

The Resource-Based View and the Concept of Value The Role of Emergence in Value Creation

*El concepto de valor en la teoría de recursos y capacidades
El rol de la creación emergente de valor*

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ABSTRACT

This theoretical paper deals with the concept of value. It asserts that value is the only and necessary condition in the resource-based view (RBV). It also argues that no resource or strategy is valuable per se: it is related to a configuration of resources, routines, and embedded assets. For example, concerning the RBV attribute of imitation, we can ask to what extent a valuable resource is independent of the rest of resources, and by extension, to what extent a configuration of resources is rare by itself. This paper discusses the emergence of value and its embeddedness in a configuration of resources. Revising the concept of value could challenge the other main conditions in the RBV: rarity and cost of imitation, impossibility to replace with strategic substitutes. If the relations of these resources are considered, we might have a better understanding of how value emerges and how a firm's resources and capabilities are related with the creation of value.

Keywords: strategy; resource-based view; value creation; emergence.

RESUMEN

Este artículo teórico aborda el concepto de valor dentro de la teoría de recursos y capacidades (RBV sus siglas en ingles). Afirma que el atributo de valor es la condición única y necesaria. También se argumenta que ningún recurso o estrategia es valioso por sí mismo debido a que están relacionados con otros recursos y capacidades en una configuración, rutinas y procedimientos incrustados en la empresa. Por ejemplo, en lo que respecta al atributo de imitación RBV, se puede preguntar hasta qué punto un recurso que se considera valioso es independiente del resto de los recursos y, por extensión, hasta qué punto una configuración de recursos es única por sí misma. Este trabajo discute cómo emerge el valor a partir de una configuración de recursos. Se ofrece una revisión del concepto de valor y se discute su relación con los demás atributos de RBV: la rareza ó recursos únicos, la imitación y la imposibilidad de reemplazar con sustitutos estratégicos. Si se consideran las relaciones entre los recursos, podríamos tener una mejor comprensión de cómo surge el valor y de cómo los recursos y capacidades de una empresa se relacionan con la creación de valor.

Palabras clave: Estrategia, teoría de recursos y capacidades, creación de valor, eventos emergentes

INTRODUCTION

This paper argues that value emerges from the configuration of resources as a result of their interaction. Imitating another firm may create value, but it can also destroy the imitating firm. On the other hand, rarity is oblique because resources are related with certain configurations. By extension, the cost of imitating may be irrelevant. Our discussion begins by reviewing essential RBV literature, as well as the basic attributes of the RVB theory. In regard to strategic substitutes, the existence of a “strategic factor market” is called into question. We also assert that, from the resource characteristics known as VRIN attributes: valuable, rare, costly to imitate, and without strategic substitutes, the main driver is value. The main focus in this work are then the relations among resources, and how a relation emerges, evolves and creates value.

Reacting against the idea of structure conduct performance (SCP), in which the firm’s fate is determined by the industry, and by extension, the view that all the firms are alike, Nelson (1991) pointed out that there are differences between firms that must be taken into account. Rumelt (1991) found evidence that the variance in firm performance is very wide within same industries. In other words, when all firms are considered as a whole and in the long term, the effects of the industry do not change a firm’s performance. In opening the “black box” of the firm, scholars realized the importance of its distinctive competencies (Ansoff, 1965; Andrews 1971), type of organization (Miles and Snow, 1978), as well as its development and growth (Penrose, 1959).

Possibly, one of the most promising approaches to understanding differences in firm performance is the resource-based view of the firm. The RVB argues that what matters are a *firm’s internal resources* (Nelson and Winter 1982; Teece, 1982; Rumelt, 1984; Wernerfelt, 1984; Barney, 1986a; Dierickx and Cool, 1989; Prahalad and Hamel, 1990; Conner, 1991). The value of an asset is not fixed, it changes with time. Assets are sometimes accumulated inside a firm (Dierickx and Cool, 1989), and there is an evolution in resources (Teece, Pisano and Shuen, 1990). In regard to core competencies (Prahalad and Hamel, 1990) in a dynamic setting, new resources are created while others are destroyed (Schumpeter, 1950).

One of several criticisms on RVB is its lack of a definite level of analysis. In the bulk of RBV literature, the resource analysis levels are mixed; for instance, concerning culture as valuable resource, Barney (1986b) and Priem and Butler (2001b) express concern about what “is hidden in the labeling of cultures with such particular characteristics as ‘valuable.’ The disconfirmed theory is actually one level of analysis below the RBV” (Priem and Butler, 2001: 62). Another criticism, related with the endogenous concept of resource value,

Mosakowski and McKelvey (1997) and Priem and Butler (2001a) claim that it is not clear how we could ex-ante determine whether a resource is valuable or idiosyncratic. The tautological nature of the RBV has also been criticized (Porter, 1991; Foss and Knudsen, 2003; Priem and Butler, 2001a.). Also, Aragon-Correa and Sharma (2003) have disagreed with the view of the firm as a closed system used by the RBV. In the RVB, the interaction of resources is embedded in the firm's strengths (Barney, 1991:99), whereas on the other end of the spectrum, Aragon-Correa and Sharma (2003) claim that "[t]he consideration of exogenous factors has usually been absent from the RBV literature" (Aragon-Correa and Sharma, 2003:72). Bearing in mind such claim by Aragon-Correa and Sharma (2003), this paper considers the relations between resources, given that a firm's resources have an impact in the emergent *value creation*. One last criticism was made by Kraaijenbrink, Spender and Groen (2010), who pointed out two main issues with RBV, besides its narrow concept of competitive advantage: the concepts of value and resource.

Two lines of literature are reviewed; the first line consists in a review of essential RBV papers. The VRIN attributes or characteristics of resources: valuable, rare, costly to imitate (inimitable), and without strategic substitutes (non-substitutable) are also explored. The second line of literature we review is an exploration of the theory of emergence. This is followed by a discussion on whether some of the VRIN attributes are valid, necessary, or conditional; it is argued that the basic attribute is value, and we describe how value emerges.

A LITERATURE REVIEW OF RBV

In the early days of RBV, when Wernerfelt (1984) wrote 'A resource-based view of the firm', he proposed considering the product in its relationship with the resources of the firm: "for the firm, resources and products are two sides of the same coin" (Wernerfelt, 1984: 171). It looks as if there were no explicit relations among the firm's resources. Furthermore, Wernerfelt (1984) claimed that "...the idea of looking at firms as a broader set of resources goes back to the seminal work of Penrose" (Wernerfelt, 1984: 171). When Wernerfelt (1984) writes about the formulation of a strategy for diversified firms, he refers only to the *internal resources of the firm*: "On which of the *firm's current resources* should diversification be based?" (Wernerfelt, 1984: 172, my italics). He asks the following question: "[u]nder what circumstances will a resource lead to high returns over longer periods of time." Wernerfelt (1984) uses Porter's five competitive forces framework (Porter, 1980). This framework isolates the firm in a competitive context that misses the opportunity of exploring potential links with the firm and the resources of its environment.

Jay Barney is another RBV pioneer. Barney wrote two papers in 1986, one about the use of strategic factor markets and another on culture as a source of advantage. His first paper (Barney, 1986a) starts with the neoclassic assumption that there are no rents (normal returns) in competitive markets. In order to create an imperfect competitive product market, and by extension, to obtain rents, it is necessary to access a strategic factor market: “[f]irms can only obtain greater than normal returns from implementing their product market strategies when the cost of the resources to implement those strategies is significantly less than their economic value” (Barney, 1986a: 1232). Under this view, the value of each resource is independent from the rest of the resources: the value is determined in the strategic factor market.

In his second paper, Barney (1986b) introduced what is considered the cornerstone of RBV, i.e. the three attributes of a sustained competitive advantage: valuable, rare and imperfectly imitable resources. This paper was criticized by some authors, but for our purpose, we should ask whether those attributes are related across different resources and capabilities. At a higher unit of analysis, Barney (1986b) regards culture as a valuable resource, and defines culture as a:

“[C]omplex set of values, beliefs, assumptions, and symbols that define the way in which a firm conducts its business. In this sense, culture has pervasive effects on a firm because a firm’s culture not only defines who its relevant employees, customers, suppliers, and competitors are, but it also defines how a firm will interact with these key actors” (Barney, 1986: 657).

Later in that paper, Barney (1986b) claims that: “...if many firms have similar cultures that allow them to behave and compete in approximately the same way, none will possess a culturally-based competitive advantage, and above normal economic performance cannot be expected” (Barney, 1986: 658). A firm contains more resources than culture, even if a culture can support the creation of value, there are other aspects to be considered, such as leadership, efficient routines, and economizing, which can support or erode the creation of value; a resource such as culture is not isolated from the other firm’s resources. Culture is defined from a point of view where resources and their interrelations matter, they are embedded in the firm’s culture.

Even if two firms have the same culture, small variances can yield widely different results: the butterfly effect. Furthermore, those firms will not necessarily have the same suppliers or customers, and their performances may also be different.

Barney's proposal of the main concepts of the RBV is considered one of the most influential ideas in the RBV (Barney, 1991; Foss and Knudsen, 2003). In the article, Barney (1991) examines the link between *firm resources* and sustained competitive advantage. Sustained competitive advantage comes from exploiting "internal strengths, through responding to environmental opportunities, while neutralizing external threats and avoiding internal weakness" (Barney, 1991: 99). The firm identifies opportunities and threats (external analysis) as well as its internal strengths and weaknesses (internal analysis), and then defines what the strategy should be. Now, the firm has certain heterogeneous resources over which it has control. Barney (1991) defines its first assumption as "this model assumes that firms... may be heterogeneous with respect to the strategic resources they *control*" (Barney, 1991: 101, my italics). This statement is not the only one where control is employed to relate resources. Barney (1991: 101) defines firm resources as including: "all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by the firm". Only with this set of resources is it possible to set a range of activities and strategies constrained by the firm's assets, but also by their interaction. The question is whether we should constrain the strategy only to the assets the firm can control: its own assets. What follows is one of the clearest paragraphs in the cited paper about the homogeneous way for creating value:

"[T]hat one firm in an industry populated by identical firms has the resource to conceive of and implement a strategy means that these other firms, because they possess the *same* resources, can also conceive of and implement the same strategy. Because these firms all implement the *same* strategies, they will improve their efficiency and effectiveness in the *same* way, and to the *same* extent" (Barney, 1991:104, my italics).

How can a firm possessing the same resources as another implement the same strategy and consequently obtain the same results? Two remarks about this question. First, there is no guarantee that identical firms with the same resources and even the same environment implementing the same strategy will end up with the same result: that might only happen in a closed system. There is an objection to the main point of this work: Where does value emerge from? Is it possible for two firms with the same set of resources to obtain the same performance? This question is answered later in this paper using chaos and complexity theory.

Another relevant work on RBV is 'Dynamic capabilities and strategic management', by Teece, Pisano and Shuen (1997). They claim that RBV literature is not clear in regard to its role in developing a competitive advantage in a rapidly changing landscape. What is thus the role of the interaction of the firm's resources and capabilities in co-building a competitive advantage for the firm and preserving it in dynamic environments? Its importance is essential for firm-specific capabilities: "[F]irm-specific capabilities [...] can be sources of advantage,

and [...] explain how combinations of competencies and resources can be developed, deployed, and protected. We refer to this as ‘dynamic capabilities’” (Teece, Pisano and Shuen, 1997: 510). The terms ‘dynamic’ and ‘capabilities’ define the management’s role in “appropriately adapting, integrating, and reconfiguring internal and external organization skills, resources, and functional competencies” (Teece, Pisano and Shuen, 1997: 515, my italics). Although this paper considers the internal source of value as the most important, external resources also have an impact and change the firm’s configuration, allowing the firm to continue delivering value in a dynamic environment. Teece, Pisano and Shuen (1997) deem factor of production, resources, organizational routines, core competencies, dynamic capabilities, and products as events endogenous to the firm, but these factors go beyond the sole concept of an isolated resource. In their conclusion, Teece, Pisano and Shuen (1997), came back again to the internal resources of the firm as a source of competitive advantage, but added a link between those resources: “The dynamic capabilities and resources approaches [...] see competitive advantage stemming from high-performance routines operating ‘inside the firm’” (Teece, Pisano and Shuen, 1997: 528).

After 30 years of development, Barney, Ketchen and Wright (2011: 1308) claimed that RBV was mature enough to be called a theory, and renamed the RBV as “resource-based theory” (RBT), including the micro-fundamentals and spin-off perspectives such as knowledge- and natural resources-based views in their definition. In the RBV, micro-foundation stands for an “analysis within firm boundaries of the internal processes of managing resources”.

THE RESOURCE-BASED VIEW COMPONENTS

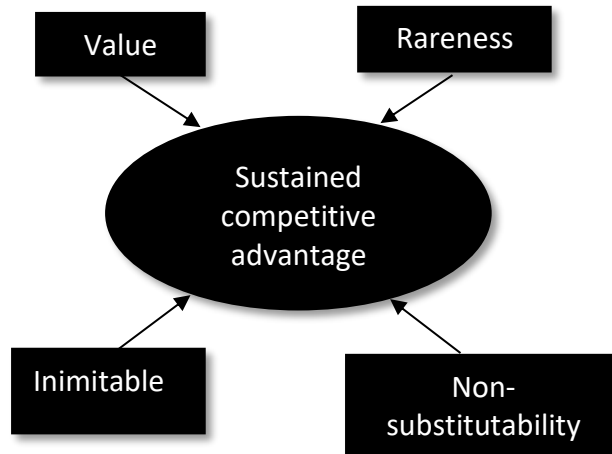
The previous review of RBV literature includes works that do take into account the interaction of firms’ resources; on the other hand, there are other studies suggesting that researchers, to some extent—by focusing on the internal resources controlled or owned by the firm—deem resource interaction and value generation constant (Figure 1).

Value

According with Fogarty (2008), the concept of value has been studied for a long time. One of the earliest thinkers to develop the concept was Aristotle (384-322 B.C.). To Aristotle, the value of an item comes from its feasibility to be either *used* or *exchanged*. Medieval theories focused on the determinants of demand. Such theories argued that value depended not *on any intrinsic value* but on utility and scarcity. A pre-classical thinker, William Petty (1620-1687), claimed that value is intrinsic and that there is a *natural value*; therefore, any fluctuation should be around its natural value and should tend toward it. In his mind, there were two value determinants: land and labor. The value of labor was determined by the average daily diet necessary to sustain the worker. Later, Richard Cantillon (168?-1687), considered the

father of economic theory, suggested that the ‘par’ value equates the value of a laborer with that of twice the produce of the land he or she consumes (Fogarty, 2008).

Figure 1
The relation between VRIN attributes and sustained competitive advantage.



Adam Smith (1723-1790) was one of the earliest classical theorists who studied value. He explained that the value of any commodity equals the quantity of labor which enables a laborer to purchase said commodity (Smith, 1776). His theory of utility was focused on total utility instead of marginal utility. In an updated version of the theory of value, William Jevons (1835-1882) and Carl Meneger (1840-1921) claimed that “value depends entirely on utility.” Meneger explained that the value of a diamond is greater than that of the water because of its marginal utility, not because of its total utility. David Ricardo (1772-1823) saw an absolute value, and defined it as a function of the quantity of labor it required. Ricardo explained that by “[p]ossessing utility, commodities derive their exchangeable value from two sources: from their scarcity, and from the quantity of labor required to obtain them” (Ricardo, 1817: 15). One of the later upgrades to the theory of value came from Alfred Marshall (1824-1924) and Leon Walras (1834-1910). They found that demand and supply determine value. Walras saw a *complex interrelated* world where: “*In general equilibrium everything depends upon everything else*” (Fogarty, 2008).

In the RBV, there are also several conceptions of value. One of them is Barney’s (1986a) definition of value as related to the value of the assets. Barney considered economic value as having no relationship with its contingent value, due to its relationship with other resources. That is why the only way to obtain valuable resources is when they are underpriced, that is, “to anticipate and exploit competitive imperfection in strategic factor markets”—which could be done by using private information—“the value created is a function of private information

about resources available to purchase in the market." (Barney, 1986a: 1232). As Barney (1986a: 1239) states; "Firms seeking to obtain above normal returns from implementing product market strategies must have consistently more accurate expectations about the future value of those strategies when acquiring the resources necessary to implement them". In such a way, value can be endogenous. According to Barney (2001: 45), the only way to obtain a competitive advantage is "[i]f only one competing firm possesses a particular valuable resource".

Against the idea from the RBV that value is endogenous, Priem and Butler (2001a) argued that the business-level resource-based view (RBV) is not yet a theory of value creation, and that Barney's (1986a) concept of value is more related with the *capture of rents*. In the discussion of market value versus the idiosyncratic value of the firm in Barney's framework, an extraction of value can be captured due the imperfection of the market or privileged information about the market. In an extended view, value can be a function of the contribution of such assets to the configuration of the firm. For example, when a firm needs a resource to complete its configuration and the marginal contribution is higher than the market price, acquiring such resource is the option. The created rent might be the result of the configuration of the firm, instead of market failure or superior information.

It is likely that Barney's (1986a) concept of value is only applicable under conditions where one asset per se could be the source of rents, or when such resources do not interact or do not have an alternative use. For example, the value of a piece of land has an intrinsic value; this intrinsic value comes from its level of fertility. But value, as previously discussed, is not intrinsic, even less in the presence of other interaction factors. When several assets interact, then it is even more difficult to realize value. How valuable is a piece of land when despite its low productivity it is used as ground for a factory?

The concept of endogenous resource value may be biased, since value depends on or is contingent with the rest of the resources. The source of created value is highly related with the concept of separability. Barney (1986a) may see the firm as the short run of a nearly decomposable system, where the behavior of one part, such as a firm, is independent of the rest of the system. But in the long run, the behavior of the complete system is co-dependent; that is: the value of an asset can be traced to the input of its supplier, and to the input the supplier received from its own supplier, so on and so forth. Here, the final value is created in several stages prior to be introduced into the firm; therefore, the created value may be seen as a combination of endogenous as well as exogenous factors. It is a co-created merger, and in the long run, these firms interact with each other and their interchange may go beyond trading goods. Information, as well as other interchanged resources, may preclude the creation of value or even the destruction of value.

Rumelt (1984) claimed that the value of the resources was a function of their context. Barney (2001: 51) expresses that “the value of particular resources depends on the specific market context in which they are applied”; furthermore, resources may change their value. “In an ever-changing world, agents that are not currently best may be a resource for the future. Parts of them may be crucial at a later time” (Axelrod and Cohen, 1999: 34). In this sense, the most important thing to take into account is that no resource or capability is valuable, rare or sustainable by itself, all of them are context-dependent (Collis, 1994). That is, firms co-evolve, and in the end, the exact contribution of a resource to a firm's capabilities may be so diluted that it becomes impossible to disentangle from the rest of the contributions.

Rarity

According with Barney (1991), “[b]y definition, valuable firm resources possessed by large numbers of competing or potentially competing firms cannot be sources of either a competitive advantage or a sustained competitive advantage.” In the RBV, rarity and value have been used together to explain “the potential for generating a competitive advantage” (Barney, 1991:107). The mechanism is as follows: if the number of firms possessing a valuable resource in an industry is smaller than the total number of firms in an industry, then those firms have the opportunity to leverage their valuable resource and obtain a competitive advantage. But, rarity *per se* does not guarantee value. “There are some commodities, the value of which is determined by their scarcity alone [...] These commodities, however, form a very small part of the mass of commodities daily exchanged in the market” (Ricardo, 1817:18).

Rarity can be a matter of analysis level. Priem and Butler (2001b) claim that the Barney's (2001) example of culture is not a test for individual resources, but a middle-range theory. If we push this argument further, at a higher level of analysis we may conclude that rarity is ubiquitous. To some extent, every firm has something rare at midrange (such as a culture, even a CEO is unique). The question is not how rare it is, or how many firms possess this resource, but if the configuration of resources (rare by definition) can create value. The operationalization of the concept of rarity relates to that question. For Barney, the rarity of a resource was operationalized as “less than the number of firms needed to generate perfect competition dynamics in an industry (2001).” The remaining question has to do with the interaction of resources. Do all competing firms have the same resources and the same interrelations between them?

Costly to imitate and without strategic substitutes

If firms also differ in their environments, before we ask if we should imitate a successful firm, we should make sure that such imitation will bring positive results in the present configuration of our firm considering its current resources and capabilities. Then, according

to its potential contribution, the cost of imitation should be considered among other options. According to Itami (1987: 61) “the essence of competition is the creation of a difference between the firm and its opponents”. In this view, such difference is necessary as a source of explanation for outperformance; the difference could be in the market position (Porter, 1980) or in the firm’s strategic resources. In the RBV, preventing other firms from copying or imitating one’s valuable resources is regarded as a priority; according to Barney (1996: 134):

“Imitability is an important component of the resource-based view of the firm. If other firms can acquire or develop the same, or substitute, resources as a firm that already possesses these resources, and can do so at approximately the same cost as the firm that already possesses them, then they cannot be source of competitive advantage for any firm”.

In different words, Barney (1991) claimed that firms with the same strategy would improve their efficiency and effectiveness at the same level. Following the same idea, Porter (1996: 64) expressed that “the more benchmarking companies do, the more they look alike”, and that such process would lead to a “competitive convergence”. Both arguments imply that performance is possible to attain by means of imitation. But, is there any assurance that copying an asset, technique, or strategy will converge or have the same performance in any firm? The bottom line is: Why would one same strategy or resource have the same impact when used by another firm? What about its interaction with the rest of the resources?

Differences expressed as heterogeneity have been mentioned as a possible source of competitive advantage: “sustained competitive advantage must focus on firm resource heterogeneity and immobility” (Barney, 1991:103). The protection of such difference can be created, or achieved via isolating mechanisms (Rumelt, 1984, 1987), property rights and reputation (Teece, 1986), uncopyable ability to forecast (Barney, 1986a), or given by its nature as a casual ambiguity (Reed and DeFillippi, 1990) or uncertain imitability (Lippman and Rumelt, 1982).

Beyond the question of whether it is possible to imitate another firm, the question is whether such action has any potential value. In view of that position, one may wonder if being imitated or copied is that bad; literature has reported it is not always negative. On the contrary, it can have a positive impact, such as network externalities (Katz and Shapiro, 1985, 1986; Farrell and Saloner, 1985, 1986; Conner, 1995; Conner and Rumelt, 1991), and more recently, Arthur (1986) has proposed the concept of increasing returns. There are other examples where the aggregation of the same kind of business makes sense; such is the case of markets. Possibly then, imitation or copy is not “bad” or “good” by definition. The reaction to being imitated goes from avoidance to nurturance. RBV researchers are among those who would

prevent the imitation of a firm's valuable assets and resources. In the other end of the spectrum are network externalities and researchers who claim the virtues of being imitated.

Imitation by a competitor is a possibility. Still, what is absent in the discussion—to copy or not to copy, or to imitate or not to imitate—is what the result of such copy or imitation will be. It is also certainly possible for external resources to have an impact. Therefore, trying to imitate a firm just by looking at its inside, as a resource-based view of the firm would stress, is at least dangerous, and the results obtained by the firm would certainly be different. If we see imitation as a strategy, and taking into account that these two firms with the same internal assets and the same strategy may show different performance, by extension, imitating another identical firm with an identical environment will lead to yet a different result. There are also different levels of uncertainty that can moderate the value of imitation:

“In highly uncertain environments [...] imitative behaviour can be dysfunctional or even pathological. In relatively certain environments [...] imitation can defuse rivalry and reduce risk for a given firm [...] imitation can occur for a variety of reasons with *dramatically different results*” (Lieberman and Asaba, 2002: 367, my italics).

Teece (1986) pointed out the importance of complementary assets and resources to surround and support the core technology of a firm. Especially when the firm faces a changing environment, Eisenhardt and Martin (2000: 1106) claim that “since the functionality of dynamic capabilities can be duplicated across firms, their value for competitive advantage lies in the resource *configurations* that they create, not in the capabilities themselves” (my italics). Furthermore, the value of the resources will change over time (Foss, Knudsen, Montgomery, 1996: 8). Having the same level of performance with different resources is possible, even with different resources and configurations: there is no certain direct link between a valuable resource and performance level. And even more in a dynamic setting, where performance can go up and down in a continuous cycle.

Emergence

Another axis of analysis, the emergence process, has to do with the possibility of prediction. Berenda (1953: 271), using as an example the emergent properties of water, claims that the center of holism and emergence laid in the “argument seems to be the contention as to the ‘unpredictability’”. When a system exhibits a predictable behavior, such as a closed system, where the same result is always attained and where there are no emergent properties, here it is argued that the whole is more than the sum of its parts.

“Ontological emergent features are features of systems or wholes that possess causal capabilities not reducible to any of the intrinsic causal capabilities of the parts nor to

any of (reducible) relations between the parts” (Silberstein and McGeever, 1999: 186).

Probably, one of the most significant examples of emergence is the appearance of order. Kauffman (1995) exemplifies it with an array of 100 light bulbs, in which an emergent pattern arises from almost infinitely possible patterns. In this line of thinking, the creation of DNA was not a matter of chance, but an emergent result of a self-reinforcing web of reactions.

In management, the concept of emergence has been discussed by some researchers. In an early work, Mintzberg and McHugh (1986: 161) brought up the importance of emergent strategies along the importance of deliberate ones. Emergent strategies are “patterns realized despite or in absence of intentions”. McKelvey (2001, 2005) presented an analogy in which people in the organization are interconnected as neurons, and the result it is an emergent intelligence. This omission maybe be due to the fact that, in the RBV “the units of analysis [are] resources and capabilities controlled by the firm” (Barney, 1996: 133), but not their interaction and emergent properties, such as value creation. Lujan (2017) argues that the firm’s emergent configuration and its capacity to generate value is forged at the beginning of its life.

Outside strategy theory, the interactions among agents, firms, and clusters are recognized. Network theory stresses the importance of taking into account the links with other firms and the capabilities developed through those relationships (Gulati, 2000,; Takesishi, 2001), as well as the importance of bearing in mind that the firm is “embedded in structures of social relations” (Granovetter, 1985: 481). Another stream of researchers makes a similar claim.

They explain that, “knowledge can be observed and distinguished on two levels, the individual and the social” (Nonaka and Nishiguchi, 2001:32). Consequently, a firm can have several agents of knowledge, but the creation of knowledge as an exchange clearly exceeds the firm’s boundaries. Unfortunately, by embodying the micro-foundation view, RBV has unnecessarily constrained the impact of its resources and capabilities to its boundaries (McEvily, Zaheer, 1999; Gulati, 2000). Despite a growing claim for higher consideration to the external environment, there is an opportunity to incorporate the emergent properties of the interactions among agents, firms, and their environment.

Sustained competitive advantage is about how long value creation can last. Before discussing how to sustain an advantage (despite its appealing sound “competitive”), can we unveil how we could have an advantage? McKelvey and Baum (1999: 10) recommended a development beyond “resource-based” or “competence-based” views: “what is needed are theories that deal with both micro- and macroevolutionary multilevel applications”. If there is no way to

determine ex-ante the key aspects of a firm's success it is because there are no key elements, no resources, no industry yet. "Competitive advantage" can be included in a list of appealing terms, but it is hard to prove and test (Kraaijenbrink, Spender and Groen, 2010). There is a dissonance between the literature and the level of success to define its source, and even worse, what it means and how it can be tested.

Multilevel theory and multidisciplinary theory could be included in a definition of the firm's goal. RBV may be too focused in a single resource or capability (microlevel analysis), instead of the firm or the interactions occurring inside. A firm is more than a collection of resources; the interrelations between those resources, which form a continuum, may be neglected if the unit of analysis is only one resource in a macro-level analysis. The unit of analysis is no longer a resource or capability per se: it is their interrelation, which calls for a higher analysis level. "Multilevel theories, thus, begin to bridge the micro-macro divide, integrating the micro domain's focus on individuals and groups with the macro domain's focus on organizations, environment, and strategy" (Klein, Tosi, and Cannella, 1999: 243).

CONCLUSION AND FUTURE RESEARCH

This paper is about the attribute of value in the RBV. It argues that value is the only property that should be considered in a firm view, and that it should include more aspects, such as the relation between different assets and internal as well as external resources in a multi-level view. We also discuss that value emerges from the interaction between resources and capabilities embedded in the firm's configuration, and that there is no possibility to determine ex ante which resources and by which forms of relation could generate value. In short, the attribute *value* should be the cornerstone of any RBV perspective. Then, if value is the central attribute, then we have an opportunity to rewrite the argument of what matters in decision-making; before asking ourselves if a resource is rare or imitable, we should ask ourselves if that resource is valuable in the actual configuration of the firm and how long the generation of value can last. The implications of imitating a "strategic" resource or capacity can create value, or not. By extension, allowing (or even encouraging) the imitation of a product can create value for the firm. One caveat is needed at this point: even if a resource is not currently valuable to a firm, under a certain configuration it could become valuable—in another setting or to another firm.

If we take imitability into account, it is possible to realize that even if another firm imitates, acquires, or develops a similar resource or capability, it will not necessarily have an effect on performance levels. Imitability is also constrained because the links between resources are embedded in the firm's structure. In One end of the spectrum, there is a question related with the concept of separability: How would identical assets have the same value in two

different firms? The external environment, as well the internal configuration of resources, can have an impact on the firm's performance, and minor changes in the strategy can result in different scenarios, levels of sustainability, and performance. A rich environment can facilitate the creation of a new firm: available sources of credit and technology and efficient infrastructure can provide most of the nourishment for a firm's early days; those external resources or conditions may not be found in other latitudes.

Under this view there is no "strategic factor market", and that is it because an asset is not valuable per se, it is valuable in association with other assets of the firm. It does not matter if the asset or resource has been acquired, leased, or owned. The definition of firm is related to several dimensions: products, chain of control, ownership and co-operation. Every aspect sets a different boundary, a different level of control. Taking it all together, defining the boundaries of the firm as a relation among assets and resources is to some extent possible.

This paper critically reviews the basic concepts of the RBV, argues that value is the central concept, and agrees in that value emerges from the interaction of internal resources within the firm. When resources, personnel, and factors interact, an emergent relation might possibly appear; such result cannot be reduced to the linear sum of its components. A possible outcome of such emergent configuration is the creation of value. Finally, the interaction of internal and external resources may foster the emergence of a configuration capable of providing value to the firm. Although this paper has explored the emergence of value, it has not been an attempt to define ex-ante how related resources and capabilities can create value, even less a lasting "competitive advantage".

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