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Building a Conceptual Model of Routines, Capabilities, and Absorptive Capacity Interplay

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Researchers have often used constructs such as routines, operational capability, dynamic capability, absorptive capacity, etc., to explain various organizational phenomena, especially a competitive advantage of firms. As a consequence of their frequent use in different contexts, these constructs have become extremely broad and blurred, thus making a void in strategic management literature. In this paper we attempt to bring a sense of holistic perspective on these constructs by briefly reviewing the current state of the research and presenting a conceptual model that provides an explanation for the causal relationships between them. The final section of the paper sheds some light on this topic from the econophysics perspective. Authors hope that findings in this paper may serve as a foundation for other research endeavours related to the topic of how firms achieve competitive advantage and thrive in their environments.

Keywords: absorptive capacity, dynamic capability, operational capability, routines, inertia, econophysics.

1. Introduction

The field of strategic management is primarily concerned with the question of how firms develop strategies and thrive in their respective environments. In this quest, strategic management has developed theories and concepts that examine the environment and look inside the firm (Herrmann, 2005). Its goal is to explain the underlying mechanisms and depict actions that ought to help firms in satisfying the needs of their stakeholders and outpacing the competition.

In the past few decades, the focus of the research has been partially shifted toward some specific internal aspects of firms, such as routines (Nelson & Winter, 1982; Cohen et al., 1996; Zollo & Winter, 2002; Feldman & Pentland, 2003; Becker, 2004), operational capability (Amit & Shoemaker, 1993; Winter, 2000; Schreyögg & Kliesch-Eberl, 2007; Helfat & Winter, 2011), dynamic capability (Teece et al., 1997; Gilbert, 2006; Schreyögg & Kliesch-Eberl, 2007; Helfat & Winter, 2011), absorptive capacity (Cohen & Levinthal, 1990; Kim, 1997a; 1997b; Van den Bosch et al., 1999; Zahra & George, 2002), etc., in order to explain the creation and retention of their competitive advantage. Even though these constructs were initially used to explain different aspects of organizational dynamics and competitiveness, in time they started to become extremely broad and less concise, as a consequence of their frequent use in different contexts. These days, the field of strategic management lacks clear understanding and differentiation between these constructs, as well as clear linkages joining them.

The identified gap in the strategic management literature has been the rationale for writing this paper. The effort was undertaken in order to precisely define these constructs based on literature review, make a clear borderline between them, and finally, since all of them are inseparable from the field of strategic management, make a clear connection between them. Thus the two primary goals of this paper are: (i) to review the most influential papers in strategy management literature in order to crystallize the meaning of the following constructs - routine, operational capability, dynamic capability, and absorptive capacity; and (ii) to reconceptualise their connections by integrating them into a conceptual model extracted from the literature review.

2. Conceptual framework

For a firm to be successful in the contemporary environment, it is necessary that it should maintain the continuity of its on-going operations, while fostering innovations and change at the same time. Continuity and change come together when stability, hierarchy, specialization, formalization and centralization are coupled with attributes such as speed, flexibility and responsiveness (Graetz & Smith, 2008). In order to achieve a competitive advantage and growth, a firm must be capable of continuously reconfiguring its resources and capabilities in order to adapt to changes in the environment (Argyris, 1996), but without compromising the stability of its operations. This is especially true in a situation in which the management of a firm ought to pay attention to a much larger number of variables in the environment and their dynamics than was the case before (Stefanovic et al., 2011; 2012).

The ability to change continuously while retaining efficiency is a core capability of successful firms, especially in the highly competitive, high-velocity oligopolies in which many contemporary firms compete (Brown & Eisenhardt, 1997). In other words, “a system has to develop boundaries, identities, procedures, practices, and competencies that bring about institutionalizing effects (replicability, inertia, selectivity, etc.) likely to damage the system’s adaptability and flexibility. Responding to those inevitable tendencies (trade-offs), an organization has to find ways to handle this risk of inherent dysfunctional flips and rigidity” (Schreyögg & Sydow, 2010, p. 1258).

In this paper we provide a review and propose a reconceptualization of several constructs that represent antecedents of competitive advantage of firms by achieving efficiency through stability and continuity, and at the same time, effectiveness through instability and adaptability.

2.1. Routines

“As companies grow, they develop structures and systems to handle the increased complexity of the work. These structures and systems are interlinked so that proposed changes become more difficult, more costly, and require more time to implement, especially if they are more than small, incremental modifications. This results in structural inertia – a resistance to change rooted in the size, complexity, and interdependence in the organization’s structures, systems, procedures, and processes... Quite different and significantly more pervasive than structural inertia is the cultural inertia that comes from age and success. As organizations get older, part of their learning is embedded in the shared expectations about how things are to be done. These are sometimes seen in the informal norms, values, social networks, and in myths, stories, and heroes that have evolved over time. The more successful an organization has been, the more institutionalized or ingrained these norms, values and lessons become. The more institutionalized these norms, values, and stories are, the greater the cultural inertia – the greater the organizational complacency and arrogance” (Tushman & O’Reilly, 1996, p. 18).

In order to discuss the concept of routines, we will adopt the approach of Nelson and Winter (1982), who begin their analysis of routines from the notion of skill, which they define as “... a capability for a smooth sequence of coordinated behaviour that is ordinarily effective relative to its objectives, given the context in which it normally occurs” (p. 73). Skill is a basic trait that determines the quality of work performed and things to be done. As far as routine concerns, although the term has been in circulation for decades, we are just beginning to understand its nature (Pentland & Feldman, 2005). Routine represents a general way of doing things, that is, a stable pattern of behaviour that characterizes organizational reaction to a specific internal or external stimulus (Zollo & Winter, 2002).

Historically, the term ‘routines’ clearly referred to recurrent interaction patterns, that is, collective recurrent activity patterns (Becker, 2004). It is “an executable capability for repeated performance in some context that has been learned by an organization” (Cohen et al., 1996, p. 683). In a revision of the extensive literature, Becker (2004) identified the following characteristics associated to the routine construct: (1) patterns, (2) recurrence, (3) collective nature, (4) realm of consciousness (mindlessness vs. effortful accomplishment), (5) processual nature, (6) context-dependence, embeddedness and specificity, (7) path dependence and (8) trigger.

When viewed from a distance, any particular organizational routine can exhibit a great deal of continuity over time, which leads some theorists to emphasize their role in organizational inertia and stability (Nelson & Winter, 1982). This stability-providing effect of routines is important for organizational learning, as well as for organizational efficiency increase. However, sometimes the stability-providing effect of routines does develop into a pathology. Repetition of specific activities takes place, even though there is no obvious evidence of benefits for this kind of behaviour. In other words, routines may lead to inertia (Becker, 2004).

Gilbert (2005) argues that two basic types of inertia are resource and routine rigidity. Resource rigidity stems from resource dependency, i.e. blinders created by resource dependence, and incumbent reinvestment incentives, i.e., a desire to preserve market power. Resource dependency means that a firm's external resource providers, i.e., capital markets and customer markets, shape and constrain its internal decision-making process (c.f., Pfeffer & Salancik, 1978). Incumbent reinvestment incentives are found to exist in situations in which firms cannot acquire new technology, and therefore they increase investments in their current market positions (Gilbert & Newberry, 1982). On the other hand, routine rigidity may influence inflexibility of firm routines as well. In this view, routines are seen as repeated patterns of response that become reinforced through repeated use. Routines are self-reinforcing by nature and are not built to change. Gilbert (2005) explains that both resource and routine rigidity constrain adaptation, but they have different underlying causal mechanisms. "Data show that resource rigidity stems from unwillingness to invest, while routine rigidity stems from an inability to change the patterns and logic that underlie those investments. The former relates to the motivation to respond, the latter to the structure of that response... By analogy, resource rigidity is concerned with movement along a line, while routine rigidity deals with the trajectory of the line... Threat decreases resource rigidity but increases routine rigidity" (Gilbert, 2005, p. 757). One of his major findings is that the response to discontinuous change in environment requires more than just commitment of resources. The underlying organizational routines that use those resources must also adapt accordingly. Therefore:

Proposition 1: *Resources and routines, if not questioned and re-examined periodically, have a tendency to become rigid due to the force of inertia.*

Having this in mind, the question that practically imposes itself is whether routines exhibit only continuity and repetition, or whether there is some other trait invisible when viewed from a distance. A closer observation of routines reveals their different kind of nature, the one that is opposite to continuity and repetition. Viewed up close, routines change. They change continuously and endogenously, which leads various academics to emphasize their role in flexibility and change (Pentland & Reuter, 1994). In response to these apparently contradictory empirical findings, Pentland and Feldman (2005) argue that routines are continuously emerging systems with internal structures and dynamics. The internal structure of a routine can produce a wide range of different outcomes on the continuum between 'very stable' and 'constantly changing', depending on circumstances.

Both the stability and instability of routines are desirable. This presents a paradox that continually challenges organizations to balance the two objectives (Poole & Van de Ven, 1989). Anand et al. (2012) argue that routines go through alternating cycles of intended stability in terms of adherence to the established procedures, and of intended instability in terms of improvisation and change in these procedures. In other words, operational routines go through regular phases of renewal through organizational learning. In the absence of a renewal, adherence to routines tends to decay, leading to a state of higher entropy over time. The preceding arguments suggest the following proposition:

Proposition 2: *The greater the extent to which firms foster organizational learning, the greater the likelihood they will establish empirically proven routines that will be subjected to renewal as circumstances dictate.*

2.2. Organizational (operational) capability

Capabilities refer to a firm's capacity to deploy and coordinate different resources, usually in combination, using organizational processes, to affect a desired end (Amit & Shoemaker, 1993). Hence, resources and capability represent two different conceptual levels. A firm's resources at a given time could be defined as

those (tangible and intangible) assets which are tied semipermanently to the firm (Wernefelt, 1984). On the other hand, capabilities are focused on the combination and linking of resources, that is, capability represents a distinctive and superior way of allocating resources (Schreyögg & Kliesch-Eberl, 2007), and each firm gradually develops its approach to selecting and using specific resources (Schreyögg & Kliesch-Eberl, 2007), which is why it is also called organizational capability, or even operational capability. All these terms are treated as synonyms in this paper.

Organizational capability may also be regarded as a firm's capacity to perform a specific activity or inter-related set of activities in a reliable and at least minimally satisfactory manner (Helfat & Winter, 2011). "Operational capability enables a firm to perform an activity on an on-going basis using more or less the same techniques on the same scale to support existing products and services for the same customer population." (Helfat & Winter, 2011, p. 1244) According to Winter (2000), an organizational capability is "a high level routine (or collection of routines) that, together with its implementing input flows, confers upon an organization's management a set of decision options for producing significant outputs of a particular type" (p. 983). Hence:

Proposition 3: *Firms that incorporate appropriate routines on the selected resources during their operations will have a greater chance to create more effective organizational (operational) capabilities.*

As already implied in the section covering routines, organizational capabilities may fall into trap of becoming needless routines if their underlying logic is not subjected to continuous re-examination and evaluation. "Any capability therefore contains an inherent risk, that is, the risk of rigidity and helplessness in the face of fundamentally changing conditions. As a consequence, organizations are confronted with a dilemma: on the one hand, they have to develop reliable patterns of selecting and linking resources in order to attain superior performance and competitive advantages and, on the other hand, this endeavour constitutes – at least in volatile markets – a considerable risk of becoming locked into exactly these capabilities" (Schreyögg & Kliesch-Eberl, 2007, p. 919). Based on the aforementioned:

Proposition 4: *Organizational (operational) capabilities, if not questioned and re-examined periodically, have a tendency to become rigid due to the force of inertia.*

An organizational capability is the result of an organizational learning process (Schreyögg & Kliesch-Eberl, 2007). Organization learning is a form of informational updating through which decision makers develop an understanding of relationships between organization's actions and outcomes (Levitt & March, 1988). Thus, the factors that define an organization's capabilities evolve over time: they start with resources, then move to processes and values, and finally end with culture (Christensen & Overdorf, 2000). Seen through these lenses, it is not surprising that creating outstanding organizational capability has a synergistic effect, i.e., it enables the company as a whole to be more valuable than the sum of its parts (Brockbank & Ulrich, 2009). Therefore:

Proposition 5: *The greater the extent to which firms foster organizational learning, the greater the likelihood they will establish adequate organizational (operational) capabilities.*

2.3. Dynamic capability

In an environment where technological, regulatory, and competitive conditions are subjected to rapid change, persistence in the same operating routines quickly becomes hazardous. If the change is not only rapid but also unpredictable and variable in direction, operational capabilities and even the higher-order learning approaches will need to be updated repeatedly. Failure to do so turns core competencies into core rigidities (Leonard-Barton, 1992). Thus, established organizational capabilities ought to be changed as quickly and as frequently as the environment changes. In other words, a firm must adapt its operational capabilities fast enough in order to cope with the environment dynamics.

A firm's ability to thrive over time lies in its ability to integrate and build upon its current competencies while simultaneously developing fundamentally new capabilities. This is called a 'dynamic capability'. According to Teece et al. (1997), dynamic capabilities may be regarded as "the firm's ability to integrate, build, and re-configure internal and external competences to address rapidly changing environments" (p. 516). In other words, organizations must develop dynamic capabilities in order to survive in the contemporary environment. Dynamic capabilities are those that promote a seemingly radical change in how a firm makes a living (Helfat & Winter, 2011) on the basis of its existing (operational) capabilities. They refer to the capacity to renew competencies (Teece et al., 1997). When change in the environment is discontinuous, residual fit usually remains between the already established firm's capabilities and some portion of the environment, which means that established capabilities as well as new ones must coexist for some period of time. This is what dynamic capabilities really mean: moving from one competency configuration to another, and maintaining multiple competencies that address inconsistent contexts simultaneously (Gilbert, 2006). "Dynamic capabilities in this sense build different types of capabilities, which amount to experiential, improvisational, and highly fragile processes of reconfiguration, integration, and acquisition of resources. They make use of real-time information, simultaneously explore multiple alternatives, rely on quickly created new knowledge, are governed by very few simple rules, do not get stored in the organizational memory, and thus do not produce predictable outcomes. Their strength no longer flows from architecture but rather from its ability to continuously produce new constellations and solutions" (Schreyögg & Kliesch-Eberl, 2007, p. 919). The foregoing literature review suggests the following proposition:

Proposition 6: *The greater the extent to which firms develop various organizational (operational) capabilities, no matter whether in a successive or simultaneous manner, the greater dynamic capabilities they possess.*

Thus, an organization's dynamic capabilities depend on simultaneously exploiting current technologies and resources to secure efficiency benefits and creating variation through exploratory innovation. Maintaining an appropriate balance between exploitation and exploration is critical for firm survival and prosperity (March, 1991; Teece et al., 1997). This is not to say that dynamic capabilities are supposed to replace operational capabilities, but rather that, as Graetz & Smith (2008) argue, the key characteristic of duality thinking that organizations must achieve if they are to exploit and explore is the bidirectional partnership between continuity (efficiency through operational capabilities) and change (flexibility and responsiveness through dynamic capabilities).

Therefore, aligning organizations to simultaneous exploitation and exploration is a task of dynamic, rather than static alignment (Raisch & Birkinshaw, 2008), and the firm's capability to manage this alignment is called organizational ambidexterity (Duncan, 1976; March, 1991). Even though organizations need both types of capabilities (exploration and exploitation), organizational ambidexterity can be viewed as an organization-level dynamic capability (Jansen et al., 2009), but only if management can repeatedly and intentionally orchestrate firm assets and resources (O'Reilly & Tushman, 2007). "As a dynamic capability, ambidexterity embodies a complex set of routines including decentralization, differentiation, targeted integration, and the ability of senior leadership to orchestrate the complex trade-offs that the simultaneous pursuit of exploration and exploitation requires. Developing these dynamic capabilities is a central task of executive leadership" (O'Reilly & Tushman, 2011, p. 6).

Cao et al. (2009) have shown that ambidexterity is fostered by close interrelations between the existing and new knowledge. They argue that synergistic effect can be achieved by allowing the existing resources to be more fully employed to acquire new capabilities, while at the same time permitting new knowledge to be more fully integrated into the existing pool of resources. Therefore, since organizational ambidexterity is a dynamic capability, it can be concluded that dynamic capabilities must be developed through learning. Zollo and Winter (2002) focused on organizational learning as a source of dynamic capability, which they defined as "a learned and stable pattern of collective activity through which the organization systematically generates and modifies its operating routines in pursuit of improved effectiveness" (p. 340). They argue that dynamic capabilities emerge from the co-evolution of tacit experience accumulation processes with explicit knowledge articulation and codification activities. It thus follows:

Proposition 7: *The greater the extent to which firms foster organizational learning, the greater the likelihood they will establish dynamic capabilities.*

2.4. Absorptive capacity

An absorptive capacity is the ability of a firm to identify, assimilate and apply useful external knowledge (Cohen & Levinthal, 1990). It can also be acknowledged as the capacity to learn and solve problems (Kim, 1997a; 1997b). In order to identify, assimilate and exploit new knowledge a firm must possess prior related knowledge. The prior knowledge allows assimilation of new knowledge only if some portion of it is closely related to the new knowledge (Cohen and Levinthal, 1990). An absorptive capacity tends to confine a firm to operate in a specific technological domain (Cohen & Levinthal, 1990), which may eventually lead to the pattern of inertia (Nelson & Winter, 1982). Hence, two propositions follow:

Proposition 8: *The greater the extent to which firms foster organizational learning, the greater the likelihood they will have effective absorptive capacity.*

Proposition 9: *Absorptive capacity, if not questioned and re-examined periodically, has a tendency to become rigid due to the force of inertia.*

“Absorptive capacity is more likely to be developed and maintained as a byproduct of routine activity when the knowledge domain that the firm wishes to exploit is closely related to its current knowledge base. When, however, a firm wishes to acquire and use knowledge that is unrelated to its ongoing activity, then the firm must dedicate effort exclusively to creating absorptive capacity (i.e., absorptive capacity is not a byproduct).” (Cohen & Levinthal, 1990, pp. 149-150) Creative utilization of new knowledge will be permitted if some part of the prior knowledge is fairly diverse, although still related (Cohen & Levinthal, 1990).

Van den Bosch et al. (1999) argued that Cohen and Levinthal's (1990) implicit feedback loop (absorptive capacity → learning → new absorptive capacity) is mediated by the environment in which the firm competes and the firm's success in coping with it. Firms facing stable or turbulent environments tend to organize themselves differently and emphasize different ways of combining knowledge (Lane et al., 2002).

On the other hand, Zahra and George (2002) have established a conceptual link between absorptive capacity, organizational (operational) capability and dynamic capability by defining absorptive capacity as “a set of organizational routines and processes by which firms acquire, assimilate, transform, and exploit knowledge to produce a dynamic organizational capability.” (p. 186) According to them, acquisition, assimilation, transformation and exploitation are organizational capabilities that build on each other to yield absorptive capacity. In this way, absorptive capacity may actually be seen as a dynamic capability that enable firms to create and deploy the knowledge necessary to build other organizational capabilities, that is, production, marketing, sales, etc. (Zahra and George, 2002). To be more precise, in order to acquire dynamic capability, a firm first needs to have a proper level of absorptive capacity in place. Therefore, two propositions are extracted from the foregoing claims:

Proposition 10: *The greater the extent to which firms have established absorptive capacity, the greater the likelihood they will develop dynamic capabilities.*

Proposition 11: *The greater the absorptive capacity and dynamic capabilities that firms possess, the greater the possibility they will develop various organizational (operational) capabilities.*

Based on a thematic analysis of the literature, Lane et al. (2002) found that organizational learning and absorptive capacity coevolve with each influencing the other. However, they concluded that little attention has been paid to the implications of exploitative versus exploratory learning for absorptive capacity development. Thus, Lane et al. (2006) suggested a more detailed definition of absorptive capacity as a firm's ability to utilize externally held knowledge through three sequential processes: (1) recognizing and understanding potentially valuable new knowledge outside the firm through exploratory learning, (2) assimilating valuable new knowledge through transformative learning, and (3) using the assimilated knowledge to create new knowledge and commercial outputs through exploitative learning. Hence:

Proposition 12: *The greater the extent to which firms have established absorptive capacity, the greater the likelihood they will foster organizational learning.*

3. Conceptual model

The propositions extracted from the literature review of the constructs determine connections between them, thus making a conceptual model depicted in Figure 1. Besides four constructs being analyzed in this paper (routine, operational capability, dynamic capability, and absorptive capacity), this figure adopts three more constructs (rigidity, resources and organizational learning). It would be impossible to depict this model without taking these three additional constructs into account.

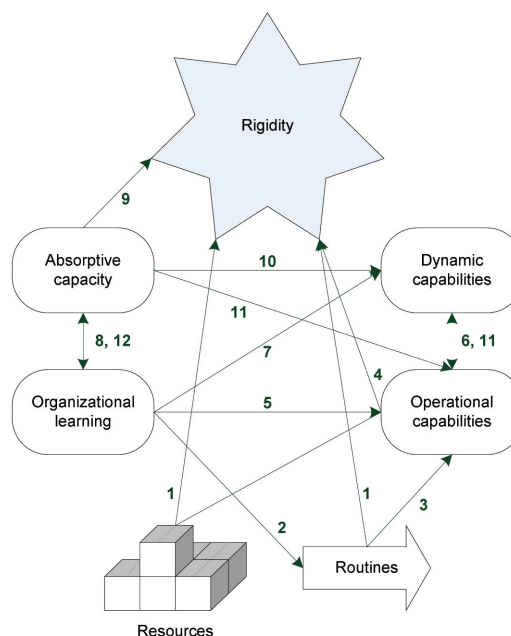


Figure 1: Conceptual model of routines, capabilities, and absorptive capacity interplay

Almost all the constructs presented in the model, i.e., resources, routines, operational and dynamic capabilities, as well as absorptive capacity, if not questioned and re-examined periodically, have a tendency to become rigid due to the force of inertia. The explanation for this statement lies in the velocity of the contemporary environment in which majority of firms operate (Stefanovic et al, 2012). It is well known that in the ever-changing environment sustainable competitive advantage is a thing of the past. Thus, contemporary environment has shifted the focus towards the temporary competitive advantage (D'Aveni et al, 2010), because the true sustainable competitive advantage is rare and declining in duration (Ruefli & Wiggins, 2002). Long-term survival ought to be embedded in new variations, internal selection that correctly reflects external selection pressures and top management's capacity for recognizing and retaining viable strategic initiatives (Burgelman, 1994).

In other words, firms ought to engage in the process of continuous organizational learning in order to cope with the changes and surprises arising from the environment and escape the forces of rigidity. Fostering organizational learning within firms increases the likelihood of establishing empirically proven routines that will be subjected to renewal as circumstances dictate. Firms that learn how to incorporate these routines on the selected resources during their operations will have a greater chance to create more effective operational capabilities suitable for the specific situation. Therefore, widespread organizational learning increases the likelihood of creating adequate operational capabilities, but also plays an important role in establishing absorptive capacity and dynamic capabilities. Nevertheless, there is also a direct causal relationship between operational and dynamic capabilities. Thus, the greater the extent to which firms develop various operational capabilities, no matter whether in a successive or a simultaneous manner, the greater dynamic capabilities they possess. Finally, the greater the extent to which firms have established absorptive capacity and dynamic capabilities, the greater the likelihood they will foster organizational learning and develop the needed operational capabilities.

4. An econophysics model based on the system theory and evolution operators

A physical model based on the theory of systems and evolution operators allows a generalization, in an econophysical manner, of the above data on the conceptualization of routines, capabilities, and absorptive capacity. Thus, the general state of the initial system is defined statically, through three specific or variable states of positioning, or analysis landmarks connected with the capability of being open to learning of a usual corporation or enterprise, of correspondence with areal corporation or real enterprise, as well as the capacity as a self-sufficient or rigid corporation. The main system elements remain the same in the static classical alternative and in this dynamics: routines, capabilities, and absorptive capacity. The statistical model, in its capacity as a classical model, defines the system three-dimensionally, capitalizing on the data enumerated above.

From a dynamic standpoint, evolution operators become the key to the econophysics model proposed. In order to express the evolution of a dynamic system of the type of that described and analysed previously, one can have recourse for the construction of an evolution operator $\chi(t)$.

Defining the dynamic function of the system $F(x,t)$, which can be the expression of the parametres analysed in the paper, or a combination thereof, will depend not only on state x of the system at a given moment, but also on the time the state is realized in. Consequently, the mechanism of time variation will have to be made clear, and the total variation of F will be expressed through:

$$F(x,t) = \chi(-t)F(x) \tag{1}$$

where: $F(x,t)$ is the dynamic function, $\chi(t)$ represents the evolution operator defined and $F(x)$ the function in a given state.

Proceeding from the definition relation of that operator, the following properties can be demonstrated for it:

$$x(t) = \chi(t).x \tag{2}$$

$$\chi(0)x = x \tag{3}$$

which means that $\chi(0)$ is a unit operator.

$$\chi(tl). \chi(t).x = x(t+tl) = \chi(t) \chi(tl).x \tag{4}$$

$$\chi(-t). \chi(t). = \chi(0). \tag{5}$$

Taking into account the fact that $F(x,0)$ is the function of the system stationed, which we want to be at least constant during the evolution of the system then equation:

$$\chi(t)F(x,t) = F(x,0) \tag{6}$$

expresses the constancy of that function over its entire evolution.

Hence, we can express the equation that formally builds the function $F(x,t)$ throughout the time interval considered.

$$F(x,t) = \chi(-t)F(x,0) \tag{7}$$

Conclusion

The constructs of routines, operational capabilities and dynamic capabilities, as well as absorptive capacity have been applied to a wide variety of phenomena in recent years. Their growing appeal is a reflection of their versatility, but this versatility carries the risk of a lack of clarity in meaning and differentiation between these constructs, as well as clear linkages joining them. In this paper, we attempt to bring a sense of holistic perspective by briefly reviewing the current state of the research and highlighting what is known about the topic. After that, the conceptual model is provided based on the propositions extracted from the literature review of the constructs.

Even though this paper provides a reconceptualization of causal relationships between routines, operational capabilities, dynamic capabilities, and absorptive capacity, and may present a small contribution to the holistic perspective on how firms achieve competitive advantage and thrive in their respective environments, authors are fully aware of its limitations. First and foremost, this paper presents a theoretical review and reconceptualization based on this review. In other words, the conceptual model presented in this paper has no direct empirical confirmation. It is simply a synthesis of various research papers, which is why its approval in an empirical setting is needed. The second limitation concerns the scope of the literature reviewed. Even though some of the most influential articles on the topics of interest are covered, and they share practically the same underlying logic, some less-known articles may indicate other aspects of the gap in the strategic management literature we are trying to bridge. Thus, a review that covers a broader scope of articles covering these topics is needed. The third limitation deals with the model itself. This model depicts static relationships between the constructs presenting antecedents of competitive advantage of firms. Competitive advantage, as stated in the introduction section, is meant to be achieved and sustained by balancing between efficiency through stability and continuity, and effectiveness through instability and adaptability. Thus, dynamics between the constructs and the nature of these relationships ought to be explained in order to make more sense of how this model captures the process of achieving and sustaining competitive advantage over time.

Nevertheless, we hope that this paper presents a solid starting point for understanding the holistic perspective on the manner in which these constructs create and sustain competitive advantage of firms, as well as encourages future research on this topic. It is reassuring that researchers in diverse organizational disciplines have recognized the explanatory power of routines, operational capabilities, dynamic capabilities and absorptive capacity, and we hope that their future uses of this conceptual model will show greater recognition of its purpose.

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