

## An Analytical Framework for Miles and Snow Typology and Dynamic Capabilities

**Autoria:** Tomas Sparano Martins, Heitor Takashi Kato

**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. Dynamic capabilities have become an intense area of study in strategy since the publication of Teece, Pisano and Shuen (1997). They 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. Thus, dynamic capabilities and the concept of adaptive cycle of Miles and Snow are aligned concepts that deserve an integration attempt, propose by an analytical framework in the paper. In order to build this framework we start using Whittington (2006) as a background to establish, for the present work, the procedural nature of strategy. Next, Miles and Snow's adaptative cycle and their generic strategic typology is described. Before describing dynamic capabilities, we decided to define the following concepts to avoid misunderstandings: resources, skills, organizational routines and capabilities. Then, in the section devoted to dynamic capabilities the following works were establish as the basis for the concept in the model: Teece, Pisano e Shuen (1997), Helfat et. al. (2007) e Teece (2007). Based on the theory, an analytical framework integrating dynamic capabilities and the Mile and Snow's model is developed. The model shows that the resource base can be dynamic, but at the same time it was build in order to suit a certain strategic orientation. The resource base reconfiguration, then, is done following the external need to adapt, the dynamic capabilities, the strategic choice and the performance evaluated through the concept of evolutionary fit. In order to verify this proposition, we suggest in the conclusion that the model is tested empirically in several kinds of organizations through different research methods.

### 1. Introduction

The 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 the 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 this paper aims 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. On the other hand, it has a very robust and well established theoretical basis, from the evolutionary economics (NELSON and WINTER, 1982) behavioral theory of Simon (1947) and Cyert and March (1963) to organizational growth, learning and decision making (HELFAT et. al, 1997; TEECE, 2007; ZOLLO and WINTER, 2002). Besides that, it has strong roots in resource-based view (BARNEY 1991, PETERAF 1993, WERNERFELT 1984).

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, 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 such as performance and change.

Teece et. al (1997), 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 alignment.

Thus, dynamic capabilities and the concept of adaptive cycle of Miles and Snow are aligned concepts that deserve an integration attempt. This paper attempts to propose a framework that integrates these concepts. The research for this paper consisted, basically, of conceptual and analytical development efforts. Concepts, theoretical developments and research streams were integrated in order to develop the analytical framework. The dynamic capabilities due to its central role in the development and sustainability of competitive advantages, is the underlying approach and the integrating element of the different concepts and constructs that form the proposed framework. It is complemented by Miles Snow's adaptive cycle and their strategy typology.

The paper is structured as follows. The basic concepts for the development of the proposed framework are presented in five sections: a general concept of strategy (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). A first effort for the integration of the different concepts and theoretical currents treated in these five sections is made as they are presented, since they constitute the conceptual base that forms the building blocks of the proposed framework, which is presented and discussed in Section 6. Finally in Section 7 the main conclusions are presented, along with their implications for the strategic analysis and indication of directions for future research.

## **2. A Theoretical Framework for Strategy**

A theoretical framework is a set of interrelated concepts that guides an investigation, determining the scope and rationale of the use of certain concepts to solve problems such as a real conceptual map. Strategy cannot be categorically defined, it depends on the point of view, the level of analysis and the study's objective. The construction and understanding of this framework is important to establish boundaries, theoretical and practical applications for the concept.

Thus, we use Whittington (2006) as a reference, the author sees strategy based on four generic approaches to strategy (classical, 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.

On the other hand, 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 theory of natural selection explains in general terms, how resources are divided among the different species. The species best adapted to the contingencies of the environment will survive and prosper, the less suited rivals will fail and disappear. The main role of strategy in a competitive environment is differentiating and experiencing the greatest possible number of small initiatives that if do not work are eliminated.

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. The followers of this view see the current internal environment of the organization as complex and the managers' rationality is limited. In other words, the manager, since he is cognitively limited, does not consider more than a limited set of facts and information. He defines a strategy in a satisfactory manner and not in an optimal, perfect, extremely rational way accessing all imaginable information. Thus, decisions are made incrementally, always trying to improve them through experimentation and learning.

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 not impartial and rational individuals, but members of a social system that define the strategy as a result of situational and sociopolitical conditions (WHITTINGTON, 2006).

Taking what was discussed until now into consideration we can define strategy as an emergent process of learning and adapting the organization to its external environment, always taking into account the interests and satisfaction of stakeholders. Thus, we end this section by making some considerations:

- the search for the ideal of a rational action is inaccessible because it is fluid;
- members of the company bargain with each other to reach a set of common goals, more or less acceptable to all, not necessarily optimal;
- the market is imperfect, organizations evolve in a disorderly way and not rational, so the strategy emerges in a huge mess in small steps.
- the real strategy is discovered during the action;
- there is commitment to the process of experimentation and learning to develop of internal skills;
- the strategic planning process can be as important as the outcome;
- strategies are better prepared in an incremental, continuous process

### 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 answer to or help form the present and future needs of customers. 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 e SNOW, 1978).

This adaptation of strategy to the competitive environment has been called by the authors "adaptive cycle" and its stages consist of the solutions given to the following problems:

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

Miles and Snow's typology, based on empirical studies, according Gimenez (1998), ranks companies or business units into four distinct adaptive strategies 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 its line of products and services. They tend to be the pioneer, so its focus is on innovation, not efficiency. These companies solve the business problem continually by expanding product-market through differentiation or low cost. 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 performance is assessed in terms of market share and sales volume, among others. 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 its domain with competitive prices or quality products / services. They usually operate in stable industries, not bothering to seek new opportunities in the environment, but having efficiency and technology directed to its restricted focus. They usually adopt limited, targeted and more profitable line 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 R & D 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) Analysers are between the defensive and prospects strategies. These companies operate on the basis of products / 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 to maintain a constant monitoring of the successes and failures of other competing companies - prospectors. 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 analyzers typically organize their structure in a matrix form and the product engineering and marketing are the major focus of attention and investment. 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 it is 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 you have chosen the posture you are going to adopt facing the competitive environment, the company should adapt its production process, distribution network and logistics, policies, price, promotion and marketing efforts and other processes involved in order to support the position selected.

#### **4. Resources, Skills, Organizational Routines and Capabilities**

Barney (2002) argues that the literature has different names 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, as Peteraf (1993), Barney (2002) stresses that the differences between terms are subtle and he concludes that the resources of a company include the key attributes of financial capital, physical, human and organizational. Also according to the author, the capabilities include 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), rapid adaptation to changing opportunities.

Similarly Stalk, Evans and Shulman (1992) argue that the terms core competence and capacity 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 a particular attribute of a particular company is a resource, capacity or competence, it will be very valuable in practice for managers. In this context, Barney (2002) proposes the following definition: resources are the assets, skills, competencies, organizational processes, information and knowledge controlled by a company and 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.
- 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 capacity 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 in 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 them authors not any capacity is valuable, as in Collis (1994) too, this ability cannot be considered a source of competitive advantage.

Teece and Pisano (1994) and Teece, Pisano and Shuen (1997) argue that routines that take 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.

The concept of capacity 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).

Moreover, the meaning of capacity, when operational, ie, 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 "metacapacity" (a higher level of capacity) which is the ability to learn by learning a skill, ie, the ability that resides in tacit knowledge allows companies to adapt to new circumstances. Still, it proposes a valuation analysis of the circumstances in which each organizational capacity will be a source of sustainable competitive advantage: a) predict (the organizational capacity will continue to be a source of competitive advantage), and b) explain (to evaluate the origin of capacity).

Helfat et. al (2007) point out that the terms "capacity" and "change" are not directly related. Thus, the capacity 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. 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 structure of industry strongly influences the competitive rules and therefore the strategies potentially available to a company (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 played 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 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, 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 asset searching is 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 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 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 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) asset base - 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 to be 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 alter the resource base.

Helfat and Peteraf (2009) argue that dynamic capability is the ability of an organization purposefully create, extend and modify its resource base. In the same line of thought, Pisano (1994) sees dynamic capabilities as organizational routines and managerial background 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 for 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 fits the context in which they operate.

### **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) maintaining 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 capacity 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 which segment focus.

#### b) Seizing opportunities

There are four major activities to which this target refers capacity: 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 capacity 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 Measuring 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 called evolutionary fit, which refers to the ability of the organization to survive by creating, extending or modifying its resources in the external environment, ie, 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 "quality per unit cost", an internal measure of performance. The other two factors, market demand and competition capture the influences of the environment (external) on the "evolutionary fit."

The value of a dynamic capability depends on whether its function creates value, that is always context dependent. Sometimes, a dynamic capability performs a function that generates a certain amount, but it cannot generate advantage if the value is not greater than that of 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 the diagram below (Figure 1).

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 strategic behaviors, which range from the dynamics of the adaptation process to the organizational environment characterized by complexity and uncertainty. This variation stems from the perception that executives of organizations have the environment, and based on them, how they 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.

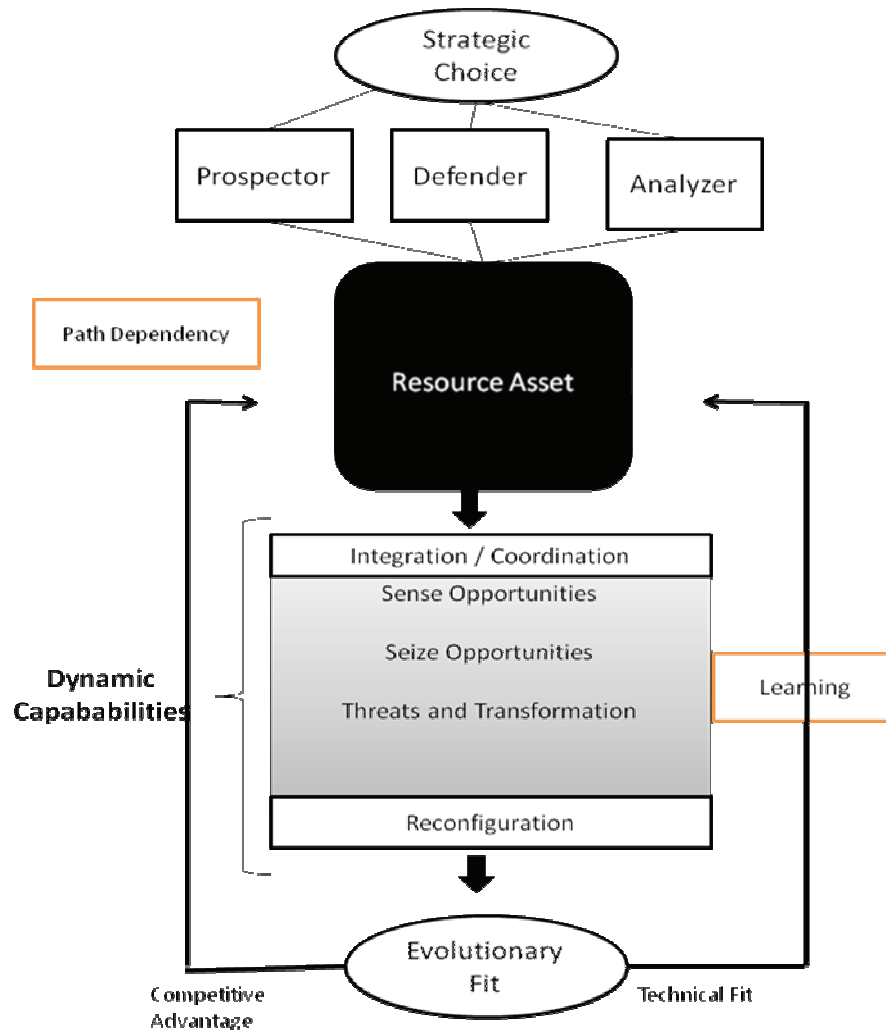


Figure 1 - The Analytical Framework: dynamic capabilities and a strategic typology  
Source: The Authors

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

Further, Helfat et. al. (2007) argues that "a dynamic capability is the ability of an organization 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, what distinguishes dynamic capabilities of something accidental or pure luck. 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.

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 though 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 nowadays have a central role in strategy research. On the other hand, it does not have a mature core to support its ideas and avoid it from being tautological. So, this paper tried to explore 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 for research that focus 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 found in the literature; it can be used at different levels of analysis and with different focus; 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 are still crawling (Miller and Shamsie, 1996), 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.

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