

A Theoretical Framework Contrasting the Resource-Based Perspective and the Knowledge-Based View

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Abstract

The purpose of this paper is to explore the relationship between the two most important perspectives of the firm, the RBV and the KBV, by examining the relative impact of firm-specific assets and knowledge capabilities on the firm's competitive advantage. A composite model is proposed which elaborates upon both perspectives causal logic with respect to the conditions relevant for the firm success.

Key words: *resource-based view, knowledge-based view, knowledge management.*

Introduction

The dominant paradigms in the field of strategic management during the 1980s and 1990s were the competitive forces approach (Porter 1980) and the resource-based perspective (Penrose, 1959; Rumelt, 1984; Teece, 1984; Wernerfelt, 1984; Barney, 1991). The former emphasizes the actions a firm can take to earn economic rents by creating privileged market or industry positions against competitive forces. The latter emphasizes building competitive advantage through capturing economic rents stemming from fundamental firm-level efficiency advantages.

Although there are apparent conflicting ideas between these two paradigms, in reality both can co-exist and shape actual firm behaviour (Spanos and Loukas, 2001). In fact, according to Wernerfelt (1984), Porter's framework and the resource-based approach constitute the two sides of the same coin. This view about the complementarity-compatibility of these two approaches in explaining a firm's performance was theoretically recognized (Barney and Zajac, 1994; Amit and Schoemaker, 1993; Peteraf, 1993, Barney, 1992; Barney and Griffin, 1992; Mahoney and Pandian, 1992; Conner, 1991) and empirically tested (Schmalensee, 1985; Hansen and Wernerfelt, 1989; Rumelt, 1991; McGahan and Porter, 1997; Mauri and Michaels, 1998; Spanos and Loukas, 2001) by many researchers.

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In recent years many studies on the status, evolution, and/or trends of the resource-based view (RBV) have been published (Barney, 2001a, 2001b; Mahoney, 2001; Makadok, 2001; Priem and Butler, 2001; Phelan and Lewin, 2000; Hoskisson *et al.*, 1999; Williamson, 1999). One of the most recent studies (Acedo, Barroso and Galan, 2006), adopting the bibliometric methodology (Zitt and Bassecoulard, 1996; Ahlgren, Jarneving, and Rousseau, 2003), analyzes the so called resource-based theory (RBT)'s heterogeneity and identifies three main trends coexisting within it: the resource-based view (RBV) (e.g., Barney, 1991 and Wernerfelt, 1984), including some representative works of the dynamic capability perspective (Teece, Pisano, and Shuen, 1997), the knowledge-based view (KBV) (e.g., Kogut and Zander, 1992 and Grant, 1996a) and the relational view (RV) (e.g., Dyer, 1996).

However, none of these studies has empirically tested the degree of compatibility or complementarity between those different approaches. The present study attempts to construct a composite theoretical framework consisting of the two most common and influential perspectives, the RBV and the KBV, that will ease the empirical testing of these two approaches in the future with real data.

The following section presents the theoretical background of the two perspectives with respect to sustainable competitive advantage as well as the rationale for the development of a composite model. Finally, section three describes and presents the model development and hypotheses and section four concludes the paper.

Theoretical background

RBV perspective

The resource-based view comprises a rising and dominant area of the strategy literature which addresses the question of an organization's identity and it is principally concerned with the source and nature of strategic capabilities. The resource-based perspective has an intra-organisational focus and argues that performance is a result of firm-specific resources and capabilities (Barney, 1991; Wernerfelt, 1984).

The basis of the resource-based view is that successful firms will find their future competitiveness on the development of distinctive and unique capabilities, which may often be implicit or intangible in nature (see Teece *et al.* 1991). Thus, the essence of strategy is or should be defined by the firm's unique resources and capabilities (Rumelt, 1984). Furthermore, the value creating potential of strategy, that is the firm's ability to establish and sustain a profitable market position, critically depends on the rent generating capacity of its underlying resources and capabilities (Conner, 1991).

For Barney (1991) if all the firms were equal in terms of resources there would be no profitability differences among them because any strategy could be implemented by any firm in the same industry. The underlying logic holds that the sustainability of effects of a competitive position rests primarily on the cost of resources and capabilities utilized for implementing the strategy pursued. This cost

can be analyzed with reference to strategic factor markets (Barney, 1986a), that is markets where necessary resources are acquired. It is argued that strategic factor markets are imperfectly competitive, because of different expectations, information asymmetries and even luck, regarding the future value of a strategic resource.

However, a serious resource-based approach omission is that there is not a comprehensive framework that shows how various parts within the organization interact with each other over time to create something new and unique (Nonaka and Takeuchi, 1995).

The resource based view (RBV) suggests that competitive advantage and performance results are a consequence of firm-specific resources and capabilities that are costly to copy by other competitors (Barney, 1986a, 1986b, 1991; Wernerfelt, 1984, Rumelt 1987). These resources and capabilities can be important factors of sustainable competitive advantage and superior firm performance if they possess certain special characteristics. They should be valuable, increasing efficiency and effectiveness, rare, imperfectly imitable and non-substitutable (VRIN) (Barney 1991).

The implication of this argument is that efficiency rents stemming from such resources and capabilities could be categorized into two, interrelated dimensions (Spanos and Lioukas, 2001):

(a) 'pure' rents (Collis, 1994) stemming directly from the efficient implementation of the given strategy currently pursued; it indicates that the more unique combination of resources the organization possesses in relation to rivals the higher is its performance. In this case firm effects are independent of strategy, and

(b) 'indirectly' from enabling the firm to conceive and develop its strategy configuration; the more resources the better the ability of the firm for a strategy that fits better market demand and results in higher customers' utility.

KBV perspective

Although Alchian and Demsetz (1972) observed that efficient production with heterogeneous resources is a result not of having better resources but *in knowing* more accurately the relative productive performances of those resources, the emergence of the knowledge-based view (KBV) came much later.

This approach considers firms as bodies that generate, integrate and distribute knowledge (Narasimha, 2000; Miller 2002). The ability to create value is not based as much upon physical or financial resources as on a set of intangible knowledge-based capabilities. According to the KBV competitive success is governed by the capability of organisations to develop new knowledge-based assets that create core competencies (Pemberton and Stonehouse, 2000). Fundamental to the KBV of the firm is the assumption that the critical input in production and primary source of value is knowledge (Grant, 1996a).

In the knowledge-based view, analysis of capabilities has incorporated human, social and organizational resources next to economic and technical resources. Firms

that possess stocks of organizational knowledge associated with value that could be described as uncommon or idiosyncratic, stand a good chance of generating sustaining high returns (Raft and Lord, 2002).

However, Leonard-Barton (1992) does warn that there is a dual nature within these knowledge-based stocks-capabilities, which can have as a result the alteration of the prior beneficial resources to potent core rigidities or performance inhibitors, in other words, what is a capability today may become a liability tomorrow. This concern that capabilities may become rigidities emphasizes the importance of understanding the processes of knowledge creation and development (Croom and Batchelor, 1997).

Within KBV, two large subgroups can be identified (Acedo, Barroso, and Galan, 2006): One subgroup, which could be considered as closer to the RBV, asserts that knowledge is the most important strategic resource for organizations (Conner and Prahalad, 1996; Grant, 1996a; Kogut and Zander, 1992). Although the RBV recognizes the importance and role of knowledge in firms achieving a competitive advantage (Wernerfelt, 1984; Barney, 1991, 1996) knowledge-based theorists argue that RBV does not go far enough. Specifically, the RBV treats knowledge as a generic resource, rather than having special properties, and subsequently, does not make any distinction between different types of knowledge-based capabilities (Kaplan *et al.* 2001).

The other subgroup shares Spender's (1989, 1992, 1996) position on the importance of collective knowledge—a knowledge that is tacit and social. This stream offers insight into different types of behaviour, inherent limitations of individuals, and the development of firms' knowledge-based activities and routines, assuming that individuals are limited by their bounded rationality (March and Simon, 1958). As a consequence of this limitation, not all of the firm's knowledge can be found in any one person's head and, therefore, it is distributed across its members.

This difference is very well explained by Grant (1996a) who believes that knowledge resides at an individual level, thereby making knowledge integration the essential function for a firm:

'Most research into organizational learning (Levitt and March, 1988; Huber, 1991) and the knowledge-based view of the firm (Spender, 1989; Nonaka, 1991, 1994) focuses upon the acquisition and creation of organizational (new) knowledge. My approach is distinguished by two assumptions: first, that knowledge creation is an individual activity; second, that the primary role of firms is in the application of existing knowledge to the production of goods and services' (Grant, 1996a: 112).

This approach ignores the concept of *organizational knowledge* and emphasizes the role of *the individual* in creating and storing knowledge. It is very similar with Simon's observation that 'all learning takes place inside individual human heads; an organization learns in only two ways: (a) by the learning of its members, or (b) by ingesting new members who have knowledge the organization didn't previously have (Simon, 1991: 125).

Thus, unlike Spender (1992), who analyzes the dual role of firms in knowledge generation and knowledge application, Grant's emphasis is on the firm

as an institution for knowledge application devising mechanisms for integrating individuals' specialized knowledge (Grant, 1996a).

Albeit there are different approaches of the KBV, the most accepted way of building distinctive capabilities and core competences within firms is through experience accumulation, knowledge articulation and codification (Macher and Mowery, 2006; Zollo and Winter, 2002; Nonaka, 1994; Zander and Kogut, 1995) or through the so called knowledge management (KM) processes of creating, acquiring, storing, sharing and deploying knowledge (Pemberton and Stonehouse, 2000). The extent to which a capability is 'distinctive' depends upon the firm and its employees in creating, acquiring, storing, sharing and deploying all necessary generic and specific knowledge that will give them a competitive advantage. Longevity of competitive advantage depends upon the inimitability of the capabilities which underlie that advantage (Barney, 1991).

Although there is recognition that knowledge is a key business asset, organisations are still in the early stages of understanding the implications of KM. KM is slowly becoming an integral business function to them (Metaxiotis *et al.*, 2005). Previous research (Davenport and Prusak, 1998; Liebowitz, 2000) has shown that a knowledge-based company possesses knowledge that allows it to manoeuvre with intelligence and creativity giving it a special advantage. For Davenport and Prusak (1998) knowledge is the only source of a sustainable competitive advantage.

However, since knowledge is not directly observable or measurable, then, it becomes a construct whose existence and properties can only be inferred through firm capabilities that are manifested in observable action (Stehr, 1992). This differentiates knowledge from resources, which can be identified without observable action. Different actions can be ascribed to different capabilities. Thus, a specific 'constellation of actions' represents a specific set of capabilities inside the firm and implies the existence of specific knowledge that is required to exercise these capabilities (Kaplan *et al.* 2001). Under this reasoning we could consider any function of the KM process (formal or informal), leading to the building of successful distinct capabilities or core competencies, as a '*prerequisite or first-order KM capability*'. Consequently, for a firm to have a sustainable competitive advantage 'KM capabilities' should be built first in order to be able to create all other necessary distinct capabilities and/or core competencies in time.

Similarly, Kale and Singh (1999) believe that knowledge management processes represent a vital core competence that can be leveraged to build other strategic capabilities or "second order" dynamic capabilities (Zollo and Winter, 2002) as, for example, the capability to manage phenomena such as acquisitions, corporate restructuring, etc.

Sher and Lee (2004) argue that KM includes three main functions: Knowledge creation, accumulation and sharing. Knowledge creation includes innovation, knowledge accumulation includes collecting new knowledge, codifying it and combining new and old knowledge, and knowledge sharing allows for diffusion of skills, experience and knowledge throughout the organisation.

Lee *et al.* (2005) add two more functions: knowledge utilization and knowledge internalization. Knowledge utilization can occur at all levels of management activities in firms: one of the popular forms of knowledge utilization is to adopt the best practice from other leading organizations, uncover relevant knowledge, and apply it. Knowledge internalization may occur when individual workers discover relevant knowledge, obtain it and then apply it. Therefore, internalization may give rise to new knowledge. In this way, it provides a basis for active knowledge creation.

Other researchers (Alavi and Leidner, 2001; Nielsen, 2006) suggest the following eight basic functions of KM, which are quite similar to those five mentioned above: knowledge creation, knowledge acquisition, capturing and articulating knowledge, knowledge assembly, knowledge sharing, knowledge integration and re-combination, knowledge leverage, and, finally, knowledge application and exploitation.

If we think knowledge and knowledge management processes as '*prerequisite or first-order KM capabilities*', then the implication of this argument is that efficiency rents stemming from such KM capabilities could be categorized into three, interrelated dimensions:

(a) 'pure' rents (Collis, 1994) stemming directly from the efficient implementation of the given strategy currently pursued; it indicates that the more unique combination of KM capabilities the organization possesses in relation to rivals the higher is its performance (in this case firm effects are independent of strategy),

(b) 'indirectly' from enabling the firm to conceive and develop its strategy configuration; the more KM capabilities the better the ability of the firm for a strategy that fits better market demand and results in higher customers' utility, and

(c) 'indirectly' through the improvement of existing or the creation of new organizational, marketing and technical capabilities; these capabilities, in turn, affect and determine the degree and quality of KM capabilities. These latter indirect effects result from KM capabilities that resemble Teece *et al.*'s (1997) notion of dynamic capabilities defined as those that reflect the firm's ability to achieve new and innovative form of competitive advantage.

All the above result in a fundamental complementarity between these two theoretical approaches, RBV and KBV, which lead to the construction of a composite framework trying to compare and contrast the two perspectives' causal logic of rent generation. This framework is justified on the basis of three reasons: (a) the two perspectives are complementary in explaining the sources of competitive advantage through their effects (direct and indirect) on performance; (b) both perspectives seek to explain the same phenomenon of sustained competitive advantage, and (c) the unit of analysis (i.e., the firm) is the same in both cases.

Model development and hypotheses

In this paper RBV and KBV constitute the two perspectives the impact of which on firm performance will be examined. The proposed composite model is

presented schematically in figure 1. The proposed model includes three effects: (i) strategy or “utility” direct effects that sustain the necessary condition for achievement of higher performance, (ii) firm-specific assets’ direct and indirect effects and (iii) KM capabilities’ direct and indirect effects, that constitute the sufficient conditions for the achievement of sustainable competitive advantage or else sustainable performance.

(i) Strategy effects

Since customer and market needs are the primary keys for the maximization of profitability, managers have to develop and apply such strategies that maximize customers’ utility. This occurs by differentiated products or by lower cost production. Market demand, besides, reflects customer needs and demonstrates firm’s profitability. This is the reason that strategy effects that take into consideration market demand and consequently customers utility, are named otherwise “utility effects”. However, although utility effects provide the necessary condition for high performance, above industry’s average effects, coming from specific unique resources and capabilities, are needed for its sustainability (Spanos and Lioukas, 2001). Strategy or “utility” (direct) effects are shown by ξ_1 in the model.

(ii) Firm assets effects

As it has been already discussed, according to the RBV, the existence of unique resources leads to sustainable competitive advantage. Schematically, two efficiency effects are appeared (Spanos and Lioukas, 2001). One of them, ξ_2 , is directly related to firm performance. It indicates that the more unique combination of resources the organization possesses in relation to rivals the higher is its performance. In this case firm effects are independent of strategy. In parallel with direct firm assets effects, there are indirect effects, too. Path ξ_3 explains the perception that the more resources/capabilities the better the ability of the firm for a strategy that fits better market demand and results in higher customers’ utility. These indirect firm assets effects could be estimated as $\xi_1 * \xi_3$.

(iii) KM capabilities effects

In accordance with KBV, KM capabilities are the primary responsible factors for the achievement of sustainable competitive advantage. These include all knowledge acquisition, creation, capture, storage, diffusion and transfer capabilities, which transform individual to group and, finally, to organizational knowledge. KM capabilities affect performance with two effects, direct and indirect, which affect the firm performance in a similar way with the firm-specific assets (i.e., the unique resources and capabilities). Hence, KM direct effect is denoted as ξ_4 and its indirect

effect (through its effect on strategy) as $\xi 5$. These indirect knowledge effects could be estimated as $\xi 1 * \xi 5$.

However, KM capabilities also affect performance through a second indirect effect on firm-specific resources and capabilities, denoted as $\xi 6$. This KM capabilities' indirect effect leads to the continuous improvement and/or renewal of the firm-specific resources and capabilities which, in turn, affect performance directly ($\xi 2$) or indirectly through their affect on strategy ($\xi 3$).

Consequently, two hypotheses are formulated:

Hypothesis 1: Firm performance depends on competitive advantage through strategy or utility effects (as a necessary condition) the sustainability of which depends on direct and indirect effects stemming from available capabilities.

Hypothesis 2: Firm performance depends on competitive advantage through strategy or utility effects (as a necessary condition) the sustainability of which depends on direct and indirect effects stemming from available KM capabilities.

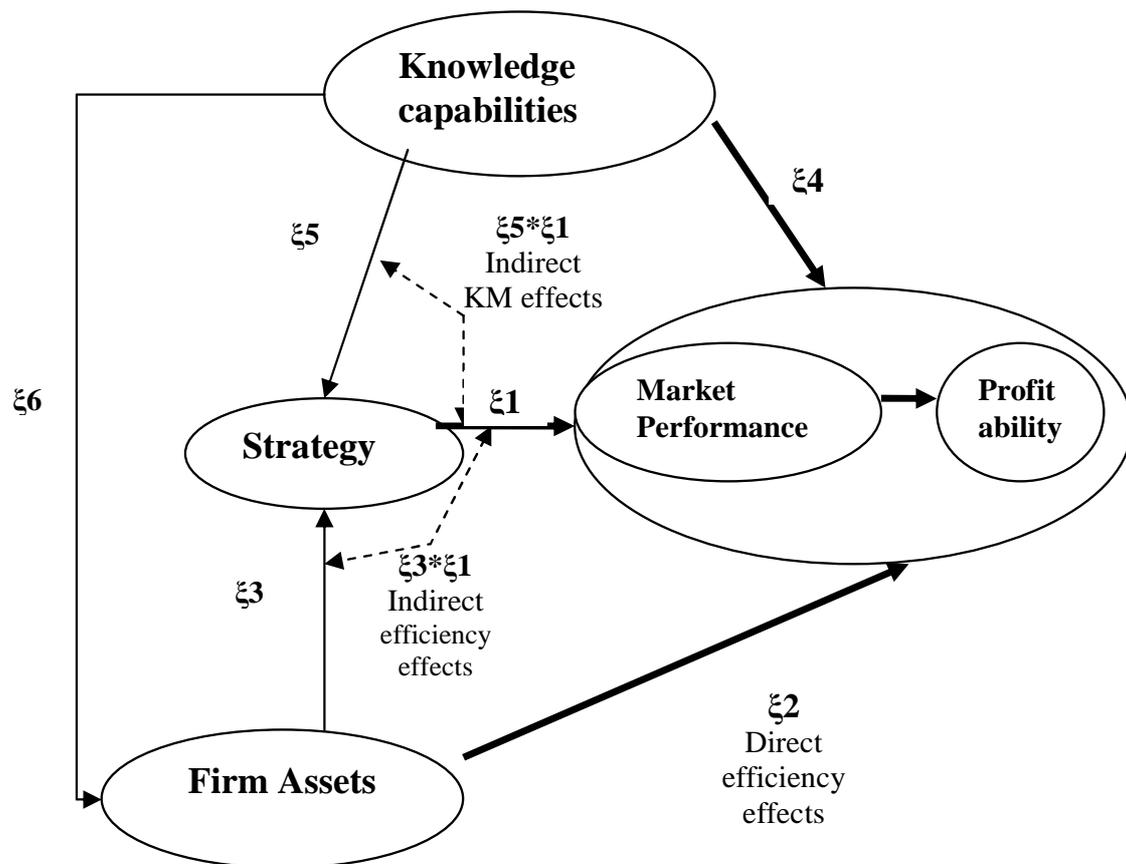


Figure 1. The proposed conceptual framework

(iv) Performance

Each research uses different performance measures analogous to its needs. For the specific proposed framework the measures of firm performance are the same used by Spanos and Lioukas (2001). They have adopted two dimensions of performance, profitability and market performance, proposed by Venkatraman and Ramanujam (1986). The first one reflects its internal success revealed by financial statements and the second one refers to external accomplishments related to market position, such as market share or sales. We also assume in our model, as Spanos and Lioukas (2001) did, a positive relationship between market performance and profitability (the first one affects the second) as various empirical researches have shown in the past.

Conclusions

The proposed theoretical composite framework indicate four complementary and interrelated types of effects in determining firm's performance: (1) 'utility' type effects depending on strategy configuration, (2) 'firm-specific assets' direct (independent of strategy) and indirect (leading to the best fit of strategy to market demand and to higher customers' utility) effects, (3) 'knowledge capabilities' effects, direct and indirect, which affect the firm performance in a similar way with the firm-specific assets, and (4) 'knowledge complementary' or 'knowledge dynamic' indirect effects on firm-specific resources and capabilities, which lead to the improvement of existing or the creation of new organizational, marketing and technical capabilities. For this reason we called them 'knowledge dynamic capabilities'. This relationship is crucial because it stresses the importance of sustaining the competitive advantage. Both of these necessary conditions, the continuous improvement and the creation of new capabilities, according to the proposed model, are primarily based, on the existence of 'knowledge management dynamic capabilities' (and, of course, the willingness of the firm to invest on this process).

To summarize, the proposed model indicates that apart from the strategy configuration's direct effects both firm-specific assets and knowledge capabilities' effects contribute significantly to the creation and sustainability of competitive advantage through superior economic rents above average. This lead us to the conclusion that the two approaches of RBV and KBV do compliment each other and explain better the creation and sustainability of competitive advantage.

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