A RESOURCE-BASED APPROACH TO PERFORMANCE AND COMPETITION: An Overview of the Connections between Resources and Competition

FLORE BRIDOUX
Institut d'Administration et de Gestion, Université catholique de Louvain, Belgium

This paper extends the resource-based view of the firm to give an overview of the connections between resources and competition. Specifically, it develops a conceptual framework explaining competitive advantage and performance that incorporate the resource-based view of the firm and Porter's approach to competitive environment. On the basis of this framework, it shows how firms compete for resources and may use their resources to compete.

Key words: Resources, competition, competitive advantage, performance

INTRODUCTION

> *"There has been much debate in the strategy literature as to whether organizational capabilities or market competition are more important in shaping firms' actions and outcomes but this debate has generated little consensus. We suspect that simply comparing firm-level and industry-level influences will continue to prove fruitless for two reasons. In the first place, both organization and competition are clearly important in shaping strategy and performance. In the second place, we suspect that the inconclusive nature of much of the existing research reflects the fact that organizational capabilities, competition, strategy, and performance are fundamentally endogenous. That is, reciprocal interactions at multiple levels of analysis between the market environment and firm capabilities shape business strategy and performance, while interactions between strategy and performance, in turn, shape both organizational capabilities and competitive environments. […] For a mixture of reasons our understanding of these relationships is still at a very rudimentary stage. In general, research in the disciplinary traditions that study business organizations has been fundamentally unbalanced: researchers interested in characterizing the environment have typically been content with very simple models of the firm while researchers interested in the internal dynamics of firms have usually been content with very simple models of the environment. […] We believe that the careful study of how capabilities and competition mutually influence each other could be one of the next great opportunities for the field of strategy research."*
>
> *Henderson and Mitchell, introduction to the 'Summer 1997 Special Issue: Organization and Competitive Interactions' of the Strategic Management Journal.*

The issue of firm performance has been central in strategy research for decades and encompasses most other questions that have been raised in the field, as for instance, why firms differ, how they behave, how they choose strategies and how they are managed (Porter, 1991). In the 1990s, with the rise of the resource-based approach, strategy researchers' focus regarding the sources of sustainable competitive advantage shifted from industry to firm specific effects (Spanos and Lioukas, 2001). Initiated in the mid-1980s by Wernerfelt (1984), Rumelt (1984) and Barney (1986), the resource-based view (RBV) has since become one of the dominant contemporary approaches to the analysis of sustained competitive advantage. A central premise of the resource-based view is that firms compete on the basis of their resources and capabilities (Peteraf and Bergen, 2003). Most resource-based view researchers choose to "look within the enterprise and down to the factor market conditions that the enterprise must contend with, to search for some possible causes of sustainable competitive advantages" holding constant all external environmental factors (Peteraf and Barney, 2003, p.

312). This inward-looking approach has proven to be both influential and useful for the analysis of many strategic issues (Foss and Knudsen, 2003), among which the conditions for sustained competitive advantage and diversification.

However, "there is also a sense that the ebb and flow of strategy research may have swung excessively to firm-centered analyses and has tended to ignore industry dynamics" (Levinthal and Myatt, 1994, p. 46). So, Amit and Shoemaker (1993, p. 39) think that it is "the applicability of the firm's bundle of resources and capabilities to a particular industry setting (i.e., the overlap with the set of strategic industry factors) [that] will determine the available rents". And Porter (1991, p. 108) writes "Resources are not valuable in and of themselves, but because they allow firms to perform activities that create advantages in particular markets. […] The competitive value of resources can be enhanced or eliminated by changes in technology, competitor behavior, or buyer needs which an inward focus on resources will overlook". Similarly, Levinthal and Myatt (1994, p. 46) argue that "many organizational capabilities emerge, are refined, or decay as a result of, or an absence of, product market activity".

After excessive swings, first, towards industry structure and, second, towards the firm's characteristics, I think, in line with Henderson and Mitchell, that the time has come to find a balanced position integrating the firm in its environment. In consequence, I would like to extend the resource-based perspective to investigate the connections between resources and competition. Mine will neither be the first attempt to extend the resource-based view nor the first attempt to use the resource-based view to analyze competitive behaviors. For instance, Oliver (1997) combines resource-based and institutional factors in her model of sustainable competitive advantage. Extending the resource-based view to analyze competitive behaviors, Tripsas (1997) studies how existing competences shape responses to technological change and Peteraf and Bergen (2003) propose a market-based and resource-based framework to identify direct and indirect competitors.

To bring into a theoretical framework the environmental factors relating to competition, I have chosen to extend the resource-based approach with Porter's (1980) five forces framework and industrial organization economics. This work also integrates some insights from the competitive dynamics literature.

Over the forty years of strategy research, a diversity of partly competitive and partly supplementary perspectives has emerged. Researchers in strategy have tended to come from other disciplines (economics, sociology, psychology, etc). So it is not amazing that the field has a penchant for divergent thinking and an eclectic view about theories and disciplines (Schendel, 1991). On the one hand, this diversity is justified by the wide variety of research topics in strategy research (Hoskisson, Hitt, Wan and Yiu, 1999). On the other hand, this diversity undermines the accumulation of theory and knowledge in the strategy field. As we enter the 21st century, it seems to many members of the academic community that the time is ripe for integration and synthesis[1]. Conner (1991) and Mahoney and Pandian (1992) conclude that the resource-based view may form the kernel of a unifying paradigm for strategic management research.[2] We hope that extending the resource-based view with

[1] Volberda (2004, p. 1) favors synthesis over integration on the ground that "attempts to integration often lead to theoretical frameworks that are relatively disconnected from urgent problems in strategic management". Volberda (2004) argues that synthesis is less far-reaching than integration because it does not attempt to develop a single paradigm consisting of universal concepts and laws covering the entire strategic management field. However, our concept of integration does not differ much from Volberda's notion of synthesis. Indeed, we have never thought that our conceptual framework would cover the entire strategic field and deal with all strategic problems. Instead, we deal with the specific problem of the interactions of competitive behaviors, resources and competitive environment that we approach with three particular literature streams.

[2] Foss (1996) opposes the belief that a distinct theory of the multi-person firm can be constructed on the basis of a theory of organizational knowledge or from resource-based insights because it is not possible to tell why there

contributions from Porter's (1980) IO-based approach and the competitive dynamics literature will contribute to bridging gaps in the eclectic strategic management theory in order to offer firmer grounds to future research.

The first section outlines the resource-based view and Porter's five forces model stressing the limits of these theories and their complementarities and differences. The next section introduces a conceptual framework that integrates resources and the competitive environment as sources of performance and drivers of strategy. Building on this conceptual framework, the third section presents an analysis of the connections between resources and competition. The paper ends with future research implications.

LITERATURE REVIEW

Review of the resource-based approach

The resource-based view (RBV) emphasizes the firm's resources as the fundamental determinants of competitive advantage and performance. It adopts two assumptions in analyzing sources of competitive advantage (see for instance Barney, 1991 and Peteraf and Barney, 2003). First, this model assumes that firms within an industry (or within a strategic group) may be heterogeneous with respect to the bundle of resources that they control. Second, it assumes that resource heterogeneity may persist over time because the resources used to implement firms' strategies are not perfectly mobile across firms (i.e., some of the resources cannot be traded in factor markets and are difficult to accumulate and imitate). Resource heterogeneity (or uniqueness) is considered a necessary condition for a resource bundle to contribute to a competitive advantage. The argument goes "If all firms in a market have the same stock of resources, no strategy is available to one firm that would not also be available to all other firms in the market" (Cool, Almeida Costa and Dierickx, 2002, p. 57). Like the Chicago School tradition, the RBV is an efficiency-based explanation of performance differences (Barney, 1991; Conner, 1991; Teece, Pisano and Shuen, 1997; Peteraf and Barney, 2003): "performance differentials are viewed as derived from rent differentials, attributable to resources having intrinsically different levels of efficiency […] in the sense that they enable the firms […] to deliver greater benefits to their customers for a given cost (or can deliver the same benefit levels for a lower cost)" (Peteraf and Barney, 2003, p. 311). The assumed heterogeneity and immobility are not, however, sufficient conditions for sustained competitive advantage. According to Barney (1991), a firm resource must, in addition, be valuable, rare, and imperfectly imitable and substitutable in order to be source of a sustained competitive advantage. In her 1993's paper, Peteraf presents four conditions underlying sustained competitive advantage: superior resources (heterogeneity within an industry), ex post limit to competition, imperfect resource mobility and ex ante limits to competition. Peteraf and Barney (2003) make clear that Barney's (1991) and Peteraf's (1993) frameworks are consistent once some terms are unambiguously defined. The RBV has developed very interesting contributions, among others, with regard to imitation with the concepts of isolating mechanisms (Rumelt, 1984), time compression diseconomies, asset mass efficiencies, and causal ambiguity (Dierickx and Cool, 1989). Recently, much resource-based research has focused on intangible assets, which include information (Sampler, 1998), knowledge (e.g. Spender, 1996), and dynamic capabilities (Teece, Pisano and Shuen, 1997).

Scrutiny and assessment have pointed to a number of unresolved problems in the resource-based approach. Some of these problems justify the approach adopted in this paper and indicate ways to integrate the RBV and the firm's competitive environment. These criticisms relate to the unit of analysis, the circularity or tautological nature of the resource-based

should be firms in lieu of notions such as 'opportunism' and 'moral hazard'. He concludes that knowledge-based theories may help shed light on issues relating to the boundaries and internal organization of the firm.

theory, the exogenous nature of value, the neglect of the environment, the condition of heterogeneity, and the behavioral assumption underlying the condition of non-imitability.

Foss (1998) states that the resource-based perspective does not escape the general problem of finding the appropriate unit of analysis. Most contributions within the RBV take the individual resource as the relevant unit of analysis to study competitive advantage. However, Foss (1998) points out that this choice may only be legitimated if the relevant resources are sufficiently well-defined and free-standing. If, in contrast, there are strong relations of complementarity and cospecialization among resources, it is the way resources are clustered and how they interplay and fit into the system that is important to the understanding of competitive advantage. Foss (1998) recognizes that the concepts 'capabilities' and 'competences' aim perhaps at grabbing this clustering and interplay. The conceptual framework takes this problem into account by relating competitive advantage to strategy rather than to individual resources.

Porter (1991) and Priem and Butler (2001 a & b) assert the circularity of the resource-based view. Priem and Butler argue that Barney's (1991) statement "if a resource is valuable and rare, then it can be source of competitive advantage" is necessarily true if the concepts 'valuable' and 'competitive advantage' are defined in the same terms. Peteraf and Barney (2003) answer this criticism by proposing a more narrow definition of competitive advantage, no more in terms of profitability advantage but in terms of competitive edge (see below).

Priem and Butler (2001 a & b) identify a second important problem, namely the exogenous nature of value in the RBV. In his response to Priem and Butler, Barney (2001) acknowledges that the determination of the value of a firm's resources is exogenous to the resource-based theory presented in his 1991's paper.

Because of its tautology and its exogenous determination of value, Priem and Butler (2001, a&b) conclude that the resource-based view has contributed very little to the explanation or prediction of competitive advantage[3] and recommend that scholars address core connections between resources and the environment because, while resources represent what can be done, the competitive environment represents what must be done to compete effectively in satisfying customer needs. Writing about the neglect of the environment, Foss (1998) says that the RBV needs not restrict its domain of application to the firm because it may in fact add some more fine-grained analysis to the understanding of industry-level competitive dynamics, for instance, by directing attention to the resources that underlie barriers to mobility and entry. Thus, bringing together the firm's resources and the competitive environment in a single framework could help to understand how resources contribute to performance (Priem and Butler, 2001, a&b) and how resources influence competitive dynamics (Foss, 1998).

While Peteraf and Barney (2003) assume heterogeneity and do not inquire into its origin, some authors argue for the development of an endogenous theory of heterogeneity. So, Mahoney and Pandian (1992, p. 374) propose either to integrate the RBV with the organizational economics and dynamic capabilities approach or to utilize the equilibrium models of industrial organization in order to explain the origins of heterogeneity. Foss and Knudsen (2003) assert that uncertainty and immobility (i.e., sunk cost commitments) should be the only conditions to enter the study of sustained competitive advantage as exogenous elements whereas a host of additional conditions are candidates for inclusion as endogenous elements. They include input heterogeneity in this unbounded list of additional conditions that give shape to competitive advantage. Many of Foss and Knudsen's (2003) additional

[3] Note that Priem and Butler (2001) fully acknowledge that the resource-based view has contributed to the explanation and prediction of the sustainability of competitive advantage by identifying the conditions that entail sustainability.

conditions relate to the competitive environment, thus supporting my claim for the integration of the competitive environment and the RVB in a single framework.

Finally, Gimeno (1999, p. 101) states that the resource-based research "has emphasized the lack of ability of imitators or rivals to erode the market position of a firm as a necessary condition for sustainability, implicitly assuming that any rival capable of eroding the position will do so, and cannot be restrained from pursuing that course of action". Extending my framework to grasp multimarket reality will allow me to consider, in analyzing sustainability, both the ability and the motivation as drivers of competitive behaviors.

Porter's five forces model

In his 1980's book "Competitive Strategy: Techniques for Analyzing Industries and Competitors", Porter outlines an analytical framework for understanding the effects of industry structure on the profit potential of firms within an industry. This framework is one of the most influential contributions to the strategic field employing IO economic logic.

Porter's (1980) framework builds on the structure-conduct-performance (SCP) paradigm from industrial organization economics. The essence of this paradigm is that the firm's performance in the marketplace depends critically on the characteristics of the industry in which it competes, i.e., the structure (Porter, 1981). In a (limited) move away from the traditional S-C-P paradigm, Porter (1980) acknowledges the role of firms in formulating appropriate competitive strategy to achieve superior economic performance, competitive strategy that may change the industry rules in the firm's favor (for instance, firm can choose strategies that affect or deter entry into their industries). Nevertheless, in Porter's (1980) work, the source of profits is not to be found in the firm but rather in the structure of the industry, especially the nature and balance of its competitive forces (Schoemaker, 1990).

Porter (1980) proposes an analytical framework to assess the attractiveness of an industry, "the group of firms producing products that are close substitutes for each other" (p. 5). He identifies five basic competitive forces seen as threats to the firm profits: threat of entry, threat of substitution, bargaining power of buyers, bargaining power of suppliers, and rivalry among current competitors. The collective impact of these five forces, the underlying structure of an industry, determines the intensity of industry competition and the ability of firms in the industry to make profits. Porter describes competitive strategy as taking defensive and offensive actions to cope successfully with the five competitive forces.

The adoption of the SCP paradigm in strategic management and as basis of Porter's (1980) five forces model has raised two important criticisms. First, the unit of analysis in the SCP-based models being the industry rather than the firm these models cannot explain intra-industry performance differences among firms. However, empirical studies have found significantly higher firm-effects than industry-effects on performance (see, for instance, Schmalensee, 1985, Rumelt, 1991, McGahan and Porter, 1997, Hawawini, Subramanian and Verdin, 2003). A second criticism (linked to the first one) concerns the managerial implications of the SCP logic. According to Porter's (1980) five forces framework, firms should enter and operate only in attractive industries (i.e., industries with low levels of threat and high levels of opportunity). However, Porter's framework focuses on what makes some industries or positions within industries more attractive (cross-sectional problem) and not on why some firms are able to get into advantageous positions (longitudinal problem). While the level of threat and opportunity in an industry influences firm performance, the returns from entering and operating in an industry cannot be evaluated independently of the firm's resources and capabilities.

Another criticism to Porter 1980's work is that it overemphasizes competition to the detriment of cooperation. Indeed, the five forces framework builds on Porter's conviction that the source of profits is primarily to be found in the nature and balance of competition. In consequence, relationships with competitors, customers, and suppliers are reduced to conflicts for profits.

Porter's strategy is about positioning a business in a given industry structure, while "the reality of business during the 1990s is that industry structures are far from stable and are undergoing major transitions" (Prahalad and Hamel, 1994, p. 10). "Traditional industry boundaries are blurring as increasingly many industries converge or overlap, especially in information technology-related industries" (Sampler, 1998, p. 344). In an increasingly dynamic environment a static snapshot of the industry may no more be the right tool for formulating strategy. Furthermore, the primary focus of Porter's strategic analysis is the business unit. This unit of analysis is adequate if corporate strategy is seen as portfolio strategy but less appropriate if when the corporation is viewed as a bundle of resources.

I have chosen to look at competition through a lens combining the RBV and Porter's model. This choice implies working with some limits of Porter's framework, in particular the focus on the business unit and market positioning. In consequence, my analysis may be less relevant to fast changing environments.

Resource-based vs. Porter's model: complementarities and differences

Numerous RBV authors (Peteraf and Barney, 2003; Amit and Schoemaker, 1993; Peteraf, 1993, Mahoney and Pandian, 1992; Conner, 1991; Barney, 1991; Wernerfelt, 1984) recognize that the resource-based perspective and industrial organization tools, such as Porter's five forces model, complement each other in explaining the sources of firm performance. Foss (1996, p. 19) summarizes the thematic complementarities between Porter's framework and the resource-based view. The resource-based is more oriented towards the longer run and may allow more fine-grained competitor analysis, it may, for example, be helpful in ascertaining the dangers of future competitive imitation through an analysis of the resources and capabilities of competitors. Porter, in turn, may add an understanding of the external environment in terms of the short run with concepts such as commitment, signaling, the role played by exit barriers etc.

Besides thematic complementarities, there are also conceptual complementarities. To build their composite framework, Spanos and Lioukas (2001) present two such similarities: (a) the RBV perspective and Porter's (1980) framework share the view that persistent above-normal returns are possible, and (b) both perspectives seek to explain the same phenomenon of interest (i.e., sustained competitive advantage). In addition, both perspectives assume that managers are rational and that a firm's ultimate goal is to increase its performance.

In spite of the complementarities between the resource-based view and Porter's (1980) framework, some important differences must also be acknowledged in order to avoid the wrong kind of eclecticism Foss (1996) pointed to.[4]

First, arguably, Porter's (1980) framework and the RBV do not have the same unit of analysis (industry versus firm or individual resource). In fact, Porter (1980) only identifies and discusses industry determinants of competitive advantage; he does not analyze the underlying resource endowments that allow firms to carry out their strategic ploys (Foss, 1996).

[4] Speaking about Porter's work, Foss (1996, p. 9) utters a general warning. "What is somewhat troubling with Porter's work is that is has become too eclectic [in his 1985 and 1990's books], or rather that he has embarked upon the wrong kind of eclecticism. Specifically, he has made numerous ad hoc adjustments (meaning both extensions and modifications) to his underlying IO framework. This exemplifies in the work of a single scholar the basic malady of the strategy field: that too many theoretical alternatives are allowed to co-exist or are brought together in loose frameworks, with no serious attempt to confront them and examine their logical relations (in terms of whether they are consistent, complementary, or antagonistic/mutually exclusive)."

Second, regarding the articulation among competitive environment, resources and strategy, Porter's five forces framework builds on the structure-conduct-performance (SCP) paradigm. In Porter's framework, the accumulation of resources is part of the implementation of the strategy dictated by conditions and constraints in the external environment. In opposition, the resource-based view suggests that firm resources provide the basis for strategy: strategy should allow the firm to best exploit its resources relative to the competitive environment.

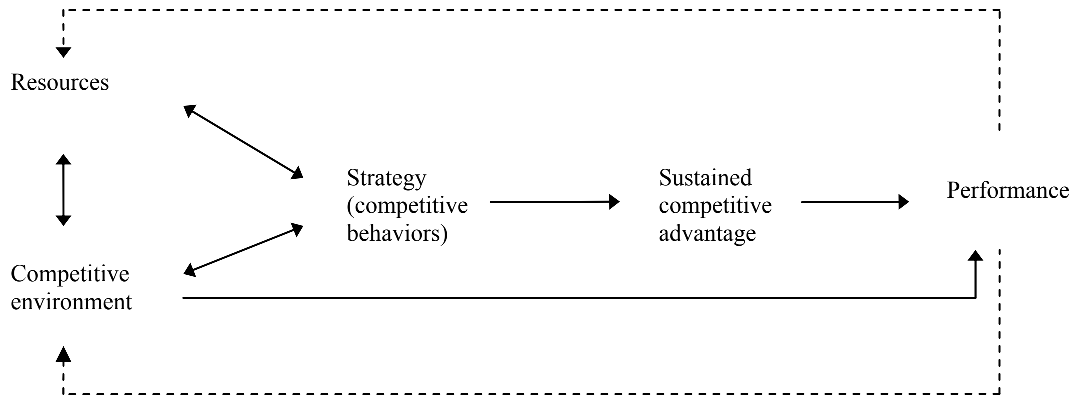
Third, the resource-based view and Porter's (1980) approach differ fundamentally regarding the nature of the rents a firm can achieve. The RBV is an efficiency-based explanation of performance differences; it is concerned with Ricardian rents resulting from the scarcity of superior resources (Peteraf and Bergen, 2003) and quasi-rents, i.e. the difference between the value of an asset in its first best use and its value in its next best use. "Superior resources are more 'efficient' in the sense that they enable a firm to produce more economically and/or better satisfy customer wants" (Peteraf and Barney, 2003, p. 311). In contrast, Porter's industrial organization approach emphasizes the exercise of market power and monopoly-type rents as the sources of performance differentials (Conner, 1991). In Porter (1980), competitive advantage stems from impeding the competitive forces, which tend to drive economic returns to zero, by erecting entry and mobility barriers, thus from restricting supply. Williamson (1991) regroups the exercise of market power, strategic ploys and efforts to blunt competition under the term 'strategizing'. According to Williamson (1991, p. 75), economizing (i.e., an efficiency perspective) is much more fundamental because strategizing is relevant principally to firms that possess market power – which are a small fraction of the total (ephemeral market advantages ignored) – and because a strategizing effort will rarely prevail if a program is burdened by significant cost excesses in production, distribution, or organization. I do not agree with this a priori rejection of one type of rents. On the contrary, this third difference is an important advantage of combining the RBV with an IO-type approach in understanding how resources and competition interact. Grant (1991, p. 117) offers some support to my position: "A closer look at market power and the monopoly rent it offers, suggests that it too has its basis in the resources of the firms. The fundamental prerequisite for market power is the presence of barrier to entry. Barriers to entry are based upon scale economies, patents, experience advantages, brand reputation, or some other resource which incumbent firms possess but which entrants can acquire only slowly or at disproportionate expenses. Other structural sources of market power are similarly based upon firms' resources: monopolistic price-setting power depends upon market share which is a consequence of cost efficiency, financial strength, or some other resources."

Furthermore, Foss (1996) emphasizes that IO builds on neoclassical theory with respect to equilibrium orientation. With regard to equilibrium assumptions, the RBV authors have divided in two groups. Some authors, among whom Peteraf (1993) and Barney (1986 and 1991), commit to the strong kind of equilibrium theory used in IO, in which all phenomena should be represented as if in equilibrium. On the contrary, as emphasized by Foss (1998), it is perfectly possible to cast the resource-based ideas in terms of a 'softer' type of equilibrium, a theory of equilibrium in which equilibrium is a legitimate tool of analysis as a state that real-world markets are constantly tending towards but perhaps not reaching.

CONCEPTUAL FRAMEWORK

The proposed framework integrates both resources and competitive environment as sources of performance and drivers of strategy and, in particular, competitive behaviors. This framework can be summarized as follows:

The resources and the competitive environment condition firms' strategy. The firm strategy and performance in turn affect the competitive environment and resources, and all these changes generate new information which in turn creates new learning opportunities and may lead to the creation and development of new resources. Thus, I view strategy as an ongoing sequence of actions and reactions conditioned by the firm resources and competitive environment, which in turn become exogenous events in the environment of other firms.



The remaining of this section first presents the various components of this framework (resources, competitive environment, strategy, competitive advantage and performance) and their interactions. The aim is to define precisely the concepts used in this paper and to make explicit the researcher's position with regard to some debates in the literature. Next, it reviews how resources contribute to building competitive advantage and performance.

For the sake of simplicity, this theoretical framework is first developed focusing on the issues of performance and competition in a given (product and/or geographic) market. Thus, the term 'firm' in the following section refers either to a single product firm busy in a single geographic market or to a business unit with the same characteristics. The framework is extended to grasp a multimarket reality in the last point of this section.

Resources

This research adopts Barney's (1991) definition of resources: firm resources include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies. The second part of Barney's (1991) definition, namely "[strategies] that improve its efficiency and effectiveness", has been dropped in order to take into account market power as well as efficiency in the creation of performance.

In their contribution to the RBV, scholars have proposed various constructs, such as resources, capabilities, competencies, skills, factors and assets, to refer to different objects. The present paper uses the term 'resources' as a generic construct that encompasses all these realities.

Competitive environment

In his analysis of the competitive environment, Porter (1980) identifies five forces: bargaining power of suppliers, bargaining power of customers, threat of new entrants, threat of substitution, and rivalry among current competitors. This list reflects Porter's adoption of a market power perspective and is ill-suited to account for the impact of the competitive environment on sustained competitive advantage and performance as this research defines them (cf. below). For instance, while customers bargain for the value created by the firm (market power perspective), they also determine the value of the product through their willingness-to-pay (efficiency perspective). Despite its market power perspective, I think that Porter's framework can be fruitfully used to analyze the competitive environment.

Strategy and competitive behaviors

Strategy is a major channel of connections between the competitive environment and resources. On the one hand, strategy acts as a fulcrum in the deployment of firm resources in the competitive environment (Harris and Ruefli, 2000), with the aim to generate sustained competitive advantage. In particular, firms constantly take offensive and defensive strategic actions vis-à-vis competitors (Baum and Korn, 1996) thus modifying the competitive environment. And, on the other hand, strategy is dependent on and constrained by the controlled resources (path dependency, Collis, 1991) and strategy coordinates the development and protection of existing resources and the creation or acquisition of new resources, taking into account the competitive environment.

This research is primarily interested in realized strategy, i.e. the competitive behaviors, actions and responses, that may be observed. In the competitive dynamics literature, an action (or attack) is classically defined as a specific competitive move initiated by a firm that may lead to the firm's acquiring its rivals' market shares or reducing their anticipated returns. And similarly, a response (or retaliation) is defined as a specific countermove, prompted by a rival's attack, that a firm takes to defend or improve its share or profit position in the industry. Well illustrated by the choice of the word 'attack', these definitions of action and response (like Porter's model) neglect the possibility of firms behaving in order to increase cooperation with other firms. In fact, they convey a perception of the relationship between two firms as a zero-sum game where one firm's gain is another firm's loss. However, some evidence points to the idea that cooperation may be significant in the relationships between firms. For instance, Smith and Wilson (1995) find that the second most frequently observed response to entry is price increase. They write (p. 158): "In this study airlines appeared to be signaling a willingness to share a market and to act cooperatively by increasing price when an entry occurs". Gnyawali and Madhavan (2001, p. 433) argue that "firms often engage in complex and simultaneous competitive-collaborative relationships". They see cooperation and competition as distinct, orthogonal constructs and not as opposite ends of a single continuum: firms may work together in some domains and at the same time compete by taking independent actions in other domains. Focusing on behavioral aspects of competition and cooperation, Lado, Boyd and Hanlon (1997) explain that firms combining high levels of competitive and cooperative orientations will generate higher rents because of greater knowledge development, economic and market growth and technological progress. In consequence, I will adopt a broader definition of action and response that allow for the possibility of cooperation.

Competitive advantage

In close line with Peteraf and Barney (2003), I define competitive advantage as superior differentiation and/or lower costs by comparison with the marginal (breakeven) competitor in the product market. "An enterprise has a Competitive Advantage if it is able to create more economic value than the marginal (breakeven) competitor in its product market. […] The Economic Value created by an enterprise in the course of providing a good or service is the difference between the perceived benefits gained by the purchasers of the good and the economic cost to the enterprise" (Peteraf and Barney, 2003, p. 314). In contrast with Peteraf and Barney, I do not exclude that the exercise of market power help to build and protect the competitive advantage. Porter adopts a similar definition of competitive advantage (see, for instance, Porter, 1991), which facilitates the integration of both perspectives. In Barney and Peteraf's (2003) definition, economic value is determined by factors exogenous to the RBV, namely the perceived benefits gained by customers and resource costs. So, based on their perception of the usefulness of the product on offer, customers determine their perceived benefits. Similarly, the bargaining power of resource suppliers (external suppliers of resources and employees) affects the firm's competitive advantage because it influences the economic cost of the acquired resource. In turn, a resource supplier's bargaining power depends on the perceived value of the resource to the firm (Bowman, 2001).

By sustained competitive advantage I understand a competitive advantage that persists over a long period of time. This approach proposed by Porter (1985) has been adopted, among others, by Wiggins and Ruefli (2002) and Acquaah (2003). Barney (1991) argues against the use of calendar time to define sustainability and considers that a sustained competitive advantage is achieved only if it continues to exist after competitors' efforts to duplicate that advantage have ceased. Barney (1991) writes that this equilibrium definition has the theoretical advantage of avoiding the difficult problem of specifying how much calendar time firms must possess a competitive advantage in order for this advantage to be considered 'sustained'. Wiggins and Ruefli (2002, p. 84) argue that, although Barney's definition may be more precise theoretically, "it is virtually impossible to meaningfully operationalize quantitatively". Wiggins and Ruefli (2002) explain that the time frame that determines the sustainability of competitive advantage may vary from industry to industry depending on such exogenous variables as product life cycles, patent protections, copyrights, or other variables specific to an industry.

Performance

Performance, viewed here as profit in excess of the cost of capital, depends upon the attractiveness of the industry in which the firm operates (industry-effect on performance) and the firm's competitive advantage.

Having a competitive advantage does not lead automatically to higher performance by comparison with the breakeven competitor in the industry. What fraction of the value linked to competitive advantage is appropriated by the firm depends on the firm's product price. On the one hand, product pricing is part of the firm's strategy. On the other hand, when choosing its product price the firm is influenced by its competitive environment, in particular by the bargaining power of customers and by the current prices of competitors and the expected reactions of competitors to the chosen price.

Resources as source of competitive advantage

Resources have a rent-producing potential if they contribute (alone or bundled with other resources) to building competitive advantage (i.e. superior differentiation and/or lower costs by comparison with the marginal competitor in the product market). This rent-producing potential is sustained as long as the resource or bundle of resources on which the competitive advantage is based is immobile and not made obsolete by environmental changes. Resources with a sustained rent-producing potential are referred to as strategic resources.

By defining competitive advantage as superior differentiation and/or lower costs, factors exogenous to the RBV, I hope to have escaped the tautological nature of Barney's (1991) 'value condition'. In fact, in line with Peteraf and Bergen (2003), I reinterpret Barney's 'value condition' as a demand-side concept.

The above statement mentions that resources may contribute to competitive advantage in a bundle of resources rather than individually. Foss (1998) says that most contributions within the RBV take the individual resource as the relevant unit of analysis to study competitive advantage. However, he points out that this choice may only be legitimated if the relevant resources are sufficiently well-defined and free-standing. If, in contrast, there are strong relations of complementarity and cospecialization among resources, it is the way resources are clustered and how they interplay that is important to the understanding of competitive advantage. Conner (1991), too, asserts that the greater the linkage of an input to the firm's existing asset base (degree of an input's specificity), the greater the input's rent potential to that firm. With her empirical study of the typesetter industry, Tripsas (1997) shows that, when incumbents experience a technological disadvantage in the face of competence-destroying technological change, the extent to which that disadvantage translates into a commercial disadvantage depends upon the other assets possessed by established firms.

In the figure above, there is no arrow linking resources and competitive advantage to emphasize the last condition of Barney's VRIO framework, namely that a resource have to be organized, combined and deployed appropriately to be source of competitive advantage. Indeed, if the firm's strategy does not set up the correct structure, control systems and reward systems to support the resource, it seems highly improbable that the resource will contribute to the firm's competitive advantage.

Resource immobility (or imperfect mobility) points to the existence of factor market imperfections as a necessary condition for the sustainability of competitive advantage. Immobility includes imperfect imitability and substitutability, the conditions for sustainability quoted by Barney (1991), but is broader in the sense that it refers to all cases where sunk costs induce competitors not to imitate the resource (bundle) functionality (see Foss and Knudsen, 2003). Thus, while for some period of time a firm may earn above-average returns through the use of resources that are mobile, to be source of sustainable competitive advantage a resource must be protected by a barrier to resource mobility. Barriers to resource mobility, also called isolating mechanisms or resource position barriers, are economic forces that limit the extent to which a competitive advantage can be duplicated or neutralized through the acquisition, imitation or substitution by competitors of the resources on which this advantage is built (inspired by Besanko, Dranove and Shanley, 2000 and Oliver, 1997).

Resources as source of performance

In addition to building competitive advantage, resources may increase the firm's capacity to charge high prices and, thus, contribute to performance by helping the firm to appropriate the value linked to competitive advantage. Furthermore, resources may be used to erect entry barriers and so increase performance at the industry level (i.e. for all industry players included the breakeven competitor). For instance, a firm may use its lobbying capability to prompt the government to erect entry barriers that enable the firms in the industry to charge high prices once output has been restricted. Note that industry competitors will be able to free-ride on the firm's expenses to build entry barriers.

The repartition of the rents generated by resources is an important issue that is only partially tackled by the RBV. Proponents of the resource-based view generally assume that there is a strong link between having strategic resources and firm performance (Coff, 1999). However, the resource-based view was formulated to explain when firms will generate rents and not which stakeholder will appropriate them. Understanding this repartition requires to consider the firm's competitive environment and employees' bargaining power. Indeed, the proportion of the value created by the firm that is retained by it is a function of the power relationships between the various economic actors involved in the transactions (Bowman, 2001). The retained value can be spent or distributed to suppliers of capital (Bowman, 2001) and is what Amit and Schoemaker (1993) call organizational rents. Spanos and Lioukas' (2001) empirical findings confirm this view by suggesting that industry and firm specific effects are both important but explain different dimensions of performance. According to their results, industry forces influence market performance and profitability while firm assets influence profitability via market performance (the direct influence of firm assets on profitability is weak and insignificant). Coff (1999) proposes to augment the resource-based view with a bargaining power model to predict when rents will be generated and who will appropriate them.

I do not claim to have included in this framework all sources of performance. For instance, I do not take into account corporate effects on performance. I think that this choice and limits are coherent with my aim to analyze the interplay of resources and competition.

Multimarket reality

The above presented framework is applicable to single-product firms operating in a single geographic market. I do not agree with Peteraf and Barney (2003, p. 314) that this type of framework "can be extended in a straightforward fashion to the multiproduct realm". On the contrary, I argue below that multimarket reality significantly impacts competition. To grasp multimarket effects, this paper makes use of some interesting insights from the competitive dynamics literature regarding to the behavioral assumption underlying the condition of non-imitability and the relevant unit of analysis to study competition.

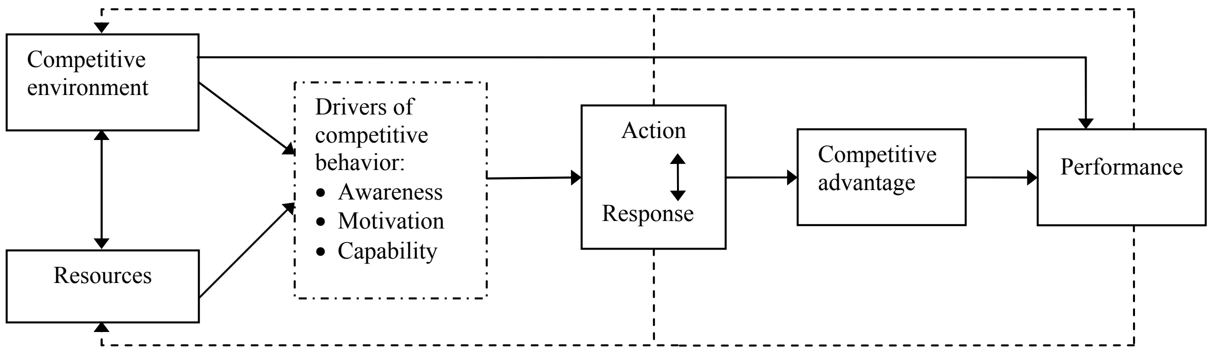
"Multiple point competition can be defined as a situation where firms compete against each other simultaneously in several markets" (Karnani and Wernerfelt, 1985, p. 87). This situation may exit with multiproduct firms or when firms are present in distinct geographic markets. This multimarket aspect of competition is important to understand competition because it helps to explain where competitive moves take place and the strength of competitive moves. First, when rivals encounter each other in multiple markets they have the possibility to respond to an aggressive action not only in the market where the attack has occurred but also in markets in which both compete and that are more salient to the attacker. Second, recent longitudinal studies provide robust support linking multimarket contact to mutual forbearance behavior, i.e. less vigorous competitive interactions in all markets in which firms meet and more stable and predictable behaviors over time (Korn and Baum, 1999). Two different processes may be responsible for mutual forbearance: deterrence and familiarity (Jayachandran, Gimeno and Varadarajan, 1999). Potential financially damaging cross-market retaliation tends to deter competitors from attacking aggressively in a given market (Bernheim and Whinston, 1990; Porter, 1980, pp. 84-85). In addition to mutual deterrence, multimarket contacts may also help firms to interpret their rivals' strategies and signal their own. This familiarity may facilitate tacit coordination (Baum and Korn, 1996; Boeker, Goodstein, Stephan, Murmann, 1997).

According to Gimeno (1999), sustainability of a firm's competitive advantage is not necessarily linked to a lack of ability of imitators to erode the firm's market position (as assumed by the RBV) but may also be due to a lack of motivation to attack by would-be imitators. To correctly grasp the dimension of motivation the multimarket reality of the firm's competitive environment must be considered. Indeed, successful deterrence can reduce the rivals' motivation to attack and allow the firm to sustain its competitive advantage in a product market even among rivals with the ability to erode it (Gimeno, 1999). In line with Chen and Miller (1994) and Chen (1996), I find important to consider the three components that shape human and firm behaviors, namely awareness, motivation and capability/ability.

The competitive dynamics literature also highlights that all firms in a market or industry are not affected equally by competitive pressures. According to Chen (1996) and Gimeno (1999), competition is not a property of markets or industries but of the relationship between two firms. In consequence, they plead for the study of competition at the level of a pair of firms. In addition, researchers increasingly choose to assess the intensity of rivalry from direct observations of moves and countermoves rather than from the impacts of moves and countermoves on price or performance. According to Chen (1996, p. 109), the action/response dyad is the level "where competitive engagement occurs and where the dynamic nature of strategy and competition and the 'mutual interdependence' of firms in an industry are best captured". This paper adopts the same approach and uses the action/response dyads as unit of analysis. I hope that this choice will answer Prahalad and Hamel's (1994) call to rethink the unit of analysis for competitiveness.

Numerous authors in the competitive dynamics literature recognize the importance of resources for competitive behavior. For instance, Chen and Miller (1994) consider firm resources as one determinant of the firm capacity to respond; Gimeno and Woo (1996) study the impact of strategic similarity (i.e., the similarity in the general pattern of resource deployments and competitive orientations) on rivalry; Chen (1996) compare firms along two dimensions, market commonality and resource similarity; Jayachandran, Gimeno and Varadarajan (1999) identify resource similarity and organizational structure of competing firms as factors moderating the relationship between multimarket contact and the intensity of competition; Gimeno (1999) finds support for the operationalization of the strategic importance of market to firms with the dimension of resource centrality; linking multimarket competition and resource allocation, McGrath, Chen and MacMillan (1998) suggest that a firm can strategically use its corporate-level resources allocation to reconfigure its competitive context by influencing other firms' resource allocations.

We conclude this point on multimarket contacts by adapting the conceptual framework to integrate the elements that have just been discussed.



Basically, we find here the elements and links presented in the first figure. However, some differences are noteworthy. First, in this second framework our unit of analysis becomes the action-response dyad. Second, we moderate the impact of the competitive environment and firm resources with the drivers of competitive behavior in order to be able to distinguish between the ability and the motivation to act and react.

RESOURCES AND COMPETITION

On the basis of this conceptual framework, I discuss two aspects of the connections between resources and competition: competing for resources and competing with resources.

Researchers' attention has often focused on competition in product markets. For instance, Porter's analysis concentrates on the firms' competitive interactions on the 'demand side'. However, firms compete simultaneously on the 'resource side'. The next section tries to outline the various competition processes that make up the competition for resources. Taking into account these different competition processes enriches competitor analysis. As highlighted by Chen (1996) and Peteraf and Bergen (2003), each firm faces a unique set of competitors when similarities among products and resources are considered to identify competitors.

To shed light on how resources may be used to compete some competitive behaviors are examined from a resource perspective.

Competing for resources: various competition processes

Two steps may be distinguished in the competition for resources: obtaining the resource and imitating/protecting the resource.

Step 1: Obtaining the resource

I will focus here on two ways of obtaining a resource: acquisition in a resource market in exchange for cash and internal building. I, thus, leave out other arrangements such as mergers and acquisitions and long-term cooperative arrangements.

Regarding traded[5] resources, the RBV has developed from a somewhat restrictive assumption, namely that resources that could be obtained on an open market would not be able to lend a firm distinctive competitive advantage. The reasoning is the following. So long as markets are reasonably efficient and competitive advantage is not wholly the consequence of luck, asymmetric information about those markets or the stupidity of others, rent-yielding resources must originate within the firm if they are to be of value because the price the firm pays in a competitive factor market will fully capitalize the rents from the resource (Barney, 1986; Spender, 1996). In consequence, the resource-based view has focused almost entirely on internally created resources. However, theoretically, there is no reason to assume that markets for resources are nearly perfect (i.e. offering full and symmetric information to buyers and sellers). Empirically, markets for resources, even intangible resources, exist. In biotechnology and pharmaceuticals, extensive markets for technologies and know-how have developed over the past decade making external resource acquisition an important strategic option (Mathews, 2003). Furthermore, Knott (2003) discusses the existence of a market for franchise, a kind of organizational routine.

Mathews (2003) identifies three steps in the process of strategic resource acquisition: search, acquisition and absorption. According to Mathews (2003), who principally discusses the external acquisition of technology and know-how, absorption is the most demanding phase of the whole process and requires the firm to possess the capabilities to integrate the resource with the firm's existing resource base. Cohen and Levinthal (1990) suggest that the firm's absorptive capacity is largely a function of the firm's level of prior related knowledge. In consequence, even when markets for resources exist, incumbents are somehow protected from competition by firms that do not use the same resources (in particular technologies) because these firms will find it difficult to absorb the resources they might acquire on the markets.

To be source of competitive advantage for its buyer a resource traded on a market must generate rents that the firm is able to appropriate. This will be the case when the firm purchases the resource for less than its marginal productivity when used in combination with the firm's stock of other resources (i.e. resource cospecialization, synergies and complementarities increases the resource marginal productivity). Because the resource may have a different marginal productivity in different industries, the presence of buyers from other industries in the resource market may raise the resource price above the firm's reservation. The firm may then turn to internal resource creation. The firm will be able to purchase the resource for less than its marginal productivity when it possesses superior information, has bargaining power on the resource supplier or is lucky. Chi (1994) discusses the conditions for imperfectly mobile resources to be gainfully traded between firms and the transaction cost problems linked to trading imperfectly mobile resources.

The firm may choose to build the resource internally when no market for the resource exists or when external resource acquisition is more costly than resource building. Mathews (2003), who sees external resource acquisition as an important strategic option, compares the potential competitive advantages and disadvantages of external sourcing with those of internal

[5] We prefer the term 'traded' to 'tradeable' as we want to refer to resources for which a market exists.

resource building. He shows how the features of the resource accumulation process (time compression diseconomies, asset mass efficiencies, asset stock interconnectedness, prevention of asset erosion and causal ambiguity) that, according to Dierickx and Cool (1989), should favor the internal development of resources may turn to be competitive disadvantages in some circumstances.

Competition to be first may be an important competition process when the firm that develops first the resource can get it protected by property rights or when first-mover advantages are significant (e.g.. learning and network effects).

Thus far I have spoken of choosing to develop resources internally, let me make clear that the creation of strategic resources is not always the result of strategic intention and planning. Firms develop some resources unintentionally and realize later that these resources are strategic.

Step 2: Imitating and protecting the resource

Once a firm has acquired or built a new resource, it deploys the resource in order to make it contribute to the firm's competitive advantage. Sooner or later competitors in the product market perceive the change in the firm's competitive advantage and wonder about its source. When competitors have been able to identify which new resource the firm has acquired or built they may consider imitating[6] the resource or the resource functionality through acquisition or internal building. Assuming that the resource would bring revenue to the competitor, whether it will imitate the resource depends on the costs it expects to incur.

However, the firm's resource or the bundle of resources in which it is integrated may be protected by barriers to imitation. A barrier to imitation, also called isolating mechanism, barrier to resource mobility and resource protection barrier, is a phenomenon that restrains or obstructs imitation by competitors (Reed and Defillippi, 1990).

Researchers have proposed and discussed numerous isolating mechanisms (see for instance Rumelt, 1984; Ghemawat, 1986; Dierickx and Cool, 1989). All these mechanisms are not reviewed here, I only mention some categories. Causal ambiguity regarding the source(s) of competitive advantage is of particular interest because it prevents competitors from knowing exactly what to imitate and how to do it. Even if competitors have been able to identify the source(s) of the firm's competitive advantage, imitation may be costly to carry on or to carry on rapidly. Isolating mechanisms which make imitation costly for competitors are superior access to resources or customers (e.g. reputation and buyer switching costs), minimum efficient scale large relative to market demand, intangible barriers to imitation (causal ambiguity, dependence on historical circumstances and social complexity), and strategic fit. Imitation in the short-term may be costly because of barriers to imitation such as legal restrictions[7] (patents, copyrights, trademarks, and government control over entry into markets) and diseconomies of time compression. In addition to protecting the firm's resources early-mover advantages are isolating mechanisms that increase the economic power of the first-mover's competitive advantage over time. Besanko, Dranove and Shanley (2000) present four isolating mechanisms that fall under this category: learning curve, network externalities, reputation for quality in the sale of experience goods, and buyer switching costs.

Imitation is a competition process. Barriers to imitation will have different height for different competitors because of factors such as the competitors' competitive aggressiveness

---

[6] From here we use the terms 'imitate' and 'imitation' broadly, to refer to acquisition and internal building of a resource or resource functionality.
[7] According to the legal system, ownership rights vary in the degree of exclusion they permit and the temporal length of the protection.

and absorptive capacity. And, because all isolating mechanisms erode over time, the firm must invest to maintain the barriers that protect its resources.

Competing with resources: resources and competitive behaviors

Firms may adopt several kinds of competitive behaviors. First, firms may take actions or responses that aim at improving their position vis-à-vis rivals by increasing their efficiency or by hurting competitors (i.e. by damaging competitors' performance). Second, firms may act/respond friendly to some rivals in order to foster collusion, to avoid harmful retaliatory moves from these competitors or to achieve gains from cooperation.

As emphasized by the RBV, resources may help to increase efficiency by decreasing costs and increasing customers' willingness-to-pay for the firm's product. If the firm transfers some of the efficiency gain to its customers (i.e., increasing customer surplus for the firm's product), it will improve its competitive position with respect to the other firms in the product market.

Besides using resources to improve its efficiency, a firm may leverage its resources to hurt competitors. A firm adopts such a behavior if it perceives the relationship with the competitor as a zero-sum game where one firm's gain is another firm's loss. The firm may raise rivals' costs, decrease buyers' willingness-to-pay for rivals' products or adopt pricing predatory behaviors. Note that this list encompasses the definition of competitive advantage and its link to performance presented in the above theoretical framework. By competitors and rivals, I mean potential entrants and substitutors as well as actual competitors.

In an attempt to extend the resource-based view, McWilliams, Van Fleet and Cory (2002) mention three basic types of strategies to raise rivals' costs using firm resources: the monopolization of resources, the use of differentiation to have a privileged access to resources, and the use of political strategies. The first type of strategy points to a firm restricting output in the product market by using market power with regard to a resource that is necessary to competitors. This kind of behavior is called vertical market foreclosure by economists and can be achieved in several ways of which vertical integration (see Riordan, 1998), long-term contracts and exclusive dealing agreements (see Rey and Tirole, 2003). The second strategy is to obtain a reputation and public recognition as a high status firm. With this high status, firms have been demonstrated to have particular access to low cost capital and unique pricing benefits (McWilliams, Van Fleet and Cory, 2002). Reputation is a firm intangible resource that needs to be accumulated over time. Consequently, it is not readily available to new entrants. The third strategy consists in lobbying government(s) to influence regulations that preclude competitors from using a resource (main issue in McWilliams, Van Fleet and Cory, 2002). Some resources fall short of being sources of sustained performance because substitutes of these resources exist or may be developed rapidly. Firms may act upon the rent-producing potential of these resources by engaging in political strategies that restrict the set of substitutes available to competitors. This explains why firms may engage in political activities to affect industry level regulations: these regulations will have a differential impact on the industry participants according to their bundles of resources.

Firms may also use their resources to decrease buyers' willingness-to-pay for rivals' products. For instance, once a firm has built a reputation and developed strong customer loyalties, it may become difficult for later entrants to attract customers. Through advertising campaigns and public relation activities, a firm may also try to hurt competitors' reputation. In addition to customer loyalties, firm may create switching costs. Long-term contracts with penalty for breach and product features in network industries are sources of such switching costs.

Finally, firms may use their resources to affect prices in the product market. So, firms with sufficient financial resources may adopt predatory pricing behaviors that aim at driving a competitor out of the market by badly damaging its profit opportunities.

It is not always in the firm's interest to behave aggressively toward competitors. Firms may acknowledge that opportunities exist for realizing benefits through cooperation. On the one hand, firms may commit resources to foster high prices and tacit collusion with some of their competitors in the product market. For instance, firms may collaborate to erect mobility and entry barriers. On the other hand, collaboration may focus on resource building. Cooperation "can enhance the competitive position of firms by enabling partners to build and leverage idiosyncratic, rent-yielding organizational competencies and simultaneously reduce the costs and risks associated with the mobilization of such competencies" (Lado, Boyd and Hanlon, 1997).

CONCLUSION AND FUTURE RESEARCH IMPLICATIONS

In conclusion, this paper has developed a general framework integrating resources and competitive environment as sources of firm competitive advantage and performance, with a will to consider market power as well as efficiency rents. On the one hand, this conceptual framework is an attempt to synthesize the RBV and some of the criticisms that have been addressed to this theory. On the other hand, it builds on Porter's five forces model to incorporate the environmental factors relating to competition. To grasp the impact of multimarket contacts on competition, the paper has brought into the conceptual framework some insights from the competitive dynamics literature (regarding to the behavioral assumption underlying the condition of non-imitability and the relevant unit of analysis to study competition).

This paper has also sketched the connections between resources and competition. It has first presented some of the competitive processes that make up competition for resources: competition in resource factor markets, competition to be first in internal resource building and imitative competition. It has also explained how firms may use their resources to compete, in particular, how firms may leverage their resources to hurt competitors.

For strategic managers, this approach suggests that resources should be at the heart of competitive strategy. We have, for instance, highlighted the strategic importance of considering external resource acquisition as a strategic option, of developing absorptive capacity and of investing in isolating mechanisms.

The analysis of competition from a resource perspective opens up new and exciting avenues for research.

I suggest that researchers begin with an empirical investigation of the links among the competitive behaviors, the nature of the resources on which this competitive behavior relies, and the features of the competitive environment in which the competitive behaviors take place. We would expect some patterns to emerge.

Future research may also adopt a more dynamic approach to examine the impact of competition on the process of resource creation. It seems fundamental to understand how competitive environment, resources and competitive behaviors shape each other over time. "Strategy is essentially a dynamic concept. It describes a modus operandi more than a posture, a process more than a state. It characterizes how the firm acts upon, enacts, or adapts to its environment. As a result, strategy can best be understood by tracking it over time; by looking at behavior rather than condition; by studying 'what happens in response to what'" (Miller and Friesen, 1982, p. 1020). To grasp this dynamic aspect of competitive behaviors researchers could make use of insights from the competitive dynamics literature.

REFERENCES

Acquaah, Moses, "Corporate Management, Industry Competition and the Sustainability of Firm Abnormal Profitability", *Journal of Management & Governance*, 2003, Vol. 7, No. 1, 57-85.

Amit, Raphael and Schoemaker, Paul, "Strategic assets and organizational rent", *Strategic Management Journal*, 1993, Vol. 14, 33-46.

Barney, Jay, "Strategic factor markets: expectations, luck, and business strategy", *Management Science*, 1986, Vol. 32, No. 10, 1231-1241.

Barney, Jay, "Firm Resources and Sustained Competitive Advantage", *Journal of Management*, 1991, Vol. 17, No. 1, 99-120.

Barney, Jay, "Is the resource-based "view" a useful perspective for strategic management research? Yes", *Academy of Management Review*, 2001, Vol. 26, No. 1, 41-56.

Baum, Joel and Korn, Helaine, "Competitive dynamics of interfirm rivalry", *Academy of Management Journal*, 1996, Vol. 39, No. 2, 255-291.

Bernheim, B. Douglas and Whinston, Michael, "Multimarket Contact and Collusive Behavior", *The RAND Journal of Economics*, 1990, Vol. 21, No. 1, 1-26.

Besanko, David, Dranove, David and Shanley, Mark, *Economics of Strategy*, 2000, USA, John Wiley & Sons, Inc.

Boeker, Warren, Goodstein, Jerry, Stephan, John and Murmann Johann Peter, "Competition in Multimarket Environment: The Case of Market Exit", *Organization Science*, 1997, Vol. 8, No. 2, 126-142.

Bowman, Cliff, "'Value' in the Resource-Based View of the Firm: A Contribution to the Debate", *Academy of Management Review*, 2001, Vol. 26, No. 4, 501-502.

Chen, Ming-Jer and Miller, Danny, "Competitive Attack, Retaliation and Performance: An Expectancy-Valence Framework", *Strategic Management Journal,* 1994, Vol. 15, No. 2, 85-102.

Chen, Ming-Jer, "Competitive analysis and inter-firm rivalry: Toward a theoretical integration", *Academy of Management Review,* 1996, Vol. 21, No. 1, 100-134.

Chi, Tailan, "Trading in Strategic Resources: Necessary Conditions, Transaction Cost Problems, and Choice of Exchange Structure", *Strategic Management Journal,* 1994, Vol. 15, No. 4, 271-290.

Coff, Russell, "When Competitive Advantage Doesn't Lead to Performance: The Resource-Based View and Stakeholder Bargaining Power", *Organization Science*, 1999, Vol. 10, No. 2, 119-133.

Cohen, Wesley and Levinthal, Daniel, "Absorptive Capacity: A New Perspective On Learning And Innovation", *Administrative Science Quarterly*, March 1990, Vol. 35, No. 1, 128-152.

Collis, David, "A Resource-Based Analysis of Global Competition: The Case of the Bearings Industry", *Strategic Management Journal*, 1991, Vol. 12, Special Issue, 49-68.

Conner, Kathleen, "A Historical Comparison of Resource-Based Theory and Five Schools of Thought Within Industrial Organization Economics: Do We Have a New Theory of the Firm?", *Journal of Management*, 1991, vol. 17, No. 1, 121-154.

Cool, Karel, Almeida Costa, Luis and Dierickx, Ingemar, "Constructing Competitive Advantage", in Pettigrew, Andrew, Thomas, Howard and Whittington, Richard (Eds), *Handbook of Strategy and Management*, Sage publications, 2002.

Dierickx, Ingemar and Cool, Karel, "Asset Stock Accumulation and Sustainability of Competitive Advantage", *Management Science*, 1989, Vol. 35, No. 12, 1504-1513.

Foss, Nicolai, "Research in strategy, economics, and Michael Porter", *Journal of Management Studies*, January 1996, Vol. 33, No. 1, 1-24.

Foss, Nicolai, "The Resource-Based Perspective: An Assessment and Diagnosis of Problems", *Scandinavian Journal of Management*, 1998, Vol. 14, No. 3, 133-149.

Foss, Nicolai and Knudsen, Thorbjørn, "The Resource-Based Tangle: Towards a Sustainable Explanation of Competitive Advantage", *Managerial and Decision Economics*, June 2003, Vol. 24, No. 4, 291-307.

Gimeno, Javier and Woo, Carolyn, “Hypercompetition in a Multimarket Environment: The Role of Strategic Similarity and Multimarket Contact in Competitive De-Escalation”, *Organization Science*, 1996, Vol. 7, No. 3, 322-341.

Gimeno, Javier and Woo, Carolyn, “Multimarket Contact, Economies of Scope, and Firm Performance”, *Academy of Management Journal*, 1999, Vol. 43, No. 3, 239-259.

Gimeno, Javier, “Reciprocal Threats in Multimarket Rivalry: Staking out ‘Sphere of Influence’ in the U.S. Airline Industry”, *Strategic Management Journal*, 1999, Vol. 20, 101-128.

Gnyawali, Devi and Madhavan, Ravindranath, “Cooperative networks and competitive dynamics: a structural embeddedness perspective”, *Academy of Management Review*, 2001, Vol. 26, No. 3, 431-445.

Grant, Robert, “The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation”, *California Management Review*, Spring 1991, Vol. 33, No. 3, 114-135.

Harris, Ira and Ruefli, Timothy, “The Strategy/Structure Debate: An Examination of the Performance Implications”, *Journal of Management Studies*, 2000, Vol. 34, No. 4, 587-603.

Hawawini, Gabriel, Subramanian, Venkat and Verdin, Paul, “Is performance driven by industry- or firm-specific factors? A new look at the evidence”, *Strategic Management Journal*, 2003, Vol. 24, No. 1, pg. 1.

Henderson, Rebecca and Mitchell, Will, “The Interactions of Organizational and Competitive Influences on Strategy and Performance”, *Strategic Management Journal*, 1997, Vol. 18, 5-14.

Hoskisson, Robert, Hitt, Michael, Wan, William and Yiu, Daphne, “Theory and research in strategic management: Swings of a pendulum”, *Journal of Management*, 1999, Vol. 23, No. 3, 417-456.

Jayachandran, Satish, Gimeno, Javier and Varadarajan, P. Rajan, “The Theory of Multimarket Competition: A Synthesis and Implications for Marketing Strategy”, *Journal of Marketing*, 1999, Vol. 63, 49-66.

Karnani, Aneel and Wernerfelt, Birger, “Multiple Point Competition”, *Strategic Management Journal*, 1985, Vol. 6, No. 1, 87-96.

Knott, Anne Marie, “The Organizational Routines Factor Market Paradox”, *Strategic Management Journal*, 2003, Vol. 24, No. 10, 929-943.

Korn, Helaine and Baum, Joel, “Chance, Imitative, and Strategic Antecedents to Multimarket Contact”, *Academy of Management Journal*, 1999, Vol. 42, No. 2, 171-193.

Lado, Augustine, Boyd, Nancy and Hanlon, Susan, “Competition, Cooperation, and the Search for Economic Rents: a Syncretic Model”, *Academy of Management Review*, 1997, Vol. 22, No. 1, 110-141.

Levinthal, Daniel and Myatt, Jennifer, “Co-Evolution of Capabilities and Industry: The Evolution of Mutual Fund Processing”, *Strategic Management Journal*, Special Issue Winter 1994, Vol. 15, 45-62.

Mahoney, Joseph and Pandian, Rajendran, “The Resource-Based View Within The Conversation of Strategic Management”, *Strategic Management Journal*, 1992, Vol. 13, 363-380.

Mathews, John, “Strategizing by firms in the presence of markets for resources”, *Industrial and Corporate Change*, 2003, Vol. 12, No. 6, 1157-1193.

McGahan, Anita and Porter, Michael, “How much does industry matter, really?”, *Strategic Management Journal*, 1997, Vol. 18, 15-30.

McGrath, Rita Gunther, Chen, Ming-Jer and MacMillan, Ian, “Multimarket Maneuvering in Uncertain Spheres of Influence: Resource Diversion Strategies”, *Academy of Management Review*, 1998, Vol. 23, No. 4, 724-740.

McWilliams, Abagail, Van Fleet, David and Cory, Kenneth, “Raising Rivals’ Costs Through Political Strategy: An Extension of Resource-Based Theory”, *Journal of Management Studies*, 2002, Vol. 39, No. 5, 707-723.

Miller, Danny and Friesen, Peter, "The Longitudinal Analysis of Organizations: A Methodological Perspective", Management Science, 1982, Vol. 28, No. 9, 1013-1034.

Oliver, Christine, "Sustainable Competitive Advantage: Combining Institutional and Resource-Based Views", *Strategic Management Journal*, 1997, Vol. 18, No. 9, 697-713.

Peteraf, Margaret, "The Cornerstones of Competitive Advantage: A Resource-Based View", *Strategic Management Journal*, 1993, Vol. 14, No. 3, 179-191.

Peteraf, Margaret and Barney, Jay, "Unraveling The Resource-Based Tangle", *Managerial and Decision Economics*, 2003, Vol. 24, 309-323.

Peteraf, Margaret and Bergen, Mark, "Scanning dynamic competitive landscapes: a market-based and resource-based framework", *Strategic Management Journal*, 2003, Vol. 24, 1027-1041.

Porter Michael, *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, 1980, New York, The Free Press.

Porter, Michael, "the contributions of industrial organization to strategic management", *Academy of Management Review*, 1981, Vol. 6, 609-620.

Porter, Michael, "Towards a dynamic theory of strategy", *Strategic Management Journal*, Winter 1991, Vol. 12, 95-117.

Prahalad, C. K. and Hamel, Gary, "Strategy as a Field of Study: Why Search for a New Paradigm?", *Strategic Management Journal*, 1994, Vol. 15, Special Issue, 5-16.

Priem, Richard and Butler, John, "Is the resource-based "view" a useful perspective for strategic management research?", *Academy of Management Review*, 2001a, Vol. 26, No. 1, 22-40.

Priem, Richard and Butler, John, "Tautology in the resource-based view and the implications of externally determined resource value: further comments", *Academy of Management Review*, 2001b, Vol. 26, No. 1, 57-66.

Reed, Richard and Defillippi, Robert, "Causal Ambiguity, Barriers to Imitation, and Sustainable Competitive Advantage", *The Academy of Management Review*, 1990, Vol. 15, No. 1, 88-102.

Rey, Patrick and Tirole, Jean, "A Primer on Foreclosure", in forthcoming *Handbook of Industrial Organization III*, Armstrong, Mark and Porter, Rob (Eds.).

Riordan, Michael, "Anticompetitive Vertical Integration by a Dominant Firm", *The American Economic Review*, 1998, Vol. 88, No. 5, 1232-1248.

Rumelt, Richard, "Towards a strategic theory of the firm", in Lamb, R., (Ed.), *Competitive Strategic Management*, Prentice-Hall, 1984, Englewood Cliffs (NJ).

Rumelt, Richard, "How much does industry matter?", *Strategic Management Journal*, 1991, Vol. 12, 167-185.

Sampler, Jeffrey, "Redefining Industry Structure for the Information Age", *Strategic Management Journal*, 1998, Vol. 19, No. 4, 343-355.

Schendel, Dan, "Introduction to the Winter 1991 Special Issue: Fundamental Research Issues in Strategy and Economics", *Strategic Management Journal*, 1991, Vol. 12, 1-3.

Schmalensee, Richard, "Do Market Differ Much?", *The American Economic Review*, 1985, Vol. 75, No. 3, 341-351.

Schoemaker, Paul, "Strategy, complexity, and economic rent", *Management Science*, 1990, Vol.36, 1178-1192.

Smith, Faye and Wilson, Rick, "The Predictive Validity of the Karnani and Wernerfelt Model of Multipoint Competition", *Strategic Management Journal*, 1995, Vol. 16, No. 2, 143-160.

Spanos, Yiannis and Lioukas, Spyros, "An examination into the causal logic of rent generation: Contrasting Porter's competitive strategy framework and the resource-based perspective", *Strategic Management Journal*, 2001, Vol. 22, No. 10, 907-934.

Spender, J.-C., "Making Knowledge the Basis of a Dynamic Theory of the Firm", *Strategic Management Journal*, 1996, Vol. 17, Special Issue, 45-62.

Teece, David, Pisano, Gary and Shuen, Amy, "Dynamic capabilities and strategic management", *Strategic Management Journal*, 1997, Vol. 18, No. 7, 509-533.

Tripsas, Mary, “Unraveling the Process of Creative Destruction: Complementary Assets and Incumbent Survival in the Typesetter Industry”, *Strategic Management Journal*, 1997, Vol. 18, 119-142.

Wernerfelt, Birger, “A Resource-Based View of the Firm”, *Strategic Management Journal*, 1984, Vol. 5, No. 2, 171-180.

Wiggins, Robert and Ruefli, Timothy, “Sustained Competitive Advantage: Temporal Dynamics and the Incidence and Persistence of Superior Economic Performance”, *Organization Science*, 2002, Vol. 13, No. 1, 82-105.

Williamson, Oliver, “Strategizing, economizing, and economic organization”, *Strategic Management Journal*, Winter 1991, Vol. 12, 75-94.