

THE INCEPTION OF DYNAMIC CAPABILITIES IN SMEs

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ABSTRACT

The studies about dynamic capabilities approach have been focused on how the combination of the resources enable organizations to deal with the environment. However, important considerations about the role played by entrepreneurs in the inception of these capabilities have been put aside. Therefore, we propose in this paper to analyze the role of the entrepreneur in creating dynamic capabilities for small businesses over time. To do so, a qualitative research was made and data were collected ranging from 1977 to 2016 in a small business. The results show that the resources were used to master three periods in the organizational life and they were sustained by the entrepreneur's learning process. As a conclusion, it can be said that the entrepreneur's learning process cannot be dissociated from the learning of the organization itself and in the case of SMEs this may be the primary resource.

Keywords: Entrepreneurship, Dynamic Capabilities, Construction Industry.

INTRODUCTION

The dynamic capabilities approach (DCA) has shed light on how organizations deal with the changing environment. Studies in this area have tended to fall back on the creation of capabilities that allow businesses to survive and grow in this type of environment (Ambrosini and Bowman, 2009). Consequently, investigations have focused on the capabilities that result from combining resources to deal with change (Meirelles and Camargo, 2014). However, important considerations about how these mechanisms and factors are handled have been neglected (Regnér, 2014). Along similar lines, the role played by entrepreneurs and managers has not been widely addressed in the DCA.

Although this was one of Penrose's concerns, only more recently are researchers studying the behavior and attitudes of entrepreneurs and managers in dealing with resources. In short, knowing their role can be useful in understanding the details and activities underlying the capabilities that are created. This can be especially helpful in the case of small businesses since managers are the main agents in combining scarce resources, which constitute the dynamic capabilities that this type of organization has. The argument that there is a need to consider other factors is defended by scholars in different ways. Lockett, Thompson and Morgenstern (2009) challenged researchers to show the origins of a firm's heterogeneity rather than simply presume that this difference exists. According to these scholars, "by providing insights into the origins of firm heterogeneity, we may be able to understand better how managers can generate and manage their firm's distinctive differences. (p. 24). Maciel, Sato, and Kato (2012) shared this thinking

and added that the focus of the studies could be combined with analysis of the activities performed by managers. For these authors, this would provide a better understanding of the foundation underlying the creation of dynamic capabilities.

Limited resources may be a problem for small businesses (Saeedl, 2015). They have a little margin for error, and the manager assumes responsibility for indicating the direction that the organization should follow. A common feature in studies of small businesses has been the importance of the manager in combining resources. However, the theories used to address this feature are taken from sociology or psychology, and space still remains to understand the role of the entrepreneur over time in constructing dynamic capabilities. This type of research in the DCA can help analyze specific capabilities in the way organizations act. Thus, the objective of this article is to analyze the role of the entrepreneur in creating dynamic capabilities for small businesses over time. This type of study can be considered as relevant since it is unclear how the factors are aggregated to constitute an organization's capabilities (Lockett *et al.*, 2009; Winter, 2012). Winter (2012) relights the importance to direct studies toward understanding the origin of dynamic capabilities. Furthermore, this author draws attention to the lack of "history" and the "historical" in studies addressing the dynamic capability approach. Teece (2012) also defends the trajectory of organizations as a possibility for understanding the origin of dynamic capabilities, which also lends relevance to the study proposed here.

THE DYNAMIC CAPABILITIES APPROACH AND SMALL BUSINESSES

According to Parayitam and Guru-Gharana (2010), the dynamic capabilities approach (DCA) has been increasingly used to explain how companies gain sustainable advantage. This is confirmed by Peteraf, Stefano, and Verona (2013), who found more than 1000 articles on this topic over a period of ten years (2002 to 2012) in the *ISI Web of Science* database. The work of Barreto (2010) confirms this interest, not only because of the number of publications but also by the acceptance of this topic in high-impact international journals. This author found 40 articles published in top-tier management journals. It seems plausible to expect that this quantity would result in some competition among the authors who use this topic for their own research. Evidence of this can be found in the work of Helfat and Peteraf (2015), who responded to the criticism that studies of the DCA did not have a unified theoretical model. These authors advocate in favor of DCA, affirming that this is an area of research that is continually evolving and has come to use a variety of theoretical bases. As we can see, a wide range of studies have been conducted on the DCA which address a great variety of topics, ranging from the understanding of the strategic process and content to micro-level analysis, as in the case of the decision-making process, as well as investigations on the macro-level, in the case of issues related to environmental change (Helfat & Peteraf, 2015).

Despite the variety of studies, this particular research considers the economic and structural nature of the DCA. In this sense, it is understood that such an approach is founded on the importance of organizational routines and managerial processes that combine to achieve adaptation to the environment. Consequently, the assumption is that environmental conditions require specific combinations of resources from the organizations to deal with the problems they face in the space where they are located. For Teece, Pisano and Shuen (1997, p 510): "Existing specific internal and external competencies (management skills, combinations that are difficult to imitate, functional and technical skills) that address changes in the environment". Winter (2003) stated that something that permits a change in product, production process, new markets, or

clients is an example of "dynamic capabilities of the first order" (p. 992). However, in a different perspective, a similar point was made by Brush, Greene and Hart (2001) advocating the need for developing and configuring a unique resource base for gaining competitive advantage. In summary, the organization must combine resources internally to meet environmental demands or face smaller gains or closure.

Following this line of argument, Parayitam and Guru-Gharana (2010) stated that a portion of the studies on DCA originates in Schumpeter's economic theory. The influence of Schumpeter's work is also cited by Al-Aali and Teece (2014) and results in the consideration of dynamic capabilities as unique and irreplaceable resources that are combined by the entrepreneur. The very notion of entrepreneurship considered from such a viewpoint is closely connected to environmental demands and possibilities. In this sense, entrepreneurship develops from a favorable environment that stimulates characteristics and provides conditions for the business development (Mamdouh, 2007).

With this in mind, the role of the entrepreneur in the process is relevant because by designing and implementing a viable business model, it is possible to create and capture value. Consequently, it can be inferred that there is no use having a set of resources without a strategist who can direct the configuration of these resources; this is even more true for small businesses. In this type of organization, due to the scarcity of resources, difficulties accessing credit, and other economic factors in the external environment, and as a consequence of a narrow internal scope and modest levels of diversification (Døving & Gooderham, 2008), dynamic capabilities are required to ensure survival.

Teece (2012) asserts that dynamic capabilities can be grouped into three categories of activities: *sensing*, which entails identification of opportunities; *seizing*, which can be understood as the mobilization of resources to capture the identified opportunity; and *transforming*, which involves continuous renewal. In these activities, the individual is featured as a relevant element because the activities linked to these categories cannot take place without human action. Evidence of this can also be found in the work of Albuquerque and Escrivão Filho (2011), who stated that among the reasons behind the causes of early small business mortality reported in the literature are factors related to the owner-manager.

When dealing with dynamic capabilities and identification of opportunities (*sensing*), it must be considered that external conditions are present for all organizations. However, not everyone can understand and take advantage of opportunities or even change to minimize the risks present in the environment. Because of this, identifying opportunity has been reported in the literature as a peculiarity underlying the very definition of an entrepreneur (Ensley, Carland, & Carland, 2000; Shane & Venkataraman, 2000; Ferreira, 2005).

Vaghely and Julien (2010) identified two lines of thought through which the process of identifying opportunity has been addressed. The first is cognitive vision, in which information is in the environment and the role of the entrepreneur is to fit this information into a cognitive pattern. In this case the information is explicit, reliable, and therefore formal. The second line of thought identified by the authors is the constructivist vision, in which the entrepreneur processes the information in an interpretative manner; the reality is not objective but interpreted. As such, the opportunity as *sensing* can be understood as the ability to interpret the perceived elements in the environment. In other words, identifying the opportunities is not just a matter of recognizing the elements of the environment, but *building* opportunities from the perception of these elements. Identification of opportunities is linked to sensitivity and creativity, as well as the entrepreneur's previous knowledge (Ardichvilia, Cardoso, & Ray, 2003). In this sense, the

decision-making process and skills in detecting opportunities and threats in the environment appear as important dynamic capabilities, and the role of these capabilities has been specified as providing the conditions for facing a changing environment (Barreto, 2010). A thorough review of the entrepreneurial opportunity recognition was made by George, Parida, Lahti & Wincent (2016). They have classified six influential factors in opportunity recognition: prior knowledge, social capital, cognition/personality traits, environmental conditions, alertness, and systematic search.

There are studies about entrepreneurship (Ardichvili et al., 2003; Detienne & Chandler, 2004) which show that the entrepreneur identifies the opportunity and acts to take advantage of it by combining resources with the goal of adapting to the environmental conditions. Opportunity is a part of the process that will lead to action on the part of the individual. To transform what was perceived as an opportunity into reality requires the combination of all types of resources. In brief, *seizing* extrapolates perception and enters the domain of action and resource management, developing the perceived opportunity (Ardichvili et al., 2003).

Continued strategic renewal (*transforming*) can be understood as constant attention to the combination of resources to meet external demands. According to Piscopo (2010, p. 135), strategic renewal can include "refocusing of the organization, redefinition of the business model, or even organizational restructuring". In this sense, the intellectual capital accumulated by the entrepreneur can result in the combination of the resources needed to boost the competitiveness of the small business (F-Jardonand & Martos, 2014), which is considered an antecedent to the formation of dynamic capabilities (Døving & Gooderham, 2008).

The link between entrepreneurship and dynamic capabilities has contributed to improving the understanding of the concept of dynamic capabilities and can also improve the knowledge about how the entrepreneurial process happens.

METHODOLOGY

This study may be classified as qualitative, since the data were collected and analyzed in depth; the objective was not to find a relationship between the variables or statistical extrapolation of the investigated phenomenon but instead to build a deeper understanding of the investigated phenomenon. With regard to the objectives, this research can be classified as explanatory because it seeks to identify factors that contribute to explain the occurrence of the strategic phenomenon in small contractors companies. In terms of the temporal dimension, this research used a temporal cutoff with longitudinal analysis. This is because the research was carried out at a specific point in time, although analysis took place over time, where past events in the life of the organization were identified.

The research strategy employed was the case study. The case study, according to Yin (2010), is a relevant research method when asking questions like "how do these phenomena occur?". According to Yin (2010), the chosen organization should contain some characteristic that allows a deeper understanding of the phenomenon. In this paper, the firm was selected on the basis of the uniqueness of the case. This company has been in existence for 38 years and is very successful considering the difficulties faced by small organizations in Brazil. (Serviço Brasileiro de Apoio às Micro e Pequenas Empresas [SEBRAE], 2010). Sebrae (2010) states that around 48% of small business cease to operate after three years. It also exhibits strategic changes that may be helpful in understanding the entrepreneur's role in combining resources in small businesses.

In order to conduct a case study, the first item of the study case project is the research question. According to Yin (2015), it must be one of the following: how, who, where, when and how. In this case, the problem is linked with how a small business was able to survive in a highly competitive environment. The second element in Yin's research model is the proposition under which the study is oriented. In this particular case, it is conjectured that the small business survival is linked to the entrepreneur's learning process. The third item proposed by Yin (2015) is the level of analysis. According to the author, it is necessary to determine what the case focus is. In this study it is the learning process of a small business and its linkage with the entrepreneur's learning process. The fourth element is the linkage among data and the proposition. In this particular study, the research process undertaken here followed the parameters suggested by Yin (2010); a research protocol was created, and a variety of data collection techniques were employed to guarantee triangulation with the research problem.

Data were collected from three sources: interviews, financial documents and documentation related to projects, and non-participant observation (of spending control and the decision-making processes).

Semi-structured interviews were carried out with the entrepreneur/manager of the organization (S1) and with two former partners of the organization (S2 and S3). The following documents were consulted: balance sheets (contained in the account journals), the company's articles of incorporation and amendments, and the company's internal records. The balance sheets have been updated using the consumer price index for São Paulo (IPC-SP). To verify the company's growth, only the assets that best represented the company's property were considered (current and permanent assets).

The data collected were summarized in searching for a pattern linked with the changing process in the small business. In this stage, an inductive strategy revealed important insights about the product-market domain. Those insights allowed dividing the changes in three periods in the organization's life. After that, Teece's (2012) three categories for dynamic capabilities were applied in order to understand the role of entrepreneur in the observed changes.

The validity in this research is linked to the ability that the methods used in a research provide for the reliable attainment of its purposes. In this paper, the research method produced desired information about the organization's dynamic capabilities in special in the entrepreneur's learning process. The combination of the data proved sufficient to support the conclusions and, in addition, the dynamic capabilities approach was able to generate the insights to justify the elaborated analysis.

Reliability, on the other hand, refers to the assurance that another researcher will be able to carry out similar research and will arrive at approximate results. In the present research, all the circumstances in which the study was conducted were informed, allowing the analysis of the accuracy of the method. On the other hand, it was possible to verify the stability of the observations through the multiple respondents and the documents collected within a same period of time.

RESULTS

The construction sector is significant in the Brazilian economy, representing around 5% of the gross domestic product. It is divided into three segments: buildings, infrastructure, and specialized services. The inputs used in production come from other domestic industries, with 2% of total inputs imported; the labor used is not specialized and industry financing, especially

for the housing market, comes through the wage guarantee fund and savings. Since housing is a social policy item for the government, the sector is affected by government decisions on this subject in addition to economic factors. The *Minha Casa, Minha Vida* [My House, My Life] housing incentive program was one of the hallmarks of President Dilma Rousseff's administration and represented an important source of resources for the market of construction, helping to mitigate the downturn in the market (Associação Brasileira de Materiais de Construção [ABRAMAC], 2015).

Starting in 2007, the construction industry attained considerable growth rates that lasted until 2013. The current period is marked by a strong retraction. Negative growth in the first quarter of 2016 has already reached the percentage for all of 2015.

The causes for this drop in the market, according to the report from the ABRAMAC (2015), originate in the type of growth policy adopted by Brazil in recent years which centered on household consumption. Delivery of construction projects for the 2014 World Cup and the decrease in projects related to the growth acceleration plan (PAC) as a result of fiscal challenges for the government also contributed to the retraction. The end of this cycle, associated with rising interest rates, led to the strong downturn currently felt by companies in the market.

The growth of the company analyzed in this study shows that it has experienced growth over the years, although the industry has not demonstrated stability over the same period. Data from CBIC (2016) shows that in 2014 and 2015 the growth in the construction market shrank over 7%.

The market for civil construction in Brazil is characterized by the use of non-specialized labor. As a result of the industry downturn, at the end of 2014 job numbers began to fall and in 2015, the negative balance of jobs (hirings minus layoffs in the sector) rose from 4,000 in January to 106,000 in December (Câmara Brasileira da Indústria da Construção Civil [CBIC], 2016).

Productivity is a critical issue for business and for government. In the period from 2007 to 2012, productivity fell an average of 0.2% per year. Considering that employment grew 12.3% in the sector during 2007 to 2013 (CBIC, 2016), one can conclude that companies did not invest in training or technology related to the production process in this period.

The players in this market vary from large construction companies to small contractors; around 70% of the market consists of small businesses. The case analyzed here is a small company in the area of civil construction. The organization will be described without revealing its identity because the intention is to identify the role of the entrepreneur/manager in creating dynamic capabilities. We decided to use the generic name Alpha to refer to the company.

First, the difficulties small businesses face during their first years of existence should be highlighted. Research on the mortality of small businesses (SEBRAE, 2010; Albuquerque & Escrivão Filho, 2011; SEBRAE, 2011) attests that the early years are the most critical. Consequently, Alpha can be considered a company that beat the mortality odds, since it was founded in 1977 and is still operational in 2016.

The Alpha results that were collected in the balance sheet from 1977 to 2010 show that the company has been growing with time, especially in comparison with the market rates in the recent two years. However, when looking at the financial data, we cannot say that there was growth in terms of size. In summary, over the years Alpha has remained a small company, which can be considered typical of small businesses. For Mudalige (2015), few ventures become large enterprises.

Alpha was founded in 1977 by two brothers (S1 and S2) from a rural area in Paraná state. This movement by the brothers, despite being an individual decision, can be partially considered the result of government policies that guided the migratory flow of the rural population to the cities from the 1970 decade (Costa & Rocha, 2012). Currently, only one of the partners remains in the organization (S1), and in general the data permit us to highlight three periods that were prominent in the combination of resources and capabilities for the establishment and permanence of this organization. Sensing, as a result of the analysis conducted, was responsible for establishing three periods over the company's 39 years. However, Alpha's growth cannot be uniquely attributed to the perception of opportunities. Although they were relevant to the capture of market changes, the experiences that the strategist acquires and turns into learning at Alpha also contributes to dealing with the environment.

The first period (1977-1984)

The first period can be more strongly characterized as *sensing* (Teece, 2012). In this phase of Alpha's history, the small business strategist's perception of the environment results in choosing the type of product offered, the way this product will be marketed, and even how the company will come to be known. Alpha began its activities with the federal government as a client, participating in construction and infrastructure-related renovations. A statement from S1 can serve to illustrate this analysis: "As soon as we set up the company we registered with the state department of construction. And it was through this that we got our first job, putting up construction fencing. The second job, also a small one, was for the army. And from there we started to do various other jobs. We did a lot for Copel, for Banestado, for Fundepar, which is a Paraná foundation for building schools. We built bridges for the department of highways".

The definition of *what to do* is connected with the training of S1. His perception (*sensing*) is not just related to the business, but before Alpha was established it appears there was a period of personal preparation before opening the company.

The lives of the company and the entrepreneur seem to merge, even before the company opened. S1 and his first partner are brothers and lived in the countryside of Paraná state, where their family had a farm. For S1, life in the country did not offer any more opportunities after the government discouraged coffee farms. In the 1970s, Brazil went through a period of growth known as the "economic miracle." This phase of the national economy was based on investment in infrastructure projects in a country whose economic policies aimed to abandon dependence in this area, reaching its peak in the era of the military governments. Consequently, the choice of a degree in engineering by S1 also meets a demand that is characteristic of the 1970s.

The company opened in 1977, and it can be said that technical knowledge of engineering is the result of the perception of a career opportunity and a determining factor in the choice of this field as an area of activity for Alpha. In other words, both the profession and later the choice of the promising market were connected with the economic development policies adopted by Brazil in the 1970s and early 1980s. This was also crucial in determining the type of client that the organization would serve. This can be seen in the following statement from S1: "There were some bid processes. The government had only one agency for bidding on small construction projects, renovations, and we had no experience doing larger projects. So we took part in these bidding competitions for small projects and maintenance that the government had".

Besides S1's technical knowledge, a learning process at Alpha can also be noted. This process seems to have been crucial to mobilizing resources (*seizing*) in order to capture the identified opportunity. This is because, in dealing with the environment, S1 recounts the process that can be associated with learning of the individual which is later transformed into resources for the organization. "It was difficult to break into the market. And I believe that, more than in the engineering course, I learned from life and from how things happened in the company."

In a statement from S2: "We started with small, public projects, because we didn't have the money to build our own projects and we also didn't have the technical assets to get big government projects. The government had only one agency for bidding on small construction projects, renovations, and we had no experience doing other projects, so we relegated ourselves to participating in these small bidding processes".

In Alpha's early years, because of Brazil's economic growth at the time and the abundance of public works, Alpha acted in a market with no threats to its activity from competition. The development tapped by Alpha is related to the second national development plan (1975-1979), which contained a section addressing the use of Brazilian hydroelectric resources and leveraging the industrial sector (Matos, 2002). During this period Alpha experienced rapid growth, and soon had 40 projects in municipalities in inland Paraná state and over 400 employees. Even so, the structure of the company was lean, with few employees in the administrative area and rotating teams of construction workers. These characteristics are typical of the project-based structure. This type of organization permits flexibility, since the projects run almost like independent companies in preparing the product, but it allows some centralized control of spending (Cury, 2006).

The process of learning in the business was incremental and depended on the experience of the entrepreneur/strategist. This is consistent with the interrelation between entrepreneurial competencies and entrepreneurial learning advocated by Zampier & Takahashi (2011). These authors advocate the inclusion of learning in the conceptual model that deals with the constitution of the organization's capabilities.

The company's first period concludes with the exhaustion of this development model for Brazil. The perception of what happens in the environment is responsible for a new phase in the life of Alpha.

The second period (1984-2000)

The second phase coincides with the mid-1980s. In 1984, the original partnership was dissolved and S2 founded his own construction company, which failed in the 2000s. During this period (1990-2005) also, another partner (S3) came on the scene and was responsible for administrative processes.

In the 1980s, the economic miracle gave way to an inflationary crisis. The government stopped investing in infrastructure and the country experienced periods of high inflation rates. According to Matos (2002, p. 52): "Government debt in this period resulted in the deterioration of the financing capacity for the public sector in the 1980s, since all the costs of the second national development plan were socialized (increased expenses without adequate financing mechanisms)".

During this period in Alpha's history, we can again see the *sensing* represented by S1's reading of the environment. The entrepreneur realized that government projects would soon cease and decided to change the product-market domain the company served. In his words: "A

bit later I saw that public projects did not have much of a future because I already had some agencies that had problems paying the invoices. So I chose not to do more projects for government. I began to sell off the heavy equipment used to build bridges, and soon after began to build buildings with the resources that I already had".

Here we can see the central role played by the entrepreneur in recombining Alpha's resources (*transforming*). However, before this recombining we again see *seizing*. In this sense, the reading of the environment and the action to change the product-market domain can be understood as first-order dynamic capabilities (Winter, 2003) because they allowed the organization to survive in its changeable environment.

The company's own resources were not sufficient at this time for the construction projects the entrepreneur considered as opportunities, considering that the maturation of a product (an apartment building, for example) can be slow. According to S1: "I do only one project at a time. And usually the intervals of time are large. Because I just start to do the project, I only start thinking about another one after I finish this one".

At this stage, Alpha began to construct residential buildings. One of these residential buildings was built without any kind of financing. Consequently, since the amount of capital required was significant and the teams were not so large, Alpha's products took a long time to mature. Evidence of this is the number of buildings constructed over a period of almost 15 years (4), as shown in the documents related to the projects.

After this experience, it was necessary to seek for money not only to capitalize the company but because of the very nature of the market in which borrowers can only obtain funding (for new units) in projects that have been financed. This period of Alpha's history is the result of the perception of the existence of resources provided by the banking system to finance projects intended for single-family housing and, among the banking institutions, CaixaEconômica Federal was offering the best interest rates in the market. This scenario was the result of a government plan to grant subsidies to housing system borrowers in 1985, and was a response to the "action of borrowers and the increase in defaults in the system (Santos, 1999, p. 18)". However, the process to obtain financing is confusing, bureaucratic, and time-consuming. This is consistent with what Kliksberg (1994) calls the "old bureaucratic pyramids" (p.13) which, for him, can be rigid, inert, and slow, with poor use of resources. Here again the learning process appears as an important element in overcoming the difficulties Alpha faced in matching up its own capabilities and environmental demands. In the words of the partner who entered during this phase (S3): "[...] bureaucracy in Brazil was very large, and still is. The documentation to obtain financing and to sell a financed apartment is enormous, but over time we are creating a system to try to facilitate the entire process".

Since the owner did not want Alpha to grow much, because he wanted to maintain control over its activities, he decided to build one project at a time. This corroborates the argument by Castor (2006), who stated that in many cases it would not be prudent for a small company to expand because there is a chance it will lose control over its activities. An alternative explanation can be seen in the work of Carland, Carland, & Hoy (1992). These authors state that not all entrepreneurs want their company to grow because owners consider their businesses as part of their existence, wanting their companies to provide them with employment, resources, and stability, creating a space to reconcile business activities and personal life.

The second phase differed not only because of the change in the environment, but because of better financial organization than during the initial period, with the accumulation of

learning about the market, production processes, and marketing. The resources (financial and learning-related) that the company had were again combined to invest in another type of product.

It is also important to note that the entrepreneur's personal life also undergoes changes and appears to influence the course of the company. The new product-market domain, which is the center of the entrepreneurial problem, required a new capital structure, which was made possible by the profits obtained during the first period.

The end of the second period is marked by the perception that, despite the good financial results from the construction of residential buildings, it was necessary to seek a new product-market domain because it was perceived that there was a large unmet demand among lower-income people. Additionally, although a part of the capital invested in building belonged to the company itself, bank loans were still required, and interest rates undermined the results, resulting in a very wasteful process because of the constant changes and bureaucratic requirements from the funding agencies.

The current period(2000-2016)

The current period is marked by another change in the product-market domain. During this phase, S3 left the company, and the process of succession began in Alpha with S1's youngest son, who was also trained in civil engineering. Again, the *transforming* seems to have been permeated by the perception and learning of S1, who is now attempting to involve his successor in Alpha's activities. S1 perceived that sales of houses, not apartment buildings, would be more suitable for a new class of clients. The choice of what and where to build also cannot be considered random. The *sensing* around economic stability in Brazil and the policies that were based on recognizing the housing deficit faced by the lower-income population provided what can be considered the hallmark of Alpha's current phase. Consequently, the strategist at Alpha was not unaware of the launch of the growth acceleration plan (PAC) in 2007, or of the *Minha Casa, Minha Vida* program in 2009 (Tonella, 2013).

The policies and public programs are part of a process that, in theory, seeks to address a social problem, namely access to housing for the low-income population (Tonella, 2013). In this way, Alpha, by choosing this new product-market domain, did so as a function of the strategist's perception of an opportunity in offering a particular type of housing and in specific clients. However, the opportunity is the result of a series of social and economic developments that were present in all the environments, but the perception was made by the entrepreneur who acted to take advantage of the perceived opportunities.

Alpha's first project in this phase was a residential development with 40 units. The number of houses built can be justified on the basis of better use of resources. Various teams of employees can be created to work simultaneously on different aspects of the project; materials can be purchased in large quantities directly from the factories at lower prices than if they were to build fewer units. The low complexity of civil construction in Brazil allows the work to be monitored without the need for many engineers to be involved. After this first venture in the current phase, three more similar projects have been executed, and another was in its initial stages in 2016.

In Alpha's trajectory, it can be noted that there are no technological innovations; no new materials or innovative construction methods were used in the projects or in the administrative processes. However, the observations and statements from S1 show his constant attention in economics. He is well aware of the macroeconomic indicators and the governmental movements,

trying to see how this could affect Alpha's direction. It should also be stressed that Alpha does not exhibit a formal strategic planning process. However, contrary to the findings by D'Annunzio, Carattoli, and Duplex (2015), who stated that capabilities arise in a process of experimentation, the case of Alpha seems to be based on analysis of the environment and less risky and more assertive strategic moments.

CONCLUSION

The literature on dynamic capabilities has assumed that successful organizations possess certain resources that are combined in a unique manner to help them overcome difficulties and gain competitiveness over their competition. It should be considered that an organization's dynamic capabilities need to be created and maintained. In other words, simply creating an organization and possessing financial resources is not enough to ensure that a company can thrive in changing environments. The dynamic capabilities approach can help us understand why some small businesses escape mortality and achieve success in changing environments.

Although the dynamic capabilities approach is founded on the importance of combining resources for the survival and growth of companies, little has been said about how these resources emerge. Teece (2012) is one of the most cited authors in the literature on this subject and has stated that activities related to the creation of dynamic capabilities can be grouped into three categories: *sensing*, *seizing*, and *transforming*. However, this does not specify how the manager acts within each of these categories or how these categories of activities originate. The data from this study allow us to infer that the strategist's learning was the origin of the dynamic capabilities. For the periods examined, the life of the organization and the creation of the dynamic capabilities appear to be interconnected with the learning of the entrepreneur/strategist, which turned into a resource for the company.

Thus, learning could also be part of Teece's model (2012), but in a transversal manner, and can be understood to serve as a foundation for the passage between the important stages in a company's history. In the same way, it can be said that the entrepreneur's learning process cannot be dissociated from the learning of the organization itself and in the case of SMEs this may be the primary resource. Learning was considered an important element by Teece et al. (1997) but, in the work of these authors, learning was linked to organizational processes and not directly to the entrepreneur/strategist. In this sense, the dual nature of learning, both as an organizational and an individual process, should be considered in future studies of dynamic capabilities development, especially in the context of small entrepreneurial firms.

The set of analyses permitted the identification of three moments in Alpha's history. The three periods are related to *sensing*, *seizing*, *transforming* (Teece, 2012) and *learning*, and allowed the organization to survive in a hostile and constantly changing environment. It can also be said that these four categories happen in many moments and not in a linear way.

It is important to note that the results here may be typical of construction organizations or even of this single organization, since other studies have found other elements that constitute dynamic capabilities, such as relationships (Saeedi, 2014), the speed of decision-making in small businesses (Przybyl, 2014), or the development of processes to meet environmental demands (Teece & Pisano, 1994).

Nevertheless, the results reported in this article bear implications for the practice of entrepreneurs/strategists dealing with changing environments while managing small businesses. In this process, entrepreneurs may gain from constant reflection on their learning, so that they

may be able to reinforce practices that were successful and, at the same time, deemphasize those that led to unsatisfactory results. This learning process, when consciously conducted may be useful in any of the categories of dynamic capabilities creation, i.e., *sensing*, *seizing* and *transforming*. And finally, it can also lead to a complete reconfiguration of a small firm business model when environments are radically transformed.

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REFERENCES

- Albuquerque, A.F. & Escrivão, F.E. (2011). Fatores De Mortalidade De Pequenas Empresas: Uma Análise Da Produção Acadêmica No Período 2000-2010. *5th Encontro de Estudos em Estratégia*.
- Al-Aali, A. & Teece, D.J. (2014). International Entrepreneurship And The Theory Of The International Firm: A Capabilities Perspective. *Entrepreneurship Theory and Practice*, 38(1), 95-116.
- Ambrosini, V. & Bowman, C. (2009). What are dynamic capabilities and are they a useful construct in strategic management?. *International Journal of Management Review*, 11(1), 29-49.
- Ardichvilia, A., Cardozo, R. & Ray, S. (2003). A Theory Of Entrepreneurial Opportunity Identification And Development. *Journal of Business Venturing*, (18), 105-123.
- Associação Brasileira da Indústria de Materiais de Construção. Perfil da indústria de materiais de construção (2015).
- Barreto, I. (2010). Dynamic Capabilities: A Review Of Past Research And An Agenda For The Future. *Journal of Management*, 36(1), 256-280.
- Brush, C.G., Greene, P.G. & Hart, M.M. (2001). From Initial Idea To Unique Advantage: The Entrepreneurial Challenge Of Constructing A Resource Base. *Academy of Management Executive*, 15(1), 64-80.
- Câmara Brasileira da Indústria da Construção Civil. Boletim Estatístico, março/2016, 12(3).
- Carland, J.W., Carland, J. A.C. & Hoy, F.S. (1992). An Entrepreneurship Index: An Empirical Validation. *Proceedings of the Frontiers of Entrepreneurship Research*.
- Castor, B.V.J. (2006). *Tamanho não é documento: estratégias para a pequena e microempresa brasileira*. EBEL.
- Costa, F. R., & Rocha, M. M (2012). A Mobilidade Da População Paranaense A Partir Da Reestruturação Produtiva. *Revista Geografia*, 21(1), 125-140.
- Cury, A. (2006). *Organização E Métodos: Uma Visão Holística*.
- D'annunzio, C., Carattoli, M. & Duplex, D. (2015). Dynamic Capabilities Associated With A Firm's Growth In Developing Countries: A Comparative Study Of Argentinean Smes In The Software And Tourism Industries. *Journal of Entrepreneurship, Management and Innovation*, 11(4).
- Detienne, D.R. & Chandler, G.N. (2004). Opportunity identification and its role in the entrepreneurial classroom: a pedagogical approach and empirical test. *Academy Management Learning and Education*, 3(1), 242-257.
- Døving, E. & Gooderham, P.N. (2008). Dynamic Capabilities As Antecedents Of The Scope Of Related Diversification: The Case Of Small Firm Accountancy Practices. *Strategic Management Journal*, 29, 841-857.
- Ensley, M.D., Carland, J.W. & Carland, J.C. (2000). Investigating The Existence Of Lead Entrepreneur. *Journal of Business Management*, 38(4), 59-78.
- Ferreira, J.M. (2005). *Potencial empreendedor e liderança criativa: um estudo com varejistas de materiais de construção da cidade de Curitiba/PR*.
- F-Jardon, C.M. & Martos, M.S. (2014). Capital Intelectual Y Competencias Distintivas En Pymes Madeireiras De Argentina. *Revista de Administração de Empresas*, 54(6), 634-646.
- George, N.M., Parida, V., Lahti, T. & Wincent, J. (2016). A Systematic Literature Review Of Entrepreneurial Opportunity Recognition: Insights On Influencing Factors. *International Entrepreneurship and Management Journal*, 12(2), 309-350.
- Helfat, C.E. & Peteraf, M.A. (2015). Understanding Dynamic Capabilities: Progress Along A Developmental Path. *Strategic Organization*, 7(1), 91-102.
- Kliksberg, B. (1994). Redesenho Do Estado Para O Desenvolvimento Sócio-Econômico E A Mudança: Uma Agenda Estratégica Para A Discussão. *Revista de Administração Pública*, 28(3), 5-25.

- Lockett, A., Thompson, S. & Morgenstern, U. (2009). The Development Of The Resource-Based View Of The Firm: A Critical Appraisal. *International Journal of Management Reviews*, 11(1), 9-28.
- Maciel, C.O., Sato, K.H. & Kato, H.T. (2012). Capacidades Dinâmicas E Rituais De Interação Entre Alta E Média Gerência: Proposta De Um Framework. *Revista de Administração Pública*, 46(2), 599-618.
- Mandouh, F. (2007). The Relevance Of Transition To Free Market, Attitude Towards Money, Locus Of Control, And Attitude Towards Risk To Entrepreneurs: A Cross-Cultural Empirical Comparison. *International Journal of Entrepreneurship*, 11(1).
- Matos, P.O. (2002). *Análise dos planos de desenvolvimento do Brasil após o II PND*.
- Meirelles, D.S. & Camargo, A.B. (2014). Capacidades dinâmicas: o que são e como identificá-las?. *Revista de Administração Contemporânea*, 3, 41-64.
- Mudalige, D. (2015). A dynamic capabilities perspective of internationalization and performance of smes in south asia: a conceptual framework. *International Journal of Information Technology and Business Management*, 35(1), 1-18.
- Parayitam, S. & Guru-Gharana, K. (2010). Economics Of Resource Based And Dynamic Capabilities View: A Contemporary Framework. *Academy of Strategic Management Journal*, 9(1), 83-93.
- Peteraf, M., Stefano, G. & Verona, G. (2013). The Elephant In The Room Of Dynamic Capabilities: Bringing Two Diverging Conversations Together. *Strategic Management Journal*, 34.
- Piscopo, M.R. (2010). Empreendedorismo Corporativo E Competitividade Em Empresas De Base Tecnológica. *Revista de Administração e Inovação*, 7(1), 131-150.
- Przybyl, B. (2014). Dynamic capabilities in smes: the case of lene bjerre design s/a. M.sc. *International Marketing*.
- Regnér, P. (2014). Strategy-As-Practice And Dynamics Capabilities: Steps Towards A Dynamic View Of Strategy. *Human Relations*, 6(4), 565-588.
- Saeedi, M.R. (2014). The impact of inward international licensing on absorptive capacity and networking capability: a multiple case study in pharmaceutical industry. *Fostering dynamic capabilities of SMEs*.
- Santos, C.H. (1999). Políticas Federais De Habitação No Brasil: 1964/1998. *Instituto de Pesquisa Econômica Aplicada: Brasília*.
- Serviço Brasileiro de Apoio às Micro e Pequenas Empresas. (2011). Coleção Estudos E Pesquisa. *Taxa de sobrevivência das empresas no Brasil*.
- Serviço Brasileiro de Apoio às Micro e Pequenas Empresas. (2010). *Doze anos de monitoramento da sobrevivência e mortalidade de empresas*.
- Shane, S. & Venkataraman, S. (2000). The Promise Of Entrepreneurship As A Field Of Research. *Academy of Management Review*, 25(1), 217-236.
- Teece, D.J. (2012). Dynamiccapabilities:Routines Versus Entrepreneurialaction. *Journalof Management Studies*, 49(3), 1395-1401.
- Teece, D.J. & Pisano, G. (1994). The dynamic capabilities of firms: an introduction. *Industrial and corporate change*, 1(3), 537-556.
- Teece, D. J., Pisano , G. & Shuen, A. (1997). Dynamic Capabilities And Strategic Management. *Strategic Management Journal*, 18(7), 509-533.
- Tonella, C. (2013). Políticas Urbanas No Brasil: Marcos Legais, Sujeitos E Instituições. *RevistaSociedade e Estado*, 28(1), 29-52.
- Vaghely, I. P. & Julien, P.A. (2010). Are opportunities recognized or constructed? An information perspective on entrepreneurial opportunity identification. *Journal of Business Venturing*, 25, 73-86.
- Winter, S.G. (2003). Understanding Dynamic Capabilities. *Strategic Management Journal*, 24, 991-995.
- Winter, S.G. (2012). Capabilities: Their Origins And Ancestry. *Journal of Management Studies*, 49(8), 1402-1406.
- Zampier, M.A. & Takahashi, A.R.W. (2011). Competências Empreendedoras E Processos De Aprendizagem empreendedora: Modelo Conceitual De Pesquisa. *CadernosEbape*, 9 *specialedition*, 564-585.
- Yin, R.K. (2010). Porto Alegre: Bookman. *Estudo de Caso: Planejamento e Métodos*.
- Yin, R.K. (2015). 5 ed. Porto Alegre: Bookman. *Estudo de Caso:Planejamento e Métodos*.

