FUTURE SRJ
FUTURE STUDIES RESEARCH JOURNAL: TRENDS AND STRATEGIES

PROFUTURO: FUTURE STUDIES PROGRAM
Scientific Editor: James Terence Coulter Wright
Evaluation: Doublé Blind Review by SEER/OJS
Revision: Grammatical, normative and layout

INNOVATION, COMPETENCIES AND ORGANIZATIONAL PERFORMANCE – ARTICULATING CONSTRUCTS AND THEIR OPERATIONAL CAPABILITY

Allan Claudius Queiroz Barbosa
Universidade Federal de Minas Gerais, Brazil

Leandro Pinheiro Cintra
Universidade Federal de Minas Gerais, Brazil

ABSTRACT

This article discusses the interfaces and articulations between the constructs Innovation, Competencies and Organizational Performance, considering their influence and operational capability in the organizational context. This discussion is sustained in an environment that proclaims and indicates intense innovation in search for a sustainable competitive advantage. In this context, the management of competencies, guided by the resource-based view, emerges as a tool for the management of human resources, which proposes an interaction of the strategies within the context of innovation focused on adaptation, evolution and expected performance. The subject was discussed in the light of theory and not as a trend.

Keywords: Competencies. Innovation. Human Resources. Strategy. Organizational performance.

RESUMO

Este artigo procura discutir as interfaces e articulações entre os construtos Inovação, Competências e Desempenho Organizacional, considerando sua influência e operacionalidade no contexto organizacional. Essa discussão sustenta-se em um ambiente que apregoa e sinaliza intensa inovação em busca de vantagem competitiva sustentável. Nesse contexto, a gestão de competências, pautada pela visão baseada em recursos, surge como ferramenta de gestão de recursos humanos que propõe a interlocução das estratégias inseridas no contexto de inovação visando a adaptação, evolução e desempenhos esperados. O tema foi tratado à luz da teoria e não como um modismo.

Palavras-chave: Competências. Inovação. Recursos humanos. Estratégia. Desempenho organizacional.

1 INTRODUCTION

In recent decades, given the increased competition and the contextual requirements, several organizations were guided by management models focused on results. Thus, more attention has been given to the relationship between several variables capable of influencing the procedures, processes, and consequently, the business itself. By addressing issues related to human performance, the subject "competencies" has gained force in the contemporary literature, encouraging a reflection regarding the key factors in the creation of value for organizations and individuals (Fleury & Fleury, 2001; Zarifian, 2001; Boterf, 2003).

The challenges imposed on the management of contemporary organizations have been the subject of intense studies and debates in academic and business communities. The search for competitive advantages and the sustainability of market positions have been discussed, especially in view of a context marked by an increased competition and continuous changes in the production dynamics (Davenport & Prusak, 1998; Terra & Gordon, 2002; Abrahamson, 2006). The need to establish higher levels of performance and competitiveness stimulates a reflection on the factors affecting the individual's performance in the work environment. The

Management of Human Resources acquires new dimensions as a result of the changes in the organizational structures and proves to be essential in the alignment between business strategies and the management of the workforce (Ulrich, 1998).

In a context of intense innovation, which also seeks a sustainable competitive advantage, the resource-based view appears as a guide of policies for the management of resources for this purpose. The management of competencies, which originates in the resource-based view, is a tool for human resource management based on the interaction of the strategies within the context of innovation, in which the management of human resources required for the adaptation, evolution and achievement of the expected performance occurs in an environment of intense changes.

Figure 1 summarizes the theoretical articulation presented in this study, in a diagram that aims to present the developments and articulations of the theories and environments, which will be revealed throughout this paper in their respective chapters. As the constructs background, we based on the theory of the firm, mainly related to the thoughts of Schumpeter (1994) and Penrose (1995). The constructs that will be presented throughout the paper are resources, innovation and competencies. The articulation of these constructs in the context of the firm generates the organizational performance resultant, which will also be presented as a construct in this paper.

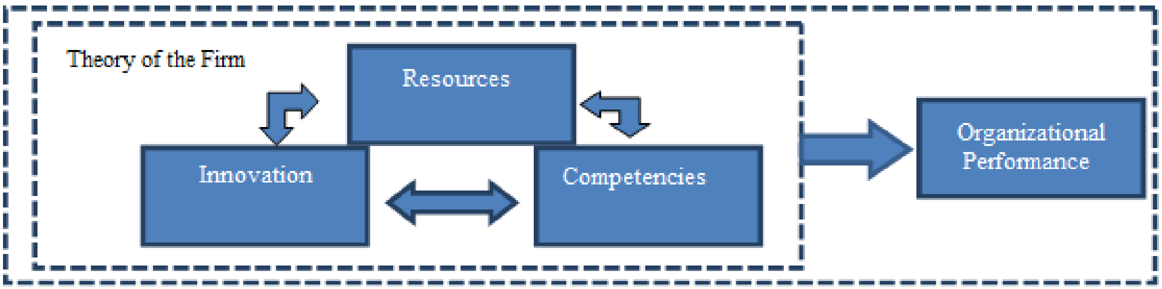

Figure 1: Proposal for the articulation and developments of theories and environments
Source: Prepared by the authors.

2 THE DIFFERENT THEORETICAL CONSTRUCTS

Studying idiosyncratic models of business strategy requires taking into account innovation and the development of competencies in firms. For Schumpeter (1994), the firm would be a set of dynamic competencies. The ideal company generalized by the classics would no longer make sense in this context, thus the idiosyncratic company is applied. The competitive monopoly would be a reality, questioning the existence of a breakeven point in capitalism. The manager becomes more important than the market, as it would coordinate the resources in the firm to create sustainable markets and competitive advantages in a unique and non-rational manner.

The management function would then be the ability of making decisions under uncertain scenarios to generate competitive advantage, and the decision under situations of uncertainty is not simply technical. Schumpeter (1994) explains that innovation, through the entrepreneur who creates the firm, defines the market. The firm is an independent variable, and the manager (entrepreneur) works with uncertainties, creating innovations, changing the equation of the production function (capital-labor). Its management act is idiosyncratic. Thus, we can say that, based on the thoughts of Schumpeter, the idea of innovation is always related to changes, to new combinations of factors that break the existing balance. There are waves, with the need of diffusion, besides innovation. However, there are basic, incremental and radical innovations, and the latter changes the equation of the production function and the logic of capitalism presented by the classical economists. Diffusion is the application of innovation in different contexts. Schumpeter (1994) argues that there is a process of creative destruction. Organizations that compete in this paradigm, which involves learning (idiosyncratic knowledge), are called firms. The firm would then be a set of routines, mental structures, tactical organizational behaviors that define it as idiosyncratic. This context justifies the management act, because it will lead the set of routines, making decisions in situations of uncertainty. It would be a set of tacit knowledge that translates into mental schemes to manage a business inserted within a market.

Penrose (1995) introduces this line of reasoning, which gave rise to the resource-based view. She argues that the goal of the firm would no longer be to accrue profits, but growth - Theory of the Growth of the Firm. There are significant factors for the expansion of the productive opportunities of a firm, caused over time by the systematic change of its activities. Examples of these factors would be prestige and power. The growing economies provide advantages to large firms over smaller firms. The great prestige of the firm is based on its abilities to explore, experiment and innovate. These abilities along with the market position (reputation), in large part, lead to their growing economies.

The theory of the growth of the firm is proposed as true for any company, and may result from an efficient use of resources. This line of reasoning reinforces the creation of the resource-based view. In today's knowledge society, the challenge and the motivation is to create markets for the existing competences, with a view from inside the firm. In this context, the manager has a key role with its tacit knowledge accumulated in the dynamics of capitalism, defining the idiosyncrasy of the firm.

According to Robert (1995), innovation, in turn, would have different applications and meanings, being mistaken, for example, with invention. Invention is associated with discoveries, while innovation is a broader term, as it may occur in the development of products, processes or in management. In most cases, it is incremental and continuous; rarely drastic, radical, derived from new inventions. Zhuang, Williamson and Carter (1999) propose a classification for innovation as follows: an invention, something totally new; an improvement, a refinement of something existing; the dissemination of something that already exists in another context, that is, the adoption of something new in a company of what is not new in the world. It may be also associated with: innovation output (products, services and logistics), innovation input (supplies, materials and sources) and process innovation (administrative procedures and techniques applied to the processes of transformation from input into output). Product innovation is perhaps the most familiar to consumers.

Freeman (1987) categorized innovation as follows: incremental, radical, changes in the technological system and technological revolution. Incremental innovation occurs continuously in any industry or service activity, which may arise from various spheres of the organization and not just be the result of research and development. Radical innovations are discontinuous events, usually resulting from research and development in the business context and/or universities and laboratories. Changes in the technological system affect sectors of the economy and generate entry into new markets, being based on the combination of radical and incremental innovation, along with organizational innovations. The technological revolution is a change of the techno-economical paradigm, involving a process of economic selection in the combination of technically feasible innovations. Such paradigm affects the structure and the production and logistics conditions of almost every segment of the economy.

In general, innovation can be understood from the standpoints of strategy, standards, innovation management process and its types. From the strategy standpoint, innovation is related to achieving sustainable competitive advantages, competitive positioning, the concepts of core competencies, organizational learning and innovation capacity. Then, innovation arises as a key element of the action and differentiation of organizations, supporting the business strategy. The other standpoint of patterns differentiates innovation by relating the degree of impact on the organization, products, markets or on the economy in general, with the terms previously presented, differentiating incremental innovations from radical and other innovations. According to the process standpoint, attention is drawn to the way organizations innovate, involving the identification of the consumer need, the formulation of reference strategies for innovation, the development of solutions, etc. The management of innovation emerges as a manageable process. With respect to the types, there are types of innovation in products/services, processes/operations and organizational/managerial.

There is, therefore, the existence of different concepts of the term innovation, especially in the social and economic contexts where they emerged and were applied in the different countries of origin. However, there is a consistency in the definitions, when comparing them with each other. It is worth it to point out the definition used by Tidd, Bessant and Pavitt (2003) for innovation: any beneficial change for the organization, being a crucial condition for the companies to realign their level of competitiveness given their environment for their sustainable success. Competitive advantage may occur through innovation to promote the sustainability of the business. However, the challenge would not be the innovation of the product or the process itself, but the management of innovation in the organizations and the innovation of management itself.

The management of innovation should take into account the necessary changes in the companies to provide an environment conducive to creativity and honest mistake. Changes that need to be reviewed in order to be in line with the following aspects: organizational structure, business values and culture, management of human resources with their various subsystems (based mainly on the management of competencies), knowledge management, etc. It is clear, also, the special attention given to knowledge management in companies considered innovative, which use technologies for connection and contribution to enhance the generation and sharing of the knowledge generated. They use forums, discussion boards, blogs, intranets, chats, etc. It is believed that the more connections, with both the internal and external environment, the more potential for the resolution of problems and innovation.

As shown by Lastres, Cassiolato and Arroio (2005), the systemic approach of innovation systems has attracted analytical tools to understand the processes of creation, use, dissemination and transfer of knowledge, given the characteristics of the system of production and accumulation of organizations that use or intend to use innovation systems. See below a few observations: the existence of an approach that favors the production based on human creativity, rather than trade and the accumulation of material resources, gives rise to a new production approach; the characterization of innovation as an interactive learning process with multiple origins; the emphasis on the importance of incremental and radical innovations, complementary to each other, and between organizational and technical innovations and their distinct internal and external sources to the companies; the compliance of the systemic nature of innovation and the importance of considering its economic dimensions, as well as the production, financial, social, institutional and political spheres. Thus, innovation would not be concentrated in cutting-edge technology sectors and would not be generated only in research and development.

In a global survey held with three thousand executives conducted by McKinsey (2006), it was found that 24% of these executives believe that innovations in products, services or business models are more important to competitiveness than other factors, such as greater ease in obtaining information and in the knowledge development, abundance of capital, reduction of trade barriers, greater access to talents and workforce, increasing activism and consumer awareness, technological changes and more capable competitors. In Brazil, studies show that innovation is increasingly becoming a concern of government institutions and the productive sector itself.

The management of innovation, however, is particularly complex because it involves different management processes, such as knowledge management as a process of organizational transfer of knowledge. Barbosa, Guzman & Scianni (2005) discuss the competency management as a process of organizational knowledge transfer and conclude that there is a need for a greater articulation of the management tools, such as change management, knowledge management and competency management, to improve the results in a dynamic organization.

3 COMPETENCE AS A RESOURCE

In an environment characterized by constant changes, innovations and an extremely competitive market, there comes the need for countries and organizations to rethink and restructure their education and training processes, their production processes and working relationships in order to maintain their global competitiveness and integration. The reflection about the factors that ensure competitiveness today reflects a movement that begins to consider competencies as a competitive differentiator. To understand this interface between competitive advantage and competencies, it is necessary to understand the fact that the traditional competitive advantages based on technological, structural or material resources no longer show the same efficiency and, therefore, the generation of competitive advantage ends up grounded in the management of human resources. It is worth it to note that there is application in the non-academic production in a distorted way regarding the terms proposed here; therefore, this chapter will seek to develop the construct of competencies in an academic manner with a historical and conceptual basis.

This perspective analyzes the importance of identifying, developing, exploiting and expanding the organizational competencies as a way to keep and expand the company’s competitive advantage. To make this possible, the company should firstly seek its strengths and weaknesses to then identify strengths and market opportunities. The strategic focus is thus transferred from the product/market to the identification, development and deployment of resources. The perspective of the resource-based view (RBV) arises in response to the hitherto predominant paradigm that the focus for the understanding of the competitive advantage was on the understanding of processes outside the firm. Based primarily on the thought of Penrose, the RBV asserts that firms differ significantly in relation to their resources and capabilities, which were accumulated throughout their history, and how they are used in response to the market opportunities.

Overall, this new perspective tries to answer the fundamental questions of the strategic field, focusing on the inside of the company: analyzing its history, seeing how the resources relate, how the corporate competitive advantage is sustained and the nature of the income generated. Three conditions are decisive for the competitive advantages of a firm to be present: a) heterogeneity - refers to the high productivity value of some resources of a company in relation to their counterparts in other companies and the rarity of the availability of such resources for many companies; b) sustainability - the resource capacity to sustain its value in the long term; c) appropriability - permanence of the availability of the company's resources, the resource cost is lower than the return that it generates. The three conditions are necessary and neither is sufficient alone, to ensure the corporate competitive advantage in the long term.

In order to better understand the RBV and its connection with the competency management, we will analyze its concepts and origin. Barney & Clark (2007) provide an overview of the RBV from its origin up to its current state of the art, relying on a variety of articles, book chapters and books on the subject from the past 20 years. The authors apply the RBV analyzing the ability of four organizational resources and capabilities aimed at sustained competitive advantage. The resources analyzed include: organizational culture; value (merit) of trust; human resource practices and information technology.

Barney & Clark (2007) initiated the discussion on this central research question: why some companies continually outperform their competitors? According to the authors, strategic management researchers seek to understand these differences between the performances of the organizations. On a broader level, there are two explanations for a better performance. The first explanation, cited in the book of these authors, is that a better performance is a result of the paradigm "structure-conduct-performance" of the industrial organization. The second explanation for better performance is given by Demsetz (1973), who argues that it is in the organizations that focus less on the industry structure and market power and more on the differential capacity to respond more effectively and efficiently to the customer needs. For Barney & Clark (2007), the RBV has deep roots in the theoretical fields of economics and sociology, which banded together and changed their thoughts to develop what is known as RBV. Its origin and influence would be, according to the most important sources, a traditional study of different competencies; a study of the neoclassical economics according to Edith Penrose, in her study on the theory of the growth of the firm, which seeks to understand the growth of firms and the limits of such growth; the implications of antitrust in the economy.

The development of the RBV had some background contributions. The first publication on the subject in the field of strategic management was held by Wernerfelt, in 1984, who did not use any of the four original sources of RBV previously discussed (traditional study of different competencies; analysis of land income based on levels of fertility; study of neoclassical economics; implications of antitrust in the economy). Wernerfelt (1984), with a dualistic thinking common among economists, tried to develop a view based on the competitive advantage of a company focused on its resources, complementarily as in Porter’s theory (1980) on competitive advantage based on a company that seeks a certain market position. One of the main contributions of Wernerfelt was to recognize that the organizational resources could have important implications for the ability to generate strategic advantages of products in the market.

Rumelt (1984), in an article published in a conference on strategic management, described a theory about strategy that questioned why there are companies that use their competencies more efficiently to generate higher revenues than other organizations. The authors studied the relationships between hierarchical governance, firm performance and transaction costs, where the importance of transaction investment as an independent variable explains the other dependent variables. Rumelt (1984) develops attributes that will later be associated with RBV. He defines the companies as a set of productive resources and suggests that the economic value of these resources will vary depending on the context in which they are applied. Barney & Clark (2007) go beyond Wernerfelt, commenting that the future RBV has implications that will overleap the simple idea of creating competitive advantages derived only from the differentials of the products on the market or the position of products on the market.

Barney & Clark (2007) explore the concept of strategic factor market, according to which the organizations that develop the resources they need, will anticipate the performance of these resources for the implementation of strategies for products on the market. Furthermore, the control of the interconnected resources and assets will allow increased revenues. It is suggested, therefore, the development of a firm theory of superior performance, where the resources constitute a unit of analysis. Barney & Clark (2007) will study the relationship between companies and how their resources will create competitive advantages. One of the conclusions was that the invisible assets, more than the visible ones, are the actual sources of competitiveness. Resource-based information are the differentials: Technology; customer trust; brand image; distribution control; corporate culture and management tools.

For Barney & Clark (2007), the terms resources and capabilities are used indiscriminately. Organizational resources are classified into four categories (capital): (1) physical capital resources, (2) financial capital, (3) human capital, (4) organizational capital. A company (reified here) has a competitive advantage if it is able to create more economic value than its competitor in the market. The economic value created by a company in the provision of a good or service is the result of the difference between the advantages obtained by the buyers of the goods and the economic cost to the company. The generation of a superior performance will depend on the revenues obtained from the strategies and the costs of the implementation of these strategies - development costs, research, hiring and training, etc. Supporting a competitive advantage is independent of time, however, in the industry, the sustaining period is usually short. Four attributes to sustain competitive advantage: I. valuable resource to exploit opportunities and neutralize threats; II. rare resource often difficult to be obtained by the competition; III. resource difficult to imitate; IV. organizational processes include the resource. The VRIO model is thus created, comprising: *Value*; *Rarity*; Imperfect Imitability; *Organization*.

This allows us to introduce the study of organizational competencies. Ruas (2005) presents the competencies divided into two dimensions: strategic and intermediate. In the strategic dimension, the organizational competencies are closely correlated with the vision, mission and strategic intent. In the intermediate dimension, competencies are observed in the macro processes executed and related to areas and functions. The use of these dimensions helps in the progressive development from strategic competencies to functional competencies. Therefore, it is important to make a historical and contextual review of the conceptual approaches on competencies to better understand the term in a reasoned manner.

According to Hirata (1994), the Ford system was based on the need to ensure profitability through a rapid and mass production of standard products using a large volume of unskilled labor, whose performance standard was translated by a strict obedience to rules and standards. The results expected were to maintain and increase productivity. In the early 1980s, changes began in the social, economic, political and technological spheres, leading to an intense process of restructuring of the productive logic. This new environment shifts the decisive conditions of business success: local competition to global competition; focus from the industry to the client; from standard products to flexible and innovative products; from products in scale to high quality and attractive price products.

Sandberg (1994) recalls a key management issue studied since Taylorism, which is to develop human skill at work to make the organization achieve competitive advantages. Thus, studies were conducted to understand how human skill at work can be developed and managed. Specifically in the field of human resource management, business administration studies the issue of skill to be understood by managers. In his study, after presenting the different approaches for the identification and description of competencies at work, Sandberg (1994) advocates the use of a multimethod-oriented approach in an attempt to confront the criticisms in the approaches oriented to the work or worker, modeling both in a single model. To this end, he presents limitations in the use of Taylorist approaches to skill: the fact that in most cases they present a fragmented view, the choice and definition of categories in the proposed models, the predefinition of competencies and the assumption of an external relation between the attributes of the worker and activities. The approach suggested by Sandberg (1994) aims to overcome these limitations by developing an approach that deals mainly with the aspects of human skill at work.

Boyatzis (1982) highlights that competencies directly depend on the organizational environment, with its policies, procedures and conditions set out, making some specific actions to be required or expected at a given position. Thus, an effective performance of a position should meet the results through these actions. Thus, the author defines competency as implicit characteristics of an individual directly related to the effective or superior performance in a given position, with competence requirements varying in type and level according to the position/work. Therefore, the evaluation of each type of competence should differ. This model suggests that performance will occur when some critical components are consistent: the working demands primarily reveal what is expected from a person to do at work; the organizational environment reveals how it is expected that a person responds to the working demand; and individual competencies reveal what a person is capable of doing, showing why he or she is allowed to act in certain situations.

Zarifian (2003) understands competency as the ability of an individual to take initiatives and assume responsibilities in view of problems and events in professional situations. In the process of understanding and explaining his concept, Zarifian permeates the field of work and the employee. The author instigates a positive and active definition of competence, trying to clarify the complex and subjective aspects that are often unnoticed and neglected. The approach presented permeates: responsibility (assuming, worrying about each other, the field of liability), the organizational choice (delimiting the field of action of the subject), the interconnections of the fields of work (communication); contextualized situations (complex experiences with previously experienced components and new aspects) that instigate initiatives with expected results; information (directs and guides); social knowledge and practical intelligence (social interconnection and conceptual applicability). Zarifian (2003) states at the end of his text that there is still a lot to be learned about the model of competencies and that this learning is only possible through individuals and social, historical and cultural contexts.

In this debate about competencies, there is no single articulated and concrete "theory" on the subject, not even a consensus about its concept. Some approaches emphasize the individual as the main focus and initial analysis, others see the organization as the core of analysis. Despite the conceptual approaches presented, there is a coherence of thought between them, including a complementarity in the studies. This relationship makes us believe that it is actually possible to build a cohesive line of concepts to guide the study on competencies, working with the intersection of the concepts presented. One should be careful not to create a shock against the post-Taylorist studies substantiated so far, so as to avoid a complex application in the organizational environments of the knowledge economy.

The approach of core competencies of Prahalad & Hamel (1995), states that the portfolio of capabilities of an organization is its greatest competitive advantage and, therefore, the corporate identity should be developed based on them. At the same time, it states that core competencies should not supplant the perspective of product/market, but complement it. This perspective assumes that the entire management team must understand and participate in the management process of core competencies. There are five basic actions: identify the existing core competencies; define a planning of competencies to be acquired; develop core competencies; distribute core competencies; protect and defend the leadership of core competencies. In summary, for Prahalad & Hamel (1995), the competitive advantage results from organizational competences developed over a collective learning process of the organization and as such cannot be copied, thus becoming the basis for the development of new business.

Wernerfelt (1997) suggests a change in the paradigm from the focus on product/production to "human" resources in the analysis of the organization. Therefore, we proposed the analysis of resources x profitability by analogy with the Porter's five forces: general effects - difficulty to replace human resources in certain situations, due to their competencies in the performance to achieve their objectives; barrier of resource positions - when there is no product barrier, there is a vulnerability, even to explore the resource barrier, this being a duality product x resource; attractive resources - the company (reified here) should create specific competencies in their resources in order to develop barriers that prevent or prolong the loss of these resources to other companies, making them less attractive to the latter and more attractive to itself; mergers and acquisitions provide the opportunity for the exchange of resources, which may be supplementary or complementary, and may extend it to profits by different combinations of resources. Wernerfelt (1997) discusses the management of dynamic resources, demonstrating which resources are used in which product/market. In summary, there is a construction of a development plan and/or acquisition of competencies to expand the operation in the current market or in new markets.

In its individual dimension, the notion of competencies starts its construction in an environment of increased competition, market uncertainties and unpredictability, acceleration and expansion of information, reduction of formal work and increase of discontinuous and informal works, emergence of the service economy and work organization with a focus on responsibility and results. In this context, there is a need to train people who can mobilize their competencies according to specific situations, which are present in certain environments.

On the form of articulation between business strategies and individual competencies, Wernerfelt (1997) argues that competence can be attributed to different players. But there is a continuous process of exchange of competencies between people and the organization. Organizational competencies are the result of their origin and development process and are materialized in the competitive advantage resulting from the wealth of knowledge. People put into practice organizational competencies adapting them to the context. That is, they validate or modify the organizational competencies. They are responsible for the continuous transformation of the organization. To this end, they need to learn focusing on the expected result, thus allowing organizations to maintain their competitive advantage. Therefore, individual competencies should be directed to what is essential to the organization, that is, according to the business strategies.

For Lévy-Leboyer (1997), there are three ways to develop competencies: by the previous background, before the active life; during the active life and through the active life, that is, through the professional activity. By recognizing that competencies have a direct relationship with the professional life in its development highlights its dynamic nature, besides the fact that it can be acquired at any time. It is then a factor of flexibility and adaptation to the evolution of tasks and jobs. Thus, the notion of competencies is inseparable from the notion of development. The set of attitudes along with personalities of individuals in specific experiences generate specific competencies, which in turn should lead to the performance of a job position (occupational space), which in turn has a mission, objective, expected outcome.

Organizations have competencies that derive from their characteristics, their goals and strategies that ensure their competitiveness. A few questions are posed: where and why the individual competencies are important for the company; in which aspects does it change the management of professional careers; how to explore the diversity of existing individual competencies. Individual competencies and organization competencies are both intertwined, since the organization competencies are formed by the integration and coordination of individual competencies. These individual competencies represent, in turn, the integration and coordination of know-how, knowledge and personal qualities. In other words, without individual competencies there are no organizational competencies.

However, limiting the company's competencies to no more than the sum of individual competencies is to go back to a Taylorist scheme, in which in every situation there will be only one competent behavior, which should be reproduced and multiplied to ensure the company's productivity and competitiveness. Therefore, the diversity of competencies should support flexibility and adaptation, because they are more flexible than attitudes and personality traits. The organization (reified here) must have the knowledge to know how to explore the diversity, where people effectively gather their resources, equipment and networks that form the system of today's enterprises. Diversity is also a condition for the emergence of innovation in organizations, making the various individual competencies that give rise to organizational competencies to become sustainable organizational competitive advantages, if well worked.

Before addressing the relationship between innovation, resource and competencies, we will present the concept of organizational performance in the next chapter, since it would be the result to measure the effectiveness and impact of articulating the management of each one of these constructs. The sustainable competitive advantage itself would also be measured in the context of the organizational performance concept, shown below. It is also important to remind that the first step in the development of a construct is to understand its basic nature and present an appropriate conceptual definition to guide the subsequent efforts. A construct is an abstract theoretical variable defined to explain some phenomenon, which should be given a meaning based on the theoretical definitions to be delimited in its scope, besides presenting the main visions and latent variables that represent the concept (Bollen, 1989).

4 THE RESULT OF THE CONSTRUCT: ORGANIZATIONAL PERFORMANCE

Studies to determine the performance of organizations and their impacts have come to some conflicting results, as can be seen on a review of some studies in the literature of strategic management. Many of these inconsistencies occur due to poor conceptualization, operationalization and measurement of the construct, among other factors, such as diversity in the scope of analysis or the nature and number of factors employed (Carneiro et al., 2007). There are numerous definitions of organizational performance (outcome), but no consensus about what is the best. Cameron (1986) presents the idea that organizational performance is more like a construct guided by the problem than by theory. In fact, the conceptual definition of organizational performance should be guided by the specific objectives of the firm to its business units. For example, the performance expected by typically capitalist firms (profit) is not in its full extent the same performance expected by the government or the third sector. Thus, it is interesting that there is a multidimensional construct, as it is necessary to specify both the measures (indicators) and the context variables and the relationship between measures and variables, which in turn must present a consistency.

In a historical and conceptual analysis made by Santos (2008), performance was initially treated as the achievement of goals. In the mid-1970s, two other streams have emerged: the organization's performance as a result of the efficiency of its structures and processes; performance as a result of the company's ability to obtain resources from the environment and adapt to it. In the 1980s, there was a view that good performance is associated with the satisfaction of the interests of different groups that relate with the organization (stakeholders). In the approach involving the achievement of goals, good performance is associated with the definition and achievement of organizational goals, generating a relativity in performance, because depending on the goals set, which could also be beyond or below the possibilities, the organization would be considered as having a good performance or not. To avoid this issue, goals must be clear, measurable, predefined and consensual among the organization members and, if possible, with the opinion of experts. The fact that there are no standardized goals for all organizations makes it difficult to compare organizations and identify the different aspects of business performance.

Then there is the theoretical orientation that defines the efficiency of the firm as a result of the efficiency of its structures and processes, mediated by the organizational environment. Efficient companies are those with high level of integration between processes, low amount of administrative and productive bottlenecks, continuous vertical and horizontal flow of information and good relationship with stakeholders. However, this is an approach of complex measurement, since, in order to evaluate the efficiency of an organization, it is necessary to measure the efficiency of all processes, although this is mitigated with the use of information and communication technology (ICT).

The organizational performance measurement system (OPMS) is a contemporary subject, and is even widely treated as an effective tool to improve management. In the private sector, there is the exposure of companies to a hypercompetitive environment with increasing consumer demand. Next to the public sector, the fiscal deficit and the society’s demand for accountability have led governments to adopt new ways of measuring performance. The evaluation of performance has a direct relationship with the effectiveness of the organization’s strategy, operations and service to the expectations of the stakeholders. An appropriate OPMS requires measurements in several strategic areas of the organization. Thus, the imbalance in the use of measures to verify the organization’s overall performance, with the preponderance of financial performance measures reflects deficiencies in the management process (Galvão, 2002). Kaplan and Norton (1992) found conceptual, methodological and operational gaps in the development and application of systems for measuring results. Then, they developed the Balanced Scorecard (BSC), a model for the measurement of performance which structure enables a more comprehensive and balanced view of the strategic areas of the organization grouped into the following perspectives: financial, customers, internal processes and learning and growth. Deadlines, innovation and other non-financial indicators are then included in this system for measuring the organizational results.

According to Galvão (2002), a good system for measuring results should include the following principles: financial and non-financial measures (performance criteria); measures focusing on the client (or target audience); systemic dimension measures (output, input , throughput and outcome). The balance between financial and nonfinancial measures need to be pursued by the administration. Historically, many organizations focus the managerial attention on financial measures. Conversely, others focus mainly on the operational measures, under the belief that if the operations are well managed, profitability will automatically increase. Both views are inappropriate, because the organizational performance criteria are the starting point for the design and operation of a performance measurement system.

The measures should reflect balance through the various components of the organizational systems, in a systemic way. According to Sink (1985), the measures should capture the expectations and needs of customers and other stakeholders that initiate the value chain. It is also necessary to measure the inputs, processes, results and customer satisfaction according to the expectation initially measured. The same set of measures can not be used to verify and compare performance and productivity at all levels of the organization. The traditional productivity measures, which emphasize outputs divided by inputs, can be problematic. The balance between the amount of process measures (throughput) and results (output and outcome) contributes to the success of the measurement system. Thus, there is the possibility of knowing the current performance and the effectiveness of new initiatives to improve performance. For the processes, specific measures of functional areas are commonly used. On the other hand, the outcome measures are macro, so they provide a view of the overall performance of the organization. It is ideal that the positive trend of the process indicator translates into a favorable outcome indicator.

Thus, based on the principle that the management of organizational resources, the management of innovation in the organization and the management of competencies are processes and their effectiveness should be measured in the organizational performance to determine their impact on the results, the articulation between innovation, resources, competencies and organizational result will be presented and discussed in the next chapter, with discussions related to their relationships and mutual impacts.

5 ARTICULATION BETWEEN INNOVATION, RESOURCES, COMPETENCIES AND ORGANIZATIONAL PERFORMANCE

The articulations between innovation, resources, competencies and organizational performance, shown in Figure 2, can be explained by the links numbered in the figure. Link number 1 shows the articulation between resource and innovation. This first articulation occurs when the firm seeks a competitive advantage, making it impossible to do so having the same products, services, processes and management of other firms. It is thus necessary to search for innovations, be they radical, incremental, or of any other nature. Finally, the organizational strategy with resource-based view can generate innovation needs in the firms depending on their strategic positioning, such as the desire of being a leader or to remain in a competitive position.

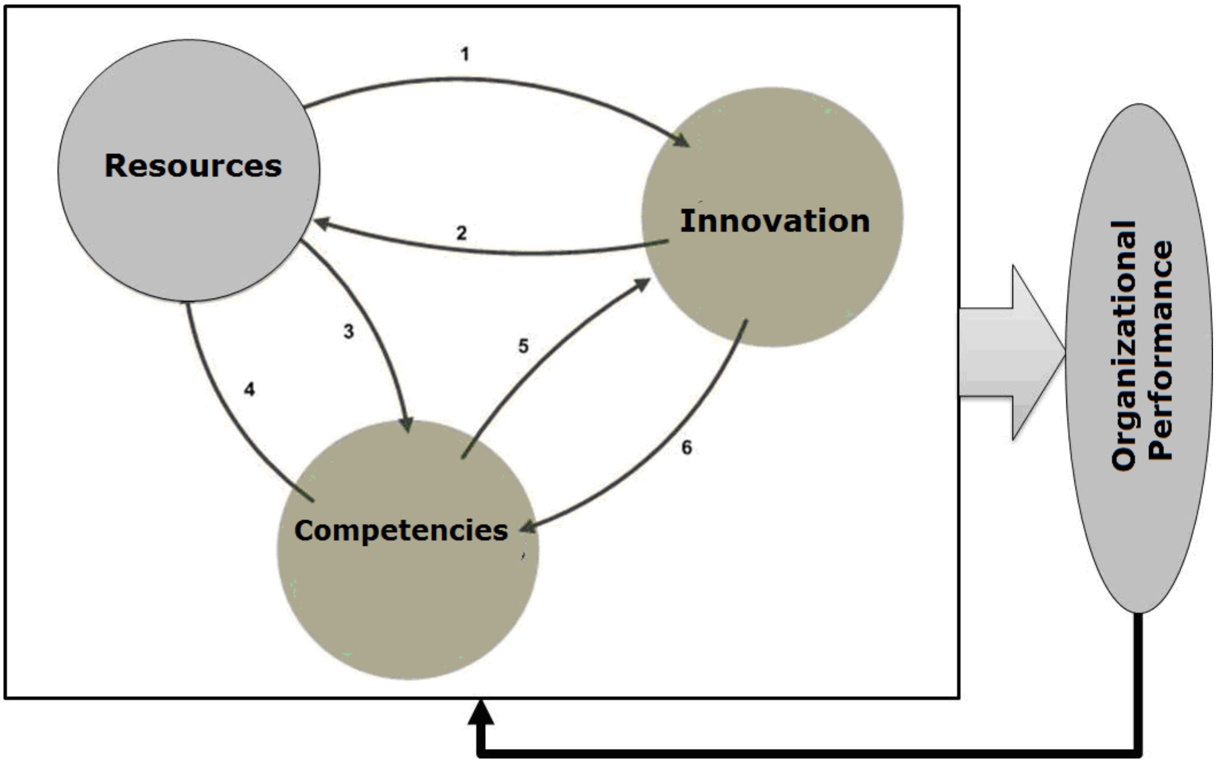

Figure 2: Articulation between innovation, resources and competencies
Source: Prepared by the authors.

Porter (1996) argues that competitive strategy has a direct relationship with differentiation, be different. This means choosing a set of activities to deliver a product or service difficult to be equaled in the standpoint of value. Foss (1997) argues that the strategy has a proximity to the discovery of hitherto unknown possibilities. On the other hand, by analyzing link number 2, which shows the relationship between innovation and resources, it is possible that innovations, generated in the organization or assimilated/disseminated therein, make the need for resources to be redesigned, because, as markets and processes are created, there is a need to realign the existing resources due to the new opportunities achieved through innovation. Schumpeter (1994) explains that innovation through the entrepreneur who creates the firm defines the market.

Link number 3 represents the relationship between resources and competencies. With regard to the Resource-Based View (RBV) presented above, it is clear that organizations may have strategic guidelines for the development of organizational and individual competencies to search for sustainable competitive advantages, as they add value, they are rare, inimitable and irreplaceable in the business processes for the transformation of inputs in the outputs of the organization. Once technology, inputs and some support services become commodities, the competitive advantages of organizations tend to focus on human capital, organizational culture, that is, on people and their relationships, or on organizational and individual competencies.

Link number 4, which is the relationship between competencies and resources, also represents that the existing competencies in the firms provide a starting point and presents opportunities to be worked in the organizational strategic context, such as human resource or installed capacity. It is noteworthy that existing competencies should not be considered as restrictions or limitations to the organization’s growth, but as a starting point and as possibilities of use in view of the opportunities.

The relationship between competencies and innovation, represented in Figure 2 by link number 5, becomes evident when innovation can be generated only by people with their due individual competencies, especially in the organizational competence. Whether in a formal process of research and development internal or external to the organization, or in an informal process of continuous improvements, the competencies are articulated to reach innovations in the context of organizations. For Schumpeter (1994), the firm would be a set of dynamic competencies in an idiosyncratic company.

Link number 6, which shows the relationship between innovation and competencies, represents the fact that the innovations developed and/or assimilated/disseminated develop organizational competencies that previously did not exist, because the new products, services, processes or management model cause an impact on people in a process of adaptive or evolutionary change, developing new individual competencies and, consequently, new organizational competencies are created in view of innovation. For Schumpeter, the manager (entrepreneur) is responsible for the new combinations of factors that break the existing balance, in a process of creative destruction, thus developing new competencies in the organizational environment, since these new combinations are precisely innovations in whatever spheres.

The result of the good articulation between innovation management, competency management and resource management in an organization would then be measured in the organizational performance measures. These management practices would be worth nothing if they did not have a positive impact on the organizational performance, whether financial or nonfinancial. The effectiveness of the articulation of these practices should then be measured and monitored in the organizational performance in order to develop an organizational learning and provide feedback to the system for a continuous improvement through the lessons learned in the management of each one and all of these issues.

6 FINAL CONSIDERATIONS

In a context of intense innovation, which also seeks a sustainable competitive advantage, the resource-based view appears as a guide of policies for the management of resources for this purpose. We presented the management of competencies, which originates in the resource-based view, as a tool for human resource management based on the interaction of the strategies within the context of innovation, in which the management of human resources required for the adaptation, evolution and achievement of the expected performance occurs in an environment of intense changes. The human resource management in this context should present itself as strategic in the awareness and articulation of the stakeholders in the organizational innovations, actively participating to make changes in this context of procedural and technological innovation.

Within this framework, human resources management becomes important to aid in the management of innovations, whether in the public and private sphere, or in the third sector. Its effectiveness, however, should be measured by analyzing the performance of HRM in view of innovations, studying its practices and the impact on results. The way the system manages the existing innovations in product/service, or their processes, that is, how technological innovations and the innovations in processes or organizational are managed in the context of the company, is interesting for further studies in specific sectors of society such as the health sector, which has special and contextual characteristics that instigate problems of interest to this study.

Finally, human resource management must respond to the speed and scope of technological innovations, including the growing incorporation of information and communication technologies (ICTs) and the working processes, also involving the organizational innovations necessary in this context. We suggest the prospect of looking at the organization, diagnose it, make consensual needs for competencies, identify individual competencies, apply them with a strategic focus. As a result, we have the development and increase of organizational competencies, of difficult reproduction, thus gaining a concrete and mainly sustainable competitive advantage.

After the contextualization of the theories of the firm, we presented the constructs in a historical and conceptual manner, trying to academically study the subject, unlike what is seen in non-academic productions, which are used to the terms inappropriately. Starting with the construct resources included in the Resource-Based View, he was introduced as the basis of the constructs of innovation and competencies. Each one of these three constructs was delimited to then present as the resulting construct, the organizational performance. In a separate chapter, we presented reflections on possible articulations of these constructs among each other and with their resultant. As a conclusion of the articulations of the constructs discussed in the paper, it is expected that the management of organizational resources, especially its human resources, through competency management and innovation management, generates a direct impact on the organizational performance. Finally, we sought to interline reflections on organizational practices, in the light of the theory and its articulations.

7 REFERENCES

Abrahamson, E. (2006). *Mudança organizacional* (M. Rosemberg Trad.). São Paulo: Makron Books.

Barbosa, A. C. Q., Guzman, G., Scianni, M. A., Rodrigues, M. A. (2005). Competence management as organizational knowledge transfer process. *Proceedings of the International Research Conference on Quality, Innovation and Knowledge Management*, 7, Malasya.

Barney, J. B; Clark, D. N. (2007). *Resource-based theory: creating and sustaining competitive advantage*. New York: Oxford University.

Bitencourt, C.; Barbosa, A.C.Q. (2004). A gestão de competências. In: C. Bitencourt (Org.). *Gestão contemporânea de pessoas*. Porto Alegre: Bookman. 528 p.

Bollen, K. A. (1989). Structural equations with latent variables. Nova York: Wiley.

Boterf, G. (2003). *Desenvolvendo a competência dos profissionais*. (3a ed., P. Chittoni Ramos Reuillard Trad.) Porto Alegre: Bookman. 278 p.

Boyatzis, R. (1982). *The competent manager*. New York: John Wiley & Sons.

Cameron, K. (1986). Effectiveness as paradox: consensus and conflict in conceptions of organizational effectiveness. *Management Science*, *32* (5), 539-553.

Carneiro, J. M. T. et al. (2007, maio/agosto). Building a better measure of business performance. RAC-Eletrônica, *1* (2), 114-135.

Davenport, T. H.; Prusak, L. (1998). *Conhecimento empresarial: como as organizações gerenciam o seu capital intelectual* (L. Peres Trad). Rio de Janeiro: Campus.

Demsetz, Harold, 1973. "Industry Structure, Market Rivalry, and Public Policy," Journal of Law and Economics, University of Chicago Press, vol. 16(1), pages 1-9, April.

Dutra, J. S. (2001). Gestão de pessoas com base em competências. In J. S. Dutra et al. (Org.). *Gestão por competências: um modelo avançado para o gerenciamento de pessoas* (5a ed. pp. 25-43). São Paulo: Gente.

Fleury, A.; Fleury, M. T. L. (2001). *Estratégias empresariais e formação de competências: um quebra-cabeça caleidoscópico da indústria brasileira* (2a ed.). São Paulo: Atlas.

Foss, N. J. (1997). Ethics, discovery and strategy*. Journal of Business Ethics*, *16* (11), 1131-1142.

Freeman, C. (1987). *Technology policy and economic performance*. London: Pinter.

Galvão, L. L. (2002). *Medidas de desempenho organizacional em organizações públicas brasileiras*. *Anais do Congreso Internacional del CLAD sobre la Reforma del Estado y de la Administración Pública*, 7, Lisboa, Portugal.

Hirata, H. (1994). Da polarização das qualificações ao modelo de competência. In: C. Ferreti (Org.). *Novas tecnologias, trabalho e educação*. Petrópolis: Vozes.

Kaplan, R. S. & Norton, D. P. (1992, Jan./Feb.). The balanced scorecard – measures that drive performance. *Harvard Business Review*, *70 (1)*, 71-79.

Lastres, H. M. M., Cassiolato, J. E. & Arroio, A. (Orgs.). (2005). *Conhecimento, sistemas de inovação e desenvolvimento*. Rio de Janeiro: UFRJ.

Lévy-Leboyer, C. (1997). *Gestión de las competencias*. Barcelona: Gestión, 2000.

McKinsey. (2006). *Going from global trends to corporate strategy: Will your business catch them before they catch it? The McKinsey Quarterly*, 277-284.

Penrose, E. (1995). *The theory of the growth of the firm*. Oxford: Oxford University Press.

Porter, M. E. (1996). What is strategy? *Harvard Business Review*, *(Nov-Dec)*, 61-78.

Prahalad, C. K. & Hamel, G. (1995). *Competindo pelo futuro*. Rio de Janeiro: Campus.

Robert, M. (1995). *Product innovation strategy.* New York: McGraw Hill.

Ruas, R. (2005). Gestão por competências: uma contribuição à estratégia das organizações. In R. Ruas et al. *Aprendizagem organizacional e competências*. Porto Alegre: Bookman.

Rumelt, R. (1984). *Toward a strategic theory of the firm. In Lamb, R. B. (1984) Competitive Strategic Management. Prentice-Hall: Englewood Cliffs, NJ*. 556-570.

Sandberg, J. (1994). *Human competence at work*. Gotebork: BAS.

Santos, J. B. (2008). *Uma proposta de conceituação e representação do desempenho empresarial*. Dissertação de Mestrado em Administração, Fundação Getulio Vargas: São Paulo, SP, Brasil.

Schumpeter, J. A. (1994). *Capitalism, socialism and democracy*. London: Routledge.

Sink, D. S. (1985). *Productivity management: planning, measurement and evaluation, control e improvement*. New York, NY: John Wiley and Sons.

Terra, J. C. & Gordon, C. (2002). *Portais corporativos: a revolução na gestão do conhecimento*. São Paulo: Negocio.

Tidd, J., Bessant, J. & Pavitt, K. (2003). *Gestão da inovação*. Lisboa: Monitor.

Ulrich, D. (1998). *Os campeões de recursos humanos: inovando para obter os melhores resultados* (C. Knipel Trad.). São Paulo: Futura.

Vasconcelos, F. C. & Cirino, A. B. (2000 Out/Dez). Vantagem competitiva: os modelos teóricos e a convergência entre estratégia e teoria organizacional. *Revista de Administração de Empresas*, *40* (4), 20-37.

Wernerfelt, B. (1997). A resource-based view of the firm. In Nicolai J. Foss (Ed.) *Resources firms and strategies – a reader in the resource-based perspective*. Oxford: Oxford University Press.

Zarifian, P. (2003). *O modelo da competência*. São Paulo: Senac.

Zarifian, P. (2001). *Objetivo competência: por uma nova lógica*. (M.H.C.V. Trylinski Trad.) São Paulo: Atlas.

Zhuang, L., Williamson, D. & Carter, M. (1999). Innovate or liquidate – are all organization convinced? A two-phased study into the innovation. *Management Decision*, 37 (1), 57-71.