ORGANIZATIONAL LEARNING IN FAST-CHANGING ENVIRONMENTS AND DECISION-MAKING PROCESSES: A LITERATURE REVIEW

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RESUMEN

Este artículo hace una revisión de la literatura sobre el aprendizaje organizacional como un recurso necesario en mercados cambiantes. Adicionalmente, esta revisión busca explorar si ha habido suficiente investigación acerca del impacto del aprendizaje organizacional y sus capacidades dinámicas en el proceso de toma de decisiones a nivel organizacional.

Palabras clave: Aprendizaje organizacional, capacidades dinámicas, perspectiva basada en recursos, ventaja competitiva sostenible, toma de decisiones.

ABSTRACT

This paper reviews recent literature on organizational learning in market dynamics. It also explores if there has been a significant research on the impact of organizational learning and its dynamic capabilities on the decision-making process at an organizational level.

Keywords: Organizational learning, dynamic capabilities, resource-based view, sustained competitive advantage, decision-making.

The objective of this paper is to review recent literature on organizational learning and its evolution, from a more static model to a dynamic market model, in which dynamic capabilities are of the utmost importance. The theoretical framework is the resource-based view, which also helps us consider the knowledge of an organization as an essential component of its competitive advantage. At a better extent, this paper also analyze if it is adequate to assess whether a sustained competitive advantage is or not possible in dynamic markets.

Additionally, it also analyzes if there is a significant relationship between the organizational learning and the decision-making process. Even though is quite evident that decisions are made at an individual level, and many studies have had this approach, it is still not entirely transparent if there is a significant effect on individual decision-making within a dynamic organizational setting. It would be important as well to consider how we can study the interaction between both kinds of knowledge: individual and organizational. Finally, light in shed on some limitations on studies made to the date and in terms of all this some proposals for future research are formalized that could enhance the state of the art on field.

This literature review is not meant to be exhaustive but it does respond to the need of a more profound understanding of the learning processes that organizations face in the current dynamism of markets. It is evident that market dynamism differs from time to time, and the corresponding needed capabilities and behaviors of any two individuals at a decision-making position or any two organizations at the same instance, need to evaluate their performance before these rapidly changing environments.

Specifically, then, this paper aims at exploring if there has been comprehensive studies around organizational learning in fast changing environments (i.e., dynamic markets), and if such studies have also considered the impact of such capabilities on the decision-making processes of different kind of agents, especially, pertaining to the relationship between individual and organizational level.

METHODOLOGY

This paper is structured around three main cornerstones: 1) organizational learning, 2) dynamic capabilities, and 3) decision-making processes. Much of the focus here will be directed towards understanding the evolution of the literature around these subjects, as well as evaluating if there is a strong way to correlate the latter cornerstone with both former two.

ORGANIZATIONAL LEARNING

This study is organized around the resource-based view (RBV) of the firm. It was important to identify if knowledge, and the ways of obtaining it, can be effectively considered as a resource. For that matter, it became relevant to briefly review what the RBV was as well as the definitions of some of the pillars of the OL theory.

Wernerfelt (1984) developed some economic tools for analyzing a firm's resource position, in addition to looking at some strategic options. He was particularly aiming at exploring further the relationship between profitability and resources, as well as ways for managing the firm's resource position over time. Barney (1991) proposed some years later, a framework under which firms obtained their sustained competitive advantage (SCA) by implementing strategies that exploited their internal strengths, responding to environmental opportunities while neutralizing external threats, and avoiding internal weaknesses. This approach is similar to Porter (1998), but emphasizes the inner capabilities (resources), rather than the external dimension (competition). A next step on the RBV, related to attaining SCA, was the model proposed by Peteraf (1993), which required, as a necessity, meeting these four conditions: 1) superior resources (i.e., heterogeneity within an industry); 2) *ex post* limits to competition; 3) imperfect resource mobility; and 4) *ex ante* limits to competition. Resources are the core of the RBV theory, and they are specific assets that can be used to generate value in an organization. According to Barney (1986) and Wernerfelt (1984), resources can be physical, human, (i.e., social, intellectual, emotional), and organizational. Huber (1991), in addition to giving a complete overview of the existing literature to that date, provided an important approximation to organizational learning, dividing it in four constructs: i) knowledge acquisition; ii) information distribution; iii) information interpretation; and iv) organizational memory.

Could we say, then, that knowledge and organizational learning are resources that may lead to SCA? Oliver (1997), quoting Barney (1991), stated that rent-generating resource traits develop from accumulation of specialized capabilities and that the persistence of rents from resources depends, fundamentally, on the features of the resources themselves. From Barney (1991), Peteraf (1993) and Rumelt (1984), one learns that these resource characteristics include whether resources are scarce, unique, inimitable, durable, idiosyncratic, non-tradeable, intangible and non-substitutable. On the other hand, it could be said that the RBV sees the firm as a collection of various technological, financial, and organizational resources. In contrast to the neoclassical view, where resources are homogeneous and mobile, the RBV holds that resource immobility and heterogeneity allow firms to develop differentiating competencies. Eventually, according to Barney, some of them might turn into valuable and inimitable capabilities that represent SCA.

These authors set the ground to consider that knowledge, and the way an organization can develop and augment their knowledge (i.e., learning), could potentially be considered as a resource for SCA. Furthermore, as Galunic and Anderson (2000) noted, "the resource-based literature has stressed that only firm-specific human capital is likely to generate organizational rents, since those assets are more likely to be inimitable, rare, and therefore a better basis for sustained competitive advantage" (p. 1). Equally important is the assertion of Haas and Hansen (2005) that for many industries, a critical source of competitive advantage is the firm's ability to apply its capabilities in the form of knowledge resources to perform important activities (Haas and Hansen, 2005; Kogut and Zander, 1992; Grant, 1996; Teece, Pisano and Shuen, 1997).

It is also of importance to address certain limitations on this approach. Haas and Hansen (2005) criticized the stocks-and-flows view of the value of a firm's knowledge, formulated by Dierickx and Cool (1989). The knowledge stocks view suggests that a firm's level of knowledge assets is associated with the firm's economic value or performance. This view also states that the firm's knowledge, when tacit and rare, and consequently difficult to imitate, can harvest differentiation and higher firm-level performance. These approaches tend to view knowledge as a trait of the entire firm, rather than of individual members or functional units.(Haas & Hansen, 2005; Kogut & Zander, 1992;Grant, 1996; Teece, Pisano & Shuen, 1997). Other scholars have used this theory focusing on the flows view, analyzing knowledge transferal among units and among different hierarchical levels of the organization, both through formal and informal channels and practices (Huber, 1991; March, 1991; Kogut & Zander, 1992). This literature review seems to indicate that there is still need for further development on the research about the way individual units of knowledge and individuals, that is, people, use the organizational knowledge to make decisions.

Is performance a result of the organization acquired-through-time knowledge, individual knowledge of the decision-making agent, or the combination of both? If it is the latter, is it possible to identify a way to understand the interaction of both sources of knowledge? Teece, Pisano and Shuen (1997) claimed that "learning involves organizational as well as individual skills" (p. 520). Kogut and Zander (1992) asserted that, what organizations do better than markets, is sharing and transferring knowledge among its members. They stated that knowledge is information and know-how that is held exclusively by individuals but expressed in regularities by which members cooperate in a social community. If that is true, there would be a theoretical framework that we could employ to understand the specific kind of knowledge relationship in which we are interested at: organizational knowledge and individual knowledge. There is perhaps a need to multi-level analysis of the phenomena. On the other hand, there are studies of significant importance to understand if there is truly incremental knowledge and performance in this particular relationship between

the two kinds of knowledge; for example, as put forth by Kostova and Roth (2002), between parent companies and its subsidiaries or by March (1991), within an organization.

To follow this line of thought, the institutional theory presents certain challenges to the incremental knowledge: adaptation seems to push towards homogenization and the correspondent lack of variety and impoverishment of the cumulative knowledge and practices: the exploration and exploitation theory of March (1991) accounts for that. Oliver (1997) also proposed that according to Institutional theorists, conformity to social expectations contributes to organizational success and survival. Scott (1987), observed that "organizations... conform because they are rewarded for doing so through increased legitimacy, resources, and survival capabilities" (p. 498). So, Institutional theory posits that institutionalized actions are consequences of individual, organizational, and interorganizational relationships and structures. At the individual level, managers' norms, habits, and unconscious conformity to traditions account for institutionalized activities. At the firm level, corporate culture, shared belief systems and political processes account for institutionalized structures and behaviors. At the interorganizational level, according to Oliver, pressures emerging from government, industry alliances, and societal expectations define socially acceptable firm conduct, and those social pressures common to all firms in the same sector cause firms to exhibit similar structures and activities. Therefore, the basic premise of Institutional theory, then, is that firms' tendencies toward conformity with predominant norms, traditions, and social influences in their internal and external environments lead to homogeneity among firms in their structures and activities, and that successful firms are those that gain support and legitimacy by conforming to social pressures. These differ radically from the RBV for which rare, immobile and inimitable resources cause firm heterogeneity, and that success is the consequence of possessing such resources.

DYNAMIC CAPABILITIES

Scholars have proposed that assets are accumulated rather than acquired, and the substitution or imitation of those assets, such as knowledge, could endanger the sustainability of competitive advantage (Dierickx & Cool, 1989). Therefore, a greater and more flexible and adaptable learning capability (i.e., dynamic capability theory) can be a relevant factor to SCA.

Teece *et al.* (1997) showed that recent research has extended RBV to dynamic markets. The reason is that RBV has not explained accurately how and why certain firms succeed in situations of rapid and unpredictable change. In these dynamic markets, such capabilities become the source of SCA. In this scenario, the knowledge resources are especially important (Grant, 1996).

Teece *et al.* (1997) defined dynamic capabilities as "the firm's processes that use resources —specifically the processes to integrate, reconfigure, gain and release resources— to match and even create market change" (p. 516). Eisenhardt and Martin (2000) defined dynamic capabilities as the way by which managers alter their resource base—acquire and shed resources, integrate them together, and recombine them—to generate new value-creating strategies. Dynamic capabilities are the drivers behind the creation, evolution, and recombination of other resources into new sources of competitive advantage.

Combining RBV with Dynamic Capabilities Theory (DCT), we can suggest with Eisenhardt and Martin (2000) that "dynamic capabilities are related to the gain and release of resources. These include knowledge creation routines whereby managers and others build new thinking within the firm" (p. 1107). These dynamic capabilities also imply their power to import additional resources into the firm. So, Teece, *et al.* (1997) coincide with Eisenhardt and Martin (2000) in that the dynamic capabilities theory consists of adding, reconfiguring, and disposing of resources or competences. Dierickx and Cool (1989) considered the relevance of SCA in a changing environment. Levinthal and March (1993) stated that "organizations that learn effectively become well-adapted to their environments, even as their environments become well-adapted to them" (p. 103) but when the world changes exogenously, that adaptation is at risk; that is why environmental changes may possibly turn already possessed competences into unnecessary, obsolete or even harmful practices unless the firm creates new opportunities from those circumstances. There is a tension between current needs and immediate uses for certain knowledge and practices and broader or deeper knowledge, not so specific and technical that has the potential to constitute a greater ability to adapt to changes (Levinthal & March, 1993). Winter (2003) has also an interesting approach to the subject: "an organizational capability is a set of decision options for producing significant outputs of a particular type while a dynamic capability would change the product, the production process, the scale, or the customers (markets) served" (p. 991). The dynamic capabilities, as discussed by Danneels (2008), are also referred to as "second-order competences".

Not every dynamic market is the same. There are significant differences in speed change among them. Eisenhardt and Martin (2000) stated that as markets become more dynamic, their change becomes nonlinear and less predictable, their boundaries less clear; their successful models ambiguous and shifting. In this scenario, dynamic capabilities require to create situation-specific new knowledge instead of relying on the existing one. This proposition possesses foremost importance because it is challenging a view in which knowledge is a source of SCA. Eisenhardt and Martin are proposing that, in certain situations, past knowledge could be a burden to performance, innovation and adaptability. For them, that is:

> effective dynamic capabilities in high-velocity markets are simple, not complicated as they are in moderately dynamic markets. Simple routines keep managers focused on broadly important issues without locking them into specific behaviors or the use of past experience that may be inappropriate given the actions required in a particular situation. (Eisenhardt & Martin, 2000, p. 1111)

So, experience, simplicity, iteration and the freedom for the creation of specific knowledge are key to the development of dynamic capabilities (Eisenhardt & Martin, 2000). It is important to emphasize that such capabilities are not necessarily organic or automatic and that the absence of a solid structure, formal proceedings, or a rigid set of practices do not necessarily imply that there is a simple decision-making process or an agile learning culture. The same goes to the codification process: even though it is necessary, to some degree, in certain markets, different circumstances could make codification an impeding practice. The work of Haas and Hansen (2005), gives empirical evidence that, in determined situations, past knowledge can hurt performance. Therefore, benchmarking and comparison to competitors can play against innovation and the development and execution of dynamic capabilities.

DECISION-MAKING PROCESSES

A transition point between a Dynamic Capability Theory (DCT) and a Decision-making Process (DMP) could be that of an innovative culture. There is a sort of congenital set of values and capabilities from the inception of certain companies that allow their members to behave and decide in a fast, unstructured, and efficient way. The work of Knight and Cavusgil (2004) is quite interesting as far as a culture forged from internal capabilities of the firm is concerned, which may be combined with accumulated knowledge as well, to engender new methods and new products. These organizational capabilities are characteristic of born-global firms, which tend to be, from its very origins, quite innovative and shaped to the dynamic market structure. For example, Fredrickson (1984), examined strategic decision-making to find that linear decision-making processes were more effective. These effective processes were characterized by a sequence of problem-solving steps that began with comprehensive collection of data, followed by development of alternatives, extensive analysis of those alternatives, and choice. Is that model still valid for highly dynamic markets? Is it applicable to an organizational level, or to an individual or group level within an organization?

There are many reasons for a person, a group or an organization to make a decision. For example, Conner (1991) declared that within-firm managerial choices are guided by an economic rationality and by motives of efficiency, effectiveness and profitability. From an institutional perspective, firms operate within a social framework of norms, values, and taken-for-granted assumptions about what constitutes appropriate or acceptable economic behavior (Oliver 1997). On the other hand, Zukin and DiMaggio (1990) argue, from a different perspective, the institutional view also suggests that the motives of human behavior extend beyond economic optimization to social justification and social obligation.

A first challenge is to recognize if decisions are made at an individual level or in groups. Most of the literature focuses on the rationality, or lack of it, and the information processing related to decision-making. Janis (1973) states that the cognitive aspect of decision (psychology) and decision-making in groups (group dynamics), are quite studied and documented as well. However, there are not enough studies of decision-making at an organizational level. This absence asks for a multi-level analysis that could help us better understand how we can translate group thinking and group dynamics oriented to decision-making to an organizational level.

There is, in fact, more literature around the decision-making process at a directorate level (i.e., group level and again, not an organizational level). In a dynamic market system, there are important levels of uncertainty and that could exert different effects on the decision-making agents. In certain occasions, the directors look at their perceived peers as a source of guidance and consultation. That practice has a psychological effect of reassurance, but also reaffirms past behavior, and reduces the opportunity of learning that arose from the experienced crisis that originated the uncertainty in the first place, as shown by McDonald and Westphal (2003). On the other hand, the behavior at a directorate level can also tend to generate a group behavior (especially for bigger firms) to make a significant move in order to alter their current situation (Martin, Gözübüyük & Becerra, 2015). As interesting as it could be, research on organizations' directories (which make the organizational decisions) are at a group level and goes beyond this literature review.

Hendry's research on Strategic decision-making is an interesting approximation to decision-making at a structural level, as a discourse and from a communications strategy (Hendry, 2000). Another highly relevant research for the proposed study is that of Mintzberg, Waters, Pettigrew, and Butler (1990) on decision-making: it is a critical review of stances toward studying decision, actions, methodology and how decision can be properly observed.

CONCLUSIONS

We have identified, in this brief literature review, that the RBV is compatible with an approximation to the knowledge and the learning capabilities as resources for the firm. In fact, for some authors, they are the resource by excellence and the preeminent source of SCA. However, in certain markets of high dynamism, the accumulated knowledge could represent a burden if it restrains the organization from making new knowledge specific to the situation.

This review of the literature also showed that there is not enough, let alone significant, research about the decision-making process at an organizational level. This fact could represent an opportunity to use a multi-level analysis methodology to further understand the organizational learning, organizational knowledge, individual knowledge of the decision-making agent and their relationships in the decision-making processes.

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