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TOWARDS A MODEL OF "PROCESS-ORIENTED" CORE COMPETENCE MANAGEMENT

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The objective of this article is to outline a model of core competence management that is closely related to process-orientation. The methodology concerns exploratory research and philosophical conceptualization, since a conceptual model iss formulated on the basis of a previous literature review (MEREDITH et al, 1993). The main references are the original proposition of core competences by Prahalad and Hamel (1990) and Hamel and Prahalad (1994) as well as several works on core competence management and process-orientation. Initially, the seminal idea of "core competence" is reviewed and models of core competence management are summarized and assessed, concerning the consideration of process-orientation. Thereafter, two frameworks of association among types of capabilities and processes are proposed, in order to support the following outline of a model of "process-oriented" core competence management. As a result, the offered frameworks and model show interrelationships among the processes and the core competences. With this perspective, actions related to the management of processes and of core competences might be clearly integrated and associated in the practice, helping to link process-orientation with strategic management.

Palavras-chaves: Core Competences, Core Competence Management, Process-Orientation, Process Management, Strategic Management

1. Introduction

A characteristic of several new management concepts of the last two decades is *process-orientation* (also "*process-view*"), which consists in the structuring of management according to the flow of the organizational activities. Accordingly, the related research increased strengthening the importance of this perspective in the optimization of firms' performance. The concerning literature presents many faces and is related to various issues, where the two "boundary" approaches are process "improvement" (HARRINGTON, 1991) and "reengineering" (HAMMER & CHAMPY, 1993). Moreover, several other concepts are also closely associated with *process-orientation*, such as "Lean Production", "Just-In-Time", "Total Quality Management", "Supply Chain Management" and "Activity-Based Costing".

The implementation of process-oriented concepts is associated with gains of productivity in organizations and many academic and consulting publications have explained how the different approaches provide improvements, mainly of costs, quality and lead-time levels. While the importance of these optimizations cannot be denied, it should be recognized that they are basically related to tactical and operational aspects of management. Moreover, an analysis of the literature on *process-orientation* allows identifying that there is apparently little attention concerning the role of process-oriented approaches in strategic management.

This lack of a structured interface between process-oriented concepts and strategic management should deserve attention of research efforts. A possible perspective to deploy this integration may be found in the literature, which has offered discussions about the interfaces between the concepts of "process" and "core competence" (GAITANIDES & SJURIS, 1995; KRÜGER & HOMP, 1997; ROHM, 1998). However, this theoretical interrelationship seems not to be clearly structured yet, although several arguments have been presented to justify a common perspective, such as:

- Process-oriented principles present a major focus on satisfying the *current* customer expectations, while the perspective of *core competences* follows a clear alignment to *future* market requirements. Thus, the combination of *process-orientation* and *core competence management* might provide a balanced view between current and future customer-orientation (ROHM, 1998);
- Regarding "structural" aspects, the borders among a firm's functions represent not only barriers to the processes, but also to the management of *core competences*, which are related to capabilities located at different functions or business units (BERGER & KALTHOFF, 1995; BHATTACHARYA & GIBBONS, 1996);
- Both *process-orientation* and *core competence management* require communication, engagement and commitment across organizational borders, since they require the participation of many areas and management levels (LUX & STADELMANN, 1995);
- *Process-orientation* and *core competence management* intend to generate competitive advantages by means of efficient applications of resources, thus they may also imply each other mutually (GAITANIDES & SJURTS, 1997; ROHM, 1998).

The filling of such gap could contribute to the integration between *process-orientation* and strategic management, more specifically in the *core competence management*. So, a review on the original concept of *core competence* is developed, followed by an analysis of selected models of *core competence management*, concerning their *process-orientation*. Based on these aspects, this work outlines a model of "process-oriented" *core competence management*.

2. Methodological Conceptualization

Research projects may be classified according to different criteria, such as (1) the objectives and (2) the adopted means of investigation (VERGARA, 1997). Pertaining to objectives, the present work represents basically an *exploratory research*, which is related to a deep study of specific issues, involving usually bibliographic and documental gathering of information, with the intent of offering the investigator the basis for the development of contributions on the investigated topic (TRIVIÑOS, 1997; GIL, 1991). An *exploratory research* usually does not provide answers to research questions; however, it can help to define the following steps of investigation, including the necessary research methods (BABBIE, 2005).

The classification concerning the means of investigation is related to the technical procedures and data gathering methods followed in the research (GIL, 1991). The present work should initially be identified as a *bibliography research*, since it involves a systematized study of published works, such as books and journals (VERGARA, 1997). The proposition of a model on the basis and conclusions of the literature review represents the deployment of a *conceptual model*, which is a set of concepts used to represent or describe an event, object or process (MEREDITH, 1993). Thus, this investigation is also characterized by the *philosophical conceptualization*, which is a methodology of theory building "that results from philosophical reflection. It basically integrates a number of different works on the same topic, summarizes the common elements, contrasts the differences, and extends the work in some fashion" (MEREDITH et al., 1989, p. 316).

3. Core Competence Management

Prahalad & Hamel (1990) introduced the concept of "core competence" to highlight the key role of a particular kind of capabilities. The main ideas of these authors will initially be summarized and, then, a discussion about other interpretations will be outlined.

3.1 Getting the Future First: Justifying the Competition on *Core Competences*

The context built by Hamel & Prahalad (1994) to propose the concept of *core competences* is based on the idea that firms should "build" the future, in order to be market leaders. The future plays a key role: "getting the future first" would allow a firm (1) to establish a virtual monopoly in a product category, (2) to set standards and to earn royalties from property rights, and (3) "to establish the rules by which other companies will have to compete" (HAMEL & PRAHALAD, 1996, p. 195). Therefore, firms should manage their resources to shape the future and the key challenges are "to preemptively build the competencies that provide gateways to tomorrow's opportunities, as well as to find novel applications of current core competencies" (HAMEL & PRAHALAD, 1996, p. 217).

Three stages would involve the competition for the future: "competition for *industry foresight* and *intellectual leadership*, competition to *foreshorten migration paths*, and competition for *market position and market share*" (HAMEL & PRAHALAD, 1996, p. 50). The preparation for that concerns technologies, customer needs, distribution channels, product features and demand expectations. The result is the design of a "strategic architecture" that specifies what new benefits ("functionalities") will be offered to the customers, what *core competences* and what interfaces with the customers should be built. A *strategic architecture* informs what should be done today, with regard to competence acquisition, to dominate future markets.

Hamel & Prahalad (1996, p. 221) affirmed that "competition for competence is not product versus product, or even business versus business. It is corporation versus corporation". Thus, competition through *core competences* occurs at a corporate level and involves high investment, risk-taking and long time to develop the necessary capabilities. Moreover, it is

very unlikely that these are all present in one single business unit. Thus, a corporation has the task "to bring these competencies together at the appropriate point within the organization" (HAMEL & PRAHALAD, 1996, p. 35) and corporations should be understood as portfolios of *core competences* and not of individual business units.

The metaphor of "corporation as a tree" was proposed to symbolize the relationship between a firm's *core competences* and business units: "The diversified corporation is a large tree. The trunk and major limbs are core products, the smaller branches are business units; the leaves, flowers, and fruits are end products. The root system that provides nourishment, sustenance, and stability is the core competence" (PRAHALAD & HAMEL, 1990, p. 81).

"Competition for competence takes place at four levels" (HAMEL & PRAHALAD, 1996, p. 233): (1) development and acquisition of skills and technologies that will constitute a *core competence*, (2) synthetisation of these different skills and capabilities in *core competences*, (3) maximization of the share of core products, and (4) competition to maximize end product share. Although the latter is a focus of most strategy texts, it represents just the final element of the whole competitive chain.

Moreover, the gain of market leadership through *core competences* is considered a long-term process: "the relevant timeframe for exploring and conquering a new opportunity arena may be ten years, twenty years, or even longer […] Leadership in fundamentally new industries is seldom built in anything less than 10 or 15 years" (HAMEL & PRAHALAD, 1996, p. 37). Furthermore, "world" leadership in thinking on *core competences* is clearly aimed.

3.2 Characterizing Core Competences

Hamel & Prahalad did not present a single definition of "core competence", but introduced this concept through several explanations, where it is understandable that a *core competence* concerns a kind of capability, which is related to the integration and coordination of other capabilities and technologies. The definition of *core competences* embraces diverse aspects: they represent "the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies" (PRAHALAD & HAMEL, 1990, p. 82). This coordination takes place through the integration of different functional capabilities: "A core competence represents the sum of learning across individual skill sets and individual organizational units" (HAMEL & PRAHALAD, 1996, p. 223). A *core competence* is the "how to coordinate and apply" diverse capabilities and not simply a given bundle of skills and technologies. As examples, Grant (1991, p. 121) appointed that the *core competences* of NEC, Philips and Sony were, respectively, "integration of computer and telecommunications technology", "optical-media expertise" and "miniaturization".

Three conditions identify if a certain competence may be a "core" one: *customer value* - the offer of "functionality" is a basic feature of a *core competence*, which "enables a company to provide a particular benefit to customers" (HAMEL & PRAHALAD, 1996, p. 219) -, *competitor differentiation* - to provide competitive advantage, a *core competence* must be singular in comparison with the rivals -, and *extendability* - A *core competence* should enable a firm to enter new markets through its application in innovative products.

3.3 Extending the Concept of *Core Competence*

Rumelt (1994, p. xv-xvi) identified four key components in Prahalad & Hamel's concept: (1) "Corporate Span: core competencies span business and products", (2) "Temporal dominance: products are momentary expressions of a corporation's core competences. Competences are more stable and evolve more slowly than do products", (3) "Learning by doing: competencies

are gained and enhanced by work", and (4) "Competitive locus: product-market competition is usually the superficial expression of a deeper competition over competencies".

Other features can also be clearly identified in the original propositions: (*i*) An explicit *future-orientation* underlies the argumentation: the building of *core competences* should follow a proactive action that looks for (world) market leadership in the "competition for the future"; (*ii*) conquering market leadership is a long-term process, requiring the development of a corporate *strategic architecture* that guides the building of *core competences*; and (*iii*) the concept of *core competences* was formulated to the context of corporate diversification.

Although most of the initial works on *core competences* had been developed in accordance with the characteristics presented above, the utilization of this concept has nowadays ranged from a "pure" original perspective to a kind of "umbrella" term that covers other types of capability (or even anything) that may provide competitive advantage. For instance, the following "interpretations" are regularly found in the literature:

- The term "core competence" has been often used as equivalent to other concepts, such as core skill, strategic asset, distinctive capability, distinctive competence, core capability and strategic capability (ZAHN, 1996; STEINLE et al., 1997; KORUNA, 1999);
- A *core competence* has also been considered as "a unique bundle of resources" (RÜHLI, 1995). If this one has a defendable inimitability and offers value to the customer, then it might provide long-term rents. Thus, customer value and extendability would not even be necessary to a core competence;
- *Core competences* have been identified by the same criteria as used for "strategic resources" or resources that may provide sustainable competitive advantages (see ROGULIC, 1999, and WELGE & AL-LAHAM, 2008);
- Core competences in non-corporate organizations: Although this concept was proposed to corporations, core competences have been identified, without adequate justification, to any kind of organization, as business areas (BOOS & JARMAI, 1994) or public administration (see GABOR, 1991, and WADDELL, 1992).

Some common differences of these and other "extensions" of the original context of Hamel & Prahalad (1994) may be identified: there are no discussions concerning the "future competition", the "extendability to new products and markets" and the corporate-wide integration of skills. Some reasons may be here hypothesized to explain the emergence of "diverging" approaches: (1) the lack of a uniform terminology in the Resource-based View (RBV), (2) inconsistent translations and "interpretations", (3) the difficulty in understanding the complex idea of "core competence" and the resulting difficulty to implementation (HINTERHUBER et al., 1997) and (4) the intention by researchers and consulting companies of translating the concept in something more "applicable" (COYNE et al., 1997).

This identification of different "meanings" of *core competences* does not necessarily mean that there is a "right" one: they all provide the theory with different perspectives than those of Hamel & Prahalad (1994). Yet, these "adaptations" of the original idea have not been accompanied by an adequate theoretical contextualization, such as those of "getting the future first" and the "strategic architecture", which supported the original proposition of the concept.

3.4 Looking for *Process-Orientation* in *Core Competence Management*

Considering the interest of understanding their interfaces with *process-orientation*, selected models of *core competence management* were evaluated. The model of Hamel & Prahalad (1996) presents five tasks: (1) *identifying core competences*, (2) *establishing a core*

competence acquisition agenda, (3) *building new core competences*, (4) *deploying core competences* and (5) *protecting and defending core competences*. Concerning *process-orientation*, few words were present in the works of these authors: they argued only that firms implement *process reengineering* to catch up the competitors that, in the past, anticipated the features of the present competition (HAMEL & PRAHALAD, 1996, p. 12-13). Accordingly, these approaches would be restricted to the context of existing businesses and unrelated to the creation of new opportunities.

Krüger & Homp (1997) presented a cycle of five tasks to the *core competence management*: (1) *identification*, (2) *deployment*, (3) *integration*, (4) *utilization* and (5) *transfer*. There is just a small contact with *process-orientation*, namely in the task of *integration*. Yet, the authors separately dedicated a discussion about the link among *core competences* and core processes. Although interesting points of view about this relationship are offered, the divergent theoretical base used makes hardly feasible to integrate their work with the original ideas of *core competences* and the understanding of processes, as usual in *process-orientation* works.

In another work, Hinterhuber et al. (1997) were interested in linking *core competences* with customer satisfaction. Their perspective brought a close attention to the processes that create value and the related need of *process-orientation*, especially to identify existing competences: the analysis of the *value chain* (PORTER, 1985), manufacture and customer processes should allow identifying and assessing each involved capability, concerning its contribution to the customer satisfaction. The authors described a sequence of *core competence* deployment related to processes: starting from future product features (which should match the customer requirements), the required capabilities and technologies are defined, which form the *core competences* to be developed. Finally, the corresponding processes are adjusted, which should finally provide the end products. Hinterhuber et al. (1997), who did not present a "model", offered useful guidelines to understand how the action on processes may be integrated into the management of *core competences*, more clearly in their identification and deployment.

Other authors intended to structure the management of *core competences* by tasks, which are relatively comparable with regard to their content (e.g. REIß & BECK, 1995; DEUTSCH et al., 1997; HINTERHUBER & FRIEDRICH, 1997; STEINLE et al., 1997; HÜMMER, 2001). A common characteristic of these works is that they usually do not present any discussion about the role of processes or *process-orientation* in *core competence management.* So, the contributions of Krüger & Homp (1997) and Hinterhuber et al. (1997) represent exceptions, since *process-orientation* was someway considered in their models. Some reasons may be hypothesized to explain why the interfaces between *core competence management* and *process-orientation* have been so far weakly discussed:

- both theories were simultaneously "popularized" in the '90s and, as they attend to different perspectives of management, there was no necessity of integrating them. Unfortunately, the few trials of filling this gap seem to be prejudiced by the terminological inconsistency deployed in the concerning literatures.
- the relationship between the concepts "core competence" and "process" seems not to be explained yet. Furthermore, as the RBV literature pays little attention to the attribute "process", its relationship with the terms "resource" and "capability" is not clear. Thus, without understanding how *core competences* are related to processes, it is impracticable to connect their management approaches.

Accordingly, a proposal for explanation on the interfaces between *core competences* and processes may be necessarily the first step towards a modeling of the relationship between *core competence management* and *process-orientation*.

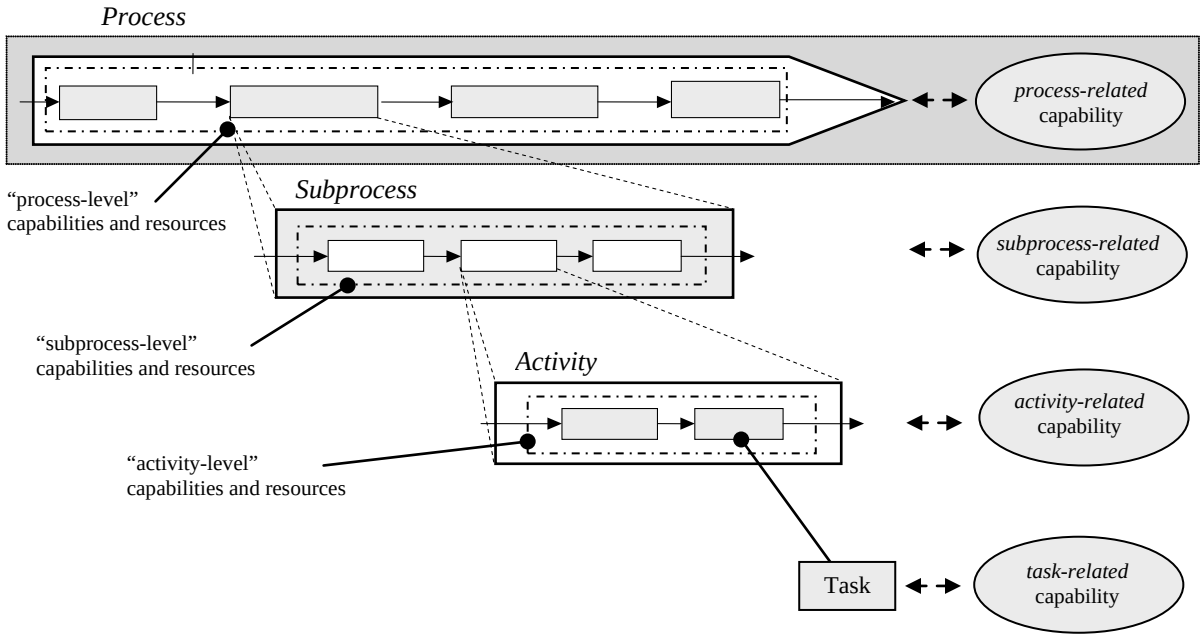
4. Proposals

4.1 Modeling the Relationship "Core Competences X Processes"

Initially, some definitions are taken as basis for the propositions. On the one hand, as proposed by Hamel & Prahalad (1994), a "core competence" denotes a particular class of cross-corporate capability that is related to the coordination and integrated application of capabilities located at different business units. On the other hand, unlike *core competences*, processes are usually restricted to the borders of a business unit.

A perspective to explain the required links may be found in the fact that the term "process" is usually defined in a context of an "input-output" transformation (HARRINGTON, 1991), thus, a process might be understood as an "action" performed with the use of resources and capabilities (AMIT & SCHOEMAKER, 1993). Such an action is possible due to the presence of some skill the firm owns and, so, a process may be seen as the *application* of a capability.

The present work proposes two assumptions, which do not disagree with usual definitions: (1) a process represents the ordered *application* of resources and capabilities to provide some expected result - in other words, a process is a *transformation*, which is performed with the use of specific resources and capabilities -, and (2) each process can be performed because there is a corresponding "process-related" capability, which coordinates and applies the concerning resources and other skills: a *process-related* capability is the ability of executing a given process and may be understood as what a business unit is capable of, concerning the execution of a given process. The same logic should be considered at the different process sublevels (sub-process, activity and task – as schematized by HARRINGTON, 1991). In each sublevel, other resources and capabilities are usually necessary to support the coordination of the next lower process-levels (figure 1).



Source: Developed on the representation of Harrington (1991, p. 30)

Figure 1: A framework of association between capabilities and processes

In order to manage the integrated use of the *process-related* capabilities, the here denominated "combined" capabilities are necessary. For instance, a given automaker owns *process-related* capabilities of "engine design", "engine assembly" and "engine production planning", among several others, and the ability of applying these and other *process-related* capabilities to the "engine production" represents a *combined* capability. Similarly, in a higher level, the ability of integrating the different *combined* capabilities represents a *main* capability, which, in the described context, concerns "car production".

Thus, the *main* and *combined* capabilities are those related to the integration and application of bundles of *combined* and *process-related* capabilities, respectively. Based on these foundations, figure 2 schematizes the net of relationships among different classes of capabilities: a *core competence* concerns the integration of different capabilities, which (*i*) are located at different business units and (*ii*) may be of any class (*process-related*, *combined* and *main*). In the case of the represented *core competence*, it embraces one *main* and three *combined* capabilities, which integrate specific bundles of *process-related* capabilities.

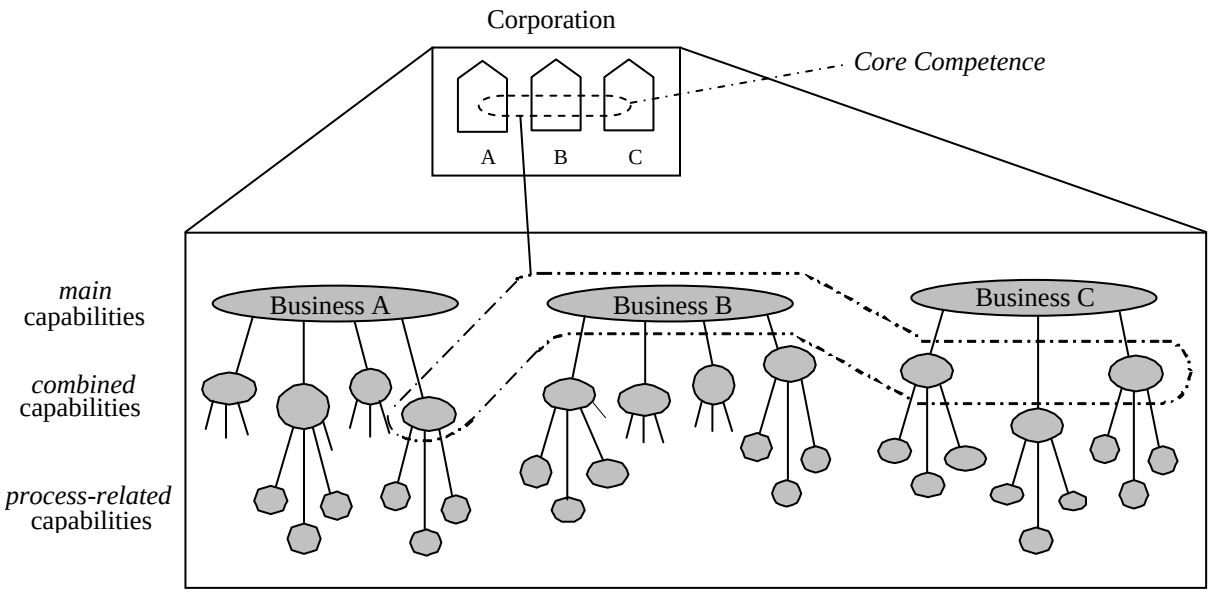


Figure 2: A net of relationships among corporate capabilities

As a hierarchy to explain the linkages between processes and *core competences* was structured, there is now a foundation on whose basis a proposal to integrate *process-orientation* into *core competence management* may be formulated.

4.2 A Model of "process-oriented" *Core Competence Management*

The present section outlines a model that makes *process-orientation* the main basis on which the *core competence management* (CCM) is structured. The context of Hamel & Prahalad's proposals is taken as major foundation; however, it is intended to stress how *process-orientation* is related to each step of the model, which are: "Identification", "Building", "Integration and Application" and "Protection and Improvement".

Step 1 (Identification)

Initially, based on process-maps and on the frameworks schematized in figures 1 and 2, an inventory of capabilities is made. Thereafter, each of these ones might be tested against the three criteria that characterize a *core competence* (customer value, differentiation and extendability). Finally, a comparison among the inventory and the demanded capabilities

(present in the strategic architecture) can be accomplished, so that it is possible to identify which competences are already available and which should be still acquired, in order to develop the future *core competences* (figure 3).

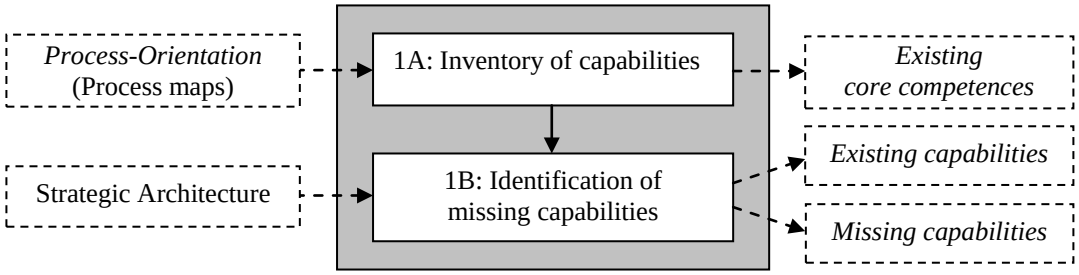


Figure 3: Step "Identification" (schema)

Concerning the completeness of this inventory, it is supposed to be representative on the bases of the following assumptions: (1) every action in a firm is related to one process - a "basic rule" of *process-orientation*, (2) each process is associated with several capabilities: *process-related*, *combined* and *main* capabilities, as well as others at the different process sublevels, and (3) the analyses of process maps, which should be available in an environment of *process-orientation* and should allow to identify the involved resources and capabilities.

Step 2 (Building)

The *building* has as main *input* the list of "missing capabilities" that was provided in step 1. Several issues need to be considered to the acquisition of capabilities, such as:

- The hierarchy of capabilities should be respected, so that the planning of acquisition may be organized: e.g. in order to acquire some main capability, it is necessary to gain the concerning combined ones, and, for these ones, the process-related capabilities;
- The acquisition of the necessary knowledge may be based at least on five different "methods", which may be also used in combination: internal development, assisted internal development, market procurement, inter-firm collaboration, merger and acquisitions (HELLELOID & SIMONIN, 1994);
- The deployment of a capability may occur through the application of knowledge and an appropriate "resources base": when they become available, a firm becomes somehow "able" to apply it to obtain an expected result. So, a kind of "rough capability" emerges, which will be further deployed through its continuous application: by trial-and-error experiences there is a learning process, which adds new information to the previous knowledge and influences improvements in the "resources base" and in the capability itself (figure 4).

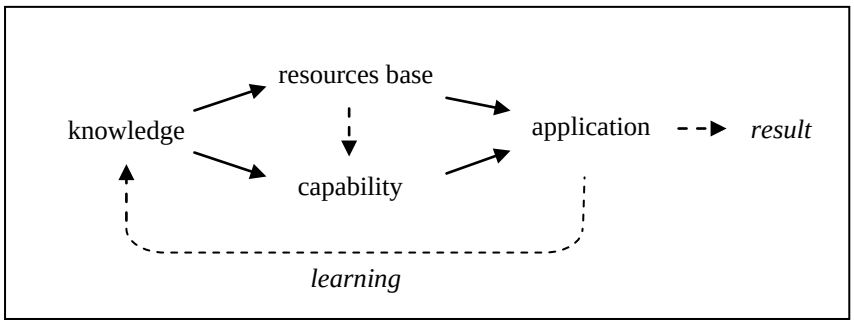


Figure 4: The deployment of a capability (schema)

The proposed pattern of capability deployment presents several interfaces with process-orientation, such as: (1) the deployment of new process-related capabilities requires the design of the respective processes through e.g. reengineering techniques; (2) the development of process-related capabilities is associated with the continuous improvement of the corresponding processes; (3) the application of a combined capability involves the specific "resources base" and process-related capabilities.

Step 3 (Integration and Application)

The integration concerns how different capabilities are combined to form new *core competences* and involves several aspects, such as (*i*) the mobility of competence holders, (*ii*) the necessity of "blending" capabilities and (*iii*) the "balancing" of capabilities, as discussed in the aspects of "resources leverage" (HAMEL & PRAHALAD, 1994).

As capabilities are combined in the deployment and offering of products, the integration paves the way for the emergence of *core competences*. The underlying "capability of integration" may give rise to a new *core competence* from the moment on it matches the criteria "customer value", "competitor differentiability" and "extendability" (PRAHALAD & HAMEL, 1990; BOGNER & THOMAS, 1994).

The application of *core competences* may provide two classes of products: "end" and "core" ones. *End* products are those offered to final customers, such as printers, cars and digital cameras. Canon provides some well known examples of combinations of *core competences* to the manufacture of several *end* products (figure 5). *Core* products, such as flat screen displays and laser printer engines, are either utilized as components in own *end* products or sold to other firms, which (1) assembly them in their end products or (2) market them under their own brand name (HAMEL & PRAHALAD, 1994).

Product	Precision Mechanics	Fine Optics	Microelectronics	Electronic Imaging
Basic camera	X	X		
Electronic camera	X	X		
Video still camera	X	X	X	X
Laser beam printer	X	X	X	X
Color video printer	X		X	X
Laser fax	X		X	X
Color copier	X	X	X	X
Laser copier	X	X	X	X
Stepper aligners	X		X	X

Source: Adapted of Hamel & Prahalad (1996, p. 251)

Figure 5: Application of Canon's *core competences* in different "end products"

Step 3 does not approach directly the role of *process-orientation*; however this is directly present in the application of *core competences*, since every product is gained through the performance of existing business processes and all related capabilities.

Step 4 (Protection and Improvement):

Core competences need to be continually protected and improved since the value of a capability is permanently threatened by imitation, substitution, erosion and unexpected changes of the firm environment. While substitution and imitation are caused by externally inducted changes, as through technological advance or competitor actions etc, several external or internal firm factors may be responsible for the devaluation of resources and competences

due to "asset erosion". Concerning the protection, three basic strategies may be considered (HÜMMER, 2001): (1) protection of the existing resources position, (2) preservation through permanent development and (3) early identification of possible threats.

As previously considered for step 2, a capability may be improved through its continuous application, since the accumulated experiences change the underlying knowledge and, indirectly, the own capability. While this argumentation may be applied to any type of capability, other specific initiatives may also be stressed for the cases of *core competences* and *process-related* capabilities:

– the continuous reapplication of a *core competence* in new products is not only a way of gaining competitive advantages, but also a permanent opportunity of expanding the available knowledge, resulting in the improvement of the own *core competence*;
– the enhancement of *process-related* capabilities may be induced by initiatives of continuous optimization of the involved processes. Moreover, as considered to the deployment of a *process-related* capability (step 2), its permanent application provides knowledge and the evolution of own competence.

As a limitation of *process-orientation*, this one presents restrictions concerning the optimization of *management* processes, which are usually of network-type and not easy to describe. Thus, if these processes cannot be well understood, it is also difficult to adopt initiatives to protect the corresponding *process-related* capabilities. As a paradox, the impossibility of understanding exactly a process helps to protect it, as argued for a key condition of the imperfect imitability: the causal ambiguity (BARNEY, 1991). Figure 6 summarizes the role of *process-orientation* in each step of the model suggested here.

Step	Role of *process-orientation*
1) Identification	The identification of capabilities is based on process maps and on the suggested frameworks of association among capabilities and processes (figures 5 and 6).
2) Building	The planning of capabilities acquisition respects a hierarchy, in which the *process-related* capabilities are direct or indirectly involved in the application and deployment of each capability.
3) Integration and Application	The integrated application of several capabilities is related to the emergence and use of *core competences.* A process is the application of several capabilities and resources to the offer products to customers.
4) Protection and Improvement	The permanent development of capabilities is recommended for their preservation against imitation. Their improvement may be stimulated by actions of process optimization, which provide new knowledge to enhance continually the involved processes.

Figure 6: A model of *core competence management* based on *process-orientation*

These proposals are intended to complement the model of Hamel & Prahalad (1994) and to serve as a "process-oriented core" a more complete CCM might be built on. For that, other proposals, such as those of Krüger & Homp (1997) and Hinterhuber et al. (1997) could be partially aggregated. Other management views should be still added, which have close relationships to CCM, such as operations management (mainly through a process-oriented view); human resources management and technology management.

5. Conclusions

The present work kept a focus on how *process-orientation* might be considered in models of *core competence management.* This research was motivated by a gap previously identified in

the literature on *process-orientation*, namely the explanation of how this is related to strategic management, and more specially, in *core competence management*.

Initially a study of the conceptualization of *core competences* was deployed, starting with the seminal definitions of Hamel & Prahalad (1994) and the identification of different interpretations of *core competences* that emerged later. Thereafter, models of *core competence management* were described and assessed concerning the role played by *process-orientation*. This study identified that the literature on *core competence management* presents rare explanations concerning its relationship with *process-orientation*. Moreover, the few existing discussions are usually superficial, mainly due to terminological inconsistencies, which are typical of RBV research. In a specific review the present work could also not recognize how the links between the concepts of "process" and "capability" - including the special case of "*core competence*" - are explained, representing another theoretical deficit.

In order to provide some contribution, this work offered a proposal to demonstrate how *process-orientation* might be considered in a model of *core competence management*. Initially, two frameworks (figures 1 and 2) to structure the relationships among processes and capabilities were developed, in order to support the creation of a model which presents a close relationship with *process-orientation*, especially in the steps "identification" and "building".

As a contribution to the practice of process-oriented approaches, the proposed frameworks and the model might guide the setting of optimization priorities, since the processes that are related to *core competences* may be identified and thus treated according to their importance. The proposed model demonstrates through several interfaces how *process-orientation* may be strongly linked to *core competence management*.

As main limitation, these proposals lack of a test in the practice. This would be restricted primarily by (1) the difficulty of gaining the necessary inputs (process-maps and a strategic architecture) and (2) the required efforts and long time to implementation and to evaluation of the results, since *core competences* need over 10 years to be deployed (HAMEL & PRAHALAD, 1994). Even without empirical assessments, the offered frameworks and model should help to throw some light in the darkness around the links between *process-orientation* and *core competence management*.

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