

UM QUADRO ANALÍTICO PARA A TIPOLOGIA E CAPACIDADES DINÂMICAS DE MILES E SNOW

RESUMO

Uma consideração expandida é necessária para explicar como a vantagem competitiva é conquistada e mantida. A literatura sobre as capacidades dinâmicas é confusa, cheia de definições sobrepostas e contradições. A importância teórica e prática de desenvolver e aplicar capacidades dinâmicas para sustentar a vantagem competitiva em um ambiente externo complexo é fundamental nos estudos estratégicos atuais. Neste trabalho, oferecemos uma definição de capacidades dinâmicas sob dois aspectos: primeiro, o caráter de mudança do ambiente e, segundo, esta definição enfatiza o papel chave da gestão estratégica em adaptar apropriadamente, integrando e reconfigurando as habilidades organizacionais internas e externas, recursos e competências funcionais para mudar o ambiente. Este estudo visa esclarecer o conceito de capacidades dinâmicas, propor um quadro analítico que conecta este “novo” conceito a um bem conhecido e reconhecido modelo estratégico genérico (Miles e Snow, 1978) e ao conceito de vantagem competitiva sustentável evolutiva.

AN ANALYTICAL FRAMEWORK FOR MILES AND SNOW TYPOLOGY AND DYNAMIC CAPABILITIES

ABSTRACT

An expanded consideration is needed to explain how competitive advantage is gained and held. The literature on dynamic capabilities is confusing, full of overlapping definitions, and contradictions. The theoretical and practical importance of developing and applying dynamic capabilities to sustain competitive advantage in complex external environment is central in strategy studies nowadays. In this paper, we offer a definition of dynamic capabilities under two aspects: first, it refers to the shifting character of the environment; second, it emphasizes the key role of strategic management in appropriately adapting, integrating, and re-configuring internal and external organizational skills, resources, and functional competences toward changing environment. This paper aims to clarify the concept of dynamic capabilities, propose an analytical framework that connects this “new” concept to a well known and recognized generic strategic model (Miles and Snow, 1978) and to the concept of sustainable competitive advantage and evolutionary fit.

UN MARCO ANALÍTICO PARA CAPACIDADES DINÁMICAS Y TIPO DE MILES Y SNOW**RESUMEN**

Es necesario un examen ampliado para explicar cómo se logra y se mantiene la ventaja competitiva. La literatura sobre las capacidades dinámicas es confuso, lleno de contradicciones y las definiciones que se superponen. La importancia teórica y práctica del desarrollo y aplicación de las capacidades dinámicas para mantener una ventaja competitiva en un entorno externo complejo es crítica en los estudios estratégicos actuales. En este trabajo, ofrecemos una definición de las capacidades dinámicas en dos aspectos: en primer lugar, la naturaleza del cambio y el medio ambiente, de acuerdo con esta definición hace hincapié en el papel clave de la gestión estratégica en forma adecuada la adaptación, la integración y la reconfiguración de las habilidades organizativas internas y externas, los recursos y habilidades funcionales para cambiar el medio ambiente. Este estudio tiene por objeto aclarar el concepto de capacidades dinámicas, proponiendo un marco analítico que conecta este "nuevo" concepto a un modelo bien conocido y reconocido genérica estratégica (Miles y Snow, 1978) y el concepto de evolutivo ventaja competitiva sostenible.

Tomas Sparano Martins¹Heitor Takashi Kato²Roberta da Rocha Rosa Martins³Eduardo Damião da Silva⁴

¹ Doutor em Administração pela Pontifícia Universidade Católica do Paraná – PUC/PR. Professor da Pontifícia Universidade Católica do Paraná – PUC/PR. Brasil. E-mail: tomas.martins@pucpr.br

² Doutor em Administração de Empresas pela Fundação Getulio Vargas – FGV. Professor da Pontifícia Universidade Católica do Paraná– PUC/PR. Brasil. E-mail: heitor.kato@pucpr.br

³ Mestre em Administração pela Pontifícia Universidade Católica do Paraná – PUC/PR. Professora da Pontifícia Universidade Católica do Paraná – PUC/PR. Brasil. E-mail: robertarosamartins@hotmail.com

⁴ Doutor em Management Sciences pelo Escuela Superior de Administracion Y Direccion de Empresas, Espanha. Pró-Reitor de Desenvolvimento da Pontifícia Universidade Católica do Paraná – PUC/PR. Brasil. E-mail: eduardo.damiao@pucpr.br

1 INTRODUCTION

Current competitive organizational context is characterized by rapid and profound changes. These changes end up making organizations adopt agile and flexible strategic postures to gain competitive advantages that guarantee a superior position in the market. Maintaining competitive advantage is a dynamic strategic activity that never ends (HUNG et. al. 2007).

In general terms, a central concern in strategy is to maintain the dynamic adjustment between what a company has to offer and what the environment wants (MILES and SNOW, 1978, LEARNED et. al. 1965). Thus, a company must possess dynamic capabilities to constantly reconfigure, renovate, and reuse its resources and capabilities to better exploit opportunities and explore the environment (TEECE, PISANO and SHUEN, 1997).

Studies on strategy in a very broad way can be divided into two categories: one that prioritizes the analysis of the external environment (as in Porter's model) and one that takes more account of the internal environment (as in the Resource Based View model). Porter (1980) emphasizes that the source of competitive advantage is related to the company's positioning, that is, it needs to find a position from which it defends itself against forces that might interfere with its results. The resource-based view (RBV) perspective analyzes in an endogenous way the explanation of the competitive advantage, from the organizations' internal factors, recognizing the heterogeneity of organizations (WERNERFELT, 1984).

Miles and Snow (1978) adaptive cycle process presents itself "in the middle" of these issues. Based on the premise that the company needs to continuously adjust its strategies to the environmental conditions and align its structures to the established strategies, the strategic fit purpose is dynamic. Thus, strategic alignment is not an isolated event but a continuous process of adaptation and change. It is based on this concept that, in this paper, we aim to present a model for dynamic capabilities and the generation of evolutionary fit from the perceived environmental uncertainty.

Dynamic capabilities have become an intense area of study in strategy since the publication of Teece, Pisano, and Shuen (1997). The citation count suggests that dynamic capabilities are the new state of the art theme in the area of strategy; for example, it received 1284 citations in ISI Web of Knowledge in December 2009. Since 2006, more than one hundred (100) articles per year have been published in prestigious newspapers and magazines on dynamic capabilities (DI STEFANO et. al., 2009).

Based on this intense activity of research and academic production, one could imagine a conceptual

unity to define dynamic capability. According to Di Stefano et. al. (2009) this is not true, based on their co-citation study, in a total of 40 articles, 29 deal with the definition of the construct.

Consequently, we can conclude that this is an area of strategy's great interest, but it is still in its infancy. However, it has a very robust and well established theoretical basis: evolutionary economics (NELSON and WINTER, 1982), the behavioral theory of Simon (1947), Cyert and March's (1963) organizational growth, and learning and decision making (HELFAT et. al, 1997; TEECE, 2007; ZOLLO and WINTER, 2002). The concept of dynamic capabilities (Eisenhardt and Martin, 2000; Teece et al., 1997) has evolved from the resource-based view (RBV) of the firm (Barney, 1986, 1991; Wernerfelt, 1984). RBV proponents argue that simultaneously valuable, rare, inimitable, and non-substitutable resources can be a source of superior performance, and may enable the firm to achieve sustained competitive advantage (Barney, 1991). Dynamic capabilities have lent value to the RBV arguments as they transform what is essentially a static view into one that can encompass competitive advantage in a dynamic context (Barney, 2001). Dynamic capabilities are "the capability of an organization to purposefully create, extend or modify its resource base" (Helfat et al., 2007, p. 1)

Moreover, there are still restrictions related to the limited empirical evidence of the approach. Helfat and Peteraf (2009) suggest that issues such as technological innovation, mergers and acquisitions, strategic alliances, decision-making, and survival and growth, should be the focus of empirical research in order to understand the phenomenon better. The authors also emphasize that dynamic capabilities are not a theory but strategic issues related to performance and change. From this point of view, a conceptual approach in this area may help understanding other phenomena embedded in the concept, such as performance and change.

Teece et. al (1997), the most cited authors in the text area according to Di Stefano et. al. (2009), define dynamic capabilities as the company's ability to integrate, build, and reconfigure internal and external competencies to deal with rapid environmental changes. Miles and Snow (1994) argue that the success of an organization depends on a process of external (the environment) and internal (strategy, structure, processes and ideology) fit. This process begins by aligning the organization to the market in an attempt to answer or help shape the present and future needs of customers. The strategy is defined by this process of intentional alignment. On the other hand, dynamic capabilities, such as the RBV, lack a common understanding and approach of strategic intentionality in their concepts. Thus, we understand that dynamic capabilities and the intentionality in Miles and Snow's

adaptive cycle can be aligned in a single construct. In this sense, the purpose of this paper is to come up with a framework that integrates these two concepts.

The paper is structured first in five sections: a general concept of a theoretical framework (Section 2), Miles and Snow concepts (Section 3), a basic definition of common terms used in the model - resources, skills, organizational routines and capabilities (Section 4) and dynamic capabilities (Section 5). An integration effort of these different concepts and theoretical currents is then presented, as the building blocks of a proposed framework in Section 6. Finally, in Section 7, the main conclusions are presented, along with their implications for strategic management analysis and directions for future research.

2 A THEORETICAL FRAMEWORK

A theoretical framework is a set of interrelated concepts that guide an investigation, determining the scope and rationale of the use of certain concepts to solve problems such as a real conceptual map. Strategy does not have a single definition it depends on point of view, the level of analysis, and the study's objective. The construction and understanding of a framework is important to establish boundaries, as well as theoretical and practical applications for a concept.

We can take Whittington's (2006) approach to strategy as an example. The author came up with four generic possibilities for the concept: classic, evolutionary, procedural and systemic.

In the classical approach, the strategic goal of a company is getting return on capital, since the maximization of profit is the main goal. This model is rational and there is a gap between designing and implementing the strategy. Alternatively, the evolutionary approach is not related to the rationality of managers, but to the market imperfection, which will ensure the maximization of profits. Evolutionists apply the concept of natural selection from biology to study how different populations of organisms (species, for us organizations) adapt to the environment. The biological model considers the coexistence of different species in the same environment as a dynamic process of competition for scarce resources.

The procedural approach is characterized by a strategy that emerges step by step, usually in a disorganized way, as a way for the organization to deal with contingencies and surprises contained in the market. Meanwhile, the systemic perspective is based on the socio-cultural context where the organization operates. For the followers of this current, the strategy should be defined from the social political system. As in the procedural approach decision makers are not impartial and rational individuals, but members of a social system that define the strategy as a result of situational and sociopolitical conditions.

3 MILES AND SNOW TYPOLOGY

According to Miles and Snow (1994), the success of an organization depends on a process of external (the environment) and internal (strategy, structure, processes and ideology) adaptation. This process begins by aligning the organization to the market in an attempt to address present and future customer needs. This alignment sets the company's strategy. In other words, this type of analysis seeks to assess the organizational adaptation to a changing environment through the study of the relationship between strategy, structure, and processes (MILES & SNOW, 1978).

The strategic adaptation of the firm to the competitive environment has been called by the authors as an "adaptive cycle". It is formed from solutions to three problems that every company has to deal with:

- 1) The entrepreneurial problem: product-market domain, success position, monitoring the environment and growth policy;
- 2) The engineering problem: technological objectives, technological scope, and technological orientation;
- 3) The administrative problem: main administrative function, planning attitude, organizational structure and control.

Miles and Snow's typology, supported by several empirical studies, as described by Gimenez (1998), ranks companies or business units into four distinct strategic categories, namely: prospectors; defenders; analyzers; and reactors.

- 1) Prospectors are the group of companies that maintain a competitive position aggressively, continually looking for new market opportunities and expanding their lines of products and services. They tend to be the pioneers, so their focus is on innovation, not efficiency. These companies solve the business problem by continually expanding product-market through differentiation. The technology is diverse, flexible and less standardized. The solution to the administrative problem is through non-centralized control, Research & Development and Marketing departments are strong, extensive in planning and there are higher costs and lower efficiency due to lack of the experience curve. The risk of this strategy is high because the non-acceptance of a new product can mean significant losses.
- 2) Defenders are companies seeking to locate and maintain a line of products or services with a very narrow focus, protecting their domains

with competitive prices or quality products or services. They usually operate in stable industries, not bothering to seek new opportunities in the environment, but having efficiency and technology directed to their restricted focus. They usually adopt limited, targeted, and more profitable lines of products (Zahra & Pearce II, 1990). They reach the solution of engineering with the use of a core technology, resulting in low cost production. For this, significant investments in Research & Development are critical. The administration tends to be rigorously controlled, centralized, focused on costs and outcomes when comparing financial and production indicators of the current year with previous years. While this strategy can be applied to various industries, the authors conclude that they are more likely to be found in stable industries. This strategy faces the risk of being unable to adapt to more drastic changes in the competitive environment, since the focus impedes diversification, essential for monitoring changes.

- 3) Analyzers are in between the defensive and prospective positions. These companies operate on the basis of products and services that are already established, looking to add new products and services that have been successful in other companies in the industry. These companies are also called "creative imitators" (Slater and Narver, 1993), by absorbing and improving innovations of competitors. This strategy allows the company to guarantee the viability of products before releasing them, avoiding high investments in Research & Development. So, companies need constant monitoring of the successes and failures of other competing companies. The technology adopted is stable and standardized, even though there is some degree of flexibility. This combination creates a certain ambiguity that results in a lack of efficiency on the part of analyzers, which, in turn, tend to adopt differentiation as competitive advantage. The biggest risk to these companies is not to achieve the necessary efficiency and effectiveness, which are the indicators used to measure the performance of these companies.
- 4) Reactors cannot be considered a kind of strategy; they have no coherent plan to compete in the industry or mechanisms and processes to adapt to the market. The typical approach of this group is to see and respond only when forced by competitive pressures to prevent loss of important customers and / or

maintain profitability. This group of companies is usually in disadvantage because they are attacked by prospectors and cannot reach the market protected by the defenders and analyzers. Reactors usually come to this situation because they fail in defining a specific strategy due to a centralized leader; or a contradiction between the chosen strategy and organizational structure; or by not adapting to the new competitive environment.

Once the firm chooses its posture to face the competitive environment, it should adapt its production process, distribution channels and logistics, policies, price, promotion and marketing efforts and other processes involved in order to support the chosen position

4 RESOURCES, SKILLS, ORGANIZATIONAL ROUTINES AND CAPABILITIES

Barney (2002) argues that the literature has different meanings for resources such as: dominant logic (Prahalad and Betis, 1986), core competencies (Prahalad and Hamel, 1990) and organizational capabilities (Stalk, Evans and Shulman, 1992).

However, Peteraf (1993), and Barney (2002) say that the differences between these terms are subtle. For the authors, a company's resources include the key attributes of financial, physical, human, and organizational capital. Also according to them, capabilities are only those internal attributes that enable the firm to coordinate and exploit its resources, and the concept of core competencies is reserved for attributes that allow the company to design and implement certain strategies of corporate diversification, resulting, according to Hamel and Prahalad (1990), in rapid adaptation to changing opportunities.

Similarly Stalk, Evans, and Shulman (1992) argue that the terms core competence and capability are often used interchangeably when they should be complementary. Competency refers to the technological differentiation or production, while capabilities are basic resources that span the entire value chain.

Emphatically, Barney (2002) closed the discussion by stating that it is unlikely that a debate about whether a particular attribute of a particular company is a resource, capability or competence, will be a valuable manager's practice. So, the following definition was proposed in 2002: resources are the assets, skills, competencies, organizational processes, information, and knowledge controlled by a company that are able to conceive or implement strategies. They are classified into four categories:

- 1) Financial: all sources of funds;
- 2) Physical: technology, equipment, location;

- 3) Human: efficiency, training, relationships, insight of individual managers; and
- 4) Organizational: administrative structure, formal and informal planning, coordination, culture and reputation.

Amit and Schoemaker (1993) and Nelson and Winter (1982) argue that the term capability is the ability to integrate resources, through the combination and use in organizational processes, in order to achieve the desired goals. In this perspective organizational capabilities can be summarized as a set of high-level routines, that is, a set of routines that provide and implement a flow of decisions from a set of options.

Nelson and Winter (1982), Amit and Schoemaker (1993), Collis (1994), Teece and Pisano (1994), Teece, Pisano and Shuen (1997) and Winter (2003) describe routines as learned behaviors, patterned, repetitive, originated partly on tacit knowledge. Helfat et. al. (2007) point out that the term capability may be the ability to perform a task in an acceptable manner. For those authors not every capability is valuable, as in Collis (1994), this ability cannot always be considered a source of competitive advantage.

Teece and Pisano (1994) and Teece, Pisano and Shuen (1997) argue that routines that encourage an organization to learn, adapt, change and renew itself constantly can be considered dynamic routines. Barney (2002) refers to capabilities such as organizational characteristics that enable organizations to design and implement certain strategies (FELIN et. al., 2012).

The concept of capability is inherent in the paths taken by the coordination and combination of the resource to understand and anticipate the market. The concept of organizational routines provides a relationship between resources and capabilities. The key to this relationship is the organization's ability to achieve cooperation and cooperation in teams. For this, the organization must motivate and socialize its members - the style of the organization, values, traditions and leadership are critical encouragement for cooperation and commitment of its members (TEECE, PISANO and SHUEN, 1997; ZAIDI and OTHMAN, 2012).

Moreover, the meaning of capability, when operational, i.e., that focuses on efficiency, seeking innovation in itself, is summarized in the company's ability to perform a specific task or activity. Operational capabilities allow the organization to operationalize the approach, with the goal of performance problems regarding the current situation (WINTER, 2003).

Collis (1994) suggests that positions of competitive advantage based on organizational capabilities are vulnerable to competitive actions, being overtaken by a "best ability" or "high order". The author therefore introduces the concept of "metacapability" (a higher level of capability), which is the ability to learn by learning a skill, i.e., the ability

that resides in tacit knowledge that allows companies to adapt to new circumstances. Still, it proposes a valuation analysis of the circumstances in which each organizational capability will be a source of sustainable competitive advantage: a) predict (the organizational capability will continue to be a source of competitive advantage), and b) explain (to evaluate the origin of capability).

Helfat et. al (2007), point out that the terms "capability" and "change" are not directly related. Thus, capability does not explain the ability of change in a company, which is important in dynamic markets, so there is need for perspectives that seek to answer questions like that. Analyzing the next topic - dynamic capabilities - Teece and Pisano (1994), Brown and Eisenhardt (1998), Helfat et. al (2007), and Teece, Pisano and Shuen (1997) introduce dynamism into the foundation of RBV and complement Collis (1994).

5 DYNAMIC CAPABILITIES

The dynamic capabilities approach discussion has its origin in the Resource Based View (RBV). For the RBV the source of competitive advantage lies primarily in the set of resources and skills of business (PENROSE 1959, TEECE 1984, WERNERFELT 1984), as opposed to the theories of positioning, that suggest that the industry structure strongly influences the competitive rules and therefore the company's strategies (Porter, 1980).

The RBV has its origins in the work of Penrose (1959), Selznik (1957), and Andrews (1971), among others. For Penrose (1959), companies can be considered a set of resources and maximizing their growth is related to the balance between exploiting existing resources and developing new resources. Selznik (1957), in turn, was among the first scholars to recognize the skills and knowledge management as one of the distinctive competencies that the company owns. Finally, Andrews (1971) has used a pioneering RBV to describe the concept of corporate strategy. To this author, corporate strategy defines the business in which the company will compete, and where to focus resources to transform distinctive competencies into competitive advantage. Thus, this approach has been consolidated in the eighties with the emergence of a series of theoretical work that demonstrated the importance of firm-specific factors to explain organizational performance (BARNEY, 1986; TEECE, PISANO, SHUEN, 1997).

For theorists of the RBV, resources can be defined as tangible or intangible, and are specific to the firm (TEECE, PISANO, & SHUEN, 1997). The term organizational skills became more popular in the late '90 by the contribution of Prahalad and Hamel (1990), who developed the concept of core competencies (resources skills). Organizational skills can be defined as the ability to combine, blend and integrate resources into products and services. To be essential, they must

meet three criteria: offer real benefits to consumers, be difficult to imitate, and provide access to different markets (FLEURY and FLEURY, 2000).

In this context, a firm's competitive advantage comes from its "idiosyncratic and difficult to imitate resources" (TEECE, PISANO, & SHUEN, 1997). Firms are heterogeneous in relation to their resources/capabilities/endowments and therefore the company adopts different strategies to exploit specific assets. According to the authors, a more detailed analysis of RBV also suggests the need for better understanding of business strategies employed to develop capabilities. It can be said that if the rare assets are an important source of economic profits, then the organizational aspects such as skill acquisition, knowledge management and know-how (knowledge of how to do something), and learning become subjects of fundamental strategic importance.

Teece, Pisano, and Shuen (1997) initiated an effort to identify the dimensions of firm-specific capabilities that can be sources of competitive advantage, and to explain how combinations of skills and resources can be developed, prepared, and protected. For these authors, the term "dynamic" refers to the ability to renew competencies in order to adapt them to a changing environment; certain innovative responses are required when the speed to suit the market is critical, the pace of technological change is fast, and/or the nature of competition and markets in the future is difficult to predict. The term "capabilities" emphasizes the key role of strategic management in order to adapt, integrate, and reorganize skills, functional skills and resources internal and external, to meet requirements of the external environment, which is subject to rapid change.

Teece, Pisano, and Shuen (1997) argue that the competitive advantage of a company primarily depends on its management and organizational processes, in other contexts as defined routines or patterns of practice and learning. Organizational and management processes are categorized as those dealing with:

- (1) coordination and integration - dynamic capabilities are organizational and strategic routines by which new resource settings are created to respond to market changes. These routines are focused on integrating, reconfiguring, acquire, dispose of or create resources to address changing market (EINSENHARDT and MARTIN, 2000).
- (2) learning - unlike the RBV, dynamic capabilities framework introduce dynamic elements, such as learning.
- (3) reconfiguration and transformation - the authors also emphasize the importance of replication or transferring competencies from one "scene" to another.

(4) assets - as in the RBV, the competitive advantage depends on the resources that the organization possesses.

(5) path dependency: "history" has its role, past investments limit the organization's future.

Eisenhardt and Martin (2000) agree with Teece et. al. (1997)'s evolutionary idea and suggest that the concept of Dynamic Capability is related to the evolution of the organization. For these authors, the organization path is unique and is formed by mechanisms such as the practice of encoding and errors. Dynamic capabilities are the organizational and strategic routines by which members of senior management change the resource base.

Helfat and Peteraf (2009) argue that dynamic capability is the ability of an organization to purposefully create, extend, and modify its resource base. In the same line of thought, Pisano (1994) sees dynamic capabilities as organizational routines and managerial backgrounds through which managers alter their resource base - acquire, select resources, integrate, and recombine to generate new value-creating strategies. Dynamic capabilities exist in several forms, some allow the company to enter into a new business or expand old businesses through internal growth, acquisitions, or strategic alliances.

The benefits that a company obtains from dynamic capabilities depend not only on understanding the effectiveness of management and organizational processes, but also on the context in which they are employed. In other words, dynamic capabilities seek a fit between internal and external environments. This plug-in affects the usefulness as a means of adjustment, exploration, and creation of change in business environment. Thus the fit depends on how the dynamic capabilities of a firm fit the context in which it operates (STADLER, HELFAT & VERONA, 2013).

5.1 Meta-Dynamic Capabilities - Teece (2007)

According to Teece (2007) dynamic capabilities can be understood as the ability to: (1) feel and shape opportunities and threats, (2) seize opportunities, and (3) maintain competitiveness through increasing, combining, protecting and when necessary, reconfiguring the organizational resources.

Teece (2007) examines the rationale and nature of dynamic capabilities to sustain superior performance in a global, open, and spread out economy with rapid innovation. For him, it is important to identify the nature and foundations of capabilities that are needed to sustain business performance. These foundations include processes, procedures, organizational structures, decision rules, disciplines and different skills that they perceive, apprehend and

reconfiguring capabilities. Teece (2007) cites three types of capabilities that interact in a steady stream:

a) Identifying opportunities and threats.

The capability nature "to perceive (format) opportunities and threats." It is not just investment in research to understand customer needs and technological possibilities, but also to understand the demand, structural evolution of industries, markets and suppliers, along with responding to competitors. When an opportunity is envisioned, entrepreneurs and managers need to understand how to interpret new events, developments, what technology to pursue, and on which segment to focus.

b) Seizing opportunities

There are four major activities to which this target refers to capability: to draw the customer's solution and business model, select organizational boundaries to manage add-ons and control platforms, select decision-making protocols, and build loyalty and commitment among employees of the organization and other stakeholders.

c) Maintaining competitiveness

Maintaining competitiveness through the enhancement, combination, and protection, when needed, to reconfigure the tangible and intangible assets. The nature of this capability has as key - to sustain profitable growth and the ability to recombine – to redistribute assets and organizational structures to enhance the developments and understand the market and technological changes. The reconfiguration is necessary to maintain the evolutionary fitness.

5.2 Performance and Dynamic Capabilities Fit

Helfat et. al (2007) suggest that the performance of dynamic capabilities should be measured. However, the authors argue that any assessment depends on the context in which dynamic

capabilities are embedded. Thus, they propose as a performance measure the concept of evolutionary fit, which refers to the ability of the organization to survive by creating, extending or modifying its resources in the external environment, i.e., setting the context in which it operates.

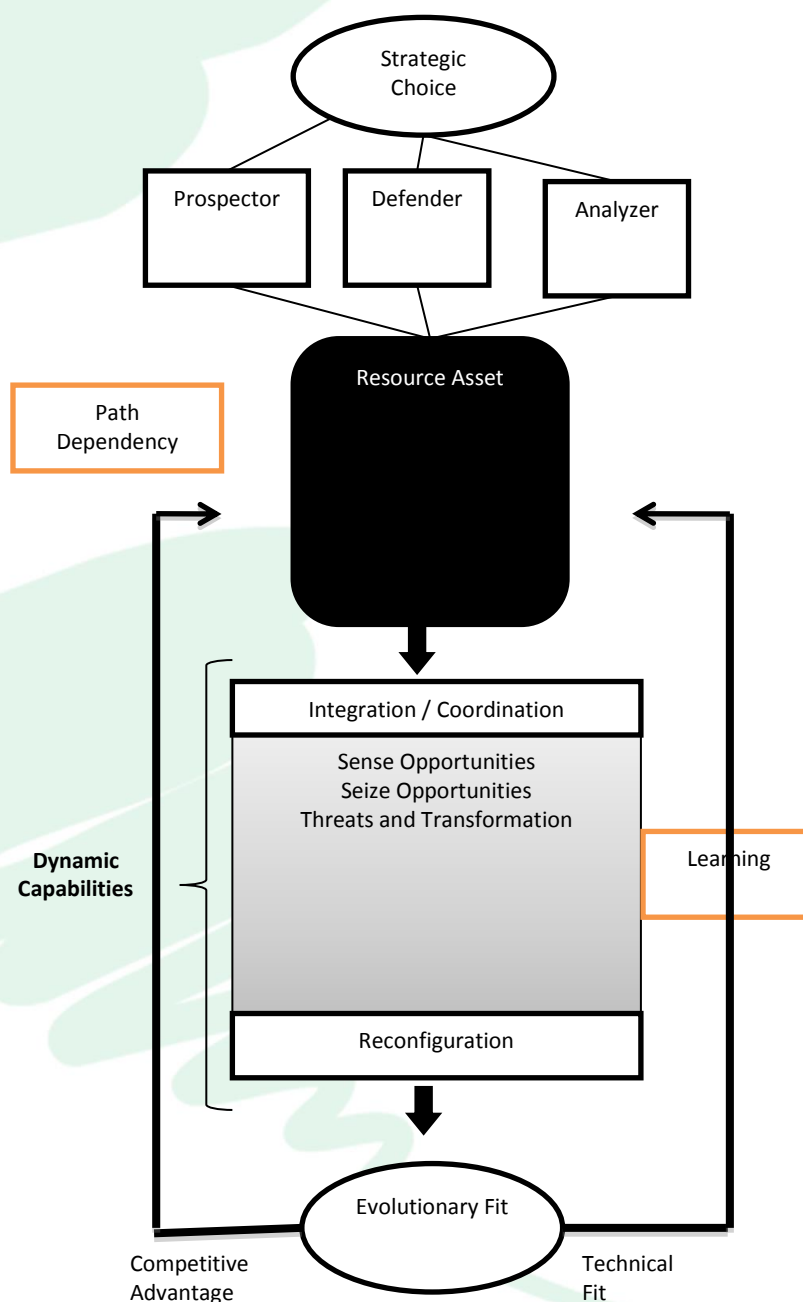
The authors identify four major influences of dynamic capabilities in the evolutionary fit: quality, cost, market demand, and competition. The term "technical fit" is introduced to deal with the idea of "quality per unit cost", an internal measure of performance. The other two factors, market demand and competition, capture the influences of the external environment on the "evolutionary fit."

The value of a dynamic capability depends on whether its function creates value, that is, it is always context dependent. Sometimes, a dynamic capability performs a function that generates a certain unit amount, but it does not generate competitive advantage if the amount generated does not correspond to a greater value than that generated by the other firms.

6 THE PROPOSED ANALYTICAL FRAMEWORK

With the conceptual and theoretical elements provided in the previous sections it is possible now to present the proposed analytic framework that integrates the concepts in a cohesive model, represented in Figure 1 below.

The concept was organized based on four concepts (Miles and Snow, 1978; Teece et al., 1997; Helfat, 2007; and Teece, 2007), incorporated by the model that is proposed. First Miles and Snow (1978) identify three types of conscious strategic behaviors, which is a consequence of the organizational adaptation process to the organizational environment.. This variation stems from the perception that executives of organizations analyze the environment, and based on this, make decisions and make strategic choices to keep them competitive. Such behaviors are expressed in a strategic typology in the following way: prospector, analyzer, and defender.

Figure 1 - The Analytical Framework: Dynamic capabilities and Strategic typology

Secondly, there is the definition of Teece et al. (1997, p.516) for dynamic capabilities, that is, "the company's ability to integrate, build, and reconfigure internal and external powers to deal with changing environments." According to the model, the resource base of a company is motivated by the strategy. This resource base can be integrated or coordinated, reconfigured to deal with changes in the environment through a learning process (DENFORD, 2013) and taking into account the path dependence.

Further, Helfat et al. (2007), argue that "a dynamic capability is the ability of an organization to intentionally create, extend, or modify its resource base". It is important to define the word "intentionally", as it indicates that the dynamic capabilities reflect a degree of intention. According to Stadler, Helfat and Verona (2013) what distinguishes dynamic capabilities from something accidental or pure luck is the manager's intentionality. Helfat et al. (2007) conceptualize the evolutionary fit by two measures, one technical - an absolute measure (something greater

than zero) that evaluates the quality and cost – and another one, evolutionary - a comparative measure based on sustainable competitive advantage.

Finally the concept of Teece (2007), does not deal with the process ("how"), but with the nature of dynamic capabilities, so called meta-capabilities. According to Teece (2007) dynamic capabilities can be understood as the ability to: (1) feel and shape opportunities and threats, (2) seize opportunities, and (3) maintain competitiveness through the increase, the combination of protection and when necessary, the reconfiguration of organizational resources. Thus, the concept of Teece (2007) is placed in the center of the model. For example, Teece (2012) argues that entrepreneurial action is a kind of dynamic capability that senses and seizes opportunities, and the routines are more related to maintaining what has been established. Denford (2013) focuses on the capability of constantly learning and using what is being learned as knowledge to maintain some sort of competitive advantage.

In a very competitive environment a static resource based group of assets does not provide a change for the organization to adapt, so the proposed framework takes into consideration this dynamism. The organization is evaluated by its performance, that is measured in the model through the evolutionary fit, that has two measures: market and technical fit. This measure makes the organization aware of its resource assets, in terms of integration, coordination and reconfiguration. This process is only possible due to the dynamic capabilities possessed by the company, ranging from sensing, seizing and maintaining competitiveness.

7 CONCLUSION

This paper's objective was to propose a framework for studying dynamic capabilities in a more structured way, that is, having a more elaborate support from strategy theory. As it was mentioned, dynamic capabilities have a central role in strategy research. However, there is not a mature core to support ideas and prevent it from being tautological (VOGUEL and GUTTEL, 2013). So, this paper explored the relationship between dynamic capabilities, Miles and Snow's competitive model, and evolutionary fit.

One can conclude that the resources a company has are going to be reconfigured to sense, seize opportunities and maintain competitiveness or even to make changes. Although the focus of this paper was on some specific factors, the framework can be useful to research the focus of different aspects and factors that affect firms' capabilities in creating and sustaining competitive advantages. Other interesting characteristics of the framework are: it consistently integrates models and concepts already tested in the current literature; it can be used at different levels of analysis and with different focuses; it provides the

context for specific analyses (for example, the role of leading firms in the creation and sustainability of competitive advantages); its "general" conception allows incorporating new elements of analysis or the exploration of new knowledge concerning its constituent elements; and, finally, it provides the basis and the proper context for the analysis of an isolated dynamic capability (*i.e.*, the relational capability).

In order to evaluate the effectiveness and efficiency of the model, it should undergo empirical tests. However, empirical research on resources and capabilities is still in its infancy (Zaidi and Othman, 2012), despite a significant growth in the past few years. Most empirical studies are longitudinal and qualitative, based on single or multiple case studies. These studies have discovered a wide range of firm and industry specific process and capabilities. These findings are the basis of theory building on this area.

Our model highlights a firm's strategy process as the "starting point" in defining the process by which dynamic capabilities come to existence. We hope that other scholars take up the challenge of further exploring and testing these ideas.

REFERENCE

- Amit, R. e Schoemaker, P. 1993. Strategic assets and organizational rent. *Strategic Management Journal* 14 (January): 33-46.
- Andrews, K. R. The concept of corporate strategy. Homewood, Illinois: Irwin, 1971.
- Barney, J. B. Firm resources and sustained competitive advantage. *Journal of Management*, v.17 n.1, p.99-120, 1991
- Barney, Jay B. Gaining and sustaining competitive advantage. 2nd ed. New Jersey: Prentice Hall, 2002.
- Barney, J.B. "Types of competition and the theory of strategy: Toward an integrative framework", *Academy of Management Review*, Vol. I pp.791 – 800, 1986.
- Brown, S., Eisenhardt, K., *Competing on the Edge: Strategy as Structured Chaos*, Boston: Harvard Business School Press, 1998
- Collis, D. J.. Research note: How valuable are organizational capabilities?. *Strategic Management Journal*, vol. 15, p. 143-152, 1994.
- Denford, J. "Building knowledge: developing a knowledge-based dynamic capabilities typology", *Journal of Knowledge Management*, Vol. 17 Iss: 2, pp.175 – 194, 2013

- Di Stefano G., Peteraf M., Verona G. Dynamic Capabilities Deconstructed. A bibliographic investigation into the origins, development and future directions of the research domain. *Industrial and Corporate Change*, 2009.
- Eisenhardt, K. M. and Martin, J. A. (2000) 'Dynamic Capabilities: What Are They?', *Strategic Management Journal* 21(10-11): 1105-21.
- Fleury, A.; Fleury, M.T. *Estratégias Empresariais e Formação de Competências*. São Paulo: Atlas, 2000.
- Gimenez, F. A. P., *Escolhas estratégicas e estilos cognitivos: um estudo com pequenas empresas*. Curitiba: RAC, v. 2, n. 1, 1998.
- Helfat, C. e Peteraf, M. Understanding dynamic capabilities: progress along a developmental path. *Strategic Organization* 7; 91, 2009.
- Helfat, C., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D. and Winter, S. *Dynamic Capabilities: Understanding Strategic Change in Organizations*. Malden, MA: Blackwell, 2007.
- Helfat C. Know-how and asset complementarity and dynamic capability accumulation: the case of R&D. *Strategic Management Journal* 18(5): 339-360, 1997
- Hung, R. Y Y; Chung, T.; Lien, B. Y. Organizational Process Alignment and Dynamic Capabilities in High-Tech Industry, *Total Quality Management & Business Excellence*, Volume 18, Issue 9, pages 1023 - 1034, November 2007.
- Learned, Edmund P., Christensen, C. Roland, ANDREWS, Kenneth R., GUTH, William D. *Business Policy*. Homewood, IL: Richard D. Irwin, 1965.
- Miller, D. and Shamsie, J. The resource-based view of the firm in two environments: the Hollywood Film Studios from 1936 to 1965. *Academy of Management Journal*, v.39, n.3, p.519-543, 1996.
- Miles, R. e Snow, C. Fit, failure and the hall of fame. *California Management Review*, vol. 26, n.º 3., 1984.
- Miles, R. e Snow, C. *Organizational Strategy, Structure, and Process*. New York: McGraw-Hill, 1978.
- Miles, R. E., & Snow, C. C. 1978. *Organizational Strategy, Structure, and Process*. New York: McGraw-Hill.
- Nelson, R. R. and Winter, S. G. *An Evolutionary Theory of Economic Change*. Cambridge, 1982.
- Penrose, E. T. *The Theory of the Growth of Firm*, Oxford: Basil Blackwell, 1959.
- Peteraf Margaret A. The cornerstones of competitive advantage: a resource based view. *Strategic Management Journal*, v.14 p.179-191, 1993.
- Pisano, G. (1994). 'Knowledge integration and the locus of learning: An empirical analysis of process development', *Strategic Management Journal*, Winter Special Issue, 15, pp. 85-100.
- Porter, M.E. *Competitive Strategy: techniques for analyzing industries and competitors*. New York: The Free Press, 1980.
- Prahalad, C. K., Hamel, G. *Competindo pelo futuro: estratégias inovadoras para obter o controle do seu setor e criar os mercados de amanhã*. Rio de Janeiro: Campus, 1990.
- Prahalad, C.K. & Bettis, R.A. The dominant Logic: A New Linkage Between Diversity and Performance. *Strategic Management Journal* 7:485-501, 1986.
- Selznick, P. *Leadership in administration*. Los Angeles, Cal.: University of California Press, 1957
- Stadler, C.; Helfat, C.; Verona, G. *The Impact of Dynamic Capabilities on Resource Access and Development*, *Organization Science*, 2013
- Stalk,G.; Evans, P. & Shulman, L. E. Competing on capabilities. *Harvard Business Review*, mar./apr., 1992.
- Teece, D. J. 'Explicating Dynamic Capabilities: The Nature and Microfoundations of (Sustainable) Enterprise Performance', *Strategic Management Journal* 28(13): 1319-50, 2007
- _____,Pisano, G.; Shuen, A. Dynamic capabilities and strategic management. *Strategic Management Journal*, Chichester, v. 18, n. 7, p. 509-533, Aug. 1997.
- _____; Pisano, G. The dynamic capabilities of firms: an introduction. *Industrial and Corporate Change*, v. 1, n. 3, 1994.
- _____, , *Economic analysis and strategic management*, *California Management Review*, 26(3)(Spring), 87-110, 1984

- Teece, D. J. Dynamic Capabilities: Routines versus Entrepreneurial Action. *Journal of Management Studies*, 49: 1395–1401, 2012
- Voguel, R.; Guttel, W. The Dynamic Capability View in Strategic Management: A Bibliometric Review, *International Journal of Management Reviews*, Vol. 15, Issue 4, pp. 426-446, 2013
- Wernerfelt; B. A resource-based view of the firm. *Strategic Management Journal*. V.5, p. 171-180, 1984.
- Winter, S. G. Understanding Dynamic Capabilities, *Strategic Management Journal* 24(10): 991–5, 2003
- Whittington, R. *O que é estratégia*. São Paulo: Thomson Learning do Brasil, 2006.
- Zaidi, M. and Othman, S. Understanding the Concept of Dynamic Capabilities by Dismantling Teece, Pisano, and Shuen (1997)'s Definition. *International Journal of Academic Research in Business and Social Sciences*, Vol. 2, No. 8, 2012
- Zahra, S. A.; Pearce II, J. A. Research evidence on the Miles-Snow typology. *Journal of Management*, v. 16, n. 4, p. 751-768, 1990.
- Zollo, M. and Winter, S. G. 'Deliberate Learning and the Evolution of Dynamic Capabilities', *Organization Science* 13(3): 339–51, 2002.