), 197–220.
- Alavi, M., & Leidner, D. E. (2001). Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS Quarterly*, 25(1), 107–136.
- Ambrosini, V., & Bowman, C. (2009). What are dynamic capabilities and are they a useful construct in strategic management? *International Journal of Management Reviews*, 11(1), 29–49.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Bettis, R., Ethiraj, S., Gambardella, A., Helfat, C., & Mitchell, W. (2016). Creating repeatable cumulative knowledge in strategic management. *Strategic Management Journal*, 37(2), 257–261.
- Bhatt, G. D. (2001). Knowledge management in organizations: Examining the interaction between technologies, techniques, and people. *Journal of Knowledge Management*, 5(1), 68–75.
- Cepeda, G., Cegarra, J. G., & Jimenez, D. (2012). The effect of absorptive capacity on innovativeness: Context and information systems capability as catalysts. *British Journal of Management*, 23(1), 110–129.
- Cepeda, G., & Vera, D. (2007). Dynamic capabilities and operational capabilities: A knowledge management perspective. *Journal of Business Research*, 60(5), 426–437.
- Chang, Y.-Y., Gong, Y., & Peng, M. W. (2012). Expatriate knowledge transfer, subsidiary absorptive capacity, and subsidiary performance. *Academy of Management Journal*, 55(4), 927–948.
- Chen, A. N. K., & Edgington, T. M. (2005). Assessing value in organizational knowledge creation: Considerations for knowledge workers. *MIS Quarterly*, 29(2), 279–309.
- Chou, S.-W. (2005). Knowledge creation: Absorptive capacity, organizational mechanisms, and knowledge storage/retrieval capabilities. *Journal of Information Science*, 31(6), 453–465.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128–152.
- Damanpour, F., & Gopalakrishnan, S. (2001). The dynamics of the adoption of product and process innovations in organizations. *Journal of Management Studies*, 38(1), 45–65.
- Davenport, T. H., De Long, D., & Beers, M. (1998). Successful knowledge management projects. *Sloan Management Review*, 39(2), 43–57.
- De Vries, R. E., Van den Hooff, B., & De Ridder, J. A. (2006). Explaining knowledge sharing: The role of team communication styles, job satisfaction, and performance beliefs. *Communication Research*, 33(2), 115–135.
- Decarolis, D. M., & Deeds, D. L. (1999). The impact of stocks and flows of organizational knowledge on firm performance: An empirical investigation of the biotechnology industry. *Strategic Management Journal*, 20(10), 953–968.
- Droge, C., Calantone, R., & Harmancioglu, N. (2008). New product success: Is it really controllable by managers in high turbulent environments? *Journal of Product Innovation Management*, 25(3), 272–286.
- Drucker, P. F. (1985). *Innovation and entrepreneurship*. New York: Harper and Row.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10/11), 1105–1121.
- Fowler, S. W., King, A. W., Marsh, S. J., & Victor, B. (2000). Beyond products: New strategic imperatives for developing competencies in dynamic environments. *Journal of Engineering & Technology Management*, 17(3/4), 357–377.
- García-Zamora, E., González-Benito, O., & Muñoz-Gallego, P. A. (2013). Organizational and environmental factors as moderators of the relationship between multidimensional innovation and performance. *Innovation: Management, Policy and Practice Journal*, 15(2), 224–244.
- Geberit, H., Geib, M., Kolbe, L., & Brenner, W. (2003). Knowledge-enabled customer relationship management: Integrating customer relationship management and knowledge management concepts. *Journal of Knowledge Management*, 7(5), 107–123.
- Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, 18(1), 185–214.
- González-Loureiro, M., Vila, M., & Schiuma, G. (2015). Knowledge and sustained competitive advantage: How do services firms compete? *Investigaciones Europeas de Dirección y Economía de la Empresa*, 21(2), 55–57.
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(Winter Special Issue), 109–122.
- Helfat, C. E., & Martin, J. A. (2015). Dynamic managerial capabilities: Review and assessment of managerial impact on strategic change. *Journal of Management*, 41(5), 1281–1312.
- Helfat, C. E., & Peteraf, M. A. (2003). The dynamic resource-based view: Capability lifecycles. *Strategic Management Journal*, 24(10), 997–1010.
- Helfat, C. E., & Peteraf, M. A. (2009). Understanding dynamic capabilities: Progress along a developmental path? *Strategic Organization*, 7(1), 91–102.
- Helfat, C. E., & Peteraf, M. A. (2015). Managerial cognitive capabilities and the microfoundations of dynamic capabilities. *Strategic Management Journal*, 36(6), 831–850.
- Holsapple, C. W., & Wu, J. (2008). In search of a missing link. *Knowledge Management Research & Practice*, 6(1), 31–40.
- Ipe, M. (2003). Knowledge sharing in organizations: A conceptual framework. *Human Resource Development Review*, 2(4), 337–359.
- Jansen, J. J. P., Van den Bosch, F. A. J., & Volberda, H. W. (2006). Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators. *Management Science*, 52, 1161–1174.
- Kang, M., & Hau, Y. S. (2014). Multi-level analysis of knowledge transfer: A knowledge recipient's perspective. *Journal of Knowledge Management*, 18(4), 758–776.
- Kang, M., & Kim, B. (2013). Embedded resources and knowledge transfer among R&D employees. *Journal of Knowledge Management*, 17(5), 709–723.
- Karna, A., Richter, A., & Riesenkaempff, E. (2015). Revisiting the role of the environment in the capabilities-financial performance relationship: A meta-analysis. *Strategic Management Journal*, <http://dx.doi.org/10.1002/smj.2379>
- Kiessling, T., Richey, R. G., Meng, J., & Dabic, M. (2009). Exploring knowledge management to organizational performance outcomes in a transitional economy. *Journal of World Business*, 44(4), 421–433.
- Laaksonen, O., & Peltoniemi, M. (2012). Operational definitions, variables, and data types in research on dynamic capabilities. In *AOM Annual Conference Proceedings*.
- Leal-Rodríguez, A. L., Roldán, J. L., Ariza-Montes, J. A., & Leal-Millán, A. (2014). From potential absorptive capacity to innovation outcomes in project teams: The conditional mediating role of the realized absorptive capacity in a relational learning context. *International Journal of Project Management*, 32, 894–907.
- Macintosh, A. (1997). *Position paper on knowledge asset management*. UK: Artificial Intelligence Applications Institute, University of Edinburgh.
- Martelo-Landroguez, S., & Cegarra, J. G. (2013). Linking knowledge corridors to customer value through knowledge processes. *Journal of Knowledge Management*, 18(2), 342–365.
- Martelo-Landroguez, S., Barroso, C., & Cepeda, G. (2011). Creating dynamic capabilities to increase customer value. *Management Decision*, 49(7), 1141–1159.
- Martelo-Landroguez, S., & Cepeda, G. (2016). How knowledge management processes can create and capture value for firms? *Knowledge Management Research & Practice*, <http://dx.doi.org/10.1057/kmrr.2015.26>
- McKelvie, A., & Davidsson, P. (2009). From resource base to dynamic capabilities: An investigation of new firms. *British Journal of Management*, 20, S63–S80.
- Morrow, J. L., Sirmon, D. G., Hitt, M. A., & Holcomb, T. R. (2007). Creating value in the face of declining performance: Firm strategies and organizational recovery. *Strategic Management Journal*, 28(3), 271–283.

- Newey, L. R., & Zahra, S. A. (2009). The evolving firm: How dynamic and operating capabilities interact to enable entrepreneurship. *British Journal of Management*, 20, 81–100.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14–37.
- Ocasio, W. (1997). Towards an attention-based view of the firm. *Strategic Management Journal*, 18, 187–206.
- Pentland, B. (1995). Information systems and organizational learning: The social epistemology of organizational knowledge systems. *Accounting, Management and Information Technologies*, 5(1), 1–21.
- Porter, M. E. (1985). *Competitive advantage – Creating and sustaining superior performance*. New York: Free Press.
- Prahalad, C. K., & Ramaswamy, V. (2004). *The future of competition*. Cambridge, MA: Harvard Business School Press.
- Ravasi, D., & Verona, G. (2001). Organizing the process of knowledge integration: The benefits of structural ambiguity. *Scandinavian Journal of Management*, 17, 41–66.
- Rezgui, Y. (2007). Knowledge systems and value creation. *Industrial Management & Data Systems*, 107(2), 166–182.
- Sanchez, R., Iniesta, M. A., & Holbrook, M. B. (2009). The conceptualisation and measurement of consumer value in services. *International Journal of Market Research*, 51(1), 93–113.
- Sirmon, D. G., Hitt, M. A., & Ireland, R. D. (2007). Managing firm resources in dynamic environments to create value: Looking inside the black box. *Academy of Management Review*, 32(1), 273–292.
- Slater, S. F., & Narver, J. C. (1998). Customer-led and market-oriented: Let's not confuse the two. *Strategic Management Journal*, 19(10), 1001–1006.
- Smith, J. B., & Colgate, M. (2007). Customer value creation: A practical framework. *Journal of Marketing Theory & Practice*, 15(1), 7–23.
- Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal*, 17(Winter Special Issue), 27–43.
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350.
- Teece, D. J. (2009). *Dynamic capabilities and strategic management*. New York: Oxford University Press.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
- Van den Hooff, B., & Huysman, M. (2009). Managing knowledge sharing: Emergent and engineering approaches. *Information & Management*, 46(1), 1–8.
- Vorakulpipat, C., & Rezgui, Y. (2008). Value creation: The future of knowledge management. *The Knowledge Engineering Review*, 23(3), 283–294.
- Wang, C. L., & Ahmed, P. K. (2007). Dynamic capabilities: A review and research agenda. *International Journal of Management Reviews*, 9(1), 31–51.
- Wang, Y., Lo, H. P., Chi, R., & Yang, Y. (2004). An integrated framework for customer value and customer-relationship-management performance: A customer-based perspective from China. *Managing Service Quality*, 14(2/3), 169–182.
- Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualisation, and extension. *Academy of Management Review*, 27(2), 185–203.
- Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*, 43(4), 917–955.
- Zott, C. (2003). Dynamic capabilities and the emergence of intraindustry differential firm performance: Insights from a simulation study. *Strategic Management Journal*, 24(2), 97–125.