

The Power of Absorptive Capacity and the Network for the Competitive Advantage

Luciano Ferreira da Silva^{1,2}, Arnoldo José de Hoyos Guevara¹, Karina Ribeiro Fernandes² & Arlindo M. Esteves Rodrigues¹

¹ University of Management, Pontifical Catholic University of Sao Paulo-PUCSP, Sao Paulo, Brazil

² University of Management, UNINOVE, Sao Paulo, Brazil

Correspondence: Luciano Ferreira da Silva, PHD program in management, Pontifical Catholic University of Sao Paulo, Sao Paulo, Brazil, Rua Monte Alegre, 984-4th floor room 4E, Perdizes, Sao Paulo/SP, CEP 05014-901, Brazil. Tel: 55-11-991-394-691. E-mail: lf_silvabr@yahoo.com.br

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Abstract

This article has the objective to understand the power of Absorptive Capacity (ACAP) in creating competitive advantage. ACAP is related to the ability of an organization to innovate using the stakeholders' social capital (Cohen & Levinthal, 1990; Zahra & George, 2002; Torodova & Durisin, 2007). For this purpose, it was necessary to develop a research-type exploratory qualitative approach in order to understand a social phenomenon in a given context or scenario. The study showed that in fact organizations may go in cycles of proactive or reactive competitive behavior; and these cycles could determine the success or failure of an organization, as was seen in the case of Apple and Xerox.

Keywords: absorptive capacity, competitive advantage, collaborative networks

1. Introduction

The industrial age began a process to create a stable and rational environment for organizations and society in general. This rationality aimed to control production processes, people, finances, among other functions and factors. The relationships established with this focus aimed at giving greater rigidity and predictability of its activities in a "Weberian" vision.

As a result of management and production defended by the scientific and classical management, a theory emerged mechanization of people and processes. This paradigm that focuses on an often fragmented and atomistic vision became favorable for organizations because it contributed to increase the gains from increased productivity and profitability (Morgan, 1996; Clegg, Hard & Nord, 1998; Child, 2012; Daft, 2008).

However, in the early twenty-first century, competitive advantage is no longer built on competencies aimed at the production and cost reduction under a vertical perspective. Management cannot work within a rationality of internal processes and routines. This rationality of construction through a fragmented vision-based paradigm in the Newtonian and Cartesian perspective organization is more and more held hostage to rationality of the environment in which the organization is inserted (Castells, 1999; De Masi, 1999; Friedmann, 2004; Child, 2012).

Thus, only building predictable and rigid processes in an organization hinders developing competitive advantages because there is a dependency for the effectiveness of these processes with the various elements and factors external to the organization. And these may or may not contribute to the achievement of your goals (Zahra & George, 2002; Cohen & Levinthal, 1990; Torodova & Durisin, 2007).

This new age that emerges called "knowledge era" brings new paradigms as the main source of wealth is no longer the earth, labor or capital as discussed by Adam Smith. In this new context, new sources of wealth are the intellectual and social capital, and the type of organization that emerges can be categorized as a type of learning organization in a collaborative way between network and consciousness (Guevara & Dib, 2007).

These networks of relationships are built through the interactions between the various actors in their actions, and the basic premise of these networks is that organizations are composed of multiple connections that interact (Eccles, 1981; Balestrin, Verschoore & Reyes Jr, 2010; Perrow, 1992; Granovetter, 1983). The connections

contribute to the formation of a complex arrangement that will serve to better reach the goals by all members of a network.

Thus, organizations that break with the vision of closed system geared only for its internal processes can create inter-organizational networks that cause organizations to have greater coverage and capacity. This type of thinking helps with their ability to innovate and to compete. So, this new concept of organization causes a manager to build organizations that have virtually unlimited capacity.

The scenario presented in this early twenty-first century makes one observe the emergence of new skills and abilities to capture and utilize the benefits of the construction of the arrangement of network organizations. However, this so-called social capital network (Nahapiet & Ghoshal, 1998), is only used when an organization develops its "Absorptive Capacity" (Cohen & Levinthal, 1990; Zahra & George, 2002).

This vision focuses on the organization of the systematic way while all-encompassing imposes the requirement of organizational and social interconnection with a high degree of interdependent structures, because when a structure operates in an isolated way, it has to face the factor of self-sufficiency. Thus, the true utilization of these interactions depends on a dynamic capability linked to its absorptive capacity, for instance its ability to recognize, assimilate and exploit (Zaheer & Bell, 2005; Wegner & Maehner, 2012; Zahra & George, 2002).

Thus, these structural arrangements that enhance the operations of the organizations are based on reciprocity, trust and communication systems, but also depend on the ability to assimilate the social capital available in the environment. Therefore, this study aims to reflect on the following question: How do factors related to absorptive capacity influence the ability to innovate and compete organizations? For this, it constitutes the main objective of this research: to identify the influence of factors related to absorptive capacity in building competitive advantage through innovation. And to achieve this goal we tried to complete the following specific objectives: to present the organizational structures used to compete in the market; to describe the elements of absorptive capacity and its conceptual basis, and to understand the relationship between behaviors generated by organizational structures and capacity that competes absorbing the knowledge available in the environment.

This work began with the assumption that society and its institutions need greater interaction in an interdependent process. It is necessary that organizations are not self-sufficient. Therefore, meeting the demands of society to overcome the paradigm driven by vertical integration and hierarchy is needed. Thus arises the possibility of using the organizational model based on building networks of cooperation. In other words, networks of organizational relationships between organizations that can facilitate the sharing of benefits and tools by a group connected to the actors.

However, there is a tendency to accumulate and retain knowledge by individuals and organizations, as it is shown often as a way to keep an edge (Sharifirad, 2010). Nevertheless, this is a paradox that proves counterproductive in increasingly dynamic and uncertain environments. Due to this power of sharing knowledge, this issue becomes relevant in the field of research on organizational management (Davenport & Prusak, 1998; Eccles, 1981; Balestrin, Verschoore & Reyes Jr, 2010; Wegner & Maehner, 2012; Perrow, 1992).

Hence, this work has relevance for actuality of the subject and its relevance to the process for the development and innovation of products and processes, besides the changes in patterns of competition between organizations. The survey and compilation of knowledge related to this subject will contribute to future research and a better understanding about the subject.

2. Literature Review

2.1 The Networks of Cooperation in the Construction of Competitive Value

Administration as science results relate to the development of society's historical process. Thus, its origin arises from the attempt of individuals and groups to organize socially and productively so the need to meet the demands can lead to the planning and organization of available resources. This type of action linked to the management of resources provides a reduced impact on the environment caused by the shortage of which processes may lead to entropy (Barney, 1991; Hitt, Ireland & Hoskisson, 2002).

As a result of this management model also came mechanization of the people, which Morgan (1996) and Clegg, Hard and Nord (1998) highlight that it brought gains with increased profitability for organizations. Moreover, this vision focused on processes coupled with the evolution of technology has caused greater control of internal processes, which leads to a closure of the organizational systems (Dosi, Nelson & Winter, 2000). Although this way of managing organizations has received several adherents, these ideas have become part of a paradox, especially when it comes to administration that is more focused on the ability of organizations to learn and innovate (Adizes, 1995; Morgan, 1996; Nonaka & Takeuchi, 2008).

It should be emphasized that, for obtaining a capacity to learn and innovate, it is necessary to act as an open system by promoting interactions with various internal and external organization elements (Wu & Lee, 2012). In other words, working collaboratively with other organizations in order to generate new inputs in the organizational system. This new situation becomes a source of advantage by facilitating the exchange of information, which becomes a good response at the stable competitive advantages (Castells, 1999; Hitt, Ireland & Hoskisson, 2002).

With this displacement of thinking about industrial economies and intangible assets, administrators and researchers were required to analyze the implicit knowledge to the business in addition to their shape of Collection and use (Armstrong & Lengnick-Hall, 2013). Thus, the reality that appears in this early twenty-first century for many organizations is to reach a better performance, not only with the implementation and successful use of tangible assets. The positive results are also related to effective knowledge management (Nonaka & Takeuchi, 2008; Hansen & Nohria, 2004).

Table 1 shows this relation between an organization model built in the industrial revolution and another that arises in modern society (Child, 2012; Daft, 2008; Friedmann, 2004).

Table 1. Organizational models

CONVENTIONAL ORGANIZATION	MODERN ORGANIZATION
Emphasis on hierarchy - vertical downward communication	Emphasis on horizontal structure - intense lateral communication in organizational networks
Making decisions in a centralized way	Decision making in decentralized and participatory manner
Specialist roles and well defined (focus on the task)	Less specialized and flexible roles (Focus on the process)
Operation based on standardized rules and procedures	Functioning based on the adaptation and collaboration
Specific knowledge	Systemic Knowledge (holistic)
Thinking local	Global thinking
Competitive strategy	Collaborative strategy
Rigid Culture	Adaptive culture
Closed System	Open System

Source: Elaborated by the authors, 2013 (CHILD, 2012; DAFT, 2008; FRIEDMANN, 2004).

As can be seen, the conventional model's vertically-integrated structure is built with an emphasis on tasks and centralization of power. Installed organizational environments serve to maintain a predictable flow of activities. The vertical integration of the organizational system works in such a way that makes it not exist or constantly influence exchange with the external environment. In other words, administration is focused on improving internal organizational processes without taking into account the changes in the environment. This leads to build a closed system.

In this way, the operations of this type of organization are centered on processes that are designed with well-defined roles and require specific knowledge, without the need for constant updates. In the field of competition is the thought of defending a position through the local view, which is to defend a position achieved on the basis of skills that already have been learned (Daft, 2008; Porter, 2004).

But the context that presents itself in the contemporary sets a new organizational model. This is more horizontal in its structure, allowing a higher capacity to interact and collaborate in the exchange and development of new knowledge (Child, 2012). This structure is prepared for certain unpredictability and flexibility, and for its operation there must be a decentralization of power and decision making in a participatory manner.

Therefore, in a globalized and competitive environment, organizations are becoming increasingly larger and the world becomes increasingly smaller. However, it is worth mentioning that an organization does not necessarily need to be larger in size, but in their relationships and partnerships. In the field of competition there is differential learning for an organization to compete and collaborate at the same time, which requires greater adaptability and a culture more open to learn and innovate (Chesbrough, 2003; Chesbrough, 2006; Mowery, Oxley & Silverman, 1996).

Larsson *et al.* (1998) point out that learning between organizations can be achieved when the transfer of existing knowledge goes from an organization to another, including generating new knowledge from the interactions between organizations of the same network. This logic requires a level of transparency and openness between organizations (Armstrong & Lengnick-Hall, 2013; Schleimer & Riege, 2009; Wu & Lee, 2012).

Therefore, the framework developed by Larsson *et al.* (1998) consists of five categories of interactive strategic behavior, which are: collaboration, competition, compromise, accommodation and the avoidance to go through the integrative and distributive dimensions of appropriation and development of joint knowledge. This idea is also supported by Marglis and Sagan (1986) when they say that one needs to understand that life does not possess the globe by combat, but by networking.

The power of networks between organizations' cooperation is a reply to changes in the environment to a condition of greater competitiveness, being that a network structure is more efficient than a vertically integrated company form (Eccles, 1981; Balestrin, Verschoore & Reyes Jr, 2010; Perrow, 1992).

A social structure based on a network works as a highly dynamic and susceptible open innovation system (Chesbrough, 2003; Chesbrough, 2006; Gulati, Nohria & Zaheer, 2000; Mahmood, Zhu & Zajac, 2011). Balestrin and Verschoore (2008) and Hitt, Ireland and Hoskisson (2002) also emphasize that overcoming the traditional way of competition, based on the hierarchical bureaucracy of organizational mega structures, gives way to the phenomenon of network organizations. Moreover, these authors point out that some factors serve as catalysts for this change, which are: the global expansion of markets, the speed of technological developments, high ease of information exchange and the end of the stable competitive advantages.

A network between organizations' relationships can be described as an organizational arrangement formed by a group of actors who relate to each other. These relationships intend to obtain complex goals that would be most likely unattainable in an isolated form (Tureta, Rosa & Ávila, 2006; Migueletto, 1998; Mowery, Oxley & Silverman, 1996).

This network is characterized by the condition of autonomy of the organizations and for relations of interdependence that are established among the actors of the same network of cooperated and collaborative forms (Borgatti & Foster, 2003). As highlighted by Castells (1999), the company continues to be a unity legally constituted and the same way drives for capital accumulation, but your operation is better when using the business network.

It is worth noting that this networking is different from transaction relationships between organizations, because the result we are seeking by everyone is a collaborative and synergistic relationship (Lima & Fields Son, 2009; Steensma, Marino & Weaver, 2000). Moreover, an important attribute in the formation of networks between organizations' cooperation is reciprocity because it accentuates upon the existence of the long-term prospects. This attribute is accompanied by the security and stability in the network that encourages creating new ways to accomplish tasks, promoting learning, exchanging of information and greater confidence (Powell, 1990).

Nevertheless, it can be said that members of the same network between organizations can obtain different levels of performance, as these actors occupy bonds formed in many different roles and positions, which generate asymmetric outcomes and benefits for each member (Wegner & Maeher 2012; Nahapiet & Goshal, 1998). Although this may be a point of conflict, this also becomes an element that contributes to the maintenance of network between organizations.

The reason for this maintenance occurs by future benefits arising from participation in the network (ZAHEER; BELL, 2005). Nevertheless, achieving benefits of this type of operation is only possible when an organization develops its absorptive capacity (Cohen & Levinthal, 1990). This capability refers to the ability of the organization to recognize the value of new external knowledge, assimilate it, and exploit it. These skills are essential for the organization to develop its absorptive capacity, and their actual realization is given by the processes of communication (Zaheer & Bell, 2005; Wegner & Maeher, 2012).

So, the relevant information that is generated by the interaction of the various actors in the network can become knowledge that will bring competitive advantage. The network and its members may obtain capital that would not be possible in an isolated form by each actor. This capital can be described as being the actual and potential resource. It exists in a tangible or intangible manner and is available in a durable network of relationships between individuals or social units (Nonaka & Takeuchi, 2008; Nahapiet & Goshal, 1998).

What stands out about this capital, which is available or generated by a network, is that it is not owned by a single member, but won or lost in the network interfaces and interactions as the many ties are built and broken (Granovetter, 1983). It is important to emphasize that the formation of a network within organizations only

provides its members with a predisposition for access to social capital in the network.

Thereby, it can be said that the strategic performance of an organization is no longer in control of tangible resources, but on their ability to relate collaboratively. For both, their survival depends on interaction within organizations, because in an increasingly complex environment, the advantage is not about being the biggest or strongest, the advantage is being better prepared and able to change.

2.2 Absorptive Capacity and Capacity of Innovation

The changes in production processes and the generation of value have influenced the organizations to compete through innovation, to be in this quest for competitive advantage also influences how organizations operate and adapt the knowledge available in your environment. This action using the available knowledge is called Absorptive Capacity (ACAP) (Cohen & Levinthal, 1990).

Thus, with this displacement of thinking about the industrialized economies focused on tangible assets to intangible assets, the administrators and researchers have been led to examine the tacit and explicit knowledge to the business in addition to their fashion obtaining and using (Hansen, Nohria & Tierney, 1999; Nonaka & Takeuchi, 2008).

The ACAP is a dynamic capability which influences the nature and sustainability of competitive advantage of an organization (Zahra & George, 2002). The first model of analysis of ACAP was developed by Cohen and Levinthal (1990) which was subsequently discussed and improved by many other researchers (Lyles & Salk, 1996; Mowery, Oxley & Silverman, 1996; Gupta & Govindarajan, 2000; Lane, Salk & Lyles, 2001; Zahra & George, 2002; Schmidt, 2005, Torodova & Durisin, 2007).

The foundations of ACAP provide a basis for your analysis (Cohen & Levinthal, 1990; Zahra & George, 2002; Todova & Durisin, 2007), which they are:

- Knowledge source—these sources can be generated by experiments, the academic knowledge and the interactions with the environment. Whereas its management forms the prior knowledge (*background*).
- Activation triggers—refers to events that encourage and enable the reviewing processes and products.
- Recognize the value—are the skills to recognize the trigger and relating them to knowledge sources.
- Gatekeepers—is the name given to those who are responsible for analyzing the information and also recognizing the value of new information, they can be a direct source of knowledge acquisition.
- Power Relationship—relations which are able to determine the allocation of investments for innovation.
- Social integration mechanisms—these can be formal and informal mechanisms which influence the exchange of information and experiences.
- Regimes of appropriability—is the ability to maintain knowledge of others and confidential knowledge.

These key elements assist in building the necessary framework for discussion of several models of ACAP. The first model is that of Cohen and Levinthal (1990), which presents three dimensions that constitute the ACAP, they are: the company's ability to recognize the value of new external knowledge, assimilate it, and exploitation. This last element, the ability of discovering and applying this new knowledge in order to generate an innovation that will be undertaken commercially, is different from the exploration that something is known (Shirokova, Veja & Sokolova; 2013; March, 1991).

An important point in this study is prior knowledge that can make or do not recognize the value of new knowledge available in the environment. Thus, this turns into a necessary skill to deal with the tacit component of knowledge transfer. Hence, the various discussions about knowledge management contribute to the construction of mechanisms that enhance an organization ACAP (Nonaka & Takeuchi, 1995; Nonaka & Takeuchi, 2008; Mciver, et al., 2103).

Different from the first model of ACAP Cohen and Levinthal (1990), Zahra and George (2002) adopted a more procedural perspective on ACAP and argued that the sharing of knowledge and effective internal mechanisms of social integration are critical of this capacity.

On this model of ACAP from the Zahra and George (2002) is built by a set of organizational routines and processes by which firms produce a dynamic organizational capability. Thus, the ACAP comes to be seen and analyzed by the four capacities of knowledge. And this would influence the organization in order to create and develop the necessary knowledge to build up other organizational capabilities that are the basis for a competitive advantage.

The capabilities described are different and complementary at the same time as they may influence the results of the organization. For Zahra and George (2002), the ACAP is divided into Potential Absorptive Capacity (PACAP), consisting in the acquisition and assimilation, and Absorptive Capacity Realized (RACAP) comprises processing and exploitation.

- Acquisition—is the capacity of the firm to value, identify and acquire external knowledge critical to the company's operations;
- Assimilation—refers to the capacity of the firm to analyze, process, interpret, and understand the information obtained from external sources;
- Transformation—is the capacity of the firm to recognize two sets of seemingly incongruous information and then combine them to reach an innovation;
- Exploitation—refers to applying knowledge in new assets, systems, processes, knowledge or new organizational forms related to commercial application.

On the other hand, Torodova e Durisin (2007) criticized the division model proposed by Zahra and George (2002). Torodova and Durisin (2007) stated that these buildings are just labeling and the dimensions are not divided into two subsets. Also, another important point is highlighted by the new model of ACAP is that the mechanisms of social integration are present in all its stages.

Torodova and Durisin (2007) also suggest a resumption of the original model of Cohen and Levinthal (1990), and several changes in Zahra and George (2002) model. A significant change is the proposal of a new interpretation in the dimension "transformation", as they point out that the transformation of knowledge is not a consequence of assimilation, by which this occurs during a process of implementing a new knowledge the company can also regress to structures prior knowledge. At Table 2 are presented the authors of the cited models and their focus of analysis respectively.

Table 2. Analysis models of ACAP

AUTHORS	FOCUS OF ANALYSIS
COHEN; LEVINTHAL (1990)	<ul style="list-style-type: none"> • Recognize the value; • Assimilate; • Exploitation.
ZAHRA; GEORGE (2002)	ACAP - Potential <ul style="list-style-type: none"> • Acquisition • Assimilation ACAP - Realized <ul style="list-style-type: none"> • Transformation • Exploitation
TORODOVA; DURISIN (2007)	<ul style="list-style-type: none"> • Recognize the value • Acquisition • Assimilation e transformation • Exploitation

Source: developed by the authors, 2013 (COHEN; LEVINTHAL, 1990; ZAHRA; GEORGE, 2002; TODOVA; DURISIN, 2007).

Worth mentioning that ACAP has been studied by many other researchers to analyze the ability to innovate, and the main focus of this research was to identify factors related to links, to this capacity and that could lead to construction of competitive advantages (Lyles & Salk, 1996; Mowery, Oxley & Silverman, 1996; Gupta & Govindarajan, 2000; Lane, Salk & Lyles, 2001; Zahara & George, 2002; Torodova & Dururisin, 2007).

It is also worth noting that the initial studies of ACAP have focused on the area of R & D (Research and Development), but as evidenced by Lane, Koka and Pathak (2006) ACAP should have a broader perspective on the dynamic capabilities of the organization. These authors also identified two distinct areas of study, one that focuses on characteristics of external knowledge and another that focuses on the identification of internal characteristics of an organization to obtain high level of ACAP.

Moreover, the influence of these factors on ACAP is one of the most important elements to enhance the ability of an organization to innovate (Lane, et al., 2006; Valberda, et al., 2010; Zahra & George, 2002). It may be perceived when considering factors such as the speed, quality and frequency of innovation in an organization.

However, these results are only exacerbated when knowledge sharing occurs, and that this share intangible assets not occur, particularly cognitive resources available within a group, remained underutilized (Lauring & Selmer, 2011; Nonaka & Takeuchi, 2008; Cohen & Levinthal, 1990).

From these information it can be inferred that ACAP is obtained by means of different levels of interaction, and these can occur between individuals, groups, organizations or even between countries (Zahra & George, 2002; Cohen & Levinthal, 1990; Torodova & Durisin, 2007; Schmidt, 2005).

Hence, in a process that takes into account the ACAP people and the processes of communication are factors of great importance because they contribute to innovate by this new procedure and external knowledge (Nonaka & Takeuchi, 2008; Minbaeva et al, 2003). Thus, innovations often result over a dynamic of adoption of knowledge than the inventive process. While investment in R & D manages the innovation potential, the ability to harness the collective or environmental knowledge is a critical component in obtaining and leveraging the ability to innovate and increase competitive advantage (Chesbrough, 2003; Chesbrough, 2006; Anders , 2012; Cohen & Levinthal, 1990; Schmidt, 2005).

So, the several interactions between internal and external to the organization actors can provide an accumulation of information and experiences that assist in this joint and coding, furthermore the result of this activity is maximized for knowledge management (Mciver et al., 2103; Hansen & Nohria, 2004; Gupta & Govindarajan, 2000). The opposite of this is that if a company that does not invest in its ACAP, will not benefit from the emerging opportunities in the competitive environment.

Besides that, it is important to emphasize again that an organization needs on prior knowledge to assimilate and use new knowledge, and the accumulated prior knowledge contributes to an organization that can recognize and use new knowledge. So the importance of knowledge management to expand the capacity to learn and innovate (Nonaka & Takeuchi, 2008).

As highlighted by Cohen and Levinthal (1990), an organization that has high level of ACAP will tend to be more proactive in the development and use of present and future opportunities. However, companies that have low ACAP tend to have a more reactive behavior in the market. Thus, this second category of companies will only search for new alternatives when it does not achieve some of its performance criteria such as market share or revenue.

Nevertheless, this sharing of knowledge is a necessary social activity that occurs within a system in which knowledge is a resource that has value (Davenport & Prusak, 1998). Lee (2001) defines knowledge sharing as the set of knowledge transfer from one person, group or organization activities.

Moreover, the available knowledge can be both tacit as explicit, and sharing it manifests itself in organizations through interactions of the various units of the organization (Nonaka & Takeuchi, 2008; Luu, 2012). The members of a particular network of relationships exchange information related to their organizational activities, although it understood the dissemination of knowledge among team members and also the inclusion of which originate from the external environment.

Luu (2012) emphasizes that knowledge sharing is a way to improve access to knowledge, and this process involves three key elements, which are:

- Object: what kind of knowledge is shared;
- Method of Sharing: face to face, conference, knowledge network, organizational learning;
- Level of sharing: sharing knowledge involves individuals, teams and organizations.

These elements help in obtaining better ways of transferring knowledge among members of a network of relationships, and the levels of knowledge sharing involve the flow of interaction among group members, subsets and sets. Hence, knowledge sharing is seen as an activity of disseminating the knowledge of a person, a group or organization to another (Lee, 2001). Aligning the factors that lead to this, a higher ACAP sharing and transfer of knowledge have a better possibility of transformation of individual and collective knowledge into organizational knowledge (Luu, 2012).

Therefore, in an increasingly dynamic and competitive environment management level ACAP becomes a great advantage. Stands out even that the management of ACAP may lead to greater acquisition of knowledge that is a feature of creating value for organizations which can determine that it is the ability to innovate and compete

(Zahra & George, 2002; Cohen & Levinthal, 1990; Torodova & Durisin, 2007).

3. Method

This study was developed by the deductive method, which consists from the survey of general assumptions drawn from theoretical reflection. This procedure allows, by means of reasoning in descending order, with the appointment of specific concepts, answers the problematic proposed (Marshall & Rossman, 2010; Yin, 2005; Creswell, 2013).

Thereby, this study fits as an exploratory research for giving greater familiarity on the subject with the proposed survey and analysis of various sources of evidence (Creswell, 2013, Marshall & Rossman, 2010). Tripodi, Fellin and Mayers (1981) pointed out that the exploratory study provides a reference framework that facilitates the process of deduction in order to build concepts and hypotheses in the investigation of certain phenomena.

In this case, were initially surveyed and analyzed sources in bibliographical and documentary form. The first step was to build up the theoretical framework and protocol analysis aimed to characterize the study variables for the analysis and discussion of the data collected (Yin, 2005). This part of work was central to the organization of the conceptual component of this study and the construction of categories of analysis (Gil, 2010; Creswell, 2013). These categories have created qualitative indicators, which allowed the inference of knowledge obtained through data collection.

Thus, for this discussion followed three main assumptions for this work, which are:

- The ability to innovate is obtained and increased when an organization has a high degree of ACAP (Cohen & Levinthal, 1990; Zahra & George, 2002; Torodova & Durisin, 2007; Lane et al., 2006; Valberda et al., 2010; Lane, Salk & Lyles, 2001; Mowery, Oxley & Silverman, 1996).
- The ACAP cannot be related only in absorbing the knowledge of its internal structure, but look for resources in your network of relationships (Luu, 2012; Lee, 2001; Nonaka & Takeuchi, 2008; Davenport & Prusak, 1998; Mciver et al., 2103; Hansen & Nohria, 2004; Gupta & Govindarajan, 2000; Luring & Selmer, 2011).
- Organizations that have a proactive relationship with the competitive environment could increase their ACAP (Cohen & Levinthal, 1990; Davenport & Prusak, 1998; Andersén, 2012; Minbaeva et al., 2003; Luring & Selmer, 2011).

Based on these inferences and the conduct of research with a qualitative approach that is used to aid in the understanding of the phenomena studied, since its use in this type of research becomes a way of access to social realities in order to explore relations in the context of this research. This is possible due to the qualitative approach the focus is to understand the social processes that occur in a given scenario or context (Yin, 2005; Marshall & Rossman, 2010).

Having said that, it was conducted the comparison between the data collected with the literature research and document initially raised. This was done by paraphrasing. To facilitate the construction of the necessary elements for the analysis with the aim of investigating the relationship between factors related to absorptive capacity and the ability to innovate and also to compete.

4. Results

4.1 Presentation of Empirical Evidence

The organizations often miss the opportunity to take an idea that can bring you a competitive advantage, thereby four cases that illustrate the study of this work will be presented. An interesting case is that in 1976 Kodak created digital machines. Nevertheless, Kodak just tries to commercially exploit this idea twenty-five years later, this time the market was already dominated by other companies and, therefore, it could no longer conquer this market (Exame Online, 2013). This attitude has led to the company's bankruptcy proceedings in 2012, however in 2013 the company was able to reverse this situation.

Kodak has started a photo-sharing service, similar to what occurs in social networks like Instagram or Facebook, even before they existed. Nevertheless, this activity at the time did not matter to their managers because they were intoxicated by profit and power of their films. However, no commercial relevance to Kodak invented digital photography, why in the end the profits would not be on this machine? Because the camera has become just an application of mobile (Anderso, 2012).

Another case studied in this work that demonstrates the lack of perception of managers of an organization is the iPod. There is a belief that Steve Jobs' Apple created it, but what happened is that Steve Jobs acknowledged the idea from Tony Fadell, that after the responsible management of Real Networks rejected the idea to develop a new

kind of music player in mid-2000. In addition, Phillips was the company where Fadell worked also declined his idea (Tynan, 2009).

In this period MP3 players were on the rise, but the concept of Fadell was a little different. He developed the idea that the device should be smaller, thinner and focused on a content delivery system that would give its users a way to manage their playlists (Tynan, 2009). This content delivery system evolved into the familiar Apple iTunes (Apple, 2013). Fadell still worked and headed Apple's iPod division until November 2008, Real Networks is still a player in the world of streaming media, but their share in the market is a fraction of what Apple does with its iTunes (Tynan, 2009; Apple, 2013).

Another example of the lack of ability to enjoy an idea was from Xerox. More than a decade before the Macintosh and Windows PCs, before even the MITS Altair, the High existed which was the name of the computer from Xerox. This was the world's first computer with a graphical user interface based on windows. This equipment was developed at Xerox PARC, the Alto had a mouse, internet network and a simple text processor. However, in 1973 the market for personal computers did not exist and Xerox did not know exactly what to do with the High (Tynan, 2009). This would refer the phrase said by Ken Olsen, founder of Digital Equipment: "I do not see why anyone would have a computer at home" (Gates, 1995).

In 1979, Steve Jobs visited Xerox PARC and he realizes the potential of the Alto. Jobs incorporates many of his features in Mac and Lisa of Apple computers. A short time later, the Xerox finally noticed his mistake and started a campaign to launch the Xerox Star, a graphical workstation based on technology developed for the Alto, but it was too late to Xerox (Tynan, 2009; Xerox Alto, 2013).

The prison of Xerox with respect to the success of copiers among other things earned him many problems. After the year 2000, sales and revenues plummeted with copiers, since competitors could sell these machines with lower prices and similar technology (Bianco; Moore, 2001; Daft, 2008). During this period, Xerox recorded losses that reached \$ 384 million, over a period of 18 months Xerox lost \$ 38 billion in market value. Also, another impactful event for Xerox was that, its shares fell \$ 64 to less than \$ 4. This error from Xerox became known as "Burox", ie the Bureaucracy Copier.

The fourth and final case is presented of Napster (2013) which was created in 1999, its creators are Shawn Fanning and Sean Parker. Napster was a program for sharing files in P2P (peer to peer), whose idea was to facilitate the sharing of music online (Tynan, 2009). At this time the then CEO of Napster, Hank Barry, suggested the recording industry to adopt an agreement on style license that would pay the artists royalties for songs distributed via internet.

Though, record companies reacted by suing Napster for contributing with piracy (Tynan, 2009). This was the first major episode in the legal battle between the recording industry and music sharing networks on the Internet. The company had to shut down their servers in 2001. But, Napster users quickly moved to other P2P networks such as Gnutella and Grokster, thereby the music programs "Pirate" became the number one enemy of the RIAA (Recording Industry Association of America) (Tynan, 2009).

This battle against what seemed the digital music market, has not produced anything that it is dominated by streaming services like Pandora. Thus, as Tynan (2009) argues that, if the music industry had accepted a partnership with Napster, MP3.com or any other network sharing in vogue undoubtedly could better control the digital music sales and better address problems piracy.

To get an idea of the role of online music subscription service, it is noteworthy that the digital channels now account for 35% of total revenue of the music industry, while physical sales represent 57% of revenues in the sector. the subscription services for streaming music and which are in frank ascent, now accounting for 20% of digital revenues worldwide, compared to 14% in 2011 (ABPD, 2013).

These historical facts, among many examples, demonstrate how the strategic vision and structure of an organization is its success or failure determined by the capacity to absorb innovation and transform it into a market opportunity.

4.2 Analysis and Discussion of Results

As seen in the mentioned cases, organizations often fail to compete for not following the market dynamics. This becomes a problem that could take it to stagnation and an entropic process. Some organizations are limited by the inertia of their structures (Sharifirad, 2010; Freeman & Hannan, 2005; Silva, Lopes & Oliveira, 2013). In addition, other organizations are limited by their incapacity to realize that particular invention or change could bring competitive advantage for its commercial application, i.e. lack of the ACAP (Sharifirad, 2010; Torodova & Durisin, 2007).

These companies assume a passive attitude and limited interaction with the innovations available in the marketplace, get stuck to the illusion of immediate results that lead to a share of restricted market. So, the success of an organizational structure that relies on closed maps and their internal instruments are only a smokescreen for what is happening or will happen in the real competitive market (Chesbrough, 2003; Chesbrough, 2006).

This situation can be perceived as the offer of partnership of the creators of the Napster for the music industry, non-commercial use of it from Xerox computer or digital camera by Kodak. As highlighted Castells (1999), Powell (1990) and Andersén (2012), these situations have become more common by several factors such as the global expansion of markets, the speed of technological developments, high ease of information exchange and the end of the competitive advantages stable.

Furthermore, the case of Xerox demonstrates the importance of recognizing the value of ideas, because your computer will become a catalyst for the success of Steve Jobs' Apple in the early 1980s. This demonstrates the power to harness the social capital available or generated by a network of relationships. So when Steve Jobs visited Xerox in 1979, he recognized the value of available knowledge, assimilate and then exploitation it.

The iPod case also illustrates the importance of social capital available in the environment, because when Fadell offered his idea to Real Networks and Philips, they did not recognize its value. Fadell used its network of relationships and, in another attempt, talked with Steve Jobs who accepted investing in what would become one of its main products.

These two episodes with Apple exemplifies the importance of developing the ACAP, because even with the investments in R & D to generate a potential for innovation, the ability to harness the collective knowledge, or of the environment was a critical component in building competitive advantage (Cohen & Levinthal, 1990; Schmidt, 2005; Chesbrough, 2003; Chesbrough, 2006).

Accordingly, in an increasingly complex environment, the advantage is not to be the biggest or strongest, the advantage grew up in being better prepared and able to assimilate the changes. However, this advantage could only be harnessed by the sharing of knowledge occurred, and that this share had not occurred intangible assets, primarily cognitive resources available within the group remain underutilized (Lauring & Selmer, 2011; Nonaka & Takeuchi, 2008; Cohen & Levinthal, 1990).

As pointed out for Castells (1999), the capacity to share network is the path to the new paradigm of competition. What distinguishes the current technological revolution is not the centrality of knowledge, but the application of these in order to generate a cumulative feedback cycle between innovations and users (Davenport & Prusak, 1998; Lauring & Selmer, 2011). This feedback loop between the introduction of a new technology, its use and further development in new areas, becomes much faster when shared.

This innovation cycle can be applied to better explain the success of the music distribution systems on the Internet. This virtualization of the music industry, might even have been fought but not interrupted. Even with the disruption of activities at the time of Napster, innovation has been incorporated by the market and represents a significant portion of the results of the recording industry.

Evidenced cases illustrated how the interaction with the environment can increase the ability of an organization to innovate and compete. Being it in products like the Apple case, or in cases such as in digital music distribution. While companies compete for competitive advantage through innovation, it is worth noting that the new paradigm that builds up, leads to an attitude of collaboration and exchange of knowledge.

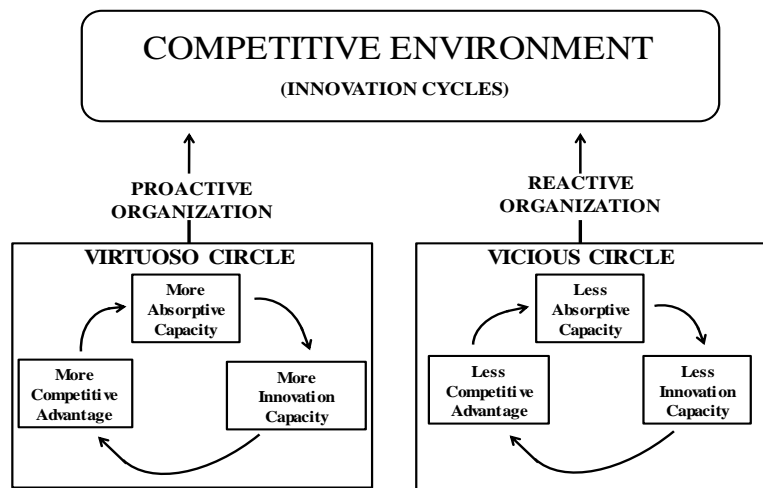


Figure 1. Relationship between absorptive capacity and ability to compete

Thus, it can be inferred that companies that fail to recognize the value, assimilate and exploitation of new knowledge (ACAP), generated both in the indoor environment, as in the external environment, are outdated and lost their competitiveness (Zahra & George, 2002; Cohen & Levinthal, 1990; Torodova & Durisin, 2007). This can create a virtuous circle or a vicious circle for businesses (Figure 1).

As such, it is clear that companies that do not invest in increasing their ACAP, have a lower capacity to innovate and hence to compete. This attitude leads to a reactive behavior in the competitive environment, and that this is independent of their inventions. The opposite is also true, as the more proactive an organization is, more it can influence the competitive environment.

The vicious circle created by a reactive market behavior that causes companies that do not invest in increasing their ACAP, so they distance themselves from those who are proactive. This way, even without producing inventions, such as Apple, an organization can increase its competitiveness through ACAP with the absorption of other people's inventions and companies.

Therefore, an organization can even generate new knowledge from interactions with the constituent elements of a network of relationships (Nonaka & Takeuchi, 1995, 2008; Mciver et al., 2103.). What facilitates the transfer of knowledge is the accumulation of information and experiences that assist in the articulation and codification, and the result of this is maximized for knowledge management (Mciver et al., 2103; Hansen & Nohria, 2004; Gupta & Govindarajan, 2000).

Lining up factors that lead to increase ACAP with this sharing and transfer of knowledge, the more possibilities of transformation of individual and collective knowledge into organizational knowledge are constructed (Luu, 2012). Moreover, the influence of these factors on ACAP is one of the most important elements to enhance the ability of an organization to innovate (Lane et al., 2006; Valberda et al., 2010; Zahra & George, 2002). This can be seen when considering factors such as the speed, quality and frequency of innovation in an organization.

In order to an organization to maintain this capability to innovate and understand the changes in the environment, it should create mechanisms of learning and assimilation of knowledge that are available in the environment. It is worth noting that, as pointed out by Wegner and Maehler (2012) and Wu and Lee (2012), the organizations that possess greater capacity to assimilate and to apply the knowledge available in interorganizational networks, will be more able to survive than those that do not have this feature.

In addition, these relations only provide an important asset to its members when there is an attitude of complementarity, sharing and mutual aid (Hansen & Noria, 2004). Since one of the important elements in the concept of ACAP is the recognition of the new local knowledge. As highlighted Zaheer and Bell (2005), the actual utilization of these interactions depending on their ACAP.

Thereby, worth mentioning the importance given by the researchers of ACAP to the mechanisms of social integration (Zahra & George, 2002; Cohen & Levinthal, 1990; Torodova & Durisin, 2007). It also appears that

the way to increase the ACAP is to build up networks of relationships which allow both leverage existing social capital and generate new capital.

Then, this transfer of knowledge can also be seen as an activity of sharing and dissemination of knowledge (Lee, 2001). In addition, companies will still have to deal with innovation cycles. As in the case of the song or the computer market, so those who are not able to change and innovate, will be back.

5. Conclusion

The environment that requires from the people a systemic view of the organization and global thinking, focused on the interaction with the external environment. This interaction brings new knowledge and developing new skills and competencies. In this new form of management, knowledge becomes the main production input. The competitive advantage of organizations is built by the ability to transform this knowledge into new forms of interaction with the various elements of the external environment.

Thus, the competitive advantage is being built by the various networks of relationships that individuals, groups and organizations will establish. These interactions promote a social capital that is available to all members of the same network, but it will be passed only by a few who are better prepared.

This ability to interact positively with the competitive environment is only possible when an organization has ACAP therefore it is no use to generate ideas or to seek information if the organization fails to promote a virtuous cycle between the factors that lead to innovate and compete. Besides, it can be inferred that an organization increases its competitiveness when establishing relationships and can enjoy the same social capital in the process of knowledge transfer.

Furthermore, the behavior of organizations with regards to management of ACAP may determine a distance between the reactive and proactive companies. This will determine the survival or not of these organizations, because without prior knowledge and generating new knowledge, companies are becoming obsolete in an entropic process of shrinkage and death.

This article focuses on the capacity of companies to transform the knowledge gained by the relations with the external environment, as the main element to their capacity to absorb this knowledge and deliver results for the company. However, this study was limited to understand the relationships with the environment and the level of absorptive capacity of organizations. So, because this research not has been deepened of other market factors as the put pressure corporate management, as legal changes, new competitors etc.

In developing the closure of this article, there was a future opportunity to perform research on the relationship between ACAP and strategic planning of businesses: for a new strategic plan to incorporate flexibility and greater interaction that are emerging with the consumer market and other organizations to be aware of market changes and innovations. So, a company can define what the best products are, as well as, processes and the best time to implement them.

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