ABSTRACT

The main objective of this study is to understand how companies develop offshoring operations capabilities through Dynamic Capabilities processes. This study integrates Dynamic Capabilities as a main theory lens and offshoring operations as organizational context. Using theory building through eight case studies with manufacturing companies, it was possible to obtain research outcomes such as the role of dynamic capabilities elements (paths, positions and processes) in the development of capability to manage and implement offshoring operations.

Keywords: Dynamic Capabilities, Offshoring Operations, Capabilities Development

INTRODUCTION

Offshoring is a growing operations practice worldwide. Over the last decade, companies have moved manufacturing operations abroad, primarily from developed to developing countries. This movement can be considered a strategy formulated in response to the increasing competitiveness of global markets. In recent years, companies have also moved services, high-skill, and core business activities overseas. This shift in offshoring to more complex operations may require the creation and implementation of new organizational practices that have implications for various organizational issues (Duke CIBER/Booz Allen Hamilton Inc., 2007), among those is the necessity to develop new resources and capabilities (Doh, 2005). Although offshoring has been practiced by companies for a long time (Hagell III & Brown, 2005; Lewin & Peeters, 2006a; Niederman, 2005; Stringfellow, Teagarden, & Nie, 2008), academic efforts are needed to achieve a full understanding of this phenomenon.

Literature has suggested that capabilities development is important when undertaking more complex offshoring processes such as product development (Manning, Massini, & Lewin, 2008), and overcoming difficulties created by temporal and spatial distance between locally dispersed work teams (Levina, 2007; Levina & Vaast, 2008). However, there is a lack of studies clarifying how companies develop capability to manage and implement offshoring operations. Focusing on managerial and firm capabilities, the dynamic capabilities (DC) approach can be a useful perspective for examining how companies develop unique capabilities in offshoring (Doh, 2005).
DC is also suggested as a means to understand the development of capabilities in open economies organizational practices, such as innovation, outsourcing, and offshoring (Teece, 2007) and development of capabilities required to evolutionary fitness and competitiveness of Less Developed Country firms (Malik, 2008). However, there is a lack of researching addressing how companies develop capabilities by DC.

Clarifying how DC works on the development of capability is central to advancements of DC theory. Based on these arguments, our research question is: How do companies develop offshoring operations capabilities through DC processes? In other words, this study aims to explore what the hole of DC processes on development of offshoring operations capabilities is. We define offshoring operations capabilities as the set of resources and capabilities developed by companies in order to implement, manage and deal with managerial challenges of offshoring operations. In this view we emphasizes the role of operational capabilities, which are central to companies becoming able to perform their activities, operations, processes and strategies (e.g. Newey & Zahra, 2009). We do not see DC as a specific capability such as new product development (e.g. Parente, Baack & Hahn, 2011). We see DC as a role of processes of development of resources and capabilities. In order to address our proposal, we integrate DC as a main theory lens and offshoring operations as organizational context. More specifically, this study defines DC as “a firm’s ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments” (Teece, Pisano, & Shuen, 1997, p. 516).

We operationalized our study by the multi-case study method. Our research is characterized as a qualitative and descriptive study, analyzing data from eight manufacturing companies. This study is organized as follows. In the next section we present a theoretical background on offshoring operations and DC. In Section 3 we describe the methodological procedure adopted. In Section 4 we present the results. We conclude with discussion and conclusion, as well as implications for researchers and managers, limitations, and future research directions.

THEORETICAL BACKGROUND

Dynamic Capabilities

The DC perspective has emerged from the RBV’s unclear response as to how firms achieve competitive advantage in a dynamic or changing environmental context (Wang & Ahmed, 2007; Ambronisi & Bowman, 2009). In other words, the DC perspective extends the RBV argument by introducing evolutionary arguments (Wang & Ahmed, 2007; Oliver & Holzinger, 2008), addressing how resources can be created and how the current stock of resources can be refreshed in changing environments (Verity, 2005; Ambrosini & Bowman, 2009), and focusing on a company’s ability to reconfigure its routines to respond to changed environment (Doving & Gooderham, 2008; Green, Larson & Kao, 2008); it also regards the effect of market dynamism (Eisenhardt & Martin, 2000), and coevolution of learning mechanisms (Zollo & Winter, 2002).

Because it alters sets of resources and capabilities, and then affects performance, DC is more than just an addition to RBV (Zott, 2003). In sum, it considers two main additional aspects, the shifting character of the environment and the key role of strategic management (Teece, Pisano & Shuen, 1997; Cavusgil, Seggie & Talay, 2007; Lillis & Lane, 2007). DC perspective also
confronts the Five Forces perspective; for instance, environment is not seen just industry by industry, but rather it is seen as a whole business ecosystem (Teece, 2007). Indeed, DC as an organizational process may embed the exploration/exploitation logic, in which environmental requirements are realized by a company and sets of resources and capabilities are configured to deal with these requirements (e.g. Yalcinkaya, Calantone, & Griffith, 2007; Katkalo, Pitelis & Teece, 2010).

As can be seen, it is not enough for a company to accumulate resources, but rather DC perspective emphasizes two main elements of development of new ways of competitive advantage: the dynamic and the capability. The term “dynamic” refers to shifting character of the environment that requires strategic responses (e.g. renew competences), and the term “capability” refers to role of strategic management to deal with changing environment requirements through adapting the company internally (e.g. adapting, integrating, and reconfiguring internal and external organizational skills, resources, and functional competences) (Teece, Pisano, & Shuen, 1997; Teece & Pisano, 2004; Katkalo, Pitelis, & Teece, 2010). For this reason, the main argument is the ability of the organization to develop high-level capabilities through its trajectory, leveraging and/or sustaining the superior performance (Helfat & Peteraf, 2003; Marcus & Anderson, 2006; Harreld, O'Reilly III, & Tushman, 2007), rather than only the possession of distinctive resources.

Dynamic capability, in turn, is the ability of the firm to build, integrate, or reconfigure operational capabilities, not directly resulting in increased profitability, but also significantly affecting the performance of the operational capabilities of the firm (Helfat & Peteraf, 2003). Resources are the foundations, or, in other words, the starting-points of the chain. Capabilities represent the company’s ability to deploy resources in order to achieve a specific goal. Core capabilities refer to sets of resources and capabilities, which have a central contribution to competitive advantage at a specific time. And finally, DCs represent the continuous management of resources, capabilities, and core capabilities (e.g. renewal), fundamentally to deal with environmental changes and sustain competitive advantage (Wang & Ahmed, 2007). Thus, operational capabilities, or only capabilities, allow companies to perform current activities. Moreover, the DC involves change, which may engage resources, capabilities, and even business models (Helfat et al., 2007; Katkalo, Pitelis & Teece, 2010).

Thus, one can figure out DC primarily works on companies’ sets of resources and capabilities. Afterward, companies become more able to deal with environmental-market requirements. In the end, companies increase their competitive position and competitiveness. Based on those previous studies, we propose the following definition: DC is a set of processes, which are stimulated by internal and external requirements, affecting companies’ collection of resources and capabilities, in order to deal with organization needs (e.g. environmental requirement, strategy implementation, exploit an opportunity).

We utilize mainly a DC approach based on studies by Teece, Pisano, and Shuen (1997) and Teece and Pisano (2004). The three specific aspects of DC are elements, firm-specific processes, and outcomes. DC elements are common features; in other words, any company should present these aspects embedded in DC (e.g. Wang & Ahmed, 2007). The three DC elements help to determine a company’s DC and distinctive competence as follows: (1) organizational processes,
which entail the organizational and managerial routines of current practice and learning; (2) positions, which refers to a company’s current endowment of technology and intellectual property and its relationships with customers, suppliers, and strategic alliances; and (3) paths, which refers to the strategic alternatives and opportunities available to the company.

**Offshoring Operations: Main Aspects**

An important differentiation can be made regarding possess/control of offshoring operations. In this study, offshoring is defined as outsourcing based on a company’s movement to source tasks or business functions (e.g. assemble) to a third party provider located in a foreign country. Offshoring captive is also defined as a company’s movement to source tasks or business functions by its own facilities in a foreign country. Finally, offshoring partnership is defined as a movement to source tasks or business functions by interorganizational relationships (e.g. joint ventures) in a foreign country. Thus, there are three types of offshoring: offshoring outsourcing, offshoring partnership, and offshoring captive (Youngdhal, Ramaswamy, & Verma, 2008).

Besides those definitions, the evolution of offshoring through time can be seen from distinctive and related aspects such as activities moved abroad, strategical importance, and managerial process. In terms of activities moved abroad, companies have been relocating activities out of the country from labor-intensive manufacturing assembly positions to service and knowledge-worker positions (Levy, 2005; Lewin & Peeters, 2006a). Further, the amount of companies using offshoring activities is growing; the scope of activities moved abroad is also increasing. Activities such as engineering, manufacturing, quality assurance, R&D, software development, marketing and consulting have been performed by companies abroad. Thus, the main characteristic of this aspect of offshoring evolution is more complex, as value chain activities of companies are being moved to be performed in developing countries (Beugelsdijk, Pedersen, & Petersen, 2009).

As a managerial process, offshoring has also spread due to development of the organizational and managerial capabilities to coordinate this process (Levy, 2005). Offshoring may be characterized as a learning-by-doing process evolving from experimental practice based on peripheral activities to core business activities. This aspect suggests that implementation of offshoring is done by a continuum of stages. This continuum is based on learning and capability building (Lewin & Peeters, 2006b). Experience accumulated also contributes toward high skill offshoring activities (Hagel III, 2004). Based on those previous studies we propose the following definition: Offshoring operations is a strategy-oriented operational and organizational process, which allows companies to achieve strategical goals by moving domestic operations abroad.

Offshoring has implications to the strategic management field because it can be considered a firm-level capability and a resource. Additionally, it can also be considered as an internal process and a business strategy, resulting from successful resource management and firm-level capabilities. Focusing on managerial and firm capabilities, a dynamic capabilities approach may be a useful perspective to address how companies develop unique capabilities offshore (Doh, 2005). As an evolutionary process, knowledge and capabilities created and shared across locations have an important contribution to offshoring success (Youngdahl & Ramaswamy, 2008).
Companies have to develop capabilities to manage offshore relationships and global networks in more advanced stages of offshoring operations (Venkatraman, 2004; Levy, 2005; Levin & Peeters, 2006b). Internal capabilities are also required to manage offshoring service processes, mitigate risks, and achieve effectiveness in this process. Capability-based theories can contribute to the understanding of offshore management challenges. A capability to conduct offshoring operations may be considered as a competitive capability (Stratman, 2008). Expertise (Doh, 2005) and managerial skills are needed to conduct offshoring operations (Scheibe, Menneke, & Zobel, 2006). The potential for achieving positive results of offshore also depends on how companies carry out this process. Consequently, at more advanced stages of offshoring operations, companies must develop specific capabilities to manage offshore relationships and global networks (Venkatraman, 2004; Levy, 2005; Lewin & Peeters, 2006b; Levina, 2007; Askin & Massini, 2008). Thus, capabilities, skills and learning related to the managerial process of offshoring are important issues (Ellran, Tate, & Billington, 2008).

**METHODOLOGY**

This research is characterized as a descriptive study using multiple cases, with a qualitative approach. The techniques of data collection we used are: (i) semi-structured interviews, (ii) document analysis based on archival records, and (iii) archival quantitative data. For data analysis we used the qualitative content analysis technique (Bardin, 1979; Mayring, 2000; Kelle, 2000; Flick, 2002; Cooper & Schindler, 2003). This study is also characterized as qualitative descriptive in that it intends to understand in depth how firms develop capability to manage and implement offshoring operations. Furthermore, another aim is to understand in depth the process of Dynamic Capabilities, identifying how the processes contribute to development of capabilities.

In general, we carried out this study using three steps. In the first step, we conducted three explorative case studies in order to get preliminary findings. The explorative phase was valuable to us to test categories of analysis and improve protocol as well. Through exploratory case studies, we identified an emergent category of analysis. In the second step, we conducted five additional cases and returned to the first three cases as well, in order to expand the analysis with more data. Finally, in the third step, we did a cross-case analysis, comparing evidence from cases.

Criteria such as reliability of generalization can be analyzed in qualitative research, yet it has a smaller role than in quantitative research (Creswell, 2003). Quality of a case study project can be verified and monitored by four tests as follows: construct validity, internal validity, external validity, reliability (Yin, 2001). The construct validity of the case studies concerns the correct operation in view of the analytical framework or conceptual model of research. We have sought to use different sources of evidences (eight cases), and qualitative and quantitative data from research reports (e.g. Offshoring Research Network). In addition, key informants were asked to analyze transcriptions in order to ensure the quality of the transcription process. Internal validity is a requirement for descriptive studies. In this study, we have followed a process of analysis through a structured procedure guided by pre-defined analytical categories, through a theoretical review, and an analytical framework, following thus an inductive logic. External validity refers to the potential generalizability of findings. It can be stated that case studies allow the emergence of new thoughts, assumptions, and theories (Eisenhardt, 1989). One of the alternatives to amplify
the generalization can be to analyze more than one case, more than one researcher involved in data analysis, and the search for a case that has specific desirable characteristics (Bryman, 1988). Thus, we have used more than one case, which fit into the context of the study object. Finally, reliability refers to the potential for replicating this study in other similar situations. In this study protocols were used and databases were generated.

The main technique for data collection used by this study was the semi structured interview. We have recorded all interviews recorded in audio mode, transcribed them, and then sent them to the interviewees for a check process. We have also taken field notes during all 24 interviews. The average length of interviews was between 50 minutes to 90 minutes, generating approximately 300 pages of transcription.

According to Eisenhardt (1989), data analysis is central to the development of theory, being the most difficult and least schematic stage of the research. In other words, the goal is to make sense of the emerging body of evidence collected (Creswell, 2003). In this research, both the data collection instruments and the data analysis were guided by categories of analysis bases on theoretical review. Taking into account the issues set out, we have used in this study the qualitative content analysis technique (Cooper & Schindler, 2000; Flick, 2002) based Mayring (2000), and Kelle (2000). We have used Nvivo®, which is a CAQDAS, in order to perform the qualitative data analysis. It is important to note that a CAQDAS does not work as statistical software, which automatically performs statistical operations. A CAQDAS is like a word processor, which does not write a text, but helps to write it. Our intention was, therefore, to analyze the reports of managers and other subjects in order to be able to extract meaning from their perceptions regarding investigated key aspects. Qualitative content analysis technique is a classical procedure to analyze textual data, including interview transcriptions to media products. It is essential to this technique to use main categories of analysis, usually originated from theory and theoretical models (Bryman, 1998; Flick, 2002). The main categories of analysis developed in this study were the following: capabilities developed by companies to manage and implement offshoring operations, the role of dynamic capabilities elements (paths, positions, and processes) on the development of capabilities for managing offshoring operations. Thus, this study applies an inductive logic of qualitative data analysis. This logic is present when categories of analysis are defined based on theoretical review, prior to data analysis process (Mayring, 2000). Inspired by Kelle (2000), we have sought a data analysis integrated processes. For the first step we created nodes in order to analyze data accordingly to our categories of analysis. For the second step, we analyzed each node by categories of analysis in order to analyze the content of each node by each case. For the third step, we analyzed each node by crossing evidence from cases, in order to identity patterns and differences among cases.

RESULTS

We have collected data from eight companies. According to the purpose of this study, we have chosen companies from the manufacturing sector. In addition, we have chosen companies that have been employing captive offshoring operations. Five are Brazilian companies (A, D, E, F, and H), one is American (G), one is Danish (B), and one is German (C).
Organizational Processes

All case companies identified the contribution of organizational processes on the development of capabilities to manage and implement offshoring operations; however, these processes vary among companies. Eight organizational processes were highlighted by companies as important to management and implementation of offshoring operations. Those processes were categorized in four aspects. The first aspect regards management and production system, as well as, routines. Company A’s managers consider standardized production system as a process that allows the company to move its production system abroad, keeping production standardized among offshoring facilities. Managers from companies G and H have highlighted management routine standardization as an important process to develop capabilities to implement and manage offshoring operations. This process allows companies to ensure that the same management routines will be made in all abroad facilities. Management and production system have been highlighted by companies D and G as a fundamental process to implement offshoring operations. This system allows companies to transfer their own system to abroad facilities, facilitating the management and implementation of operations. Finally, process and project management has also been highlighted by company D as an important process. This process has been contributing to the company’s implementation of offshoring operation, regarding the implementation as a whole project and operational processes.

The second aspect regards planning and control processes. Managers from company G consider that abroad operation planning, which is done in advance of implementation of offshoring operation is a significant process, requiring the company to prepare for implementation and management of offshoring operations. Additionally, controlling routines are considered by managers of company F as a central process. They allow the company to get control of achievement of abroad facilities, as well as ensure alignment of management and operational procedures among locations. The third aspect regards information process. Managers from companies A, C, D, and F consider integrated information system as essential processes, allowing companies to access information from abroad facilities, keep aware of managerial and operational information, as well as sharing knowledge among facilities. Those flows of information are considered important to develop capabilities to manage and implement offshoring operations. Finally the fourth aspect regards human resources development process. As managers from companies B, E, and F have emphasized, training of local human resources is central to developing capabilities to manage offshoring operations, especially production, quality, and management skills.

Path

Managers of all companies have highlighted the contribution of companies’ paths on the development of capability to manage and implement offshoring operations. Learning and past experience were aspects the most observed by managers. During its path, company A has been learning how to deal with cultural differences. This learning has contributed to implementing and managing offshoring operations, particularly regarding the adaptation of expatriates and implementation of its own management and production system. Company B also considers learning during its path important. Unlike company A, company B sought learning as related to the transfer of businesses among countries that offer cost advantages. This learning is essential to
its captive offshoring operations. Company D, F, and H consider past experience in international business a key issue. That leaning has been fundamental to management and implementation of offshoring operation by development of capabilities. It is interesting to note that those companies together represent the three types of offshoring operations.

Organizational culture was also emphasized by managers as a main aspect of companies’ paths. Company C attributed to its path the formation of an organizational culture that was fundamental to the implementation and management of offshoring operations. In addition, companies E and H also believe the development of a strong organizational culture allows both companies to develop capabilities to manage and implement offshoring operations, especially to overcome barriers. Finally, business model was the third aspect regarding companies’ paths. As managers of companies A, F, and G have highlighted, their business model was central to guiding the implementation of offshoring operations, allowing companies to move their own management and operational systems and routines abroad. This aspect has been essential to the development of implementation and management of offshoring operations.

Positions

Concerning positions, all companies identified its contribution to developing capabilities to manage offshoring operations. However, these aspects vary among companies. It was possible to identify five main aspects: specific resources, technology, and organizational culture as internal positions; and relationship with suppliers and relationship with clients as external positions aspects. Regarding specific resources development, company A attributes its position on maintaining its own production of the majority of its components as a main contributor to the implementation and management of its offshoring operations. This way, company A controls all central operations of its supply chain. Company B attributes its position to utilizing offshoring captive. In some way, the positions of companies A and B are similar. The two companies have a centralized posture in relation to offshoring operations that orients the development of their capabilities. And finally, companies E, F, and G consider their position of developing dedicated facilities abroad, facilitating the flow of items and production among locations.

Position of development of technology was also considered by companies as a major aspect of the development of capabilities to manage and implement offshoring operations. Companies A, D, and G have emphasized the development of their own management and production systems, allowing those companies to replicate their procedures and routines in abroad facilities. Production allocation among abroad facilities was considered by Company B as a main position, contributing to management and development of its offshoring operations. Development of specific technology was considered by Company F an important position made by the company, which has been central to implementation of offshoring operations. Additionally, company H considers its position on product innovation and product development process as central to its offshoring operations.

Development of strong organizational culture was also emphasized by companies. Managers of companies E, F, and H highlighted that a strong culture of international business has been developed during their companies’ history. This aspect was central to companies being willing to move abroad; it has also been essential to the development of capabilities to manage and
implement offshoring operations. Complementary positions on development of HR were regarded by companies A, E, F, and H essential as well. Relationship with supplier aspect was considered by companies as a main external position. Companies A, D, F, and G highlighted keeping a close relationship with main suppliers as essential to implement offshoring operation and to develop capabilities as well. Companies A, E, G, and H also emphasized the development of suppliers abroad as a key issue in their offshoring operations. Similarly, relationship with abroad clients was considered a main position made by companies. Companies D, E, and F consider that aspect is central to reputation of companies in the market, especially when companies are moving abroad.

CONCLUSION AND DISCUSSION

Using eight cases, we analyzed how companies develop offshoring operations capabilities through DC processes. Different from other studies that see DC as a singular capability (e.g. innovation, new development process), we see DC as a set of elements resulting in the development of specific capabilities to fit companies’ needs. Thus, we aim to contribute to DC theory as well, exploring how DC elements develop companies’ capability.

We also identified that DC elements (organizational processes, path and positions) have a central effect on resources and capabilities developed. We argue that first companies developed resources and capabilities based on those DC elements, and then, resources and capabilities developed affects the development of companies’ capability to manage and implement offshoring operations. This is a central finding to offshoring literature and to DC theory as well. Previous studies (e.g. Wang & Ahmed, 2007; Ambrosini & Bowman, 2009) argue the need for exploring the sources and benefits of DC, as well as how companies renew routines and develop capabilities. Thus, our study offers some contribution to reduce this gap.

All companies in our study report the role of organizational processes on development of resources and capabilities. For instance, internal development of procedures and routines allows companies to develop their own management systems, which is central to companies’ ability to manage and implement offshoring operations. Similarly, internal development of procedures and routines generates knowledge that is essential to move operations abroad. This finding corroborates the routine approach of DC (e.g. Zollo & Winter, 2002), which highlights the role of routines on development and changing of resources and capabilities.

We identified the contribution of path on development of resources and capabilities to manage offshoring operations. Development of strong culture, learning and past experience, and business model was highlighted by companies as development made over time that is central to development of resources and capabilities. This finding guides us to argue that development of resources and capabilities to manage offshoring operations is a path-dependent process. Our finding corroborates previous DC studies (Eisenhardt & Martin, 2000), which proposed the effect of path, or “history matters” on development of resources and capabilities. For instance, a path history of doing international business, or exporting products and importing key production components, helps companies to accumulate knowledge on international market or development of abroad suppliers.
Positions refer to commitments set by companies during the time (Teece, Pisano, & Shuen, 1997; Zott, 2003; Ambrosini & Bowman, 2009). We showed companies have commitments to specific resources, technology, organizational culture, relationship with suppliers, and relationship with clients. Those commitments have been central to the development of resources and capabilities to manage and implement offshoring operation. For instance, commitment to development of dedicate captive facilities has allowed companies to move production abroad locations. As previous DC studies pointed out, positions shape the current stock of resources and capabilities available to companies.

In addition, how do companies develop offshoring operations capabilities offshoring operations? Companies use DC elements (path, organizational processes, and positions), developing resources and capabilities during their path, by making commitments and continually developing routines and procedures. This study contributes to practice by providing information on offshoring operations aspects, what kind of capabilities companies have been developing, and how they are developing capability to manage offshoring operations. Several limitations of this study merit discussion. First, the scope is limited to manufacturing companies implementing offshoring captive operations. Results regarding offshoring operations aspects and capability development by DC cannot be extended beyond this contingency. Second, the sample case companies were not randomly sampled but were chosen by manufacturing sector, type of offshoring operations implemented, and access to interviews. This may cause some bias in the results. However, we have chosen manufacturing companies implementing offshoring captive in order to avoid the literature confusion between offshoring operations and outsource, and in order to contribute to reduce the lack of empirical studies of this kind of companies on offshoring operations. However, future studies may benefit from the insights proposed, exploring them with other research methods such as surveys.

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