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Extending resource-based theory: considering strategic, ordinary and junk resources

Vanessa Warnier and Xavier Weppe
IAE, University of Lille, Lille, France, and
Xavier Lecocq
IAE, University of Lille, Lille, France and IESEG School of Management, Lille, France

Abstract

Purpose – The purpose of this paper is to answer the question: how to extend resource-based theory to take into account the contribution of all kinds of resources (including the less regarded ones) to performance? While recognising the importance of strategic resources in building and sustaining a competitive advantage, the authors contend that a symmetric analysis of more available resources can shed new light on the sources and mechanisms of superior performance. Thus, they aim to contribute to an extended theory of resources.

Design/methodology/approach – Based on literature review and theorization process, the authors introduce alongside strategic resources, the concepts of "ordinary resources" and "junk resources", showing how they may contribute to performance with an appropriate business model. Several illustrative cases are discussed to demonstrate that such resources need to be studied by resource-based theory (RBT).

Findings – The authors propose shifting the focus of RBT from the study of strategic resources alone in order to consider other types as well: ordinary and junk resources. Such an approach involves significant implications for strategic management theory and management practices.

Practical implications – The paper describes the conditions under which ordinary and junk resources (more available to most firms than strategic resources) may generate a competitive advantage. The extended resource-based theory can have implications for society as it may influence managers' and public attitudes towards underestimated resources and lead to new business models.

Originality/value – The approach developed in this article also goes beyond traditional critiques of RBT. Specifically, the authors' analysis avoids tautological reasoning, distinguishing between: resources; perceptions of their attributes by firms; the services these resources render; the business model implemented to deploy these resources; and the effects in terms of performance. The authors build an extended resource-based theory, allowing the contribution of various kinds of resources to firm performance to be explained.

Keywords Resources, Resource management, Resource-based theory, Intersubjectivity, Strategic resources, Ordinary resources, Junk resources, Business model

Paper type Conceptual paper

Introduction

Firms' resources are the particular focus of resource-based theory (referred to as RBT throughout the rest of this article). However, studies adopting this approach tend to

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concentrate on "strategic" resources, i.e. those with VRIN attributes (valuable, rare, inimitable and non-substitutable) and therefore those resources offering a sustainable competitive advantage. While research in RBT recognise the existence of other resources, the latter are not really conceptualised or examined in detail since, by definition, they are not at the origin of a sustainable competitive advantage and Ricardian rents which constitute the main focus of this strategic management theory. Moreover, extensions of the RBT, including studies dedicated to strategic competencies (Sanchez and Heene, 2005) and dynamic capabilities (Teece *et al.*, 1997; Eisenhardt and Martin, 2000) have neglected the study of the characteristics of resources developed or acquired by a firm in favor of new levels of analysis to explain competitive advantage. Finally, recent work on resource orchestration (Sirmon *et al.*, 2007) focus on the characteristics of the resource management processes but neglect the resources attributes. They consider all kinds of resources, whether strategic or not, the same way, suggesting that resource characteristics have no influence on how to manage them.

As a consequence, there is a lack of systematic analysis of the different types of resources used by firms and as noted by Lockett *et al.* (2008, p. 1134) "the area of resources is vast and ambiguous". In this paper we seek to answer the following question: how to extend resource-based theory to take into account the contribution of all kinds of resources (including the less regarded ones) to performance? While recognising the importance of strategic resources in constructing and sustaining a competitive advantage, we contend in this article that an analysis of other resources can shed new light on the sources and mechanisms of performance (and eventually of superior performance). Alongside strategic resources, we introduce the concepts of "ordinary resources" generally perceived by firms as neutral in terms of performance and "junk resources" generally perceived as negative in terms of performance.

We advocate several interests in studying these non-strategic resources more closely. First, the positive bias of RBT (West and DeCastro, 2001) often leads researchers to only consider firms achieving higher than average performance for their sector. In fact, we know little about resources in the vast majority of firms that do not enjoy a sustainable competitive advantage. Furthermore, since VRIN resources are rare by definition, then most firms, whether they enjoy a sustainable competitive advantage or not, acquire, develop and use some ordinary and junk resources. The latter therefore represent the bulk of resources available inside firms and on the factors market. Thus, for these resources, factor-market rivalry, i.e. competition over resource positions (Markman *et al.*, 2009), is lower. Finally, RBT models help to explain the existence of a competitive advantage, but do not shed light on the dynamics of the resources behind a temporary advantage in turbulent environments (D'Aveni *et al.*, 2010). Yet, while it seems difficult *a priori* to generate a sustainable competitive advantage with ordinary and junk resources, it is perhaps possible to use them to develop a temporary advantage.

Thus, the goal of this conceptual article is to highlight the potential contributions of ordinary and junk resources (which are the most common resources available to firms) to the performance of a given firm. To do so, we develop a theoretical framework, namely extended resource-based theory, supported by illustrative examples. Indeed, as demonstrated by Siggelkow (2007), illustrations of theory may allow to avoid two major shortcomings of theory development: pure speculative discussion of underlying mechanisms of a phenomenon, and difficulties to apply conceptual arguments to empirical settings. Thus, illustrative cases presented in this paper are designed to give flesh and blood to ordinary and junk resources and to demonstrate the need to integrate them in the analysis of firm performance.

In the first part of this article, we present the traditional conception of resources in studies adopting a *RBT* perspective and identify a focus on strategic resources to the detriment of others. In the second part, we demonstrate the interest of broadening the research field to include other types of resources or other characteristics of resources and present the rare contributions in this area. In a third part, we show how an intersubjective view of resources can avoid the tautological character of RBT studies while taking into account broader types of resources (strategic, ordinary and junk resources) to explain firm performance. Based on these arguments, we propose a new conceptualization of resources and an extension of the resource-based theory (the extended RBT). In the fourth part, we discuss the consequences of our framework and shed a new light on the analysis of some strategic questions within the RBT framework.

The traditional conception of resources within organisations

Strategic resources at the heart of competitive advantage

RBT emerged as a criticism of the industrial paradigm in which the organisation is often considered a black box. On the contrary, RBT has focused on the internal workings of the firm by mobilising the concept of resources. This means starting the strategic diagnostic by an analysis of the firm's resources rather than industry characteristics. However, we have to note that some researchers have mentioned the need to consider in the meantime resources and environment (for instance, Bowen, 2007, Furrer *et al.*, 2008).

RBT is based on earlier studies, notably the work of Penrose (1959), which is regularly cited in research asserting a resources approach. For Penrose, the essence of the firm is strongly linked to the concept of resources since she defines it as "a collection of productive resources, where the choice of different uses of these resources over time is determined by administrative decision" (Penrose, 1959, p. 21). While the work of Penrose (1959) concerning the growth of the firm considers all resources (productive and administrative) globally, research in strategic management has then mainly focused on a certain type of resources, i.e. strategic resources. The heterogeneous nature of resources and their uneven distribution between competing firms is one of the cornerstones of RBT as it helps to explain competitive advantage (Peteraf, 1993). However, the concept of heterogeneity is defined in a restrictive way since, in the end, only strategic resources are taken into consideration in the analysis: "it signifies, simply, that strategic resources are distributed unevenly across firms, or that different firms possess different bundles of strategically relevant resources" (Peteraf and Barney, 2003). However, not all resources offer the possibility of developing sustainable competitive advantage and the work of Barney (1986, 1991) has identified the different attributes a resource must have in order to create such an advantage. According to the VRIN model (Barney, 1991), a valuable and rare resource can create a sustainable competitive advantage if it is also inimitable and non-substitutable (Barney and Clark, 2007). Thus, the focus of RBT on competitive advantage through the establishment of Ricardian rents (Foss and Ishikawa, 2007) leads research to concentrate exclusively on strategic resources, overlooking the role of non-strategic resources.

Some criticisms of RBT leading to exploration of the complete range of resources

While RBT seems to have become the dominant paradigm in strategic management, a certain number of critiques lead us to believe that a new conceptualisation of resources is required. We have identified three main types of criticism in the literature: the conceptualisation and operationalisation of the resources' attributes, the given characteristics of resources, and finally the weak role of managers in the theory.

First of all, the resource seems to be used as a catchall concept (Priem and Butler, 2001), introducing confusion between resources and associated services (i.e. use of resources). Thus, while Barney (2001) considers economies of scale can be valuable resources, they seem to correspond more closely to the services created using certain resources rather than the resources themselves. Hansen *et al.* (2004) assert, furthermore, that most researchers would agree with the idea that services create value and not resources, while explanations of competitive advantage tend to link resources directly to better economic performance without considering services. The absence of an explanation for the differences and relations between the concepts of resources and services creates a certain ambiguity around VRIN attributes. Thus, when Barney (1991, p. 106) asserts "A firm enjoys a competitive advantage when it is implementing a value-creating strategy not simultaneously implemented by a large number of other firms", value and rarity are not associated with the concept of resources but with the strategies developed using resources. RBT appears to be somewhat tautological (Priem and Butler, 2001; Kraaijenbrink *et al.*, 2010) since the strategic resource and the supposedly resulting competitive advantage are both defined in terms of value and rarity.

Secondly, most research in RBT considers that the attributes of resources, associated services and their possible uses are inherent characteristics of the resources and therefore "objectively given" (Foss and Ishikawa, 2007). The nature of resources appears to be given and without ambiguity: "Resources are what they are, and organizations either have the resources they need or they do not" (Baker and Nelson, 2005, p. 331). The question then is to obtain as much information as possible concerning these resources in order to make effective investments (Makadok and Barney, 2001). The search for information can appear relatively complex because although the characteristics of resources are objectively given, they vary according to the competitive environment and the initial allocation of resources. This characterisation of resources has been criticised (for example by Foss *et al.*, 2007) because it does not allow for the subjective nature of knowledge and interpretation of the environment by entrepreneurs. Recent studies based on the research of the Austrian School of economics develops a subjective conception of resources and the environment, considering that the attributes of resources are in fact determined by knowledge and beliefs of entrepreneurs (Foss *et al.*, 2007; Foss and Ishikawa, 2007; Mathews, 2010). Thus, firms are heterogeneous, even when they possess objectively similar characteristics.

Thirdly, RBT, due to its conceptualisation of resources, establishes a direct relationship between strategic resources and competitive advantage and therefore minimises the manager's role:

> Finally, the model presented here emphasizes the importance of what might be called firm resource endowments in creating sustained competitive advantages. Implicit in this model is the assumption that managers are limited in their ability to manipulate all the attributes and characteristics of their firms (Barney, 1991, p. 116).

The manager's role is therefore of little importance in VRIN and VRIO models compared to the importance granted to the characteristics of resources. To create value, firms must acquire, accumulate, combine and exploit resources, but we know little about how managers transform these resources to create value (Sirmon *et al.*, 2007). A few recent studies (Sirmon *et al.*, 2007; 2010; Hansen *et al.*, 2004) attempt to reintroduce the role of managers in the analysis, notably their capacity to acquire good resources and to combine them. In a more fundamental way, some authors attempt to reintroduce the role of managers and entrepreneurs in the theory (Foss *et al.*, 2008).

Based on these criticisms, we propose: that to achieve a finer analysis RBT must clearly distinguish between the characteristics of resources, the entrepreneur's perception of these resources and the services provided by resources, and that these weaknesses of RBT may be addressed by a broadening of the analysis to include other types of resources.

For an exploration of the resource range

Calls to include new types of resources in the analysis

The influence of the VRIN model in the literature and managerial practices has focused a disproportionate amount of attention on strategic resources to the detriment of other resources. In the same way Chris Anderson (2009) considers firms are focused on flagship products to the detriment of more ordinary ones due to the famous 20/80 principle, we observe that we have become accustomed to analysing resources through the prism of success and more specifically through the prism of sustainable competitive advantage. The predominance of the VRIN model also leads certain authors to adopt a highly restrictive vision of resources themselves, reinforcing the tautological character of the approach: "resources are firm specific assets that are difficult if not impossible to imitate" (Teece *et al.*, 1997).

As strategic resources are by definition rare and uniquely possessed by firms with a sustainable competitive advantage, we actually know very little about the resources controlled by the vast majority of firms that do not have such an advantage. Ten years after his seminal article, Wernerfelt considers that RBT does not offer a rich representation of the resources a firm possesses: "We have a rich taxonomy of markets and substantial technical and empirical knowledge about market structures. In contrast, 'resources' remain an amorphous heap to most of us" (Wernerfelt, 1995, p. 172). Indeed, the VRIN model, and more generally the principles of RBT, only applies to firms seeking to establish a sustainable competitive advantage. For firms satisfied with their competitive position, RBT seems of little use (Kraaijenbrink *et al.*, 2010). Montgomery (1995) already observes this phenomenon and calls for inclusion of the complete range of resources i.e. the good, the bad and the boring: "It simply belies credibility to conclude that resources can be meaningfully characterized by only two categories: the extraordinarily valuable and all the rest. It is impossible to draw meaningful observations across such a huge residual category" (Montgomery, 1995, p. 261). Despite these observations, there have been very few attempts at compensating for these shortcomings by exploring the full range of available resources.

Gradual recognition of other types of resources

The founding studies of RBT encourage researchers to analyse "firms in terms of resources rather than products" (Wernerfelt, 1984, p. 171). However, as we have demonstrated earlier, this exploration has been only partial (i.e. limited to strategic resources). Our review of the literature has led us to identify two approaches of the exploration of other types of resources. The first is focused on "complementary resources" (Barney and Clark, 2007) necessary for the firm to function, but that do not offer a competitive advantage. The second concerns the negative side of resources and emphasises the notion of a resource as a weakness. However, we observe a lack of integration of these studies with traditional strategic resources, making it very difficult to create a homogenous corpus.

Common resources

While recognising that the opportunities and threats a firm encounters can lead to a variation in its resources portfolio (Ahuja and Katila, 2004), the resources systematically studied in RBT are those with VRIN characteristics. If partisans of this framework recognise the existence of other types of resources, they are not the object of specific research. For example, RBT integrates the notion of "common" resources, i.e. valuable resources that are not rare and do not allow the development of a competitive advantage but only establish a position of competitive parity (Barney, 1986; Barney and Clark, 2007). While the use of these resources does not lead to the development of a competitive advantage, even temporarily, poor use can lead to a competitive disadvantage (Barney and Clark, 2007). It is interesting to observe that other resources are generally conceptualised in relation to strategic resources. Thus, Peteraf (1993, p. 180) evokes "inferior resources" to designate non-strategic resources that are nevertheless used by the firm in its production processes. Similarly, Branzei and Thornhill (2006) concentrate in their article on "common resources", i.e. valuable resources that are not rare because they are shared by several firms in the same industry. In addition, some recent research, extending the approach RBT, seem to consider equivalently all resources, suggesting that the value extracted from these resources come from their combination more than from their intrinsic value. Indeed, we can observe that the shift from a resource-based theory to one based on dynamic capabilities has led researchers to no longer distinguish between types of resources but types of capabilities, i.e. ordinary vs dynamic capabilities (Drnevitch and Kriauciunas, 2011) or first and second level capabilities (Winter, 2003). Thus, resources seem to be implicitly treated indistinctly in research on dynamic capabilities. This observation can also be extended to recent research focusing on the management of resources (e.g. Sirmon *et al.*, 2007) since it conceptualizes resources indiscriminately, whether strategic or not. While welcoming the willingness to take into account the overall portfolio of firm resources, lack of resource characterization masks a number of questions and may, for example, suggest that the acquisition of strategic resources and non-strategic resources are identical.

Another side of the story: resources as a weakness

While Wernerfelt (1984) considers a resource can be a strength or a weakness, research in RBT has mainly opted for the first possibility, which has led some authors to consider the omission of weaknesses as a major oversight (West and DeCastro, 2001) and that the theory, by considering only the factors that contribute to the creation of a sustainable competitive advantage, tells only part of the story (Arend, 2004). Wernerfelt (1995), ten years after his seminal article, looks back at the development of RBT and considers that the research of Leonard-Barton (1992) demonstrates resources can have a negative value and this is an idea worth exploring further. Despite a call by some researchers to explore “the dark side of resources” (Montgomery, 1995) or their negative impact (Wernerfelt, 1995; Armstrong and Shimizu, 2007), very little research has adopted this standpoint compared to the large number of empirical articles on strategic resources. However, some research has tried to tell the other side of the story of resources by introducing the concept of “resource weaknesses” (West and DeCastro, 2001), mobilising the concept of “capability weaknesses” (Sirmon *et al.*, 2010) and, finally, the notion of “strategic liabilities” (Arend, 2004). These studies concentrate on resources that have a negative impact on the firm’s performance, destroy rents (Arend, 2004) and are potential sources of a competitive disadvantage (Castro and West, 2001; Arend, 2004). In the line of Leonard-Barton (1992), Armstrong and Shimizu (2007) conclude their review of the literature on RBT by emphasizing that the “negative effects” of resources are worth studying and discussing in more depth in empirical research.

While constructed in opposition to the concept of strategic resources, research such as West and DeCastro (2001) and Arend (2004) share some hypotheses and limitations of the traditional RBT approach. Indeed, “strategic liabilities” are above all defined by their effect. They are costly and diminish performance. Moreover, the model is deterministic on two levels. Firstly, the possession of “strategic liabilities”, in a given context, leads to reduced performance, independently from the way they are used by managers. Thus, failure to uncouple the concept of “strategic liabilities” and their effects renders part of the results tautological. Secondly, context determines the resources’ characteristics: “Firms own, build, trade and leverage factors. Context determines whether a factor is a Strategic Asset, a Strategic Liability, or strategically benign” (Arend, 2004, p. 1022). The only alternative for managers remains the “manipulation of context” (Arend, 2004).

Towards a new conceptualization of resources

Towards an extended resource-based theory

Despite the interest of this work to explore new aspects of resources, existing research is not sufficient to consider the complete range of resources and their respective contributions to the performance of the firms.

Former studies tackle the notion of resources mainly through their effects. “Strategic liabilities” are resources that destroy value, “resource weaknesses” can lead to the loss of competitive advantage or the emergence of a disadvantage and, finally, common resources are not sufficient alone to create a competitive advantage. This observation leads us to agree with Wernerfelt’s analysis concerning the conceptualisation of resources: “my sense is, however, that many resources remain mystical. We have made progress in terms of their effects, but we do not know really what they are” (Wernerfelt, 1997). This statement still holds true today. However, without a clear distinction between resources and their effects, recent developments regarding the perception of resources and the strategic actions surrounding them are of little interest and RBT remains tautological.

Suddaby *et al.* (2011), in their article questioning the reasons behind the lack of new theories, emphasise the fact that considering existing theories as “sacred canons” makes criticism difficult and can lead to conservatism. Our analysis of the limitations of RBT leads us to assert that the exploration of the entire range of resources would require some changes in the original hypotheses.

Considering that any theory must achieve balance between new contributions and continuity (McKinley *et al.*, 1999), we specify the four pillars of our conceptualisation of resources, based on the arguments developed in the first sections of this paper.

Firstly, we go back to a Penrosian conception of resources in which resources and services are viewed as distinct components. Different resources (or different sets of resources) can render the same services and, conversely, identical resources (or identical sets of resources) can be used in very different ways and thus generate new services (i.e. new use of resources). The question is therefore not only one of possessing the best resources, but of understanding more fully the productive performance of the resources possessed. We adopt the hypothesis that resources are heterogeneous and recognise there is different types of resources, which in turn can render very heterogeneous services.

Secondly, we consider that the attributes of resources are not objectively given but are perceived through the entrepreneur's prism (Foss and Ishikawa, 2007). In such a conception of resources their characteristics differ according to the interpretation or judgment of entrepreneurs in the sector.

Thirdly, we decouple resources (and their characteristics) from strategic actions (structuring, deploying, bundling) that managers may have on them. Here, the resources' attributes are not simply considered as perceived by managers, but also as constructed by them. Actions on resources are realized through the implementation of the business model.

Fourth, we decouple resources, their characteristics and strategic actions from the consequences of these actions in terms of competitive advantage, competitive parity or competitive disadvantage. This approach avoids the tautological character of RBT as it does not establish a direct and systematic relationship between the type of resource and the existence of a competitive advantage.

Indeed, we believe that traditional definitions based on "objectivism" (i.e. considering only intrinsic characteristics of resources) fail to consider the managerial actions on resources (such as finding new services or bundling resources) that may create value unexpected by agents in a given industry. Recent stream of research assuming "subjectivism" (Foss and Ishikawa, 2007; Foss *et al.*, 2007, 2008) appears fruitful as it allows considering entrepreneurial identification of opportunities on the factor markets. However, as noted by Fullbrook (2002), in the economic life subjective properties of agents (such as preferences, goals and perceptions) are not determined independently of relations with other agents, justifying "intersubjectivism". Intersubjectivity is the sharing of subjective properties by several agents. As noted by Knorr Cetina (2006), intersubjectivity derives from the character of the markets as observed by participants. Applied to RBT, we define intersubjectivity as the sharing of perceptions about a given resource among most managers in an industry. Based on industry recipes (Spender, 1989), entrepreneurs are intersubjectively attributing the value of a resource. This value is encapsulated in the price of this resource on factor market. In this article we define the various types of resources based on their perceived value (from an intersubjective point-of-view).

In our framework, subjective and intersubjective views are complementary. First, the intersubjective view (operating at the collective level, i.e. most of time the industry level) allows to consider why a given resource has a given price on the factor market. Second, the subjective view (operating at the individual level, i.e. the level of entrepreneur) allows to consider that an entrepreneur may envisage new services for this resource or new combinations leading to new business models in an industry and eventually to higher productivity of the resource. Thus, together, the intersubjective view and the subjective view lead to a more complete framework about rents extracted from resources. We contend that RBT should consider together:

- the price of a given resource (depending on the intersubjective evaluation of the resource);
- its expected productivity (influenced by the subjective evaluation of the resource by an entrepreneur) leading to build or acquire this resource; and
- its actual productivity (based on the actions made on this resource by the firm to actualize the expected productivity).

Indeed, rents extracted from a resource depend on its price and its actual productivity. Figure 1 synthetize our framework of an extended resource-based theory.

As a consequence, our approach allows decoupling the resources, the resources-related actions and the resulting performance while considering in the meantime the shared interpretations of a resource by managers in a sector and the potentially diverging interpretation by a few entrepreneurs who expect to create more value from this resource. Finally, in the logical chain from resources to rents, we include judgement and strategic action and avoid tautological reasoning characterizing traditional RBT. Based on this perspective, we detail the typology and definitions for the different kinds of resources.

Three types of resources: strategic resources, ordinary resources and junk resources
As we have mentioned earlier, RBT today does not have a formalised conception of the different types of resources managed by a firm. Based on the pillars presented above, we advance a new typology of resources: strategic resources, ordinary resources and junk resources. We define each type of resource in an intersubjective way and draw consequences on the management of these resources.

Strategic resources
Strategic resources, while the rarest, are the most widely studied in RBT. While the literature often reminds us that the theory is based on the heterogeneity of resources,

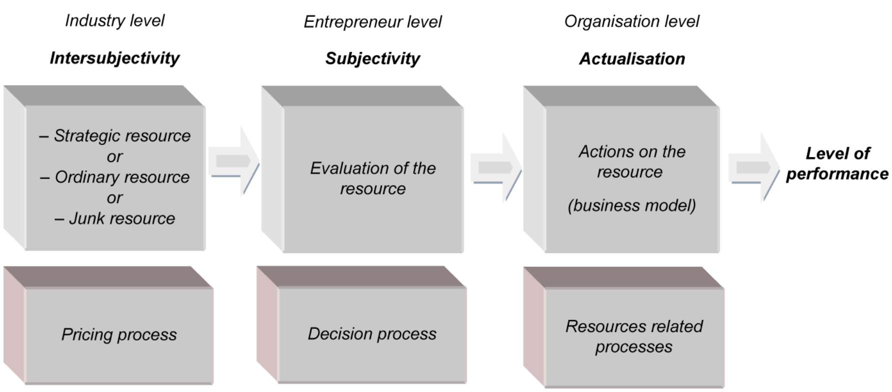

Figure 1.
The extended resource based theory

studies within this context tend to focus on a few resources with specific characteristics (i.e. VRIN). With our objective being to reintegrate the managers' intersubjectivity in this characterisation, we propose the following definition:

> A strategic resource is a rare resource on the market, generally perceived as positive in terms of performance, i.e. with an expected level of productivity that is greater than its cost (acquisition or development). Such a resource is considered a potential source of rents.

We can distinguish two cases, according to whether the resource is possessed internally or present on the market of strategic factors. In the first case, the entrepreneur perceives the rare resource he possesses as generating value, even if he cannot always explain the relationship between possessing the resource and superior performance due to causal ambiguity and/or interconnection of resources. Nevertheless, this leads him to judge the resource as strategic. In the second case, a strategic resource can be available on the market of strategic factors due the sale of assets by a firm or changes in the competitive environment that lead firms to consider resources that were common yesterday as strategic tomorrow. In both cases, competing firms can more or less easily identify the resource as "strategic" and try to acquire or duplicate it.

This definition, in our opinion, presents the interest of broadening the field of investigation regarding strategic resources. Indeed, a large number of empirical studies on RBT, due to their focus on the attributes of inimitability and non-substitutability and in the *ex ante* limitations of competition, have analysed resources that are inextricably linked to the firm and not available on the market of strategic factors. For example, resources that are the most frequently analysed are human capital, accumulated experience, social capital, innovation and reputation (Newbert, 2007). Resources such as tacit knowledge have also been at the heart of theoretical debates and empirical studies (Berman *et al.*, 2002). In this article, we consider that the resources available on the factor market may be strategic if they are perceived to create value.

We believe that our definition also allows us to avoid the tautological character of RBT, which is often cited in the literature. Indeed, in our framework the strategic resource is rare and perceived as a potential source of rents. However, the actual creation of rents results also from the strategic action of the firm and not only from the intrinsic characteristics of the resource. Thus, even if more often than not the possession of strategic resources will indeed lead a firm to develop rents, we consider that possession alone is not explanatory, which opens the door to new research questions such as: Why does a firm that possesses strategic resources, which are perceived as such by most firms in its sector, perform poorly, at a level below the average for its sector?

Finally, it seems crucial to explain why the hypothesis that firms in an industry perceive the strategic nature of a resource is not contrary to the hypothesis that some of them generate rents. To understand this apparent paradox, it is important to disconnect the process of resource assessment and the integration and deployment processes of the resource. First, if this resource is related to a process of accumulation (Dierickx and Cool, 1989), it is not easily exchangeable and copyable. Competitors recognize the strategic nature of this resource, but cannot perfectly imitate. Second, a resource available on the strategic factors market and considered by many firms as strategic will not necessarily result in increase in its price and thus the cancellation of the Ricardian rents. A strategic resource has a price that makes it access uneven depending on financial resources of competing firms. Moreover, competing firms may perceive the strategic nature of a resource for various reasons, referring to differentiated uses of this resource, based on generation of specific services. Depending on the use of the resource by the firm and the value that will be generated, the reasonable cost of acquisition will be higher or lower. The resource will finally be acquired by companies that have devised the most profitable services from this resource.

However, even if our framework acknowledges that firms may generate rents from strategic resources, a paradox is that the rents generated by these resources will tend toward zero as most entrepreneurs in the industry recognize their potential for value creation and capture. As a consequence, their price will tend to increase until their level of expected productivity.

Ordinary resources

In addition to strategic resources, we believe that RBT should also take ordinary resources into account, which constitute the bulk of a firm's assets. On the one hand, most firms do not have a competitive advantage and therefore, if we apply the principles of RBT, they are essentially endowed with non-strategic resources. On the other hand, the few firms that do enjoy a competitive advantage sustain it with VRIN resources, yet most of their assets are ordinary resources. Indeed, as Hansen *et al.* (2004) have pointed out, resources that are the basis of production are widely available on the factors market for all competitors:

> An ordinary resource is a common resource on the market, generally perceived as neutral in terms of performance, i.e. with an expected level of productivity equivalent to its cost (acquisition or development). Such a resource is considered, at best, as ensuring competitive parity.

Ordinary resources are neutral in terms of performance because their expected productivity is equal to costs. Indeed, even if we accept the hypothesis of an imperfect factors market, since ordinary resources are widely used and relatively available to most firms, the value of exchange and use of these resources should be widely known by most firms in the sector. While certain firms could take advantage of an asymmetry of information on the strategic factors market (Barney, 1986), ordinary resources, due to their frequent use and common character, appear generally as standardised resources whose productivity is equal to the cost of their acquisition or development. Such a resource is considered, at best, in the eyes of most managers, as ensuring competitive parity.

Nevertheless, while these resources are not *per se* a source of greater performance and higher rents, they are generally required for the firm to function properly as they are often used in production processes. While their presence does not generally create a competitive advantage, their absence could create costs for the firm and destroy value. For example, the various ISO standards, which today are widely awarded to firms, have become ordinary resources and do not offer any more a competitive advantage. Yet, the absence of ISO certification could lead a firm to lose business, as has been the case for some subcontractors in the automobile industry.

Thus, ordinary resources are, by definition, the most numerous resources inside organisations. Mastering of accounting standards, ICT or even disposing of sales advisors in the banking sector are often ordinary resources required for a firm to develop. Furthermore, ordinary resources are also quite common in firms that possess VRIN resources and a sustainable competitive advantage. Besides, it is likely that an organization has some difficulties for obtaining the same strategic resource in many copies. Thus, the strategic resources probably need to be combined or be supported by ordinary resources, more common therefore more available.

But we contend that these ordinary resources can also be the basis of firm performance. Their availability makes possible the reproducibility or the duplication of a business model in new business units and/or in many countries. As pointed out by Winter and Szulanski (2001), such a replication is in many cases an essential factor in the performance of firms. Szulanski and Winter (2002) suggest that the main difficulties of companies to ensure replication come from an excess of optimism and confidence. However, in a RBT perspective, we may also suggest that another limit to replication is the ability of the company to acquire or to develop the same resources and combine them in the same way. The integration of ordinary resources in the analysis of resources offers new perspectives: it is easier to replicate a business model that is built on ordinary resources rather than a business model that relies primarily on strategic resources.

Moreover, ordinary resources may also play a central role in some firms because they are intimately involved in the emergence of new business models. In this last case, the use of ordinary resources can be behind the creation of new sectors or a change in the rules of competition in an existing sector. For instance, the invention of the Low Cost business model by SouthWest Airlines in airline industry finds its origin in the fact that the firm was endowed with ordinary resources (access to small regional airports, old airplanes…) and not the VRIN ones (hub airports…).

Illustrative case: developing a new business model based on ordinary resources: the case of YouTube

As discussed above, the use of ordinary resources could lead to better performance, even extraordinary performance, either through an unusual combination of these resources or the combined effect of a significant mass of ordinary resources, as in the case of YouTube. In this section, we describe the YouTube case from our framework lens.

Each year the weekly magazine *Time* designates its Person of the Year, recognising the person who has most influenced the past year, for better or for worse. In the business world, entrepreneurs such as Mark Zuckerberg (2010) founder of Facebook, Jeffrey Bezos (1999), founder of Amazon or Andrew Grove (1997), cofounder of Intel, have been honoured by the magazine. However, in 2006 *Time* named "YOU" person of the year, in honour of the millions of ordinary citizens who have played a role in the development of the internet and communications, by sharing videos, creating blogs or posting information for the entire world use. While this decision was widely criticised, it highlights the fact that the development of many firms in the new economy (for instance YouTube, Dailymotion, Agoravox) depend a great deal on ordinary resources: amateur filmmakers, would-be journalists and more generally ordinary people who wish to share their interests, feelings or experiences.

In order to illustrate this point, let us look back at the development of YouTube, a website that hosts videos and where millions of users can upload, share and watch video content, often produced by amateurs. Created in 2005 by three former PayPal employees, the firm was acquired by Google in October 2006 for more than US$1.5 billion. Today, two billion videos are viewed every day on YouTube, whose various “channels” have one billion subscribers. YouTube’s business model is based on generating revenue through advertising content integrated in the videos. Even if the content available today is more professional (videos produced by world-renowned artists, excerpts from broadcasts or TV series, etc.) they are generally produced and uploaded by amateurs who want to share their tastes in other media. Furthermore, amateur videos remain an important pillar in the business model as the firm’s slogan asserts: Broadcast Yourself. Moreover, the site has allowed many amateur artists to make a name for themselves, the most famous case today being the singer Justin Bieber, a true “success story” that started with an uploaded video of an amateur song contest and concluded with the signature of a contract with the legendary Island Records. Thus, while many TV channels consider their audience, and therefore their advertising revenues, as linked to either the acquisition of strategic resources like broadcasting rights for popular TV series or prestigious sporting events (Champions League, Tour de France, etc.) or the development, in-house, of strategic resources (series produced directly by the channel), the example of YouTube shows that these strategic resources are potentially substitutable and that it is possible to generate advertising revenues with a business model based on widely available ordinary resources: amateur screenwriters, filmmakers and artists working with basic equipment such as camcorders and software available to the general public.

Junk resources

An analysis of the full range of resources would not be complete without considering resources overlooked by firms because they are perceived as negative in terms of rents generation:

> A Junk resource is a resource overlooked or ignored by firms (i.e. not highly valuated on the market), generally perceived as negative in terms of performance, i.e. with an expected level of productivity lower to its cost (acquisition or development). Such a resource is considered as a source of costs or as destroying value by the firm that possesses it.

Although junk resources have not been investigated through specific research studies because the RBV research has mainly focused on the positive effects of resources, they can be found on the factor market and are also detained by firms even if these latter may seek to sell them. In the first case, these resources are ignored by firms because they are interpreted as value destructive. Thus, premises considered too old or too small to design a store, employees with apparently inadequate qualifications, obsolete technologies are so many resources non-integrated by firms because they are resented and therefore they tend to remain available on the market factors. In the second case, the negative resources may be present within a firm. These can result from an accumulation process that failed or a changing environment making them irrelevant.

Usually, firms are not interested by junk resources which are negatively perceived in terms of performance, and therefore seek to get rid of it. These resources are available and they are most likely to be purchased at low prices in factor markets. Unlike the strategic resources that are rare and protected by isolating mechanisms, junk resources are widely available and can be easily purchased. However, the process of integrating a new resource may be more complicated in the case of junk resources. It is likely that junk resources create lower expectations and therefore receive less attention than a resource considered *a priori* as strategic. A junk resource could even disappear from the cognitive repertoire of the majority of firms in the sector and become "invisible" to many entrepreneurs. Indeed, it is likely that a resource considered only as a source of cost will no longer be subject to specific analysis by the majority of firms. Indeed, the complexity of competitive environments precludes an analysis of most available resources on factor markets in a given industry. The majority of firms is choosing to acquire information on resources with high potential for value creation (or perceived as such) and neglect information on other resources.

In our opinion, a junk resource is unlikely to create a competitive advantage in most cases. We can put forward the idea that if most managers grant little value to a resource there must be a valid reason, justified by the destruction of value for the firms possessing it. We therefore concur with Denrell *et al.* (2003) who hypothesise that existing resources are accurately valued by the actors involved according to their use. However, this argument does not rule out the possibility that few entrepreneurs may want to acquire junk resources, overlooked or unused by other firms. Indeed, a junk resource, as we define it above, could create value and even be a source of competitive advantage. Certain firms could imagine developing other services (as understood in Penrose, 1959), i.e. new uses of a resource so that it can create more value. Such new services can lead to the emergence of new business models within a sector. Thus, a firm may create value with junk resources, which could in turn become more highly valued. Firms must not necessarily shun junk resources or get rid of them by divesting or selling them off.

The concept of junk resource seems therefore close to the definitions of "strategic liability" (Arend, 2004) or "weaknesses resource" (West and DeCastro, 2001), but it has two advantages. First, our definition of junk resource is broader since it includes also the resources available on factor markets, not covered in the research on the "strategic liability" and "weaknesses resources". Second, the integration of intersubjectivity in our definition leaves open the hypothesis that a resource perceived as such by most managers is not necessarily a real source of competitive disadvantage. Some entrepreneurs may want to acquire a junk resource, neglected by other companies, because they perceived potential value in it.

Illustrative case: the acquisition and development of resources overlooked by the market: the case of Chronostock "pop-up" stores

There are many commercial premises in cities that are temporarily vacant while waiting to change hands or undergo renovations. While many of them are in the centre of town and potentially attractive, they are overlooked by the market for various reasons: they are too small for major retail outlets (the sales floor of typical Zara or H&M outlets easily exceeds 1,500 m^2), rents are too high for independent merchants who are looking for a permanent location or they are not available long enough before their scheduled sale or renovation. These premises are therefore junk resources for most retailers. They are temporary locations that do not allow them to invest in any type of outlet either in terms of décor or furnishings, etc. While a long-term lease for premises in the centre of town can be considered a strategic resource, temporarily leasing the same property is not that interesting for retailers who tend to ignore such premises, only available for a few weeks or months. Furthermore, they are often too small to stock enough merchandise to meet customer needs. However, there is one firm that has built its business model on the use of these resources: Chronostock. It has developed the concept, in France, of the temporary "pop-up" store, set up in vacant retail premises, for the purpose of clearance sales. By developing a wide range of partnerships with manufacturers, Chronostock sells brand name products from discontinued lines, factory surpluses and repackaged products at rock bottom prices. In 2011, the firm opened several dozen stores, which remained open for an average of three months and with monthly sales between €100.000 and €200.000 per store. Its low-cost positioning allows it to optimise time and space. Shop furnishings are limited to the strict minimum (a few adhesive signs indicate the name of the store), in-store merchandising is very basic (packages are piled on top of each other) and opening a store requires very little preparation. Obviously there are not any loyalty operations. This low-cost positioning allows the firm to act quickly. It can open a new store within three days. The notion of timing is at the heart of the Chronostock business model. On the one hand, the temporary nature of sales (limited quantities and time) seems to confer greater value to the products, which are often unsold items that have been in warehouses for months and do not interest traditional retailers. As the two founders of the brand point out: "We noticed that there was a spike in sales when an outlet opened or closed. Our idea was to create temporary outlets, open 2 or 3 months in premises left vacant before renovation (the time to get the necessary permits), or unoccupied and always in prime locations". On the other hand, the coordination process between Chronostock and its different suppliers must be highly streamlined in order to have merchandise ready when an outlet opens. Sometimes, there are only a few days between the decision to use a location and the actual opening of the retail outlet. Due to its strategic skills in identifying vacant premises and rapidly using these resources, the retail firm manages to occupy locations in the centre of town, while the latter are almost exclusively occupied by leading retailers today. Thus, in the Chronostock case, the premises that are even not considered anymore as resources because they are only available for a few weeks (and thus used to be junk resources) have become the basis of a new business model and have led to the development of strategic resources such as the ability to identify these unoccupied premises.

Discussion of the extended resource-based theory

The shift of RBT from the study of strategic resources alone to the symmetric consideration of other types as well (ordinary and junk resources) in an intersubjective approach involves significant implications for strategic management theory and management practices.

From a managerial standpoint, junk resources and ordinary resources are probably more common and more representative of the assets held by most firms, compared to strategic resources, which are rare by definition. For instance, the illustrative examples cited in this article suggest the extent to which ordinary resources are commonplace and necessary to firms. Their availability on the factors market is in fact one of their strengths as factor market rivalry is also a crucial stake for strategic management (Markman *et al.*, 2009). As Mathews (2010) noted, Micron and Samsung moved into the microprocessor business by acquiring assets that had to be highly transferable and available. These challengers on the market therefore sought out the cheapest resources they could find and easily purchase. Firms can therefore find an interest in possessing these common resources. However, possession of ordinary or junk resources is not reserved for companies in difficult situations or with little capacity for investment. As we have shown, they can also be found inside the most competitive firms. Moreover, our arguments reveal that ordinary resources may be necessary for the replication of a given business model in various business units or countries. Finally, ordinary or junk resources can be the basis of new business models when an entrepreneur creates new services (new uses) for them, leading to unsuspected performance.

These different contributions show that the extended RBT we advocate here can be a source of useful recommendations for managers and an answer to the traditional criticism of RBT concerning its lack of managerial implications. However, more than the mere lack of recommendations for managers, we believe that the main risk associated with traditional RBT is a potential negative impact on managerial practices due to its current focus on strategic resources. This could lead some managers to overlook seemingly non-strategic resources and potential means of creating value. Indeed, as developed in this article, ordinary and junk resources may contribute, or even be the basis, of the performance of a firm.

Beyond management practice, we contend that the extended resource-based theory advocated in this article can have implications for society as it may influence public attitude towards underestimated resources. This holds also true for human resources such as disabled people or people with autistic syndrome for instance. These individuals are most of time considered to be less productive within firms and are most of time excluded from the workplace (Richards, 2012). Thus, they appear as "junk resources". However, some examples show that these human resources can be integrated into companies for other reasons than social responsibility. A live example of the above statement is the Danish Company called Specialisterne. Established in 2004 by Thorkil Sonne, Specialisterne is one of the first organizations in the world that has built a valuable competitive advantage from people with Asperger syndrome (a form of Autism Spectrum Disorder). The meaning of the Danish term "Specialisterne" means "The Specialists" in English. Specialisterne has been able to place its ASD employees in a certain work environment and to ask them to realize tasks related to information systems where their special weakness have been converted to strengths and thus into valuable performance that could eventually beat the performance of employees without ASD. Our framework allows to theorize and generalize the potential of such initiative and may contribute to influence public opinion about the potential contribution of such human resources in the workplace. It also reveals the interest to craft new business models in order to deploy in a new way ordinary and/or junk resources.

From a theoretical standpoint, recent studies attempt to show that combinations of resources are more explanatory regarding differences in performance than resources considered individually (Newbert, 2007; Adegbesan, 2009; Lockett *et al.*, 2009). It is therefore essential to dispose of a more specific understanding of the various types of resources in order to apprehend which combinations can be used to achieve superior performance. Consideration of the combination of different types of resources also leads to a refreshing perspective about causal ambiguity. We contend that causal ambiguity may be partly attributed to the observers' focus on strategic resources. Indeed, while resources with a high potential in value creation can often be perceived by the market as "strategic" (a central location for a store, a charismatic leader, a brand with a strong reputation and a good image . . .), ordinary resources and junk resources are in fact perceived by the market as less value-creating. Their role in the performance of the company may therefore appear less obvious. These ordinary or junk resources may even "disappear" in the eyes of the observer (competitor, analyst, researcher and even the manager himself) which focuses mostly on strategic resources (those that are considered to have VRIN characteristics) while the performance of the company may actually be due to the combination of these strategic resources with other resources that eventually contribute to the deployment of the first. One can therefore ask whether a strategic resource does not actually create a competitive advantage combined with ordinary resources or junk resources. Thus, we contend that firms operating in the same sector are sometimes able to identify strategic resources at the origin of competitive advantage but cannot understand how this strategic resource is combined with less visible resources (because less perceived as contributing to value) to develop a competitive advantage.

Moreover, the consideration of different resources raises new questions, echoing the recent work on resource management processes (Sirmon *et al.*, 2007, 2010) and business models from a resources point-of-view (Demil and Lecocq, 2010). Indeed, it would be useful to study the specific processes of resource management as they relate to strategic resources, ordinary resources or junk resources. For example, we believe that the procedures for acquiring or accumulating resources depend on the type of resource. Even if strategic resources may be available on factor markets, they are most often built by the firm itself through years. Instead, ordinary resources and junk resources are, by definition, much more available on factor markets. The nature of the competition to access to the different resources (strategic, ordinary, and junk) and how to obtain them, are thus differentiated. More systematically, it would be interesting to conduct research on orchestration processes –structuring, bundling and leveraging processes (Sirmon *et al.*, 2011) – associated with each kind of resources.

The approach developed in this article also goes beyond traditional critiques of RBT, notably its tautological character (the most successful firms are those that possess strategic resources because strategic resources offer a competitive advantage). Specifically, because our analysis distinguishes between: resources, perceptions of their attributes by firms, the services these resources render, the impact of managers on them (more or less efficient use, combinations . . .), and the effects in terms of performance (competitive advantage, parity, destruction of value) we contribute to explain why resources overlooked by most managers can become sources of competitive advantage. On the contrary, resources perceived as "strategic" may not lead to competitive advantage. Thus, our framework allows to reintroduce management in the analysis of performance by avoiding the assumption that the characteristics of resources may *per se* lead, or not, to a competitive advantage. Therefore our framework avoids tautology, for which RBT has been criticized, linking resources to performance through business model.

Conclusion

This article is a contribution to an extended RBT. Through theoretical development, we have proposed to shift the focus of RBT from the study of the mere characteristics of resources to an articulation of subjective and inter-subjective views. Such an approach allows to distinguish several kinds of resources (the strategic, ordinary and junk ones) based on the way they are inter-subjectively perceived by managers in an industry or a set of industries. However, some entrepreneurs may identify for some resources a potential to create value beyond their cost of development or their price. The various kinds of resources may potentially contribute to performance depending on the actions of the entrepreneur or the firm to develop new use of the resource, to improve the resource, to use it intensively and to combine resources together, eventually crafting a new business model,

Further research could explore actions on the various types of resources. First, the entrepreneur's ability to identify new services (use) associated with a resource should be explored. It would allow to understand how value may be created from undervalued resources. Secondly, the strategic processes behind the acquisition or construction of ordinary or junk resources could be studied. Finally, several possibilities for future research are related to the organisation of different resources, particularly the combination of strategic, ordinary and junk resources, whether developed internally or acquired on the factor market. For instance one may ask if a mass of ordinary resources is necessary to leverage a strategic resource?

References

Adegbesan, J.A. (2009), "On the origins of competitive advantage: strategic factor markets and heterogeneous resource complementarity", *Academy of Management Review*, Vol. 34 No. 3, pp. 463-475.

Ahuja, G. and Katila, R. (2004), "Where do resources come from? The role of idiosyncrasic situations", *Strategic Management Journal*, Vol. 25, pp. 887-907.

Armstrong, C.E. and Shimizu, K. (2007), "A review of approaches to empirical research on the resource-based view of the firm?", *Journal of Management*, Vol. 33 No. 6, pp. 959-986.

Anderson, C. (2009), *The Long Tail: Why the Future of Business is Selling Less of More*, Hyperion, New York, NY.

Arend, R.J. (2004), "The definition of strategic liabilities, and their impact on firm performance", *Journal of Management Studies*, Vol. 41 No. 6, pp. 1003-1026.

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

Barney, J.B. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.

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

Barney, J.B. and Clark, D.N. (2007), *Resource-Based Theory. Creating and Sustaining Competitive Advantage*, Oxford University Press, Oxford.

Berman, S.L., Down, J. and Hill, C.W.L. (2002), "Tacit knowledge as a source of competitive advantage in the National Basketball Association", *The Academy of Management Journal*, Vol. 45 No. 1, pp. 13-31.

Bowen, F. (2007), "Corporate social strategy: competing views from two theories of the firm", *Journal of Business Ethics*, Vol. 75, pp. 97-113.

Branzei, O. and Thornhill, S. (2006), "From ordinary resources to extraordinary performance: environmental moderators of competitive advantage", *Strategic Organization*, Vol. 4, February, pp. 11-41.

D'Aveni, R.A., Dagnino, G.B. and Smith, K.G. (2010), "The age of temporary advantage", *Strategic Management Journal*, Vol. 31, pp. 1371-1385.

Demil, B. and Lecocq, X. (2010), "Business model: toward a dynamic consistency view of strategy", *Long Range Planning*, Vol. 43 Nos 2/3, pp. 227-246.

Denrell, J., Fang, Ch. and Winter, S.G. (2003), "The economics of strategic opportunity", *Strategic Management Journal*, Vol. 24, pp. 977-990.

Dierickx, I. and Cool, K. (1989), "Asset stock accumulation and sustainability of competitive advantage", *Management Science*, Vol. 35 No. 12, pp. 1504-1511.

Drnevitch, P.L. and Kriauciunas, A.P. (2011), "Clarifying the conditions and limits of the contributions of ordinary and dynamic capabilities to relative firm performance", *Strategic Management Journal*, Vol. 32 No. 3, pp. 254-279.

Foss, K., Foss, N. and Klein, P. (2007), "Original and derived judgment: an entrepreneurial theory of economic organization", *Organization Studies*, Vol. 28, pp. 1893-1912.

Foss, N.J., Klein, P.G., Kor, Y.Y. and Mahoney, J.T. (2008), "Entrepreneurship, subjectivism and the resource-based view: toward a new synthesis", *Strategic Entrepreneurship Journal*, Vol. 2, pp. 73-94.

Foss, N. and Ishikawa, I. (2007), "Toward a dynamic resource-based view: insights from Austrian Capital and entrepreneurship theory", *Organization Studies*, Vol. 28, pp. 749-772.

Furrer, O., Sudharshan, D., Thomas, H. and Alexandre, M.T. (2008), "Resource configurations generic strategies, and firm performance", *Journal of Strategy and Management*, Vol. 1 No. 1, pp. 15-40.

Fullbrook, E. (2002), *Intersubjectivity in Economics: Agents and Structures*, Routledge, London.

Hansen, M., Perry, L. and Reese, C. (2004), "A Bayesian operationalization of the resource-based view", *Strategic Management Journal*, Vol. 25 No. 13, pp. 1279-1295.

Knorr Cetina, K. (2006), "The market", *Theory Culture and Society*, Vol. 23 Nos 2/3, pp. 151-156.

Kraaijenbrink, J., Spender, J.C. and Groen, A. (2010), "The resource-based view: a review and assessment of its critiques", *Journal of Management*, Vol. 36, pp. 349-372.

Leonard-Barton, D.A. (1992), "Core capabilities and core rigidities: a paradox in managing new product development", *Strategic Management Journal*, Vol. 13, pp. 111-125.

Lockett, A., O'Shea, R. and Wright, M. (2008), "The development of the resource-based view: reflections from Birger Wernerfelt 1", *Organization Studies*, Vol. 28 No. 9, pp. 1125-1141.

Lockett, A., Thompson, S. and Morgenstern, U. (2009), "The development of the resource-based view of the firm: a critical appraisal", *International Journal of Management Reviews*, Vol. 11 No. 1, pp. 9-28.

Makadok, R. and Barney, J.B. (2001), "Strategic factor market intelligence: an application of information economics to strategy formulation and competitor advantage", *Management Science*, Vol. 47 No. 12, pp. 1621-1638.

Markman, G.D., Gianiodis, P.T. and Buchholtz, A.K. (2009), "Factor market rivalry", *Academy of Management Review*, Vol. 34 No. 3, pp. 423-441.

Mathews, J.A. (2010), "Lachmannian insights into strategic entrepreneurship: resources, activities, and routines in desequilibrium world", *Organization Studies*, Vol. 31, pp. 219-244.

Montgomery, C.A. (1995), "Of diamonds and rust: a new look at resources", *Resource-Based and Evolutionary Theories of the Firm: Towards a Synthesis*, Kluwer Academic Publishers, Norwell, MA, pp. 251-268.

Newbert, S.L. (2007), "Empirical research on the resource based view of the firm: an assessment and suggestions for future research", *Strategic Management Journal*, Vol. 28, pp. 121-146.

Penrose, E.T. (1959), *The Theory of the Growth of the Firm*, Oxford University Press, Oxford, MA.

Peteraf, M. (1993), "The cornerstones of competitive advantage: a resource-based view", *Strategic Management Journal*, Vol. 14, pp. 179-191.

Peteraf, M. and Barney, J.B. (2003), "Unraveling the resource-based tangle", *Managerial and Decision Economics*, Vol. 24 No. 4, pp. 309-323.

Priem, R.L. and Butler, J.E. (2001), "Tautology in the resource-based view and the implications of externally determined resource value: further comments", *The Academy of Management Review*, Vol. 26 No. 1, pp. 57-66.

Richards, J. (2012), "Examining the exclusion of employees with Asperger syndrome from the workplace", *Personnel Review*, Vol. 41 No. 5, pp. 630-646.

Sanchez, R. and Heene, A. (2005), "Competence perspectives on managing internal processes", *Advances in Applied Business Strategy*, Vol. 7, Elsevier Science, Amsterdam.

Siggelkow, N. (2007), "Persuasion with case studies", *Academy of Management Journal*, Vol. 50, pp. 20-24.

Sirmon, D.G., Hitt, M.A. and Ireland, R.D. (2007), "Managing firm resources in dynamic environments to create value: looking inside the black box", *Academy of Management Review*, Vol. 32 No. 1, pp. 273-292.

Sirmon, D.G., Hitt, M.A., Arregle, J.L. and Campbell, J.T. (2010), "The dynamic interplay of capability strengths and weaknesses: investigating the bases of temporary competitive advantage", *Strategic Management Journal*, Vol. 30 No. 13, pp. 1386-1409.

Sirmon, D.G., Hitt, M.A., Ireland, R.D. and Gilbert, B.A. (2011), "Resource orchestration to create competitive advantage: breadth, depth, and life cycle effects", *Journal of Management*, Vol. 37 No. 5, pp. 1390-1412.

Spender, J.C. (1989), *Industry Recipes: The Nature and Sources of Managerial Judgement*, Basil Blackwell, Oxford.

Suddaby, R., Hardy, C. and Nguyen Huy, Q. (2011), "Where are the new theories of organization?", *Academy of Management Review*, Vol. 36 No. 2, pp. 236-246.

Szulanski, G. and Winter, S.G. (2002), "Getting it right the second time", *Harvard Business Review*, Vol. 80, pp. 62-69.

Teece, D., Pisano, G. and Shuen, A. (1997), "Dynamic capabilities and strategic management", *Strategic Management Journal*, Vol. 18 No. 7, pp. 509-533.

Wernerfelt, B. (1984), "A resource-based view of the firm", *Strategic Management Journal*, Vol. 5, pp. 171-180.

Wernerfelt, B. (1995), "The resource-based view of the firm: ten years after", *Strategic Management Journal*, Vol. 16, pp. 171-175.

Wernerfelt, B. (1997) in Foss, N. (Ed.), *Foreword in Resources, Firms, and Strategies: Reader*, Oxford University Press, Oxford.

West, G.P. and DeCastro, J. (2001), "The Achilles heel of firm strategy: resources weakness and distinctive inadequacies", *Journal of Management Studies*, Vol. 38, pp. 417-442.

Winter, S.G. (2003), "Understanding dynamic capabilities", *Strategic Management Journal*, Vol. 24, pp. 991-995.

Winter, S.G. and Szulanski, G. (2001), "Replication as strategy", *Organization Science*, Vol. 12 No. 6, pp. 730-743.

Further reading

Arend, R.J. and Lévesque, M. (2010), "Is the resource-based view a practical organization theory?", *Organization Science*, Vol. 21 No. 4, pp. 913-930.

Barney, J.B. and Hesterly, W.S. (2005), *Strategic Management and Competitive Advantage: Concepts*, Pearson Education, Upper Saddle River, NJ.

Barney, J.B., Ketchen, D.J. and Wright, M. (2011), "The future of resource-based theory: revitalization or decline?", *Journal of Management*, Vol. 37 No. 5, pp. 1299-1315.

Newbert, S.L. (2008), "Value, rareness, competitive advantage and performance: a conceptual-level empirical investigation of the resource-based view of the firm", *Strategic Management Journal*, Vol. 29, pp. 745-768.

About the authors

Vanessa Warnier is an Associate Professor of Strategic Management at the University of Lille, France. She has been a visiting scholar at Copenhagen Business School. Her research deals with resource-based theory and she has authored several articles, books and book chapters on this subject. She was awarded the Best PhD Dissertation Prize by the French Strategic Management Society (AIMS) and the Best PhD Dissertation in Management by the French National Foundation for Management (FNEGE).

Xavier Weppe is an Associate Professor of Strategic Management at the University of Lille, France.

Xavier Lecocq is a Professor of Strategic Management at the University of Lille 1 (France) and a part-time Professor at IESEG School of Management, Lille and Paris (France). His research has been published, among others, in *Long Range Planning*, *Organization Studies* and *Strategic Management Journal*. He is a founder of the Business Model Community (www.businessmodelcommunity.com), a research community encompassing 250 researchers worldwide from various disciplines. Xavier Lecocq is the corresponding author and can be contacted at: xavier.lecocq@iae.univ-lille1.fr