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MANAGING SUPPLIERS AS AN INTANGIBLE RESOURCE TO CONTRIBUTE TO THE CREATION AND SUSTAINABILITY OF COMPETITIVE ADVANTAGE

A Resource-Based Approach

JURY

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Foreword

Genesis of this Doctoral Research

During my career in purchasing[1] at PepsiCo Foods International (PFI), the international unit of the snack food division of PepsiCo, Frito-Lay, I discovered the benefits of leveraging suppliers to support the development of competitive advantages in terms of costs, innovation, and availability. The contrast was striking between our relationship with suppliers and the practices of other firms, what I read in the professional press, or heard attending professional events. In 1995, Frito-Lay Purchasing had defined its mission in strategic rather than operational terms:

> "Our Objective is to leverage Purchasing as a significant source of Sustainable Cost Advantage and Proprietary Barrier to Entry, whilst delivering 100 % Consumer preferred specifications to every plant, every day"

After leaving Frito-Lay to join McKinsey, I observed that managing suppliers for competitive differentiation was not a topic attracting much interest. In 2000, the focus was on helping clients reduce costs by applying the practices developed in the automotive industry during the nineties. At the launch of projects such as M&A support, or performance improvement, the discussions centered on the classic Michael Porter inspired view of suppliers as one of the five forces affecting an industry. To achieve this, we helped clients to increase power over suppliers, to standardize to and consolidate spending, improving internal processes and managing demand.

[1] Practitioners use the terms "Purchasing" or "Procurement" with a broad range of meanings, depending of their culture. This document will adopt the term "Purchasing" to refer to the function that manages all the components of the relation between a supplier and its client, except in citations, where the original formulation will always be retained.

Today, a more collaborative approach to supplier management receives frequent support in the discourse of General Managers and Heads of Purchasing. Nevertheless, the daily behavior of buyers in the firms submitted to heavy competition does not demonstrate the same mindset. It is “cost reduction” that remains the primary objective of buyers worldwide (Zycus, 2014). According to some studies, this objective is even getting more prevalent evolving from 73% in 2013 to 82% in 2016 (*Les Priorités des Services Achat*, 2013; X-Achats and AgileBuyer, 2016).

The objective of this research is to address the apparent contradiction highlighted above and bring insights for researchers, for purchasing students and for practitioners in charge of supplier management eager to contribute more significantly to their corporate agenda.

This thesis would not have been possible if my career had not crossed the path of inspiring people who shaped my ideas, challenged me to think creatively, or exposed me to the theories that structure this research. The first one was David Gonzales, who was leading the strategic purchasing initiative at PepsiCo Foods International and convinced me of the validity to manage suppliers for sustainable competitive advantage. Philippe Bideau, from McKinsey Paris, shaped my approach to problem solving. Per Agrell encouraged me during my first writing project, the strategy section in the book “Collaborative Sourcing” (Philippart et al., 2005). During reviews, he encouraged me to explore conceptual frameworks like the Resource Based Theory.

This project owes much to the people who have guided me. Xavier Lecocq, my tutor, was essential in guiding my in depth understanding of the RBT. Pierre Romelaer and Pierre Volle, in charge of the EDBA at Paris Dauphine, encouraged me regularly. Finally, I owe my thanks to

those who have always believed in my capacity to grow and who have pushed me when necessary. To them I owe the completion of this thesis and my endeavor to go beyond.

"Competitive Advantage" or "Competitive Advantages"

A debate exists amongst scholars about the use of the singular "Competitive Advantage" or the plural "Competitive Advantages". Authors often use the singular in the title of their research but mix both the singular and plural forms in their analysis. For instance, Barney, in 1991, titled his article "Firm resources and sustained competitive advantage " but, in the body, stated that firms obtain sustained competitive advantages by implementing strategies that exploit their internal strengths, through responding to environmental opportunities, while neutralizing external threats and avoiding internal weaknesses. He used the plural "competitive advantages" 22 times. Likewise, in "Competitive advantage: logical and philosophical considerations" Powell in 2001 stresses that the leading hypothesis is that sustained superior performance arises from sustainable competitive advantages.

The singular "competitive advantage" is more associated with a captured position of leadership, sought after by firms aiming at obtaining quasi Ricardian rents from the long-term control of the source of rent. It is the output of a strategy. The plural "competitive advantages" is associated with the many differentiating factors that a firm leverages to build or strengthen its competitive position; those factors have multiple sources, from the better capabilities of management to the privileged access to material and immaterial resources. They are the inputs that contribute to the strategic positioning of the firm. Their multiplicity suggests that they are not permanent and implies that firms need to renew or upgrade them regularly. The resulting rents are therefore more Schumpeterian, obtained by risk seeking and entrepreneurship insights (Dagnino, 1996; Mahoney and Pandian, 1992).

In our research, the diversity of the outcomes of supplier relationship management, such as a better offer, a more timely reaction to market changes, or a more efficient operation encourages the use of the plural "advantages" for discussing the possible results of the successful supplier management initiatives. Moreover, supplier management is not a silo but one of the elements that firms may possess like the strength of their brand or the insights from their R&D team, all of which can contribute to build "advantages" to sustain the opportunity to earn rents as the result of their endeavors.

The title of this thesis will adopt the singular form, while the body will use the plural to discuss competitive advantages that properly managed suppliers can deliver.

Introduction

Strategic Management is the setting of goals and the development of plans by a firm's leadership to achieve the objectives of the shareholders. Those objectives are usually understood as "value maximization for the shareholders" (Grossman and Stiglitz, 1977). Firm leadership's primary objective will therefore be to develop a position of competitive advantage that will allow them to generate economic rents.

One of the objectives of business administration researchers and practitioners is to improve the understanding of the mechanisms that allow firms and their management to achieve this goal. Given that firms spend on average more than half of their revenues on resources external to the firm ("CAPS Research Cross Industry Report of Standard Benchmarks," 2014) one may expect to find suppliers in good place as a topic of interest for strategists. This is even more relevant for industries like automotive or electronics where the percentage is closer to 75%. It can reach 85% of operating costs for some electronic equipment manufacturers like Acer (*Acer Incorporated 2014 Annual Report*, 2014; Schipper and van Dijk, 2007) or for sporting goods or apparel firms which usually manage their brands, develop their images, design their products without owning any manufacturing assets. Consequently, suppliers have become the largest pool of resource for most firms. So evaluating how the Resource Based Theory[2] (RBT) framework can help practitioners to better use key suppliers as contributor to their strategic objectives is highly relevant. In fact, the role of suppliers in supporting the development of a competitive strategy appeared in the literature almost a century ago: "A fundamental aspect of competition is the selection of specialized suppliers. Those semi-permanent pairings appear

[2] Initial works on this topic used the term "Resource Based View" (RBV). Today the term "Resource Based Theory" (RBT) is more common, reflecting the maturity of the concept. We will use RBT in this document.

quasi-monopolistic but do not behave like monopolies. They seek profit from adaptation to their client's need" (Alderson, 1937). This definition already highlights the concept of a dedicated dyad, focused on satisfying current market needs to capture rents in a protected way.

Suppliers condition the performance of the firms not only in terms of costs, but also increasingly in more strategic elements, from quality and service level to innovation contributing to growth and market performance. Today, supplier relationship strategies aim at becoming more responsive to client's demands, to offer customers a sought-after difference that they will value sufficiently to create the opportunity of economic rent. The competition has therefore moved from firms to the network made of the firm and its suppliers. Scholars sometimes call this "Agile" or "Responsive", in contrast with traditional supplier relationship management that maintains a very clear boundary between the firm and its suppliers (Christopher, 2000; Gunasekaran et al., 2008). The former aims at increasing the customer base by a better, more competitive offer. The later focuses heavily on increasing cost-saving from improved efficiency, constantly reevaluating in and outsourcing decisions, production planning, and logistics processes. Although improved efficiency throughout the end-to- end supply chain can enhance a firm's competitiveness, it will not necessarily make the firm an order winner (Roh et al., 2014) or to improve its profitability (Porter, 1996).

This research aim is to contribute to the strategic understanding of the mechanisms and the drivers of the contribution of suppliers in a firm's position of competitive advantage. This research will provides directions to allow the firm to understand the challenges of strategic supplier management, set objectives and measure outcome in a way that encourages the durability of those advantages.

We observe the evolution of the frameworks pertaining to supplier management. We then focus on the Resource Based Theory as a promising framework to develop supplier management best practices. We explore this topic with an evidence-based literature review focusing on high impact journals. We confront the results of the literature search to daily practices to develop three research questions. An article for a peer-reviewed journal explores each topic. Each article adopts a different methodology: an in-depth case analysis, the statistical analysis of a broad survey, and a conceptual essay. The thesis ends with a conceptual model that can help practitioners implement a resource-based strategy to manage the relationship with the firm's key suppliers.

Evolution of frameworks to design supplier strategies

In shaping supplier relationships, the first question that strategists have asked was "where to place the boundaries of the firm?" Williamson (1975) had identified "market" and "hierarchies" considerations to draw the boundary of what the firm should control and what it should allocate on the open market. His perspective was the transaction cost economics (TCE). Is it easier to resolve conflicts for resource allocations by the way of a hierarchical decision or via negotiation in markets governed by opportunism? The make or buy decision was primarily driven by the efforts to minimize governance costs. A few years later, Williamson extended his framework to include hybrid relationships that occur for intermediate levels of asset specificities with long-term relationships during which transactions are regulated with less formal contracts (Williamson, 1991).

In exploring why and how a firm's boundaries change over time, recent studies moved beyond transaction costs and defined broader frameworks to account for both firm-specific and market-related factors. This lends support to the inclusion of capabilities in exploring firm boundaries (Jacobides and Winter, 2005; Safizadeh et al., 2008).

The challenge of setting the boundaries of the firm was further developed by Santos and Eisenhardt (2005) who identified four independent dimensions to decide how far a firm should extend its territory (Table 1).

Table 1: The Four Boundary Logics of Santos and Eisenhardt

Efficiency	• Focusing on minimizing governance costs • The organization is shaped by a succession of "make or buy" decisions. • This is the traditional TCE approach of Williamson.
Power	• boundaries at the point of maximal control over critical dependencies. • Organizations will seek to internalize the sources of uncertainties in their environment.
Competences	• Maximizes the value of the firm's resource portfolio • Would appear to be precluding the suppliers from being a source of value and competitive differentiation.
Boundaries of identity	• The organization wants to make sense of its DNA • Organizational identity is perceived as a competitive strength that should not be diluted.

The authors did not intend to identify how competitive advantages developed outside those boundaries but rather how to set the boundaries to control elements that constitute competitive advantages. Santos and Eisenhardt proposed a new research agenda to understand how boundaries could be set dynamically to obtain a resource portfolio evolving with its environment and the opportunities offered for strategy setting. They proposed to explore relationships across the different boundary conceptions. Boundary choices were not "problem driven" but "solution driven" to allow agile organizations to extend their scope of control beyond their observed boundaries and operate in a privileged ecosystem. This approach challenged the static view of boundary setting, and proposed a process based on a dynamic capability portfolio. Firms needed to ask themselves how to organize their relationships considering their core competencies and lack of abilities.

Once the boundaries had been set, firms attempted to structure themselves with an eye on competing forces driving value for those in the most favorable power position. Downstream, firms had to develop competitive advantages versus their direct opponents and potential entrants. Upstream, they had to develop a favorable structural power advantages to overcome the relative strength of their potential suppliers, which corresponded to the classic industry developed by (Porter, 1980a).

For the last decades, the Resource Based Theory" (RBT) took a more prominent place in the literature and has been receiving significant attention from scholars in academic journals. The resource portfolio component of strategy comprises decisions about how the firm can assemble resources and how it will acquire or build them. In the RBT model, resources are heterogeneously distributed across firms, and resource differences persist over time enabling firms to sustain their competitive advantages (Barney, 1991; Penrose, 1959; Peteraf, 1993; Wernerfelt, 1984). Those resources are useful when they are valuable, rare, imperfectly imitable, and have no equivalent substitutes, often summarized by the abbreviation “VRIN” (Barney, 1991). Firms that manage the most effectively the resources they control over time will show the highest levels of performance. Consequently, the identification and development of strategic resources should be a primary consideration for scholars and practitioners (Crook et al., 2008).

The interest in the RBT does not eliminate the TCE from consideration. The RBT is another branch of the organizational economics tree of knowledge (Mahoney and Pandian, 1992). The overlap between strategic frameworks arises where firms make strategic decisions concerning which capabilities they need (RBT) and how they control them (TCE). Some scholars position TCE and RBT as two approaches to explain what capabilities firms need to retain. TCE focuses on the negative consequences of outsourcing specific assets, while RBT explains the positive aspects of retaining those assets (Espino-Rodríguez and Padrón-Robaina, 2006). Typically, the two theories complement each other. Both TCE and the early works on RBT often concluded that it is not easy to make a profit with bought in capacity. Initially, suppliers were not considered as relevant from the point of view of the RBT because they were fully tradeable (Dierickx and Cool, 1989). This argument is used to justify that core capabilities, capable of generating strategic rents, should be kept within the firm, with a hierarchical control (TCE). From an RBT perspective, the argument for hierarchical control is that if a supplier develops a firm specific capability, in future transactions, the supplier may behave opportunistically and demand higher price for that capability. This makes the “valuable” criteria difficult or impossible to meet: there is no potential for value capture as value creation is outside the boundaries of the firm.

Therefore, if we want to explore the strategic value of resources outside the boundaries of the firm, those frameworks need adjustments. Researchers in the Information Technology were the first to consider that relationships outside the boundaries of the firm needed more strategic consideration. It was the recognition that firms had to look outside their traditional boundaries to find new opportunities for operational efficiencies and to enhance competitive position (Konsynski, 1993). Manufacturing systems linked by powerful information management systems were coined “Extended Enterprises”. Researchers foresaw major structural changes in business organization. Although the principles of partnerships within those “Extended Enterprises” was not yet well understood, the emergence of alternative operations models was announced (Browne et al., 1995). Looking at manufacturing firms in closed knit networks, Childe (1998) defined the "Extended Enterprise" as a system composed of a client and its suppliers who strongly collaborate in order to maximize the benefits of each partner.

There is an increasing recognition that what lies outside of those boundaries could also become a source of competitive advantages or an instrument leading to the development of those advantages (Jap, 2001). The concept of "Extended Enterprise" developed further, challenging the view of a strict boundary between the firm and its key partners. In close partnerships, the boundaries appeared as a semi porous membrane allowing to pool resources and share a strategic agenda in privileged collaborative relationship. Firms such as Dell, Frito-Lay, Toyota or Repower, were rewriting the rules of strategy and rivalry in their respective industries through using supplier relationships not just as a means for obtaining goods and services, but also as a competitive weapon (Dyer and Hatch, 2004; Dyer and Nobeoka, 2000; Hult et al., 2007; Philippart et al., 2005).

The continued theoretical development of the RBT required scholars to move their investigations to the levels of analysis where resources reside within the firm, at the interface or at the partnering suppliers. The interest for development of sustainable competitive advantages in supplier relationship management increased. On the other hand, the mechanisms to create and capture value did not receive sufficient attention to serve as foundations to develop supplier management strategies on a regular basis in corporate environments. The strategic nature of the "Extended Enterprise"[3] deserves further research.

[3] Today, scholars may use the terms "Extended Enterprise", "Supplier Networks", or "Supply Chain". Supply chain appears to be the most generic of those terms, used equally to refer to internal and external networks of infrastructures, and the relationships that govern them. We will adopt "Supplier Networks" or "Networks" when speaking of generic supplier-client relations and use "Extended Enterprises" to speak of supplier networks constructed with a strategic perspective. The citations will always use the terminology of the author.

The Resource-Based Theory applied to supplier management

Early reference studies on the resources fitting in the RBT framework capable of delivering superior performance and sustainable competitive advantages did not identify supplier networks. In Table 2 Fahy and Smithee (1999) organized the resources into assets, both tangible and intangible, and capabilities. Suppliers did find a logical place in this list.

Authors cited	Tangible Assets	Intangible Assets	Capabilities
Wernerfelt (1989)	Fixed Assets	Blueprints	Culture
Hall, (1992)		Intangible assets	Intangible capabilities and competencies
Hall (1993)		Assets	Competencies
Prahalad and Hamel (1990)		Core competencies	
Itami (1987)			Invisible assets
Amit and Schoemaker (1993)			Intermediate goods
Selznick (1957); Hitt and Ireland (1985); Hofer and Schendel (1978)			Distinctive Competencies
Irvin and Michaels (1989)			Core Skills

Table 2: The natures of resources according to Fahy and Smithee

Their approach is nevertheless interesting as it does not try to separate the resources from the capabilities but rather use resources as an all-embracing concept declined in tangible assets, intangible assets, and capabilities. The authors had a marketing perspective, with a limited interest in the role of suppliers. Nevertheless, their categorization could serve for the development of a RBT based supplier analysis. For instance, the “intangible” category includes firm networks, in which one may find the critical suppliers. If we accept that members of the extended enterprise can contribute to the development of competitive advantages, the firm will attract investors, which will increase its market value above its balance sheet value. If we go back to the sources used by Fahy and Smithee, we identify potential references to suppliers. “Intangible capabilities”, for instance, are “intangible resources” when they provide a capability differential based on the knowledge and skills of employees but also others in the value chain such as suppliers and advisors (Hall, 1992). In fact, service providers like advertising agents are suppliers. Hall also considers external networks and reputation as resources. Other authors like Amit and Schoemaker (1993) identified suppliers as “Strategic Industry Factors” without including them as “Strategic Assets of the firm”. For them firms had to own or control the resources.

Ten years later, in a comprehensive review of publications on the RBT, Newbert (2007) identified 26 resources as potential providers of competitive advantages fitting that framework. One significant resource is conspicuously absent from that list: Suppliers. Newbert identified the internal capability “supplier relationship building” as an independent variable in a single article. It was supported only 33%, versus for instance 100% for “Customer Relationship Building”. The criteria for selection of the articles in the Newbert article were very selective, with only 57 articles on a total of 1152 that were qualified as substantive and methodological.

At the beginning of this century, a new opinion emerged, initially with a limited audience. The theoretical conditions that exclude the suppliers from consideration in the RBT are routinely breached in real markets (Ramsay, 2001a). We selected an evidence-based approach to explore if other researches supported this observation. We conducted this exploration using the EBSCO “Business Source Complete” search engine, using constructed search queries to search for supplier and supply chain related terms in the title and theme words connected to the RBT in either the abstract or the keywords. We analyzed all the articles treating of supplier management topics with a deliberate mention of a RBT perspective, with its different semantic variations. Therefore, we identified titles containing terms related to supplier management: supplier, purchasing, procurement, sourcing, and suppliers. A review of the keywords in the first list of article suggested adding the term "vertical" and “dyad” in our search. The abstract or keywords had to contain (RBT OR RBV OR "Resource based"). The resulting search string follows:

Search String 1

TI (supplier OR supply OR buyer OR sourcing OR vertical OR dyad OR purchasing OR procurement) AND AB (RBV OR RBT OR "Resource Based)

We evaluated the yearly evolution of the number of articles covering our search topics in titles and RBT related terms in abstracts as a percentage of all articles focusing on the RBV, regardless of the resource covered, using the following search string:

Search String 2

AB (RBV OR RBT OR "Resource Based)

We analyzed the yearly evolution in articles meeting search string 1 as a percentage of articles meeting search string 2, the subset of articles interested in supplier related topics.

Compared to the period when Newbert conducted his research, there is an increase in the interest for analyzing supplier management issues with the RBT framework, as illustrated by the change in the percentage of articles on a time line (Figure 1).

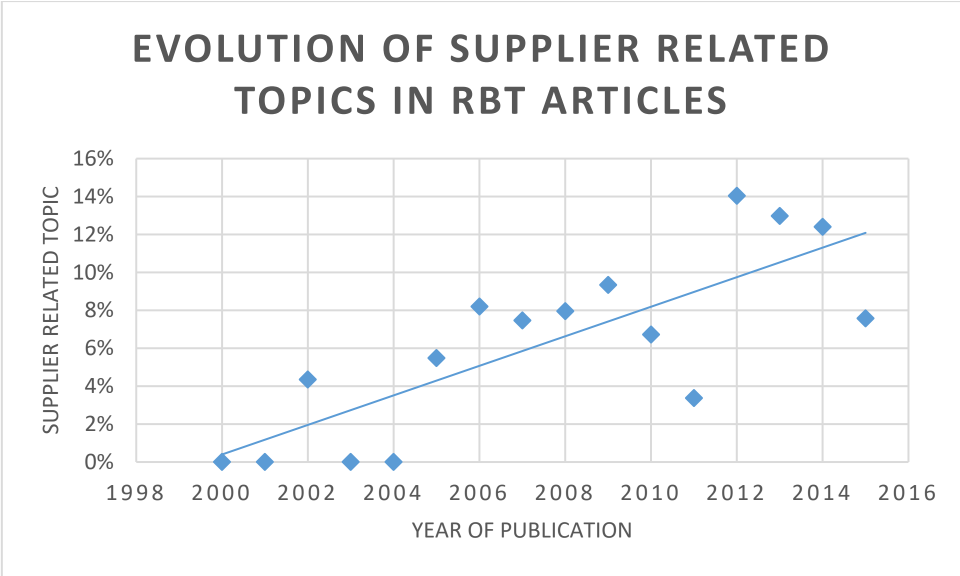

Figure 1: Evolution of supply related topics in all EBSCO listed RBT article

Our results identify articles not present in the initial Newbert's list. This is in part due to our criteria that are less restrictive than Newbert's criteria's, selecting articles only based on the keywords or abstract, without filtering out on methodology grounds. More importantly, our research happens 10 years after Newbert's research. It shows a trend that was barely noticeable when Newbert completed his article.

This shows a significant contrast between the interests of academics on the topic of suppliers with the RBT versus common industry practices. The traditional view that the firm should own its key resources is probably a major explanation of this difference.

To understand if there is a meaningful change in the scholarly perception of suppliers we focused on the most important papers from a thought leadership point of view. We selected to search for articles the most renowned journals covering strategy, those with the most rigorous editorial policy and the most senior impact. We used the 2015 CNRS[4] categorization of Journals in Economics and Management as a reference, selecting only the highest ranked journals. At first, our focus was on general and operational management journals. We added innovation, marketing, and organizational journals after observing the themes discussed in the papers from the initial list.

The search string evolved as follows:

Search String 3

TI (supplier OR supply OR buyer OR sourcing OR vertical OR dyad OR purchasing OR procurement) AND AB (RBV OR RBT OR "Resource Based") AND SO "Academy of Management Journal"

A simple spreadsheet based routine adapted it to include all the journals targeted. We reviewed the results obtained to eliminate terms such as “natural resource based economy” or journals of lesser relevance with names similar to the reference journals selected, such as the “Romanian Journal of Marketing”, a non-ranked journal, in the results searching for “Journal of Marketing”, a CNRS category 1 journal. The detailed results are available in appendix 1.

Thirty papers, 5.7% of the papers in CNRS category 1 journals discussing the RBT are addressing the topic of suppliers. It is very close to the 6.4%.ratio found for all papers, independently of journal ranking, in the EBSCO database.

[4] The CNRS is the French National Centre for Scientific Research. It is the largest fundamental science agency in Europe, and ranked first on the Scimago Institutions Rankings (SIR) 2014 list in terms of publications. It publishes the reference French journal ranking system, a list with four levels from 1, the highest to 4, the lowest. The ranking is one of the inputs to the Harzing Journal Quality List.

The different perspectives on suppliers and strategic resources

If the resources are in the relationship with suppliers, this means that firms do not necessarily need to own or directly control them. Indeed control can be obtained through other means than hierarchy such as contracts (Mayer and Teece, 2008) and social links (Heide and John, 1990; Li et al., 2010; Liu et al., 2009; Wuyts and Geyskens, 2005) even though control is neither automatic or easy through any mean (Villena et al., 2011). Social or relational capital can replace the classic capital control. This social capital can be a cognitive capital, shared values, a relational capital, co-dependency, or a structural capital, supplier development activities (Krause et al., 2007).

To qualify the supplier as a resource in the situation described by the papers, we attempted to answer the following questions:

- "If the supplier were replaced by one of its competitors, would the buying firm obtain the same benefits at minimal additional costs? (Is the supplier the source of value)?
- Can the firm's competitors achieve the same results easily, with another supplier or with the same supplier? (Is the supplier asset rare, inimitable, and non-substitutable)?

The answer to those questions was often the result of a semantic analysis of the circumstances presented as authors do systematically follow the Barney VRIN criteria within a systematic and deliberate analysis.

Within the 30 papers identified as relevant for our study, several clearly identify the supplier role as a resource that can deliver competitive advantages. Others considered that the source of competitive advantages was the supplier-buyer dyad, the network: the combined output of the supplier and its client deliver superior performances and competitive advantages. A third group of papers identified the sources of competitive advantages as supplier management capabilities, the structured and organized deployment of appropriate routines. Finally, a handful of papers followed the original perspective of suppliers in the RBT theory, and identified that the objective to retain activities delivering competitive advantages drove the outsourcing decision to outsource those that were mere commodities. We will explore those four distinct views separately.

The Suppliers

Lawson et al. (2015) show the importance of the strategic supplier contributions to competitive advantages. Firms that integrate their strategic supplier's contribution in their New Product Development initiatives (NPD) gain an advantage by using innovations that have yet to be integrated into competitor's products. Supplier performance and contribution can come from either their superior technical skills or their superior problem solving abilities. Missing elements in research are insights on how to keep the supplier's innovation rare and non-substitutable and identifying what makes the link privileged. The questionnaire used to conduct the research addressed this issue but the paper did not identify the tools or techniques adopted by the firms surveyed to improve those factors through deliberate policy. The paper focuses more on the technical capabilities as an input and the product performance as an output, without exploring further if the relational elements are mitigating or strengthening the correlation identified.

In a research testimony to supplier role in the development of competitive advantages for new ventures, Song et al. (2011) show that the supplier contribution can be extremely high as the first product launch initiates a virtuous circle of enhanced reputation, attractiveness for new hires, and new funding. Since new ventures are resource constrained, they need supplier investment and involvement for success and survival. As an external resource, suppliers can complement the new venture's relatively limited marketing and R&D resources with their own resources, and in fact may be the most important contributor to the success of the new venture's innovation. These resources allow the new venture to achieve three positional advantages: product innovativeness, production support, and product launch quality. The empirical findings suggest that it is beneficial for a new venture to involve major suppliers during the launch phase of its first products. While product launch quality is critical for first product performance, market potential positively moderates the relationship of product launch quality and product performance. In new ventures, resource constrained, this shows that the support from the suppliers to reach quality and timeliness objectives, the external resource, may actually be more important than the innovativeness and entrepreneurial capabilities, the internal resource.

A research focusing on alliances clearly identifies the contribution of the alliance supplier as a resource (Sambasivan et al., 2013). It uses multiple perspectives including the RBT to analyze that alliances arise to acquire property-based or knowledge-based resources while avoiding the opportunistic behavior of non-alliance based business links. When firms pool their resources to acquire skills and knowledge, they create an environment that encourages sharing of information and experience, which strengthen the results of the alliance. Firms ally with their suppliers to compete better in an environment of rapid change, globalization, and sophisticated competitors. Therefore, the suppliers in the alliance are clearly valuable contributors to the firm's competitive position. The study also points that the negative effect of opportunistic behavior. When the buyer takes any opportunity to ask for price concessions, or if the vendor seeks to acquire its client's competitors as new clients, the relationship deteriorates reducing or suppressing the rent from alliance outcome, because it decreases the sharing of strategic and proprietary information. Interdependence on the other hand encourages collaboration since the benefits of collaborating are higher than working alone. Finally, the study demonstrates that it is difficult to achieve alliance success without relational capital.

The supplier-buyer dyad or the network

The resource could also be the dyad supplier-buyer. Neither the supplier alone nor the buyer alone could contribute to building competitive advantages. Networks are viewed by some as superior to the firm at generating, transferring and recombination of knowledge when it has implemented coordination principles that support the efforts amongst specialized firms (Dyer and Nobeoka, 2000).

Analyzing the implications of socialization, Cousins and Menguc (2006) identify that strategic resources may lie beyond the boundaries of the firm, that a network of inter-firm relationships may also explain competitive advantage. It is a shift away from the traditional view where the firm manages strategic resources primarily within its boundaries. They offer an extended view of the firm, in which a firm's resources and competitive advantage exist in the wider network. This implies that the analysis needs to move beyond firm level to the network at the center of which the firm resides. The buyer's integration and socialization with the supplier will enhance the supplier's operational and communication performance and lead to improved 'rents' for both parties through increased relational competencies. In turn, this will increase the buyer's perception of the supplier's contractual conformance and will lead to higher levels of buyer/supplier collaboration. Therefore, the socialization becomes an asset of increasing value, as it is improved and extended. Unlike tangible resources, it does not deplete but grow, a characteristic of intangible assets (Hall, 1992; Lev, 2001; Wernerfelt, 1984). The paper stops after identifying an increase in perceived performance but not a measured rent through increase market share, superior offer, etc. In order to benefit from the additional rent, firms need to have the right governance in place, sharing knowledge and information. Integration is not binary (you have it or you do not) but is a staged effect. This would require measurement systems that have a continuous or at least staggered scale. The process is not simple and requires commitment from both parties.

Mesquita et al. (2008) also look at vertical alliances, especially those where the supplier has to learn from its client to develop new capabilities and achieve performance improvements. This clearly shows the role of the dyad, with the value creation resulting from the combination of assets or expertise from both sides in the relationship. The article offers a conclusive assessment of the applicability of the RBT to suppliers. In the right situation, the learning developed within the supplier or at the dyad is able to generate superior performance for the supplier and for its client. Moreover, the quality of the relationship and the relational governance improve the exclusiveness of the learned abilities, making them rare and inimitable. Maximizing relational performance from joint buyer-supplier knowledge acquisition efforts seems to involve the mediation effects of relationship specific assets and capabilities, and relational governance mechanisms. The two firms learn and reapply their developed capabilities to new situations. This contributes to the ongoing performance of the dyad. The supplier will benefit from the partnership because its enhanced abilities allow it to serve its other customers better. The buying entity will benefit from higher pricing / volume it its own marketplace. The RBT helps establish the fundamental link between a supplier's advantages from its valuable yet costly to imitate assets and capabilities. Those advantages reside within a particular symbiotic relationship with a focus customer or market, which makes them difficult to imitate or substitute, by other dyads outside the relation.

Inter-firm coordination allows the different actors in an extended enterprise to attain collective efficiencies that would be unavailable to firms working alone. Therefore it is the ability to organize and develop collaboration at the dyad level that creates the rare resource (Holweg and Pil, 2008; Mesquita and Lazzarini, 2008). Mesquita and Lazzarini refer to the RBT but do not establish either a deliberate intent to create a resource that is rare, inimitable, differentiating a set of firms from their competitors. Rather, they show how firms have pooled resources to close a competitive gap vs. other clusters in more organized settings. An interview with a CEO opens the door to showing how the network can become the result of a deliberate effort but this comes only in the conclusion, rather than being a central driver of the paper.

The management of suppliers is not merely a mean to get products and services where they need to be, but also as a tool to enhance the competitive position of the firm. "Cultural competitiveness" between the client firm and its suppliers is a resource that meets the "Valuable, Rare, Inimitable and Non substitutable" (VRIN) criteria proposed by Barney in 1991. This cultural competitiveness is a shared orientation towards entrepreneurship, innovativeness, and the desire to close the gap between the consumer's expectations and the market offer (Hult et al., 2007). The study clearly lays the grounds for applying the RBT outside a single organization. It also identifies the intangible nature of the identified asset, an "unobservable construct" and proposes to measure it by looking at its predictors. This article shows that firms cannot measure directly the strategic value of the RBT assets, identifying one of the main challenges of managing suppliers as strategic resources within an extended enterprise: there is no easy metric of success. Hult et al. (2006) develop the analysis further and strengthen the intangible analogy. They point out a gap in understanding the value of intangible assets across the supply chain. Intangible elements of the supplier relationships, like the shared knowledge, allow understanding how supplier management differences can justify firm performance differences. The performance is not only measured with a historical perspective “Have we improved?” but also as a competitive advantage “Have we bettered the other extended enterprises in our competitive landscape?”

Another feature identified it is the ability of the network to be more agile than competing networks. Network agility is a valuable characteristic, but it is difficult to replicate, embedded in operational routines. With it, firms can increase their service level while containing costs and adapt to ever changing customer demands (Brusset, 2016; Roh et al., 2014). Again, the articles do not discuss the potential of constructing or defending the obtained agility.

For Menguc et al., (2014), it is the deliberate intention of both the supplier and the client firms that deliver a component in a way that competition had not identified. For instance, when both parties contribute expertise, knowledge and patent protected technologies to deliver as a dyad what competitors would not be able to match they show a deliberate intention to leverage the dyad as a competitive advantage. This supports the concept of “supply chain cultural competitiveness” already identified by Hult and al.

In the dyad, the "Supply Chain Knowledge" that exists across the different actors as a critical intangible resource has the ability to create superior firm performance. Taking a higher level point of view this focuses on the extended enterprise and pointing that competition now occurs between supply chains, rather than firms (Craighead et al., 2009). Because it stresses the importance of phenomena at the supply chain level on firm performance, it is supporting the role of actors outside the boundaries of the firm as able to increase performance and develop economic rent. There is no explicit assessment of a strategy implemented to strengthen the “Supply Chain Knowledge”, to make it valuable, or to protect it to make it inimitable.

The capabilities to manage the supplier network

Most articles focus on or include the capabilities to manage suppliers as contributors to higher performance. They support the theory already identified by Lawson that, albeit strategic supply management can create alignment with long-term business strategy, it is the structured and organized deployment of appropriate routines that allow to achieve competitive advantages. The value of suppliers as a resource in the sense of the RBT is not as predominant as the value of the skills deployed by the buying firm (Day et al., 2015).

Luzzini et al. (2015) focus on a narrower set of skills, like the commitment to sustainability that leads to higher levels of intra and inter firm collaborative capabilities, and that those capabilities positively affect performance.

The relationship between e-business technology use and firm performance is recurring in research using the RBT to understand the performance of supply chains (Jin et al., 2014; Vaidyanathan and Devaraj, 2008; Zhang and Dhaliwal, 2009). The internal human, organizational, and technical resources are the components of the IT generated advantage. Technology by itself is not rare or heterogeneous, but the way firms implement it can be rare and difficult to imitate. It highlights the fact that it is not the investment in technology that creates the competitive advantage but the capabilities to implement the e-business technologies. E-business technologies can contribute to dyadic cooperation (Johnson et al., 2007). Their successful implementation allows leveraging the boundary spanning capabilities of the teams. The advantage results either from the team or from the culture of the firm that fosters the development of effective teams that can identify the right technologies and tools. In addition to the survey, the article relied on in depth study of four cases.

Because the suppliers deploy their capabilities for multiple clients, strategic supplier management must seek to protect a supplier technological resource, prevent it from becoming available to a firm's competitors, and secure its role as a resource in the RBT sense, rare and inimitable. If the supplier capabilities are incorporated in its client operations, they can deliver sustainable competitive advantage even if other firms can access similar capabilities. The location in the value chain where supplier capabilities create value will determine if they contribute to competitive advantages (Weigelt, 2013). Unfortunately, the articles analyzed do not point out a deliberate intent to isolate the supplier or to manage it to develop it as a resource that would meet the criteria of rareness or inimitability. Even when people label the interaction strategic, there is no justification of why those relationships are strategic or how the resources or the technologies enhance their strategic nature.

The supplier as a non-strategic resource

To complete our analysis, it is interesting to analyze the articles that position the role of suppliers with the classic perspective of the RBT: the firm must own the resources that contribute to the development of sustainable competitive advantages. The role of suppliers is to provide goods and services that have limited or no influence on competitive advantages and do not deliver any strategic value. Assessing the logic and the arguments of the articles that place the suppliers outside the framework of the RBT can also deliver insights that strengthen our analysis.

A firm will prefer an acquisition over a licensing of technology when the technology offers the opportunity for sustainable competitive advantages, which is the classic perspective of strategic resources, residing within the firm's boundaries (Steensma and Corley, 2001). Service firms will take their sourcing decisions to retain activities that are of high volume and high contact with their clients, outsourcing only the non-strategic activities that do not impact their client perception (Safizadeh et al., 2008). According to Mayer et al. (2012) the decision to outsource and the management of the outsourced knowledge work or human capital is not sufficiently driven by a strategic competitiveness objective: firms should carefully consider the long-term impact of outsourcing human capital rather than only performing a short-term cost / benefit analysis as this may harm their competitive position. Those studies adhere to the point of view that resources should be managed internally and that TCE should guide where the place the boundaries of the firm. What would be the recommendations in a capital constrained environment? The research supposes that the firms have the ability, financial or intellectual, to acquire or develop internally the knowledge and capabilities needed to deliver competitive advantages.

Some studies that exclude suppliers from the list of strategic resources, like Hutzschenreuter and Gröne, (2009) offer hidden indices of the validity of an alternative perspective. They assert that under pressure from foreign competition, firms will reduce their vertical integration and focus on their core internal resources, delivering competitive advantages and rely on external parties for non-core activities. Interestingly enough the author finds support for the correlation between foreign imports and foreign direct investments in the US, but less support in Germany, especially regarding the reaction to foreign direct investments. They explain this difference by the more rigid German market, where, for instance, unions have more say on strategic decision-making. When their observation is complemented by those of Kwon, (2004, 2003), who identify that German firms have less asymmetry of information, more fairness in price pressure, it appears that German firms consider their suppliers more as valuable resources than disposable commodities than their American counterparts. The Germans appear to have more hybrid supplier client exchanges as defined by Williamson, (1991) than the American who rely more on pure market and therefore see less value in specific dyads. Therefore, it is less the localization of the resource than the strategic intent in managing that resource that shapes its ability to deliver competitive advantages, and the culture that prevails in designing and managing supplier relationships.

As an additional observation, the article points out that foreign competition decreases margins and increase the quest for innovation and differentiation. As the resources of firms are limited, those facts could also justify that firms look for stronger partnerships, more efficient extended enterprises to achieve the innovation and differentiation while facing constrained financial resources due to their decreasing margins. Again, here, the article points to the potential for an increasing role for the key suppliers able to contribute to the firm's differentiation strategies.

Similarly, one can find arguments to include suppliers in the RBT even in research with the recurring theme is that firms should use the RBT and the TCE to structure their outsourcing choices with low value capabilities at the suppliers and core strategic activities remaining as their internal focus (Leiblein and Miller, 2003; Williams et al., 2002). Those studies also points that linking internal processes to external suppliers in unique extended enterprises is an important element of a strategy.

Developing Research questions

We have validated that supplier resources and the management of relationships across firm networks can be sources of competitive advantages. Therefore, they deserve consideration as strategic assets in the sense intended by the RBT. Many supplier network researches that use the RBT do not systematically assess the situation analyzed in view of the full VRIN framework that has become the most recognized benchmark of a true strategic resource. Only nine studies in the identified list take a formal view; five refer to the VRIN framework without fully exploiting it. In this area, our observations are consistent with those of Newbert in 2007, stating that most empirical articles fail to test all the hypotheses of the RBT. More importantly for practitioners, articles points to situations that deliver competitive advantages consistent with the RBT, but not the management actions that shape resources and capabilities to convert them into sources of the competitive advantages. They offer limited guidance for practitioners willing to achieve this desirable outcome. They do not discuss why this outcome does not occur naturally. We will explore those by focusing on three different sub-question, each of them explored in an article[5].

- Article One, Problematization: Can we validate the literature findings with a detailed empirical case and identify the key building blocks of a successful SCA driven supplier management strategy?
- Article Two, Gap Analysis: On a daily basis, why firms do not leverage suppliers as strategic resources as much as research would suggest? Why practitioners do not manage suppliers primarily to deliver sustainable competitive advantages?
- Article Three, Toolbox development: What tool would deliver a more comprehensive measurement of the extended enterprise performance?

[5] The reader will find the three articles in appendix. Their format adopts the style of this document rather than the style of the publishing journal. Their bibliographic references are included in the general bibliography of this document.

Article 1, Problematization

Article

The role of supplier management in Frito-Lay's snack food market domination[6]

Journal

The article is in the final stages of redaction. It will be submitted to a business history journal.

Purpose

Many of the findings in the management journals covered in the introduction are the results of the application of statistically robust tools such as "Structured Equation Modeling". Because SEM is a theory-driven technique, it is best used when the researchers have well-developed a priori models, applying to mature research areas with significant empirical work, while we have seen that the application of the RBT to supplier management is a recent trend. Moreover, because of the need to use a questionnaire administered to a large panel of respondents, the questions remain generic in nature. The results, although statistically solid, are not as telling as a detailed case to help practitioners understand how to address the weaknesses identified or the opportunities uncovered in their supplier landscape. Additionally, the studies explore the situation "ex-post" without analyzing if the supplier management approach was deliberate or if serendipity led to the enhanced performance. The initial intent of firms to protect the supplier resource does not appear clearly.

Some scholars had suggested that future studies should test the identified findings empirically (Lavie, 2006). The only empirical analyzes are Toyota (Dyer, 1996) and Food Service Group (Lewis and Brandon-Jones, 2010). Both analyze the situation to conclude that the supplier

[6] The full text of the article appears in appendix 2.

network was valuable but do not look at the motives of the managers. They do not formally identify a VRIN approach. The proposed article analyzes the role of suppliers in the ascent of Frito-Lay to its current dominating position in the global snack food market to provide an empirical validation of the link between supplier management and sustainable competitive advantages. It seeks to identify the sequence of actions that linked supplier management strategy to the capture of a competitive advantaged position.

Methodology

The article uses a historical case approach. Its sources are interviews with the firm actors and their suppliers, articles in the business press, and company reports to explore how Frito-Lay evolved, its motivations, its strategic intent. While some may deride case based research as anecdotal, adherences to good practices to insure that the information collected is relevant make empirical case based research a useful tool for in depth assessment of the drivers of a firm's performance (Hillebrand et al., 2001; Johnston et al., 1999). This is particularly critical when theory is still in its formative stages (Yin, 1994), which appears to be the case when trying to understand how to apply the RBT to supplier management strategies.

Findings

In 1990, the company had grown complacent, shipping average quality products that were not meeting customer expectations. It was losing market share to Eagle Snacks in the US, and had ambitious growth targets overseas. 10 years later, it had acquired or eliminated its competitors with significantly better products based on revolutionary packaging technology and innovative seasonings, sourced from suppliers so closely aligned to Frito-Lay that they were refusing to serve its competitors. The supplier management strategy aimed at creating an effective extended enterprise insulated from competitive imitation. The case demonstrates that the suppliers meet the VRIN criteria defined by Jay Barney in 1991.

- The suppliers were valuable. The quality of its packaging and seasonings were key in allowing Frito-Lay to reverse its slide and become the dominant, almost monopolistic actor in the global snack food business, generating growth, and profitability.
- This resource was rare. Frito-Lay competitors were not able to access it. Some of the technologies were just emerging, and the suppliers either refused to serve other snack food producers, or did not allowed them to access to their most capable R&D staff, or the same production equipment.
- The resource was inimitable. Some of the impact of the new packaging and seasonings was also a consequence of its implementation in the Frito-Lay factories, adding a layer of causal ambiguity to the output. Frito-Lay had also a significant scale advantage. It was sufficiently large and integrated to saturate the dedicated lines of advanced packaging production at its suppliers, with a cost below the one of alternative, less desirable options. In seasoning, Frito-Lay was piloting flavor development with an objective of significant global preference in blind test. It scale again allowed to push the developments much further than competitors did, while enjoying a lower per unit cost.
- The resource was non-substitutable. There were no alternatives to reach the packaging properties obtained by Frito-Lay or to develop as impactful seasonings.

Limitations

Its format, a single case from an embedded point of view, does not facilitate generalization. Moreover, many suppliers involved at that time are still closely align to Frito-Lay and refuse to share publicly information about their relationship with their preferred client. Finally, the insider perspective of the author provides insights but reduces independence from the observed facts.

Originality

We have found no other cases documenting the evolution of supplier management and the strategic intent to develop privileged relationships to enhance the competitive position of a firm. The case analysis allows us to highlight the stakes and the benefits achieved managing suppliers as strategic assets, illustrating an example of a constructed strategy to fence off supplier assets from competitors.

Article 2: Gap Analysis

Article

The Procurement Dilemma: Short-term Savings or Long-Term Shareholder Value? [7]

Journal

Journal of Business Strategy (CNRS Category 3), November 16, 2016, Volume 37 Issue 6

Purpose

Why practitioners do not manage suppliers to deliver competitive advantages? We have seen that managing suppliers with a rigorously developed, resource-based strategy offers significant opportunities to strengthen a firm's competitive position. Industry surveys show that this approach is the exception rather than the norm even if the academic literature documents a few examples of fruitful collaboration. The article seeks to understand the

[7] The full text of the article is in appendix 3.

perception of purchasing professionals regarding competitive advantages and long-term value creation.

Methodology

The article analyzes the 500 answers in a survey of 600 purchasing professionals for a global FMCG firm. A four statements question tested the understanding of shareholder value from the point of view of purchasing professionals. Two statements presented situations in which the buyers had access to a commodity, while the other two were offering the possibility of a competitive advantage because of a privileged access to a value generating resource. Two statements were presenting opportunities in the value chain, with clients or suppliers, and two presented operational efficiency gains / TCO opportunities (Table 3).

	Question	Value chain	Efficiency TCO	Transactional	SCA
a	Lower priced commodity	X		X	X
b	Exclusive access to a new molecule	X			
c	Exclusive collaboration delivering above industry average effectiveness		X		X
d	New technology from a dominant player increasing operational effectiveness		X	X	

Table 3: Detail of the four statements

To obtain a reference outside of the corporate purchasing culture, we used second year students from a French business school. They had not attended a Purchasing class or worked in Purchasing, but had already attended strategy and finance courses. The statistical analysis used primarily logistic regression; it used R and R Studio to process the data and confirm the validity of the results.

Findings

The corporate respondents belonged to four cohorts of seniority. We retained only the managers and the executives. Many of the two cohorts with the lower rank professionals did not answer the question suggesting they do not master the concept sufficiently.

The students scored better than the manager and executive populations, both in the percentage that properly identified the four statements and in the average number of correct choices (Figure 5 in appendix 3). A Tukey honesty significance test at 95% confirmed the difference between the students and both professional populations (Executives vs. students: $p=0.016$; managers vs. students: $p < 0,001$).

We examined the answer patterns to understand why executives did not appear to pick up better the long-term benefits of differentiated performance. We looked at the percentage of choices of the short-term options versus the long-term options for the three populations. The executives identify more the long-term benefits of the supplier situations presented but also more readily choose the short-term initiatives (Figure 6 in appendix 3). On average, their ratio of short-term to long-term is similar to the one of the managers. This shows that, although the executives understand better than managers the concept of shareholder value delivered from competitive advantages, they do not value it more than the short-term transactional initiatives.

Limitations

The study it is limited to a single corporation. Only one question in the entire questionnaire tested the value perception of the purchasers and their management.

Originality

This article suggests that the governance of the function, the pressure for constantly delivering cost savings clouds the ability of purchasing professionals to structure long-term strategy. This is an example of bounded rationality. There an inherent immediate satisfaction to deliver cost savings measurable within the performance timeframe of most traded corporations, quarterly, and the human resource management practices of annual or bi-annual individual performance reviews. The top management, CEO and CFO must take an active role in setting long-term targets for their purchasing team, and train them in understanding the difference between strategic impact and transactional efficiency. The main challenge is that the tools to measure long-term impact are not available, while most corporate systems easily deliver benchmarks on cost evolution on a historical basis.

Article 3: Toolbox Development

Article

The article is in French: Mesurer la performance de l'entreprise étendue pour piloter la création de valeur: une approche par l'immatériel [8]

The title in English would be "Measuring the Extended Enterprise performance to drive value creation: an intangible based approach"

Journal

"Revue Française de Gestion Industrielle" (CNRS Category 4), volume 33, issue 4, December 2014.

[8] The full text of the article is in appendix 4.

Purpose

The second article concluded with the need for a better tool to focus the purchasing function on managing the extended enterprise with a long-term perspective. Other researches have also identified that to manage suppliers as a strategic resource; new performance measurement tools are required. They must measure not only short-term transactional performance but also the performance of its extended enterprise (Hult and al. 2007).

Methodology

A meta-analysis of supplier performance measurement research identifies the missing elements in the tools documented in the literature. None can measure the performance of an extended enterprise. To propose an approach better suited to manage a supplier relationship with an objective of value creation, this article uses the construction management approach introduced in accounting research (Kasanen et al., 1993). To develop propositions adapted to the practical needs of firms is at the origin of the "Balanced Score Card" (Kaplan, 1994). Those researchers in accounting wanted a tool to measure intangible assets.

Findings

The article identifies first the characteristic of intangible assets: a promise of future benefits that does not appear on the balance sheet, that increases as it is used, but that it is difficult to defend and control (Lev, 2001). It validates the analogy between strategic suppliers and intangible assets: they are also a promise of future benefits, but the firm cannot directly control them. A measurement tool based on those two characteristics will be a suitable leading indicator for the success of the extended enterprise.

The potential for future benefits uses two sets of measures. A commonly admitted way to measure the value of a firm is the discounted cash flow formula; initiatives contributing to cash flow increase make the first element of our measurement system. Practitioners track also features, the measured performance of the product or service as they indicate the ability to answer the expectations of the final user.

We must also evaluate the strength of the relationship, what organizations implement to control it without the traditional contract based control mechanisms. Measuring capabilities to protect and defend the intangible assets rely on softer measures. The first one is checking if there is a congruence of interests. The second is the ability to develop a collaborative environment.

Table 4 documents the link between the chosen dimensions of the balanced scorecard, and the characteristics of intangible assets.

Intangible assets (Lev, 2001)	**Applicability to key suppliers**	**Constructed measurement components**	
		Mirror for each firm	Team / the outcome
Promise of a future benefit which does not appear on the balance sheet	Key suppliers help you strengthen your competitive advantages and increase profitability	Components of value creation	Final user perceived performance
A resource difficult to exchange and control	Key suppliers are not owned by the firm, and contracts are not adapted	Congruence of interests, joined sensemaking	Ability to collaborate, to work as a team

Table 4: Principles guiding the scorecard design

Questionnaires allow measuring the last two, “soft” dimensions of this balanced scorecard. It can be difficult to obtain an unbiased answer if the questionnaire comes directly from the client. An external party administering it will provide a buffer allowing both the supplier and the client to express their unbiased point of view.

Limitations

Practitioners have not used the model as it is developed. It is therefore untested. On the other hand, assessments developed prior to training projects have applied some of those building blocks independently.

Originality

The model answers a need expressed by practitioners who point out that they do not have tools to measure the long-term impact of their initiatives. The details provided would allow testing in a corporate environment and move to an implementation phase.

Discussion

As Penrose (1959) established in her seminal work, the firm is a collection of productive resources. At her time, firms owned most of those productive resources. Outsourcing appeared as a mainstream business strategy the 1980's (Mullin, 1996; Slaughter, Matthew J, 1995). Today, firms focus on what they deem to be their core competencies and outsource what others could do better and more efficiently. This has significantly modified the allocation of resources between what lies within the boundaries of the firm and what lies outside. Therefore, suppliers are the most complex and diversified pool of resources for a firm. This should attract the interest of resource strategists, both academics and practitioners.

The still limited body of research targeting suppliers within the framework of the RBT already opens new avenues to explore strategies that convert or maintain suppliers and supply management as resources that can contribute to the development of sustainable competitive advantages. Managing resources to create value in supplier relationships is not sufficient in the hypercompetitive environment faced by most firms. The value developed collaborating with suppliers must be retaining for the shareholders and not transferred to the next member of the value chain. This work has attempted to identify why and how firms can manage supplier relationships to develop competitive advantages and create value. It also helps translate the logic developed from conceptual thinking into applicable recommendations.

The introduction shows the growing interest from strategic researchers for the opportunities offered by supplier management to enhance a firm's competitive position. It validates that suppliers, the dyad supplier-buyer, and the capability to manage the relationship strategically offer fertile grounds for the application of the RBT. This departs from the classic view of the RBT that insists that firms must possess the resources that deliver its competitive advantages.

Therefore, some scholars have proposed the term "Extended Resource-Based Theory", defined by Mathews (2003) as the wide array of external resources that the firm can leverage, through both market-mediated transactions and through various kinds of resource exchange and resource leverage relationships that link firms in value-chains that crisscrosses the economy. It was further explored by Squire et al., (2005), Lavie (2006), Lewis and Brandon-Jones (2010). This research is an extension of their work.

The Frito-Lay case (Article 1) validates empirically that the right supplier strategy and properly managed suppliers can become strategic resources in the sense defined by Barney: available to the firm, valuable, rare, inimitable, and non-substitutable. It illustrates how firms to can design supplier management strategies with a competitive advantage agenda to capture rents from their supplier's abilities.

Analyzing the perception of value for purchasing professionals (Article 2) shows why this approach is not more readily applied. The mindset of corporate Purchasing teams is too often focusing on transferring value with short time and functional horizons while the development of supplier relationships that delivers competitive advantages requires for purchasing to add to its traditional short-term functional perspective a long-term firm wide strategic view. The value capture perspective with an end-to-end value chain vision needs to complement the value creation perspective highlighted in the initial RBT works. This oversight had been recently documented: in product markets, in which value is created and captured before being redistributed to stakeholders and resource owners, empirical studies in the RBT tradition have rarely accounted explicitly for competition (Chatain, 2011). It is especially true in purchasing activities, where the measures of success are easier to measure at the tactical than the strategic level.

To improve the likelihood of success in firms eager to strengthen their supplier network with a strategic mindset, to deliver competitive advantages, practitioners need a new measurement framework, broader than the traditional efficiency based measurement approaches common in most purchasing environments. It must address both the tangible elements of the relationship, and the less tangible organizational perspectives (Article 3).

Action research bias

This work is the contribution of a former practitioner who has spent twenty years of his professional life facing the daily constrains of management in a corporate setting. It builds upon a career-long observation of the common purchasing practices.

Therefore, this research borrows tools used in Action Research (AR). Because the perspective is partially case based rather than embedded in current practices, it diverges from the classical definition of AR (Bradbury and Reason, 2003; Susman and Evered, 1978). Nevertheless, it shares with AR a future orientation, the objective to solve practical problems and to create a more fruitful approach for the networks of buyers and sellers. Like AR, it implies a system development, to build the appropriate structures and competencies to generate new knowledge about process improvement opportunities. It aims at generating theories grounded in actions. On the other hand, unlike AR, it does not intend to be situational, but to develop tools applicable to a broad range of situations. Additionally, a measured change is part of the AR, while here there is merely a proposition of a tool to measure future changes.

The road map to manage suppliers as competitive resources

Reflecting on the articles analyzed in the introduction allows us to identify the key building blocks necessary to deliver competitive advantages from supplier management. The observation of the strategy deployed by Frito-Lay during the 1990-2000 period provides an empirical validation of the key conditions and drivers identified in academic research. This will allow structuring the road map to guide practitioners and executives to drive supplier management strategies or change management initiatives.

The first condition we identified is the spotting of a gap between market expectations and current offering. As the Frito-Lay case illustrated, the starting point of the development of its supplier management strategy was the need to serve an unmet market demand better ("a better product at a more attractive price point"). The market potential, a gap between expectations and current offers, has been identified as an essential antecedent to using suppliers as a source of competitive advantages (Luzzini et al., 2015; Sambasivan et al., 2013; Sirmon et al., 2007; Song et al., 2011). In some cases, firms perceiving that their internal resources are not sufficient to deliver the winning proposition to the market will reach for their network, their extended enterprise to bridge the gap.

The second antecedent was a serious challenge to conquer or retain a leadership position. For Frito-Lay in the USA, the wakeup call was the performance of Eagle Snacks as a challenger with a superior product that benefited from the same structural advantages in terms of distribution system. In Europe, it was the need to displace entrenched competitors while working with large-scale distributors that were both essentials for market reach and predatory on margins. To survive and prosper in those hypercompetitive environments, Frito-Lay had to reinvent itself. Other examples of successful supplier management strategies have also shown that the networks are developed to allow the focal firm to move from a weakened to a dominant position, like Repower's ascent from marginal player to dominance in the profitable niche of highest power wind turbines at the beginning of the 21st century (Philippart et al., 2005).

Departing from the initial recommendations to grow in hypercompetitive environments, the constant destruction and replacement of competitive advantages (D'Aveni et al., 1995), Frito-Lay and Repower intended to build a strengthened competitive position by extending the scope of resources necessary to free themselves of the hypercompetitive environment. Biedenbach and Söderholm (2008) had also identified the development of new organizational structures, virtual, imaginary or network to combine the need for long-term sustainability with change management in a hypercompetitive environment.

In empirical studies, a decisive leadership willing to challenge traditional practices is often key to initiate the cultural change. Roger Enrico played this role in the Frito-Lay case. More recently, Caterpillar CEO Douglas Oberhelman pushed a radical cultural shift in supplier relationship management. The firm was losing revenues under pressure from Asian competitors when he encouraged an approach to enhance competitiveness with a more strategic approach to the management of key suppliers, giving them a broad envelope to develop innovative solutions for a defined subcomponent. In exchange, they received a lifetime agreement, creating a common interest. This initiative allowed the company to reduce its asset base, to increase its product performance and to incorporate unique, innovative features that allowed to differentiate from competing alternatives (Singh, 2010; Stenier, 2016). At this time, the long-term outcome of this change is still unknown.

The CEO must open the door by supporting change with budget allocations, public statements, and renewed governance, especially about expectations and performance. The CPO must have a clear, articulated vision for change and must fully embrace the new agenda (Smeltzer, 1998).

The next contributor is what Hult called “supply chain competitiveness”. A tacit convergence of objectives will develop through interactions among the members of the extended enterprise. Its key components are Entrepreneurship, innovativeness, and learning ability. Facing market uncertainty, extended enterprises will invest into knowledge development and focus their resources and capabilities to beat competing networks. This supply chain competitiveness is valuable, rare and difficult to duplicate (Hult et al., 2002). Learning organizations share information freely not only within the organization but also key suppliers (Slater and Narver, 1995).

Cultural competitiveness would be difficult to maintain without a bias for collaboration. Without it, the competitiveness would quickly be pushing the buyer to apply pressure on its essential suppliers and ask for cost concessions. Likewise, the supplier would seek to disseminate quickly its expertise indiscriminately. The two parties would have reverted to the opportunistic behavior described in the TCE. Collaboration builds trust, and allows suppliers and buyers to exchange information during early stages of market need identification and develop targeted innovation (Rosell et al., 2014). Collaboration is also linked to enhanced reputation about the trust of the parties and their skill sets, their shared capabilities (Akrout, 2005; Ha et al., 2011). Trust between the parties is a major contributor to convincing a supplier to give a single client a privileged access to its assets (Barney and Hansen, 1994). That trust comes from a routinized set of methodologies and tools within a culture that create the stability for all parties to create deeply embedded links. The stability creates competitive advantages (Lawson et al., 2009). Trust building is one of essential capabilities to delivering competitive advantages made of distinct bundles of routines which evolve over time (Day et al., 2015). The collaborative culture is therefore an essential skill to develop and monitor when implementing an extended enterprise network to deliver competitive advantages.

The combination of supply chain competitiveness, trust, and collaboration allows creating joint sensemaking[9] and a system of shared value. With common goals, buyers and suppliers develop compatible understandings of what constitutes improvements and how to deliver it, providing competitive differentiation in terms of cost, quality, service, features and/ or flexibility (Krause et al., 2007; Revilla and Knoppen, 2015). Joint sensemaking allows the different firms in the extended enterprise to work on the targeted innovation that most efficiently delivers a differentiating, superior answer to the market needs identified earlier (Song et al., 2011). The perceived or observed congruence of interests is an indicator of joint sensemaking. Frito-Lay and its suppliers have illustrated the congruence of their interest by the willingness of suppliers to give Frito-Lay a much larger share of their capacity than any other client and their refusal to serve Frito-Lay competitors.

The last and most overlooked element of the resource-based extended enterprise management is the strategic intent to insure that the resource remains inimitable. The firm must construct a fence to prevent competitors from accessing the same supplier resources. An early element of Frito-Lay strategy was the deliberate intent to fence off the supplier assets deemed strategic to strengthen and maintain its competitive position avoiding returning to the trap of hypercompetitivity. To the classic “create and apply”, they added the objective of “protect” what would otherwise have been an open knowledge or innovation, quickly disseminated leveling the competitive field. Early RBT research had identified that managers needed to protect their resources, referring to resources that were “firm specific” (Amit and Schoemaker, 1993). Supplier abilities must remain off reach from the firm’s competitor, through a combination of shared efforts at the dyad level, interests and causal ambiguity, and

[9] While Revilla and Knoppen use the hyphenated form “sense-making”, we will use the single word spelling sensemaking as a single word, adopted by most authors following the trend sent by Weick (1995).

a decrease of the competitive pressure (Mesquita et al., 2008). This was one of the conditions already identified by Ramsay (2001) in one of the first articles on the applicability of the RBT to supplier management. At Frito-Lay, some of the drivers of the increased performance of packaging and seasoning remained hidden, embedded in the production or product development routines.

The framework represented in figure 2 can structure a critical assessment of supplier management in a firm’s environment and lead the development of more strategic supplier initiatives. It integrates concepts in an organized flow not previously validated by theory, so it is still conceptual. It offers opportunities for further research to strengthen the value of the insights it seeks to provide.

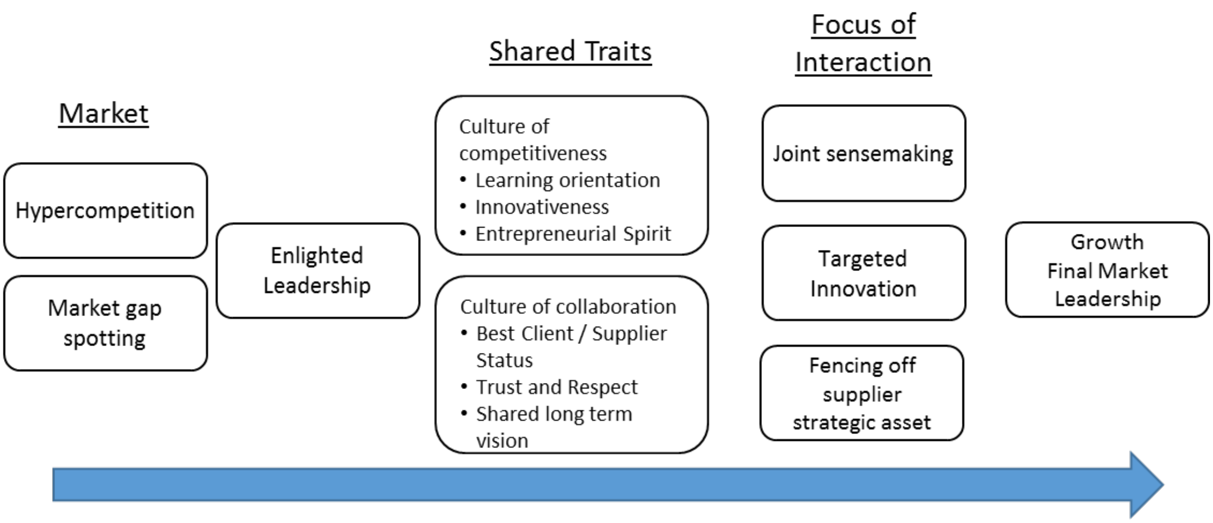

Figure 2: Conceptual Framework

This discussion would not be complete without reflecting on the traditional cost objective of supplier management. Cost control remains the primary objective of the purchasing function, at least when the “Total Cost of Ownership” (Ellram, 1993; Ellram and Siferd, 1998) or even better “Total Value of Ownership” (Wynstra and Hurkens, 2005) is used as a reference. As we have seen in the Frito-Lay case, the cost focus of traditional supplier management remains relevant when it is included in a search for competitive advantages. It is an integral part of the management of a strategically effective extended enterprise. Frito-Lay has improved its cost position significantly by acquiring a deep understanding of its supplier's operations and promoting a shared understanding of the competitive requirements. Because trust existed between the parties, they could optimize the entire value chain as a continuous system (Article 1). On the contrary, in the US market, automotive firms that have not been able to manage the relationship with their suppliers within a mutually beneficial extended enterprise have jointly forfeited a cost improvement of $2 Billion in 2014 (Henke Jr., 2015). So the financial perspective must remain a key metric of supplier management effectiveness, as long as it is correctly established with a long-term value creation perspective rather than the "quarterly capitalism" described by Barton (2011).

The Nature of Resources in the Extended Enterprise

Researchers in the RBT literature have questioned whether it is the absolute level of resources or the deployment of such resources that leads to differences in firm performance (DeSarbo et al., 2007; Newbert, 2007). The review of the literature has allowed to identify the two causal mechanisms that deliver economic rents to the firm from the proper management of its suppliers: resource picking and capability building (Makadok, 2001). Under the resource picking mechanism, a firm selects its strategic suppliers for their ability to contribute the most effectively to its own value proposition and strategic agenda. Under the capability building mechanism, it actively manages the development of the dyad's outcome that best enhance its position. The two mechanisms complement each other: the supplier resources selected during the strategic sourcing process create value at the dyad level for the client firm. Multiple controlling tools, such as the quality of the relationship or the ambiguity of the processes making the boundary between the client and the supplier more porous protect the extended enterprise from competitor's attempt to imitate its outcome. Those activities of sourcing, interaction management, and protection exist within the strategic supplier management capabilities at the buying firm level. The difference in their abilities to deploy resources effectively so that inputs convert more effectively into desirable outcomes explains why two firms that have similar resources obtain drastically different levels of performance.

In this research, we have identified how multiple potential supplier network related sources combine to deliver sustainable competitive advantages and value creation for the firm: the supplier, the dyad, or the ability to manage suppliers with a strategic agenda. Suppliers can be rare and valuable, but alone they are unlikely to qualify as a strategic resource, as it is the management of the relationship that will make the output inimitable. This is consistent with recent research showing that the resource potential to deliver the expected new product-driven competitive advantages derives from the capabilities applied to manage the resources. New product performance improves when the capabilities used to transform the supplier resource into product is properly reflecting the nature of the resource (Menguc et al., 2014). This shows that suppliers are necessary to deliver value but not sufficient. The ability to manage them with the right strategic intent is essential to convert the valuable resources offered by the supplier into a long-term value opportunity for the firm.

The traditional RBT considers physical assets that acquired and protected by contract but the extended enterprise inputs are not stable resources. As the market changes, the people involved rotate, the technologies evolve. The firm strategy requires constant adjustments to maintain the value of its extended enterprise and to protect its latest outputs, as earlier results become commodities. The dynamic nature of the relationship between firms operating in a network and facing a hypercompetitive environment suggests that the rents obtained from managing suppliers as resources are of Schumpeterian nature rather than Ricardian.

Intangible assets and firm boundary perspectives

Intangible capital contributes to the creation of value without appearing in financial and accounting statements. It is a claim on future earnings that cannot be recognized in the balance sheet of the firm, which cannot be easily exchanged, whose property is hard to defend, and which offers the potential for an increase in return on investment as this intangible is exploited (Lev, 2001).

Suppliers are not a “property” of the firm, and therefore defending the benefit of the collaboration is challenging. They present the potential for increased returns as firms are leveraging them widely across an enterprise system. They are not easily transferrable, and are difficult to control.

Suppliers that are strategic contributors to the firm present the characteristics of intangible capital for the firm that has the capabilities to manage them according to this potential. The dyad and the capabilities to manage it with supply chain competitiveness in mind on both the buyer and the supplier sides, to develop sustainable competitive advantages, are intangible resources. This allowed structuring a measurement system to pilot the performance of the extended enterprise. The intangible analogy can also contribute to shed a different light on suppliers when cost considerations come to mind. Intangible capital is a financial concept that can demonstrate to a CFO or the shareholder representatives that key suppliers are part of the strategic agenda. Vertical alliances can replace vertical integration strategies, considering not only firm capabilities and capital availability but also the potential of the extended enterprise as immaterial capital that improves the competitive position of the firm. This immaterial capital approach does not require an allocation of financial resources that could find a better use elsewhere. It offers levers for the development and defense of sustainable competitive advantages. Because of the shift from internally owned production capabilities to outsourced capabilities, the firm's strategy must integrate sources of competitive differentiation linked to knowledge and competencies within the extended enterprise.

For future research, it would be valuable to assess if competition in the buying firm market pushes the development of strategies that are more or less conducive to development of value capture strategies leveraging suppliers as a resource. When price competition drives strategy development, firms would privilege a cost-based relationship. When non-price competition drives it, firms may more readily develop cooperative strategies to leverage supplier capabilities with a long-term competitiveness agenda.

Conclusion

In the hypercompetitive environments most industries are facing today, the role of the top management is essential to implement the set of policies that allow a firm to overcome the environmental challenges (Chen et al., 2010). For them, this research identifies a path often overlooked at board levels to deliver competitive advantages: developing partnerships with suppliers that can capture some of those supplier's skills and knowledge for the exclusive use of the firm. The suppliers within the extended enterprise become intangible assets instead of mere sources of costs. The research opens new avenues of research for strategists attempting to develop alternative sources of competitive advantages with a more systematic and targeted management of the key supplier relationships. This requires strong leadership as the financial rewards of improved supply side strategies for the firm and its shareholders are long-term effects often difficult to separate from other initiatives on the demand side. This would demand a better governance of the supplier relation with input from both the strategic management and the marketing executives. It would increase the ability of the firm to outperform its competitors to benefit from emerging trends and align both its internal and external resources to provide better answers faster to unmet market needs.

For practitioners the research illustrates how the RBT can support the development of category management plans and supplier relationship management to gain competitive advantages. The research identifies measurement tools to pilot the new strategic initiatives, to adapt the mission and targets of managers.

Successful firms are not competing alone but in networks of allied firms that share objectives. Successful partnerships require commitment and trust. Merely considering the network members as “buyers” and “sellers” risks focusing on short-term objectives (Hunt and Morgan, 1994). The focal firm must structure and defend its network of suppliers as carefully as it defends its market share. So the most important learning from this research, worthy of further investigation is probably the deliberate intent to manage a pool of suppliers with a strategic perspective and the actions to protect that pool from competitive poaching, as illustrated by Frito-Lay deliberate intent to isolate its suppliers.

Appendices

1) Papers Analyzed in the evidence based literature review
2) Article 1: The Role of Supplier Management in Frito-Lay's snack food market domination.
   To be submitted to a Business History Journal
3) Article 2: The Procurement Dilemma: Short-term Savings or Long-Term Shareholder Value?
   Published in "Journal of Business Strategy", Volume 37, Issue 6, Nov 2016
4) Article 3: Mesurer la performance de l'entreprise étendue pour piloter la création de valeur : une approche par l'immatériel.
   Measuring the performance of the extended enterprise to drive value creation : taking the intangible capital perspective.
   Published in "La Revue Française de Gestion Industrielle", Volume 33, Issue 4, December 2014
5) Bibliography

Papers Analyzed in the evidence based literature review

Paper	Search in	All discussing RBV	RBV and Suppliers
All papers in the database	Abstract	3304	211
General Economics, General Management			
Academy of Management Review	Abstract	30	0
American Economic Review	Abstract	1	0
Econometrica	Abstract	0	0
Journal of Political Economy	Abstract	2	0
Management Science	Abstract	14	0
Quarterly Journal of Economics	Abstract	2	0
Review of Economic Studies	Abstract	0	0
Academy of Management Journal	Abstract	35	3
Brookings Papers on Economic Activity	Abstract	0	0
Economic Journal	Abstract	2	0
European Economic Review	Abstract	0	0
International Economic Review	Abstract	0	0
Journal of Economic Perspectives	Abstract	1	0
Journal of Economic Theory	Abstract	1	0
Journal of Management Studies	Abstract	48	1
Journal of the European Economic Association	Abstract	0	0
Quantitative Economics	Abstract	0	0
Review of Economics and Statistics	Abstract	3	0
Innovation and Entrepreneurship			
Entrepreneurship: Theory and Practice	Abstract	48	0
Journal of Business Venturing	Abstract	13	0
Journal of Product Innovation Management	Abstract	32	2
Research Policy	Abstract	19	0
Production and Operations Management			
International Journal of Production Economics	Abstract	30	9
Journal of Operations Management	Abstract	22	7
Production and Operations Management	Abstract	0	0
Industrial Organization			
International Journal of Industrial Organization	Abstract	0	0
Journal of Economics and Management Strategy	Abstract	0	0
Journal of Industrial Economics	Abstract	0	0
RAND Journal of Economics	Abstract	0	0
Business Strategy and International Management			
Strategic Management Journal	Abstract	147	7
Journal of International Business Studies	Abstract	28	0
Marketing	Abstract		
Journal of Marketing		4	0
Journal of Marketing	Abstract	4	0
Journal of Consumer Psychology	Abstract	0	0
Journal of Consumer Research	Abstract	0	0
Journal of Marketing Research	Abstract	1	0
Marketing Science	Abstract	1	0
Organization Studies			
Administrative Science Quarterly	Abstract	1	0
Organization	Abstract	1	0
Organization Science	Abstract	31	1
Organization Studies	Abstract	10	0
		527	30

Table 5: list of journals searched

Journal	Article reference

Academy Of Management Journal	Steensma, H. K., & Corley, K. G. (2001). ORGANIZATIONAL CONTEXT AS A MODERATOR OF THEORIES ON FIRM BOUNDARIES FOR TECHNOLOGY SOURCING. *Academy Of Management Journal*, *44*(2), 271-291
Journal Of Product Innovation Management	Lawson, B., Tyler, B. B., & Potter, A. (2015). Strategic Suppliers' Technical Contributions to New Product Advantage: Substitution and Configuration Options. *Journal Of Product Innovation Management*, *32*(5), 760-776
Journal Of Product Innovation Management	Menguc, B., Auh, S., & Yannopoulos, P. (2014). Customer and Supplier Involvement in Design: The Moderating Role of Incremental and Radical Innovation Capability. *Journal Of Product Innovation Management*, *31*(2), 313-328
International Journal of Production Economics	Day, M., Lichtenstein, S., & Samouel, P. (2015). Supply management capabilities, routine bundles and their impact on firm performance. *International Journal Of Production Economics*, *164*1-13
International Journal of Production Economics	Jin, Yan, Mark Vonderembse, T.S. Ragu-Nathan, and Joy Turnheim Smith. 2014. "Exploring relationships among IT-enabled sharing capability, supply chain flexibility, and competitive performance." *International Journal Of Production Economics* 153
International Journal of Production Economics	Roh, J., Hong, P., & Min, H. (2014). Implementation of a responsive supply chain strategy in global complexity: The case of manufacturing firms. *International Journal Of Production Economics*, *147*
International Journal of Production Economics	Zhang, C., & Dhaliwal, J. (2009). An investigation of resource-based and institutional theoretic factors in technology adoption for operations and supply chain management. *International Journal Of Production Economics*, *120*(1)
International Journal of Production Economics	Brusset, X. (2016). Does supply chain visibility enhance agility?. *International Journal Of Production Economics*, *171*46-59
International Journal of Production Economics	Silvestre, B. S. (2015). Sustainable supply chain management in emerging economies: Environmental turbulence, institutional voids and sustainability trajectories. *International Journal Of Production Economics*, *167*156-169
International Journal of Production Economics	Luzzini, D., Brandon-Jones, E., Brandon-Jones, A., & Spina, G. (2015). From sustainability commitment to performance: The role of intra- and inter-firm collaborative capabilities in the upstream supply chain. *International Journal Of Production Economics*, *165*51-63
International Journal of Production Economics	Wong, C. W., Lai, K., Shang, K., Lu, C., & Leung, T. (2012). Green operations and the moderating role of environmental management capability of suppliers on manufacturing firm performance. *International Journal Of Production Economics*, *140*(1)
International Journal of Production Economics	Sambasivan, M., Siew-Phaik, L., Abidin Mohamed, Z., & Choy Leong, Y. (2013). Factors influencing strategic alliance outcomes in a manufacturing supply chain: Role of alliance motives, interdependence, asset specificity and relational capital. *International Journal Of Production Economics*, *141*(1),
International Journal of Production Economics	Adamides, E. D., & Pomonis, N. (2009). The co-evolution of product, production and supply chain decisions, and the emergence of manufacturing strategy. *International Journal Of Production Economics*, *121*(2)
Journal Of Operations Management	Barratt, M., & Oke, A. (2007). Antecedents of supply chain visibility in retail supply chains: A resource-based theory perspective. *Journal Of Operations Management*, *25*(6), 1217-1233
Journal Of Operations Management	Johnson, P. F., Klassen, R. D., Leenders, M. R., & Awaysheh, A. (2007). Utilizing e-business technologies in supply chains: The impact of firm characteristics and teams. *Journal Of Operations Management*, *25*(6), 1255-1274
Journal Of Operations Management	Cousins, P. D., & Menguc, B. (2006). The implications of socialization and integration in supply chain management. *Journal Of Operations Management*, *24*(5)
Journal Of Operations Management	Craighead, C. W., Hult, G. M., & Ketchen, D. J. (2009). The effects of innovation–cost strategy, knowledge, and action in the supply chain on firm performance. *Journal Of Operations Management*, *27*(5), 405-421
Journal Of Operations Management	Holweg, M., & Pil, F. K. (2008). Theoretical perspectives on the coordination of supply chains. *Journal Of Operations Management*, *26*(3)

Journal Of Operations Management	Vaidyanathan, G., & Devaraj, S. (2008). The role of quality in e-procurement performance: An empirical analysis. *Journal Of Operations Management*, *26*(3), 407-425
Journal Of Operations Management	Hult, G. M., Ketchen, D. J., Cavusgil, S. T., & Calantone, R. J. (2006). Knowledge as a strategic resource in supply chains. *Journal Of Operations Management*, *24*(5), 458-475
Journal Of Operations Management	Williams, T., Maull, R., & Ellis, B. (2002). Demand chain management theory: constraints and development from global aerospace supply webs. *Journal Of Operations Management*, *20*(6), 691-706
Journal Of Operations Management	Song, Lisa Z., Michael Song, and C. Anthony Di Benedetto. 2011. "Resources, supplier investment, product launch advantages, and first product performance." *Journal Of Operations Management* 29, no. 1/2: 86-104
Strategic Management Journal	Mesquita, L. F., Anand, J., & Brush, T. H. (2008). Comparing the resource-based and relational views: knowledge transfer and spillover in vertical alliances. *Strategic Management Journal*, *29*(9), 913-941.
Strategic Management Journal	Safizadeh, M. H., Field, J. M., & Ritzman, L. P. (2008). Sourcing practices and boundaries of the firm in the financial services industry. *Strategic Management Journal*, *29*(1), 79-91.
Strategic Management Journal	Hult, G. M., Ketchen, D. J., & Arrfelt, M. (2007). Strategic supply chain management: Improving performance through a culture of competitiveness and knowledge development. *Strategic Management Journal*, *28*(10), 1035-1052
Strategic Management Journal	Leiblein, Michael J., and Douglas J. Miller. 2003. "AN EMPIRICAL EXAMINATION OF TRANSACTION- AND FIRM-LEVEL INFLUENCES ON THE VERTICAL BOUNDARIES OF THE FIRM." *Strategic Management Journal* 24, no. 9: 839-859
Strategic Management Journal	Weigelt, C. (2013). Leveraging supplier capabilities: The role of locus of capability deployment. *Strategic Management Journal*, *34*(1
Strategic Management Journal	Chatain, O. (2011). Value creation, competition, and performance in buyer-supplier relationships. *Strategic Management Journal*, *32*(1)

Table 6: articles in CNRS Rank 1 journals

The role of supplier management in Frito-Lay's snack food market domination

Introduction

The article explores the contribution of the strategic management of key suppliers in the emergence of Frito-Lay as the undisputed leader of the snack food market. At the end of the 1980's Eagle Snacks challenged Frito-Lay on its home turf with an equally performant distribution system and updated recipes. Under a new leadership, Frito-Lay changed its culture, its strategy, its network to tackle not only this challenge at home but also to conquer new territories outside the USA, where it had to face entrenched competitors and powerful retailers with their ubiquitous store brands. Suppliers played an important role in helping Frito-Lay deliver superior products at a lower price point. They were strategically managed to make sure they remained closely aligned to Frito-Lay's objectives and that their skills and expertise would not become commoditized, available to Frito-Lay's competitors to buy in an open market. This contributed to Frito-Lay becoming the undisputed leader both in its domestic, in 1996, and international markets, after 2000. It has retained its position since that period.

Objectives and Methodology

For the most part, in the management literature, the research on the supplier role to contribute to competitive advantages has relied on large-scale surveys of professionals. A literature review allowed developing hypotheses organized in frameworks conducive to structured equation modeling. The researchers developed questionnaires to support those hypotheses, and then treated the answers statistically. Although this approach provides robust statistical inferences between causes and effects, they remain generic in their conclusion and suffer from the inherent limitations of predefined questionnaires. Empirical research has been suggested as a way of validating those results with a robust understanding of the chain of events that have led to the observed effects (Lavie, 2006).

The article intent is to provide this empirical analysis, a detailed example of the why and how of supplier relation strategic leverage. The firm explored in this case had aligned its supplier management strategy very closely with the overall firm's strategy, allowing it to broaden significantly the objectives assigned typically to the function. An article in the business press independently identified supplier's contribution as a key driver of Frito-Lay ascent to leadership in its category.

We collected from three distinct sources:

- Publicly available information: articles in the business press, books, conferences covering the 1980 to 2010 period.
- Interviews of former Frito-Lay executives (4), their suppliers (4), and their competitors (1) conducted between 2011 and 2016. We used semi directive centered interviews to allow the interviewees the latitude to express their perception of the relationship between Frito-Lay and its suppliers, without being guided towards the researcher's objectives.
- Internal presentations and models developed by the PepsiCo Foods International Purchasing function between 1994 and 2000.

The approach used is a case study, which brings unique strengths in its ability to deal with a full variety of evidences such as company documents, press publications, interviews and observations (Yin, 2009). Although the methodology is sometimes accused of being subjective, we have attempted to insure scientific rigor by using the best practices in this area (Johnston et al., 1999). We start with hypotheses developed from theory; we explored the topic systematically using the broad range of sources identified above rather than focusing on accounts from the actors involved; the outcome of the Frito-Lay initiatives are validated by external sources.

The Resource Based View applied to supplier management

One of the objectives of Frito-Lay supplier management was to collaborate significantly and isolate supplier resources that were deemed strategic from access by competitors. Therefore, we will structure our analysis based on the Resource Based Theory (RBT) extended to consider resources outside the formal boundaries of the firm. Other mainstream theories of the firm such as the industrial organization framework (Porter, 1980a) stress the competitive rather the cooperative perspective in interfirm relations. In its initial developments, it was less concerned by individual actions of firms than industry dynamics to find the ultimate profit potential of an industry, rather than helping a single actor perform above its pairs. Another frequently used framework is the transaction cost economics. In its later expressions, it presents strategic forms of cooperation as hybrid situations, but it is primarily focusing on costs and contractual elements of the relation between firms (Williamson, 1991).

In the RBT model, competitive advantage is not modeled to lead directly from possessing resources. Rather, possessing the requisite resources potentially can be leveraged into developing competitive advantage and then increasing performance. Resources are heterogeneously distributed across firms, and resource differences persist over time enabling firms to sustain their competitive advantages (Barney, 1991; Penrose, 1959; Peteraf, 1993;

Wernerfelt, 1984) Those resources are useful when they are valuable, rare, imperfectly imitable, and have no equivalent substitutes (Barney, 1991).

The initial work on the RBT envisioned the firm as an independent entity, and the resources as physical, tradeable assets. The resources had to be owned or controlled by the firm .What laid outside the firm was not considered suitable for analysis from a resource-based point of view. Suppliers could not be controlled by the firm, were freely tradable, accessible equally by all players in the industry (Dierickx and Cool, 1989). If one firm can purchase tools of production, other firms should be able to purchase those tools, and such tools cannot become sources of competitive advantages (Barney, 1991).

Dyer and Singh (1998) introduced the relational view of the firm to explore alliances. Gulati (1999) examined how resources residing in alliance networks could provide strategic opportunities. (Ramsay, 2001a) highlighted the fact that the conditions that preempt the consideration of suppliers as strategic resources were often breached in real life company interactions. He theorized that purchasing could develop a strategic role by identifying unknown suppliers, enclose known suppliers, or buy in a hard to imitate manner. He nevertheless concluded that this would not begin to happen until the function acknowledges the validity of the RBT and its current strategic irrelevance (Ramsay, 2001b).

The last ten years have seen a steady growth of the ratio of papers applying the RBT to analyze the management of suppliers. Several clearly identify the supplier role as a resource that can deliver competitive advantages. Firms that integrate their strategic supplier’s contribution in their NPD gain an advantage by using innovations that have yet to be integrated into competitor's products. Supplier performance and contribution can either come from their superior technical skills or their superior problem solving abilities (Cousins and Menguc, 2006).

In the case of the new venture, the contribution can be extremely high as the first product launch initiates a virtuous circle of enhanced reputation, attractiveness for new hires, and new funding. Since new ventures are resource constrained, they need supplier investment and involvement for success and survival. As an external resource, suppliers can complement the new venture's relatively limited marketing and R&D resources with their own resources, and in fact may be the most important contributor to the success of the new venture's innovation. These resources allow the new venture to achieve three positional advantages: product innovativeness, supplier involvement in production, and product launch quality (Song et al., 2011)

Others considered the source of competitive advantages as the supplier-buyer dyad, the network: the combined output of the supplier and its client allowed creating a resource capable of delivering superior performances and competitive advantages. Because extended enterprises are inter-reliant, the success is often the result of collective efforts, coordination. It moves the focus of the search to explain firm successes from the operations within the firm to the operations across firm boundaries in a "extended enterprise to extended enterprise" competition rather than a "firm to firm" competition. Success is the result of collective efforts across the supply chain rather than the sum of individual entities efforts (Hult et al., 2007). Supplier network differences can justify firm performance differences, based on intangible components of the relation between firms such as trust, knowledge, social interactions. The performance is not only measured with a historical perspective (have we improved) but as a competitive advantage (have we bettered the other extended enterprises in our competitive landscape) (Hult et al., 2006). Holweg and Pil (2008) identify the ability to exchange knowledge vertically across the supply chain as a driver of competitive advantages. Interfirm coordination allows them to attain collective efficiencies that would be unavailable to firms working alone.

Therefore it is the ability to organize and develop collaboration that creates the rare resource (Mesquita and Lazzarini, 2008).

A third perspective focuses on capabilities of the client firm that allowed to achieve competitive advantages. Firms that integrate their strategic supplier's contribution in their NPD gain an advantage by using innovations that have yet to be integrated into competitor's products. Supplier performance and contribution can either come from their superior technical skills or their superior problem solving abilities (Lawson et al., 2015). Albeit strategic supply management can create alignment with long term business strategy, it is the structured and organized deployment of appropriate routines that allow to achieve competitive advantages (Day et al., 2015). The boundary-spanning abilities of the purchasing team, the ability to implement the strategy is the source of competitive advantages (Johnson et al., 2007).

Unfortunately, there is minimal explanation on how managers and firms identify resources and shape them to create value (Priem and Butler, 2001). What initiates the transformation of a firm from a traditional environment to a resource harvester and nurturer? Some indications are provided by Sirmon et al. (2007) who prescript that top managers need to consider their firm as a system of resources and capabilities to develop the strategies that will allow them to create value for their shareholders and for their customers. Their recommendations remain prescriptive based on integration of academic researches but do not provide empirical evidences of successful applications of resource management to develop competitive advantages, of the succession of events and decision that allowed firms to effectively leverage generic resources and turn them into strategic assets.

History of Frito-Lay

Frito Lay was founded in 1961 by the merger of "The Frito Co" and "HW Lays" companies, which had already a close relationship since 1945, when they started cross distributing their products. In 1965 Frito-Lay joined Pepsi, when the then CEO of Pepsi-Cola, Don Kendall, sat down with Herman Lay of Frito-Lay and, without lawyers and investment bankers, sketched out a merger plan it merged with Pepsi-Cola to form PepsiCo. The natural synergies between Pepsi-Cola and Frito-Lay were captured in the memorable quote attributed to Kendall: "You make them thirsty and I'll give them something to drink" (Burhans, 2008, p. 60). At the time of the merger, Pepsi-Cola earned 2.4 times the net profits of Frito-Lay on a top-line share that was 58% of the combined sales. In the year 2000, those shares were reversed, with Frito-Lay earning 2.4 times the net profit of beverages. ("Frito-Lay - History," 2016; Lemann, 1982).

Frito-Lay's fortune waned in the late eighties, losing 5 points of market share to Eagle, a newcomer. According to George Suhrosky, VP worldwide for quality assurance at Frito-Lay, at that time, Frito-Lay was viewing itself in a commodity market, with competition based mostly on supply, demand and price (Schreiber, 2000). Frito did not think it could compete on the basis of product characteristics or product quality. It believed it could rely on its excellent distribution system to deliver more products to stores, restaurants, etc. Frito-Lay's "store-door" distribution – bypassing warehouses by sending the route men right into the store – became the envy of the industry. The drivers physically entered the stores making sure the products were displayed prominently, with the shelves full of fresh products (Burhans, 2008, p. 61). At the end of the 80s, other players like Borden then Anheuser Busch's Eagle Snacks were developing large and efficient systems to compete with Frito's and had better recipes. During that period, Frito-Lay lost about 5 market share points to Eagle. Costs were too high and rivals were eating away Frito-Lay's margin (Bongiorno, 1996). Focus groups showed that Eagle products were preferred to Frito-Lay's which was viewed as "too greasy, too bland, and too boring"(Burhans, 2008, p. 69). A commodity product was just not good enough.

Roger Enrico was called in to take charge in January 1991, launching a profound transformation of the Frito-Lay culture and system. After laying off old administrative and management staff, he proceeded to hire younger staffers. He managed to slash prices, increase quality and boost profitability (Zellner, 1992). He initiated a new culture of competitiveness, where every function of the firm, not only the sales and marketing team, had to keep their eyes on the competition and to measure their performance and to set their objectives in terms of competitive positioning rather than internal historical benchmarks.

It is at this time that the "Banner Sun" logo for Lay's chips appeared. It would become a global brand. The quality was also significantly improved. The formula that had never been tinkered with was modified to change the oil from palm oil to cottonseed, and to adapt the cooking parameters. The packaging was improved with the introduction of better films, from clear packaging to metallized packaging and nitrogen flushing (Schreiber, 2000). The company launched a relentless search for system efficiencies that crossed Frito-Lay boundaries. Between 1991 and 1996 the snack business grew at a compounded rate of 12% in the USA and 15% internationally. This was making Frito-Lay able to compete aggressively with Eagle Snacks and Frito-Lay, and retain for 1996 an operating margin of 19% for its US stack business (*PepsiCo Annual Report 1996*, 1997). This squeezed most of the regional players out of the market. In 1995, even Eagle could not survive: Anheuser-Busch, its owner, refocused its attention on brewing beers and decided to sell its snacks operations. In 1996, other potential acquirers had tried and looked at the details of the company but found that Eagle Snacks had "no cost or quality advantage" over Frito-Lay (Melcher, 1996), a significant change from five years earlier.

Frito-Lay in Europe (PFI)

At that time, the international branch of the PepsiCo group in charge of snack food was called PepsiCo Foods International (PFI)[10]. In a presentation to the board of PepsiCo in 1994, Europe was presented as a land of opportunity for PFI, with low but growing salty snack share of macro snack consumption. The only global competitor for PFI was United Biscuits, headquartered in the UK. Already in 1994, its performance was lagging: its profits were flat, it was highly leveraged and its stock was languishing. The opportunities for PepsiCo to expand its snack domination was perceived very positively by the markets and identified as a key driver of the stock attractiveness. In 1996, it owned already 5 of the top 10 markets outside the US (Collins and Strom, 1996). The company's research has shown that when given a choice between their local snack and a Frito-Lay chips, consumers in most countries will choose the Lay's. It viewed crisps as its tool for global snack domination, as long as they could be delivered with the perfect qualify like in the USA. Everywhere it introduced its Lay's potato chips, the introduction was a success.

Frito-Lay honed a strategy for moving into new countries where a local snack industry is already established. Rather than face the costs of building a new business in an unfamiliar market, the company identifies the leading local snack manufacturer and offers to buy it out. If the local manufacturer refuses to sell, Frito-Lay moves into the market on its own, using its size and marketing experience to cut into the local manufacturer's sales. Often, at that point,

[10] We will use the name Frito-Lay when speaking of the snack activities of PepsiCo globally. We will use the PFI / PepsiCo Foods International name when referring specifically to activities outside North America.

the local company gives in and sells, sometimes for a lower price than the original offer. So it acquired Walkers and Smith in the UK in 1989, or UB's snack business in France in 1997 (Les Echos, 1997; PepsiCo, 2016). If the preferred local snack is already a potato chip, Frito-Lay rebranded it. After buying Walkers, the dominant chip in Britain, PFI refashioned the Walkers logo into the red "banner sun" design. In many other countries, it replaced the local brand altogether with the Lay's brand.

Its integration approach was incremental. Initially the running of acquired business was let in the hands of local managers who had only to report satisfactory financial results. Corporate financial management methods and objectives were then introduced. Slowly the global products were introduced, in parallel with a revamping of local operation to introduce the methods and recipes developed in the USA at the beginning of the 90s to fend-off Eagle Snacks and Borden. The pattern was to leverage Frito-Lay extended US experience to broaden the segment and increase its sales volume both from attracting "share of mouth" from other indulgence products and to grow the overall category("ABC News," 2002).

Europe posed a few challenges for the PFI team. It had a more fragmented structure, with multiple languages and brands. The "go to market" approach used in North and South America, where Frito-Lay had developed its own infrastructure to deliver any potential point of sales, regarding its size, was not feasible in Europe, where distribution was controlled by large scale retailers. Local established brands were strongly entrenched, with different consumption habits than in the USA. For instance, in France, the category was primarily simply salted crisps, positioned as a vegetable replacement for hurried times. Not being able to use the powerful distribution system that was one of its strengths in the USA, and not able to achieve economies of scale as easily, Frito-Lay had to develop a multi-pronged strategy. PFI identified the need to leverage its scale both in operations and in marketing to capture the opportunities offered by European markets. The first step was the generalization of a unique brand image, the banner sun that will become the world largest food brand (Brady, 2014, p. 324; PepsiCo, 2012). The second was to compensate its lack of competitive advantages in distribution by other operational assets, both within the boundaries of the firm and outside those boundaries.

In addition to scale leverage, PFI had another powerful weapon to invade Europe: Seasonings. In the potato chips segment, the flavored variations did not appear until PFI penetrating the market, while in the USA, Frito-Lay had repositioned chips as a “pleasure” product rather than a vegetable substitute. The result of Frito-Lay move was a profound transformation of the category, from a seasonal product to a product consumed all year long. Those initiatives were ultimately so successful that Frito-Lay achieved market leadership. In France, for instance, PFI acquired the snack assets of United Biscuits at the end of 1997. Seven years later, it was the dominant player (Table 7:). Flodor, the original potato chips company in France, who initially had a 50 percent market share, was on the verge of disappearing.

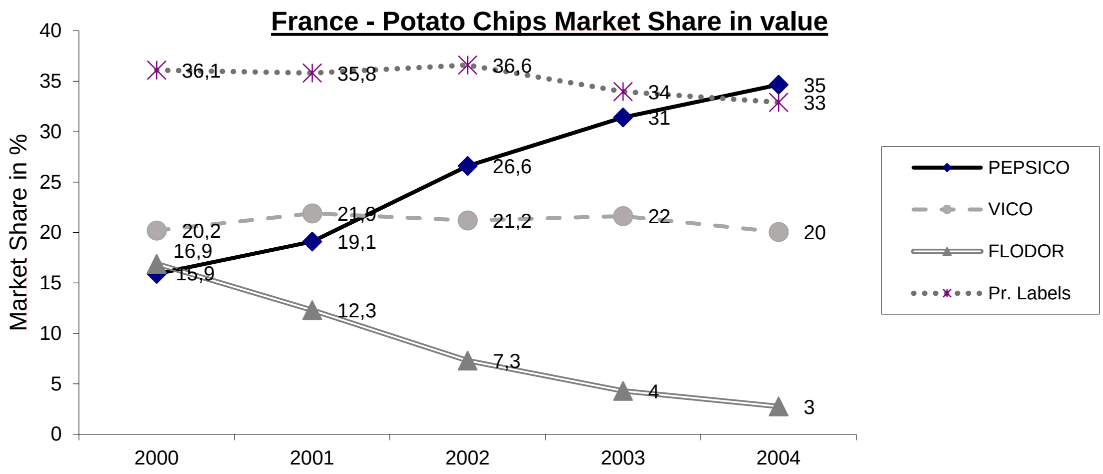

Figure 3: Nielsen Value Report 2005 - Potato Chips Market Share in France

PFI was identified as a key driver of the demise of Flodor that had been identified for many years as the French Potato Chips reference (Haget, 2003). The article identifies packaging and seasoning as the two drivers of PFI ascent, while the company does not produces its own packaging or seasoning, but sources them from suppliers. This begs the question as why competitors could not access the same suppliers and obtain a leveling field.

PFI competitors perceived it as a rule breaker. When PFI entered Spain, it changed the local market in three years, introducing flavored potato chips and new oils for frying that were providing a better taste but a shorter shelf life before turning rancid. The competitors did not know how Frito-Lay could do it: for them it was not manageable in their supply chain. Actually, PFI was supporting its market penetration with the introduction of US developed technical solutions such as metallized packaging and nitrogen flushing (Grant, 2005, p. 351), which were essential to preserve the original flavor of the potato chips and all the seasoned products. PFI was as steamroller, more aggressive commercially giving large-scale retailers a larger cut to gain shelf space. They perceived that the packaging was a driver, alongside the seasoning, but PFI suppliers declined to sell to them (Mercier, 2014). Because of its size and the production efficiency gains, PFI was also able to offer to retailers commercial conditions that the other players were considering unsustainable, or suicidal. It was giving less margin than its competitors but investing in promotion to grow the category again, while it had been declining, and therefore PFI could discuss margin not in terms of percentage but in terms of total amount generated by the category growth (Prolongeau, 2014).

Frito-Lay Purchasing

At the end of 1994, PFI launched an effort to globalize its purchasing function. Outside the USA, local efforts to generate cost savings had not yielded the expected outcome. The efforts were identified as tactical, with no clear authority and conflicting interests between the different stakeholders. A new, much more strategic approach was implemented, center driven, pan-European, with industry experts rather than local negotiators. In addition to the class book objectives of cost reduction and best practice generalization, PFI had a much more strategic objective. The mission of the function became "Our Objective is to leverage Purchasing as a significant source of Sustainable Cost Advantage and Proprietary Barrier to Entry, whilst delivering 100 % Consumer preferred specifications to every plant, every day". Globally, the function was reporting to the Vice Chairman (Gonzales, 1994). At a conference organized by the Singapore Institute for Purchasing and Materials Management, PFI presented its purchasing initiative and concluded on the results of its "global sourcing strategy" delivering sustainable competitive advantages resulting from the development of barriers to entry, and a supplier network that was insulated from competitors ("SIPMM Conference," 1996).

Frito-Lay Purchasing was very good at understanding the economics of its suppliers, and modelling the different steps of the value chain. They were buying the film from converters in charge of printing and cutting the film into rolls ready to feed the packaging lines. Because of the significance of film in the overall cost structure of chips, they had invested in the detail understanding of the different steps necessary to produce a bag of snack food, from the providers of the clear OPP film, the metallization, the printing, the lamination and the cutting (the last three steps performed by the converters). The initial intent was for Frito-Lay to control the sourcing of base film, like what Pepsi had done to control the sourcing of aluminum for the cans (White, 2012). The initial model was developed by consulting firm AT Kearney, then refined with input from suppliers and the internal analyzes of PFI. It indicated that even PFI largest European supplier was leveraged only with a 20%, or less than half a press (PFI, 1996). This cost modelling identified new avenues for cost effectiveness, based on massive leverage of a dedicated production line at two aligned suppliers. This encouraged a radical shift in the way packaging suppliers were managed across Europe.

1994-1996	After 1996
Competitive supply market • Understand the marketplace • Invest volume with suppliers most willing to work our way Value engineering • Cost down the product • Family printing at country level	Converter Productivity • Converters aligned to product line rather than country to maximize efficiency • Engineered to allow converters to add capacity without capital investment • Profitability as a proxy for operating excellence • Full utilization of “captured assets” New technologies developed for FL-E’s exclusive usage • High barrier films • Total supply chain management

Table 8: Evolution of PFI Europe Packaging Supply Strategy (el-Shabrawi et al., 1997)

For potato chips, the quality is strongly linked to the ability to control oxidation of the product in the bag. It is equally important for seasoned snacks. None of the solutions available on the market was able to provide the level of protection required by PFI. The solution was a combination of the clear film, metallization and its adhesion to the substrate, and the final structure of the packaging that was patented by Frito-Lay (Brodie et al., 1993). To maximize the benefits, all the specifications across Europe were standardized in terms of packaging structure, dimension, and graphics, but also centrally planned to optimize the sequencing of runs with minimal variations between countries and flavors. The volume placed at the two aligned converters allowed to saturate a dedicated production line delivering economies of 30% on average due to the better asset utilization at the converters.

The film suppliers for the converters were key contributors, primarily Toray, a Japanese company who had a suitable technology that had not yet found a profitable market positioning (Gonzales, 2012). Although it was not supplying Frito-Lay directly but its packaging printers, the converters, Toray would end up becoming a major supplier to Frito-Lay worldwide and was nominated three times as Supplier of the year by Frito-Lay (Gervais, 2010; Kreiss, 2008) and become so closely associated with Frito-Lay that the Vice-President of Frito-Lay was associated to the award received by Toray from the United Nations' chief Baan Ki-moon ("Toray Humanitarian Award," 2009). Likewise, Frito-Lay maintained very close relations with its selected converters. For instance, it was the largest client of Printpack, representing 19%, and the only one above 10%, illustrating the special position that Frito-Lay had with its preferred suppliers ("Printpack SEC filing," 2001). Clearly, financially healthy suppliers managed within an extended enterprise system were clearly a significant part of the new equation to win and maintain leadership, as illustrated by an internal company campaign of 1995 (Figure 4).

Figure 4: Frito-Lay Internal Motivation Campaign Logo - 1995

Analysis

Many years before the link between supplier management and marketing management became a topic of interest for scholars (Wagner and Eggert, 2016), PFI culture was already conducive to maintaining a tight linkage between its marketing team in charge of identifying unmet market needs, the value creation potential, and the operational teams in charge for delivering an answer to that unmet market need by a clever leveraging of internal and external resources. R&D, suppliers of equipment and suppliers of input materials, were coordinated in a way that created extended enterprises protected from competitive imitation attempts. This effective co-management of all functions, aligned towards the same strategic objective, the construction and protection of sustainable competitive advantages created superior value for the firm. This culture of competitiveness, the predisposition to detect and fill gaps between what the market desires and what is currently offered has been identified as a key driver of the strategic leverage of supply chains (Hult et al., 2007, 2002).

In a sense, Frito-Lay has extended its virtual boundaries beyond its apparent organizational boundaries by creating an extended enterprise that can be analyzed with some of the boundary logics identified by Santos and Eisenhardt, (2005)

- Boundaries of identity: The PFI ecosystem shares an identity with a strong linkage to the outputs of the PepsiCo Group. The suppliers were encouraged to grow with PFI and increase their profitability by constantly improving the efficiency of the asset they had synchronized with PFI needs.
- Boundaries of resources: Although essential for its successful market penetration, some essential resources were outside of the real boundaries of Frito-Lay but inside its virtual boundaries, giving it privileged access to the seasoning development or the packaging performance it needed
- Boundaries of power: Through mechanisms that were more linked to the design of their network and the approach to managing the suppliers, Frito-Lay had control over the some of the assets of its suppliers. By loading those assets, it justified the investment for the supplier who could not generate a similar return with a fragmented order list from multiple clients.

We can analyze the PFI ecosystem using the classic set of criteria developed by Barney in 1991.

Was it Valuable?

Value was created for the consumers, as they increased their purchase of Frito-Lay branded products in Europe. In 1999, it had its best ever performance in Europe (Yuhn, 1999). Because PFI competitors could not replicate those products, it could retain a larger share of that value than what it would in a quasi-perfect competition environment. Suppliers to Frito-Lay have learnt new skills. Some of those skills that were directly associate with Frito-Lay product performance were not transferred to the most threatening Frito-Lay competitors, like the manufacturers of store brands that could create a threat to Frito-Lay superior pricing. Other skills, such as those that allow a better operational efficiency, were applied factory wide but were not benefiting Frito-Lay competitors. Rather, they allowed the supplier to enjoy improving returns

The value of suppliers for Frito-Lay increases because of their willingness to reduce the competitive field by keeping their expertise for the exclusive use of PFI. The extent to which a supplier has an established relation that is a source of superior rewards versus its other potential clients was a powerful motivator to remain within the PFI ecosystem.

The PFI approach is similar to the one of Toyota who has also invested extensively in improving its suppliers and sharing knowledge effectively between its operations and the operations of its suppliers, without letting that expertise flow to its competitors. It has, in effect, created barriers to intra and interfirm knowledge transfer. Toyota and its knowledge sharing networks that motivate members to participate and openly share valuable knowledge, prevent free riders, and reduce the costs associated with finding and accessing different types of valuable knowledge (Williams et al., 2002).

It is interesting to note that for the key suppliers, the relation with Frito-Lay is equally valuable. Packaging benefited from the relation by improving its overall effectiveness and a better understanding of the cost models, which gave it a rent through superior profitability for the sales with its other customers.

Was it Rare?

PFI had structured its relation with key suppliers to make it almost impossible for competitors to replicate its benefits. For competitors to replicate this approach, they would have to combine the same access to film technologies, like those of Toray, converters willing to invest dedicated lines on a specific technology and the capability to place a very large volume that was standardize across Europe. It would have been nearly impossible: one of the objectives of the management of the relation with the suppliers was to keep those assets exclusive, to be always available to absorb Frito-Lay's increasing volume. Because Frito-Lay contributed to the development of those assets in terms of technical knowledge, suppliers could not promote them or use them for other clients. This approach was recently explored by Sambasivan et al., (2013). It is especially interesting to look at the elements of "assets specificities" that are also present in the relation that PFI has developed with its packaging suppliers (dedicated lines) and its seasoning suppliers (immaterial assets represented by the knowledge of the best development teams dedicated to Frito-Lay.

Was it Inimitable?

An important factor of the inimitability was the causal ambiguity about the sources of the performance and the way all those elements were combining to offering unique properties. Some of the expertise also lies within Frito-Lay. For instance, in addition to excellent barrier properties, Frito-Lay was nitrogen flushing its bags with equipment that was custom developed by another supplier. Frito-Lay was making sure that the knowledge was distributed between the parties, with the OPP supplier having an understanding of the barrier properties of the raw materials, the converter focusing on the most effective way to process the film, and Frito-Lay coordinating the full solution including the packaging material.

Another source of inimitability was the control over knowledge in highly customized products. The knowledge development by the supplier is requiring a familiarity with the client specific environment. PFI shared marketing insights with its preferred suppliers, to allow them to understand the purpose of their research, efficiently target their efforts on what will deliver the most value for their preferred client. This has recently been illustrated by Chatain (2011), where a client with very acute expertise can increase its share of the value created.

The quality of the relation between the parties contributed to protecting the knowledge developed and the access to the supplier's assets. PFI was very demanding in terms of quality, and annual cost reduction from learning and increased effectiveness, but was using supplier profitability as a proxy for operational excellence. Therefore, the pressure on supplier margin was below what other large clients would apply. Moreover, the learning developed either within the supplier or at the dyad is able to generate superior performance for the selected supplier in its dealing with other clients. The quality of the relation and the relational governance improves the exclusiveness of the learned abilities while increasing the overall effectiveness of the supplier (Mesquita et al., 2008). Maximizing relational performance from joint buyer-supplier knowledge acquisition efforts contribute to the mutually beneficial situation for the dyad members making it more difficult to replicate in another dyad, as it has established an advantaged position.

The behavior of suppliers regarding Frito-Lay, for instance Printpack accepting that Frito-Lay represents such a large percentage of its revenues indicates that the suppliers trust Frito-Lay to be a long-term sustainable partner. Trust, both relational and competence is a significant antecedent to successful relations (Barney and Hansen, 1994; Dodgson, 1993; Ha et al., 2011; Rosell et al., 2014). PFI has developed a governance for its supplier relations that enhanced trust and reduced the temptation from the supplier to serve competing clients on a tactical way.

Was it non-substitutable?

Although there are less visible indicators of the non-substitutability of PFI approach, the difficulties of its competitors to maintain profitability, to defend their market share was an indirect proof that alternative technologies or models of supplier relationships could not replicate the PFI approach.

Discussion

The snack food division of Frito-Lay has undergone a radical change since being pushed by Eagle Snacks at the end of the 1980's. The old culture focused on tactical excellence in delivery of a commodity product line. It radically changed its approach to deliver what Frito-Lay called "Consumer Preferred" products. What the corporation had learned fighting Coke with the "Pepsi Challenge" was adapted to the snack environment. To win, it had to become more innovative, providing a product better than the competition, while giving retailers the right incentives to push it. Relying on internal resources was not sufficient: both its internal and supplier's capabilities had to be combined to obtain the superior products envisioned. And it had to do it in a way that large or small competitors could not replicate.

The empirical examination of the actions of PFI Purchasing team, and the evolution of the culture of Frito-Lay both in the US and internationally demonstrates that it applied an "Extended Resource Based" approach to develop its purchasing strategy. It was a deliberate action plan to leverage its scale, and deliver operational excellence with the intent to deliver sustainable competitive advantages over the established European players and support PFI growth and market share capture in Europe. PFI pioneered this concept by conscientiously developing and reshaping its relation with a handful of key suppliers to strengthen its competitive position resources allow the new business in Europe to achieve three positional advantages: product innovativeness, supplier involvement in production, and product launch quality. This has been explored in the context of new ventures (Song et al., 2011). In the case of Frito-Lay the same logic has applied: lowering costs, enhancing differentiation and changing the competitive scope.

When Frito-Lay began to view its suppliers as a resource that needed to be developed and protected from competitive interests, the concept of extended enterprise was just being explored in the IT sector as a mere recognition that firms had to look outside the their traditional boundaries to find new opportunities for operational efficiencies and to enhance competitive position (Konsynski, 1993). It was not yet defined, as Childe (1998) did it speaking of manufacturing firms in closed knit networks as "A system composed of a client and its suppliers who strongly collaborate in order to maximize the benefits of each partner". Manufacturing systems linked by powerful information management systems were coined extended enterprises. The researchers foresaw major structural changes in business organization. Although the principles of partnerships within the extended enterprise was not yet well understood, the emergence of alternative operations models was announced (Browne et al., 1995).

At the beginning of the 1990's, Frito-Lay was already looking at its suppliers with a strategic perspective: its critical suppliers shared its goals of industry leadership. PFI expected that they contribute their innovations, their most productive resources, better than what they would to for any other client. They worked with PFI in good intelligence to strengthen the impact of PFI internal teams, contributing through their contribution to strengthen their client position. In exchange, they were experiencing significant access to PFI forecast, market data, and were supported in their efforts to improve their effectiveness or to identify promising technologies in which to invest.

The source of competitive advantages

Researchers interested in using the RBT to analyze supplier management strategies have mentioned three different onuses for the sources of the competitive advantages: the supplier, the dyad, and the capabilities to manage the suppliers. In the case of PFI, the capability to manage the supplier is clearly the driving force. PFI structured its international purchasing management as a strategic tool. It is not the only source. The performance improvements derive from capabilities forged at the dyad level and within the firm. Some suppliers have clearly decided to align their strategy to PFI's and enter in a long-term partnership. Finally, some of the capabilities are clearly outside of PFI boundaries, and have existed prior to PFI decision to adopt them, such as the Toray technologies that are at the heart of the packaging performance in terms of protection from oxidation. Therefore, the supplier, the dyad, and the capabilities of PFI to manage its suppliers are resources that contribute to the development of competitive advantages. The set of internal capabilities is an antecedent resource to the supplier and the dyad as strategic assets of the firm.

Practitioner Learnings

By shifting the focus from selecting and exploiting, to leveraging and developing resources for sustainable advantage, managers can conceptualize what their businesses are, do, and can be (Rouse and Daellenbach, 1999). Although the application of the RBT to supplier management is a relatively recent evolution of the theory, the analysis of Frito-Lay strategy and actions indicates that the concept found its place at some visionary firms. When facing both a market pressure (Eagle Snacks in the USA, the predominance of the large scale retailers in Europe), differentiation strategies that leverage both internal and external resources and capabilities deliver superior performance in a more durable way than strategies aimed merely at operational efficiency and short term cost improvements. Supplier Management practitioners are too often inclined to focus on cost reduction initiatives without fully evaluating what course of action offers the best potential to enhance the competitive position of their firm. They are led to this course of action by objectives that remain predominantly structured around documented cost reduction initiatives, easy to capture with corporate accounting database.

The purpose of this article has been to use an in-depth case analysis to document the steps taken to capture a superior position from a strategically minded supplier management policy.

Why do practitioners not manage suppliers to deliver competitive advantages?

Managing suppliers with a rigorously developed, resource-based strategy offers significant opportunities to strengthen a firm's competitive position. Industry surveys show that this approach is the exception rather than the norm even if the academic literature documents examples of fruitful collaboration. To attempt to identify the causes of this dichotomy, this article shows that professionals in the purchasing function do not differentiate value transfer with a short-term value perspective, at the functional level, versus long-term value creation and the vision of investors who seek long-term sustainable competitive advantages.

This is an example of bounded rationality. There an inherent immediate satisfaction to deliver cost savings measurable within the performance timeframe of most traded corporations, quarterly, and the human resource management practices of annual or bi-annual individual performance reviews. This research helps to explain the gap between what a RBT approach would suggest and industry practices. We surveyed 600 purchasing professionals in a global FMCG firm. Five hundred answered. A four statements question allowed understanding their perception of "value". For comparison outside of the corporate purchasing culture, we used students from French business schools, never exposed to Purchasing as a function or a practice. The statistical analysis used primarily logistic regression using R and R Studio to evaluate the statistical validity of the results.

The Procurement Dilemma: Short-term Savings or Long-Term Shareholder Value?

Introduction

Corporations overarching goal is value creation for the shareholders. This objective must cascade to all the functions of the firm, including purchasing. Value creation demands that firm innovate to either increases the consumer's appreciation of the benefits of consumption or improves the effectiveness of the firm versus its competitors. But value creation is not sufficient: to deliver benefits for the shareholders, a share of the value must be captured to the benefit of the firm, rather than flowing to its customers or other actors in the value chain. Value capture is difficult to sustain in the hypercompetitive environment that most industries face. Only firms that constantly develop new competitive advantages can escape it. Hence, would be champions must focus all their forces, resources and functions on actions that enhance competitive differentiation, including purchasing. Indeed, suppliers can be sources of competitive differentiation and value creation. In this case, usually, the relation takes the form of a partnership, defined as a mutual ongoing relationship with a commitment over an extended period, sharing information and the risks and rewards of the relationship.

Buyers in charge of managing supplier relations often state they value partnership and collaboration. In practice, "strategic partnership" appears in declared intentions but is rarely supported by daily acts. The "US Automotive Working Relation Index"® (WRI®), an annual survey quantifying the state of the relations between component manufacturers and their automotive OEM clients illustrates this. Because it has been conducted and documented yearly since 2001, it offers a reliable benchmark of supplier-customer relations and their impact. It indicates supplier willingness to dedicate their resources to their customers. The 2015 release allowed the authors to quantify the missed opportunities for those with poor supplier relations: the four companies which do not score well on that index, Ford, GM, FCA and Nissan, forfeit a value opportunity collectively evaluated at more than 2 billion USD when compared to the best performers in the index, Toyota and Honda (Henke Jr., 2015). It indicates that the discourse on collaboration remains a theoretical, academic topic about the benefits of constructive relations between suppliers and buyers. It has limited impact on practices in many corporate environments.

Our hypothesis is that buyers are biased towards transferring value at the transaction level. They do not balance that sufficiently with the need to strengthen the firm's ability to capture value at the shareholder level by developing an advantaged position in its market. In buyers language "Value Creation" is the result of negotiation with suppliers, a limited functional perspective. In contrast, firms and their shareholders consider that value creation results from developing competitive advantages that provides pricing power to maintain revenues above the cost of all necessary resources.

This paper attempts to understand the mindset of a corporate purchasing environment and its implications for the firm's leadership. It looks first at the evolution of two major management frameworks as they apply to supplier management, then explores a corporate environment with a questionnaire addressed to a global purchasing team.

Evolution of Classic Strategy Frameworks Applied to Supplier Management

The Industry Structure View

Many business practitioners have been educated with Michael Porter's original strategic management framework to deal with the major forces influencing an industry (Porter, 1980a). Regarding suppliers, Porter (1980b) advocated the development of strategies that tilt the balance of existing forces. He recommended building the best structural bargaining position to offset or surmount the sources of their supplier's power: spread purchases, reduce or avoid switching costs, qualify alternative sources, promote standardization, create the threat of backward integration. Those strategies were all aimed at turning the suppliers into commodities, undistinguishable from alternatives that could be adopted at minimal or no cost. Creating a favorable balance of power remains deeply embedded in the culture of the purchasing function.

However, times have changed and so have Porter's views (Porter and Kramer, 2011). He now states that the traditional playbook approaches have marginalized suppliers, who, as a result, cannot remain productive or sustain and improve their quality. It is interesting to see that, according to Google Scholar, Porter's older competitive strategy is cited more than 1000 times per year, while his 2011 article receives about 40 citations per year!

The Resource Based View

A central premise of the resource based view (RBV) is that rival firms seek to develop competitive advantages based on their unique bundle of resources and capabilities (Peteraf and Bergen, 2003). Given that companies spend roughly half of their revenues on suppliers, they should be a priority for resource strategists, as they are a major resource, albeit external to the firm. Surprisingly, in a comprehensive review Newbert (2007) identified 26 resources as potential providers of competitive advantages. Suppliers were conspicuously absent from that list.

In one of the most cited articles on the RBV, Barney (1991) mentioned suppliers briefly stating that firm reputation among suppliers is socially complex and therefore difficult to imitate. However he did not explore further mechanisms by which suppliers could become sources of competitive advantages.

Various factors may explain the reluctance to consider suppliers as a sustainable resource. The resource portfolio component of strategy comprises decisions about the firm resources and how it will acquire or build them (Ensign, 2004). Therefore, it does not include suppliers as they sit outside of the firm's direct control. In addition, for many, suppliers are input factors that are available in open markets and are freely tradable commodities (Dierickx and Cool, 1989). This therefore precludes suppliers from being included in a resource-based strategy, as they are neither "rare" nor "non-substitutable", two of the RBV criteria. Another reason for not including suppliers in the RBV is the assumption that suppliers will not transfer the value they create if they offer a unique product or service. Hence, they are not valuable for the firm. In addition, rather than establishing unique partnerships, suppliers may opt to sell their offer to all bidders, preventing to satisfy the "rare" attribute of the RBV.

More recently, scholars have begun to revise this point of view. (Ramsay, 2001a) was one of the first to analyze suppliers using the RBV. He pointed out that the assumptions that supplier relations cannot generate sustainable competitive advantages are commonly breached in real markets. Shanley and Peteraf (2004) have explored further dyads associating vendors and clients. The dyad organization generates value, which would be out of reach for either member independently. This can only be sustainable if members of the dyad have incentive to keep working together for the long term. Members of the dyad are not seeking immediate value maximization but expecting long-term value in the partnership, which thus satisfies the resource criteria as Barney had intended in his 1991 article. This thinking has further evolved with the strengthening of the concept of extended enterprise where the focus of the relation is value creation and sharing rather than relative power (Filieri and Alguezaui, 2012). Recently Barney (2012) also stated that purchasing and supply chain management can meet the criteria that define sources of sustained competitive advantages.

Influential management concepts have evolved as concerns supplier management as a source of competitive differentiation. Yet, there is a gap between contemporary concepts in strategy and the observed practices of purchasing departments. We hypothesized that the majority of purchasing professionals do not understand the concept of value developed in strategic management. Rather, they focus on exchange value and value transfer within their functional scope while paying little attention to value creation and value capture at the firm level.

Experimental Research

A consumer product corporation provided the opportunity to test our hypothesis. In a questionnaire developed to evaluate the perception of corporate objectives and assess the skill set of purchasing professionals, we incorporated a question to test the match between the shareholder maximization concept of value and the purchasing perspective. The questionnaire was addressed anonymously to 599 buyers. The question testing the perception of value presented 4 statements in a random order. We collected 505 valid answers across four continents, aggregated in four distinct groups from administrative purchasing support to executives.

To test our hypothesis that the corporate purchasing culture was a key driver of the results, we needed a sample that was outside this influence. The question was submitted to 54 second year students from a top 10 French business school, providing 49 valid answers. The students had never been exposed to purchasing as a skill or as a business practice. As they were in their second year of studies, they had already assimilated key concepts in finance and strategy.

Question Development

We designed the question (Table 1) to test the understanding of the difference between value capture at the shareholder level versus value transfer at the functional level.

Read the next 4 statements then choose the actions that are likely to drive improvement in company shareholder value: a. For a computer company, you source hard drives in China for 20% less than last year on a per gigabyte basis. b. For a home gardening supplies company, you have exclusive access to a better active ingredient (the chemical component that drives the properties of the product) representing 2% of the total cost of the product, but it costs you 5% more than last year. c. For a car company, you have implemented a new collaborative communication protocol with the suppliers that allows you to reduce inventory 5% below industry standards. d. For a bank, you have acquired from the leader in the industry a faster mainframe that will reduce your processing cost of monthly statements by 23%.

Table 1: Question to test the concepts attached to "Value" by Procurement Professionals

Two propositions were offered for each situation. In each set, one proposition presented transfer price as a key element while the other presented improved operational efficiency. Two statements incorporated an innovation from the suppliers that allowed the company to improve its competitive position, either by a better offer or by a more efficient operation (statements "b" and "c"). In both statements, wording indicated the opportunity to create a competitive advantage: "exclusive access" and "inventory 5% below industry standard".

The other two propositions, "a" and "d" were purely transactional sourcing initiatives likely to be adopted by all efficient players in the industry. Proposition "a" presented a traditional sourcing initiative to benefit from overall market effectiveness. Proposition "d" presented a situation in which a dominant supplier brings innovation to the market. However, supplier size and the ubiquity of the offer implied that the buying entity can only increase its short term efficiency but not retain the value generated because all efficient players will adopt similar improvement tools. Statements "a" and "d" were set in competitive environments where the likelihood of retaining the value rather than being forced to transfer it to the next player was limited. As Richard D'Aveni (1985) outlined, there are few industries that have escaped a shift to hypercompetition. Therefore, all efficiency gains that are not supported by a different, innovative approach are expected to be washed away under the pressure of hypercompetitivity.

The perspective of the four propositions is presented in Table 5. From the point of view of shareholder value, the correct answer is therefore "b c".

Component	Value capture for the firm	No value capture for the firm
Price paid	“b”: value capture by development of a competitive advantage through a superior product	“a”: value transfer to the final user under competitive pressures
Efficiency gained	“c”: value capture through the development of an effectiveness above industry standard	“d”: value transfer to the inventor who serves all players and retains the value

Table 9 Value capture difference between the four propositions

Results

We focused our analysis on the two most senior groups, “Managers” (172 answers) and “Executives” (67 answers), the most likely to be involved in the design and management of supplier relations with the potential to deliver sustainable competitive advantages. Moreover, the number of answers selected increased with the seniority level. Senior members selected 2.3 propositions on average with only 1% with no answers; junior members selected only 1.6 propositions on average with 5% selecting none. This suggests that lower seniority groups did not sufficiently understand shareholder value to respond systematically.

We looked first at the percentage of respondents that had the perfect combination (selecting “b” and “c” exclusively). The difference between the corporate and student groups, was statistically significant (p=0, *** using a logistic regression model) whereas it was not between the two seniority levels. We also calculated the overall score for all three groups, i.e. the number of correctly selected statements out of the 4 possible. The analysis of responses revealed no significant differences across corporate groups for this measure; both were statistically different from the students (*p=0, ***)*. This suggests that the corporate environment is less conducive to discriminating long-term value capture opportunities from transactional value transfer than the student environment. These results appear in figure 5.

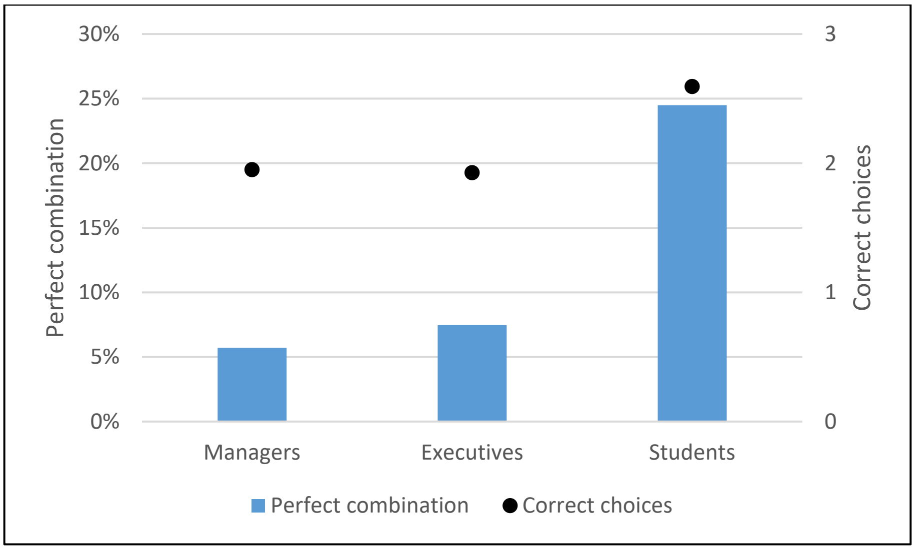

Figure 5: Results of each tested group

The fact that executives had a lower score than the students is not an indication that the purchasing professionals do not understand the concept of shareholder value. Indeed, there was a correlation between seniority level and the ability to identify situations that offer the opportunity for value creation and value capture. This did not translate into a better score because, as seniority increases, they chose more options (propositions “a” and “d” in addition to “b” and “c”) rather than discriminate better. It is even more telling when looking only at the propositions involving a price negotiation, “a” and “b”. Figure 2 shows this relation between short-term choices (the functional perspective) and long-term value choices (the shareholder perspective). The area below the line represents more short term than long-term answers.

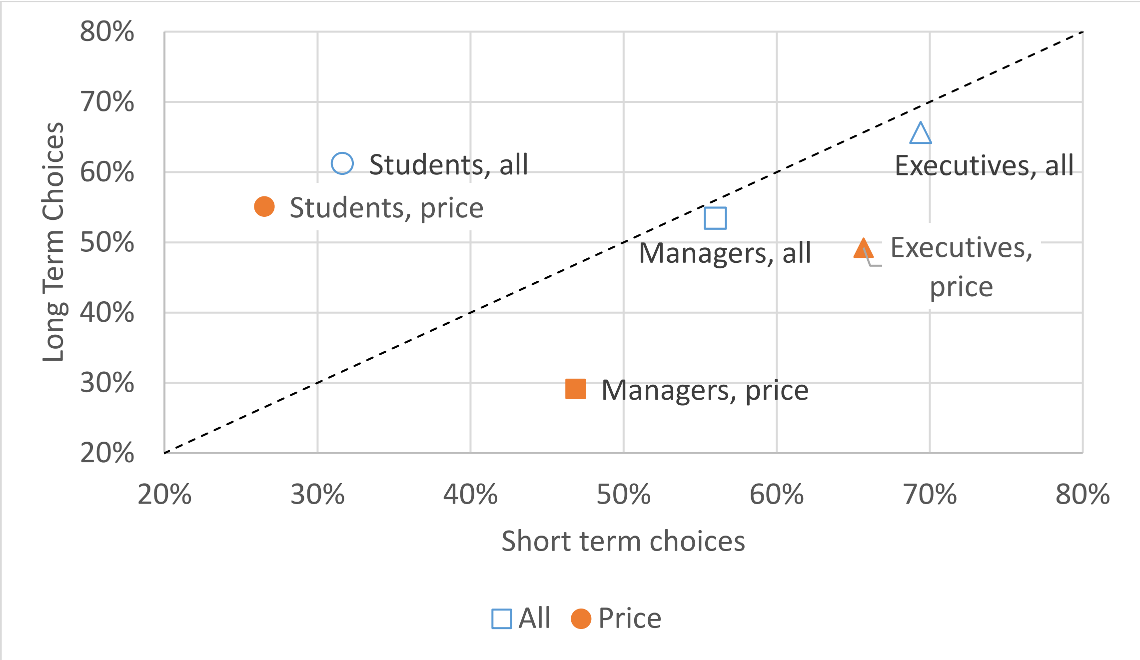

Figure 6: Short-term bias of corporate procurement professionals

Our analysis suggests that the purchasing department was not as able or motivated to discriminate between short term value transfer and long term value creation perspectives as our student population. About half the senior purchasing professionals understood the concept of shareholder value but they gave it equal or less consideration than short term price negotiation. This explains why the behaviours highlighted in the introduction are so prevalent and why strategies adapted to shareholder value creation and capture potential of the supplier resources are the exception rather than the norm.

Conclusion

Although our study is based on the analysis of only four scenarios that have been simplified to be administered in a multiple choice environment, the results are sufficiently telling to engage corporate leaders to rethink the way they set the vision and the mission of their purchasing team. The study shows that in environments subject to aggressive cost competition, the pressure on purchasing staff to generate short term savings reduces their ability to properly identify, differentiate and manage relationships with a focus on sustainable competitive advantages. Short term cost reduction can be relevant in many transactional exchanges but fall short of the most efficient usage of the resources offered by the suppliers.

To leverage the full set of opportunities offered by the ever increasing resources outside firm boundaries, in the extended enterprise, the purchasing culture must evolve. This can only happen if the top management provides not only the right leadership but also new tools to measure how well purchasing effectively manages its extended enterprise to generate long term sustainable competitive advantages in addition to the traditional “cost-quality-service”. To make purchasing a better contributor to the shareholder’s objectives requires a change in the culture developed over the last 30 years. There are multiple steps to do such.

- Raise awareness: Explain to purchasing the multifaceted components of your corporate strategy, and how you develop competitive advantages.
- Motivate: Align the objectives for your purchasing team to the shareholder’s interests. This will most likely imply change in the target setting and performance evaluation of the team.
- Transform: Train your purchasing team to understand value with a perspective that is compatible with long term shareholder interests. Quarterly results are interesting but rarely build competitive advantages.
- Structure: Demand purchasing strategies based on a rigorous supplier segmentation process that clearly separates the « commodity suppliers » from the “value builders”. The supplier strategy must satisfy both the needs of the front line as well as the cost managers

- Measure: As you integrate key suppliers in your extended enterprise, measure how this extended enterprise performs, ensuring that all members adapt their behaviour and benefit from the developed competitive advantages.

This multi-faceted transformation will enhance the firm's sustainable competitive toolbox and strengthen its ability to deliver shareholder value by exploiting better the potential of key suppliers to support the firm's strategic agenda.

What scorecard can help manage suppliers to deliver competitive advantages?

Once a firm has set the deliberate management of suppliers as a strategic resource, it needs to develop an instrument adapted to measuring not only its performance but also the performance of its extended enterprise. Hult and al (2007) had identified the lack of proper tool to measure of the intangible elements of the supply chain as contributors to performance. Because the strategic suppliers are a promise of future benefits that does not appear on the balance sheet, they can be analyzed as intangible resources. Therefore, we can leverage the research developed around the measure of intangible to build a measurement system adapted to the performance of the extended enterprise. It assesses the evolution of performance measurement in supplier management, identifies the gaps in the existing tools, and proposes a scorecard with four components, cash flow improvements with a firm valuation perspective, technical capabilities, congruence of interest, and collaboration culture.

Mesurer la performance de l'entreprise étendue pour piloter la création de valeur : une approche par l'immatériel

Résumé.

Certains fournisseurs sont devenus des ressources essentielles à l'entreprise. Leur contribution aux objectifs stratégiques ne peut se mesurer uniquement selon le triptyque coût-qualité-service. C'est particulièrement le cas dans les interactions complexes, quand le fournisseur est apporteur d'expertise, en mode projet. Cet article utilise l'expérience des actifs immatériels pour proposer une approche de mesure de la performance de la relation avec les fournisseurs clés plus adaptée que les approches classiques de pilotage de leur potentiel de création de valeur.

Mots clés

Mesure, performance, collaboration, avantages concurrentiels, fournisseurs, ressources, création de valeur, entreprise étendue, immatériel

Introduction

Les entreprises qui ont besoin de technologie et d'innovation prennent de plus en plus conscience de la contribution de leurs fournisseurs clé pour renforcer leur offre par rapport à celle de leurs concurrents. Dans leur communication publique, certaines entreprises parlent aujourd'hui de leurs fournisseurs comme d'un levier stratégique de compétitivité en termes de coûts, de qualité, d'innovation et de création de valeur partagée ou encore affichent leur intérêt pour la performance des fournisseurs. Le terme « partenaire » devient un mot commun du vocabulaire de la relation achat, même si, dans la pratique, peu d'acheteurs en comprennent toutes les implications dans leur approche de la relation avec ces fournisseurs. Il leur manque un cadre pour mesurer l'efficacité de la relation partenariale avec ces fournisseurs dans leur contribution à la réalisation des objectifs stratégiques de l'entreprise et un outil pour communiquer en interne sur l'obtention de résultats stratégiques. Nous allons donc explorer l'évolution de la mesure dans les achats pour proposer cet outil.

L'objectif de l'entreprise est de développer et renforcer ses avantages concurrentiels durables pour obtenir une rente de situation, en général grâce à une offre clairement différenciée de celle de ses concurrents. La valeur nette réside dans l'accomplissement des attentes du client, la perspective externe, tout en créant des richesses pour les actionnaires, la perspective interne (Martinez-Hernandez, 2003). Les projets qui permettent à l'entreprise de construire cette offre différenciée passent de plus en plus par les fournisseurs, qui représentent souvent la portion la plus importante des ressources de l'entreprise. Il est cependant difficile de piloter ces projets en se basant sur les indicateurs économiques à court terme lorsque l'objectif est la création de valeur à long terme. Comment alors mesurer l'efficacité de la relation avec les fournisseurs pour augmenter son potentiel de création de valeur d'usage pour les clients de l'entreprise, renforcer sa position concurrentielle et donc créer de la valeur pour les actionnaires?

Les managers formés aux modèles de Porter, (1980a) se sont focalisés sur l'extraction de valeur des fournisseurs par la construction d'un rapport de force favorable (Gulati and Sytch, 2007). Ceci a été encouragé par les enseignements des techniques d'achat et de négociation qui commencent en général par la démonstration de l'effet levier de la baisse du prix d'achat sur le bénéfice et sur le retour sur investissement. C'est donc prioritairement la valeur d'échange avec le fournisseur qui est considérée même si le concept de valeur d'usage commence à prendre place dans les objectifs de la fonction achat (*Les Priorités des Services Achat*, 2013).

Dans cet article, nous focalisons notre exploration sur les relations complexes entre les entreprises et leurs fournisseurs clé : ceux qui contribuent au renforcement de la position concurrentielle de l'entreprise. Ce sont souvent des relations qui prennent la forme de projets plutôt que de simples transactions, entreprises avec des partenaires privilégiés coopérant au sein de l'Entreprise Etendue. L'Entreprise Etendue est définie comme un système composé d'un donneur d'ordre et de fournisseurs qui collaborent fortement pour maximiser les bénéfices de chaque partenaire (Childe, 1998) ou comme une relation collaborative entre acheteurs et fournisseurs qui ont une vision partagée de la création de valeur pour les clients finaux. Le pilotage de cette Entreprise Etendue vise à créer un avantage concurrentiel à long terme par une intégration forte, des comportements collaboratifs (Davis and Spekman, 2004). Les fournisseurs au sein de l'Entreprise Etendue ne doivent plus être gérés par les principes du marché mais au sein de relations d'alliances mises en place pour optimiser de nombreuses dimensions allant des coûts de transaction (Geyskens et al., 2006) à la création de la valeur (Bititci et al., 2004). Dans ces partenariats, chacun bénéficie de la collaboration par l'augmentation de la valeur pour ses actionnaires tout en amenant de la valeur pour les clients finaux.

Cadre conceptuel : le fournisseur comme ressource immatérielle

La mesure de la performance pour atteindre des objectifs à long terme est un défi auquel se sont confrontés d'autres fonctions de l'entreprise comme les Ressources Humaines qui ont dû dépasser la simple mesure instantanée de la masse salariale pour travailler avec un horizon stratégique. Elles ont intégré de nouvelles grilles d'analyse dans leurs outils de mesure et construit des programmes de développement pour s'assurer que les besoins futurs de l'entreprise soient satisfaits en conservant le personnel clé motivé. De manière plus générale, mesurer la performance en dehors du périmètre classique de l'approche budgétaire et financière est un problème auquel ont dû faire face les chercheurs dans le domaine du capital immatériel. Améliorer les instruments de mesure devait aider à formuler et évaluer les stratégies basées sur les ressources intangibles (Andriessen, 2004; Marr et al., 2003). D'ailleurs, la mise en place de mesures de l'immatériel a été associée à une performance supérieure (Ittner, 2008). Ces systèmes de mesure font appel à des mesures composites comme les tableaux de bord qui intègrent résultats financiers et non financiers. Ces résultats de recherche sur l'immatériel interne à l'entreprise peuvent-ils être étendus aux relations fournisseurs ? Est-il possible de construire un outil de mesure et de pilotage de la relation fournisseur, non pas pour sélectionner un fournisseur parmi un panel issu du sourcing stratégique mais pour faire progresser des objectifs communs au sein de l'Entreprise Etendue, c'est-à-dire créer de la valeur à long terme pour client et fournisseur?

Cet article valide d'abord l'applicabilité du cadre de référence de l'immatériel pour les fournisseurs clé de l'entreprise. Ensuite, il identifie les outils de mesure existants et évalue leur pertinence pour développer une discussion sur une approche de mesure mieux adaptée au pilotage des fournisseurs en tant que ressources immatérielles de l'entreprise. Finalement, par une approche de recherche ingénierique, il développe une proposition de mesure pour mieux répondre aux besoins d'animation d'un réseau de fournisseurs essentiels au sein d'une Entreprise Etendue. Cette approche ingénierique est pertinente pour permettre au chercheur d'être force de propositions concrètes dans des environnements marqués par l'incertitude et la complexité (Chanal et al., 1996).

Les Fournisseurs comme Capital Immatériel de l'entreprise

Le capital immatériel, est constitué de ressources intellectuelles, de savoir-faire, de méthodes de travail, de cultures, qui sont exploitées pour créer de la valeur. Traditionnellement il comprend les activités d'innovation, les ressources humaines, et les pratiques organisationnelles. L'Organisation de Coopération et de Développement Economiques identifie comme tel les ressources et capacités humaines, les moyens structurels mais aussi le capital « relationnel » comme les réseaux de fournisseurs (OCDE, 2008).

Ce capital immatériel contribue à la création de valeur sans apparaître dans les documents comptables et financiers (Lev, 2001).

- C'est une créance sur un bénéfice futur qui ne peut être reconnue au bilan de l'entreprise, qui offre le potentiel d'une augmentation du retour sur investissement à mesure que ce capital immatériel est exploité.
- Elle ne peut facilement être échangée, et sa propriété est difficile à défendre

Les fournisseurs partenaires remplissent-ils ces critères? L'utilisation du cadre de l'immatériel pour le pilotage du management fournisseurs peut sembler surprenante au premier abord, mais les fournisseurs partagent avec le capital immatériel plusieurs éléments. Des études y avaient brièvement fait référence en observant que de nombreux secteurs, à commencer par l'automobile, associent des fournisseurs en phase de conception pour bénéficier d'un apport de ressources « intangibles » (Calvi, 2000). Ces fournisseurs partenaires présentent en effet les traits qui caractérisent le capital immatériel, comme nous allons le montrer.

Une créance sur un bénéfice futur qui n'apparait pas au bilan

Les fournisseurs représentent souvent plus de 50% de la valeur ajoutée des entreprises. En terme budgétaire, c'est la ressource la plus importante à la disposition de la direction, qu'il faut déployer dans le cadre de la mise en place de la stratégie de l'entreprise. Des études ont déjà fait un lien entre l'apport du fournisseur et la valeur créée par l'entreprise au sein de relations partenariales. Des exemples documentés comme ceux de Frito-Lay et de REpower (Philippart et al., 2005) ou de Toyota et Honda (Henke Jr. and Chun, 2010), montrent que des relations collaboratives entre fournisseurs et clients amènent des bénéfices exclusifs à l'entreprise et contribuent au renforcement de sa position concurrentielle et donc qu'ils contribuent aux bénéfices futurs de l'entreprise.

Quel est le mécanisme de réalisation de ces bénéfices futurs ? La pression intense imposée sur les entreprises par la globalisation de l'économie les pousse à se différencier par l'innovation, à laquelle contribuent leurs fournisseurs clé. Ces bénéfices futurs sont également construits en mode projet quand les partenaires travaillent ensemble pour créer de la valeur au-delà de ce que chacun peut faire de manière isolée, en intégrant les compétences des deux parties. La contribution des fournisseurs dans l'innovation a été brièvement analysée pour l'innovation de rupture et les projets de développement de produits nouveaux : une meilleure implication des achats pour intégrer les compétences des fournisseurs permet une meilleure maîtrise du couple coût/ qualité et du délai de mise sur le marché (Calvi, 2000).

Une innovation ou une collaboration offerte par un fournisseur à tous ses clients de manière similaire créera cependant moins de valeur pour chaque client que si elle est disponible de manière exclusive pour un client privilégié. La qualité de la relation entre le client et son fournisseur est donc créatrice de valeur : les fournisseurs sont alors une source de bénéfices futurs sans que ce potentiel ne soit reconnu au bilan des entreprises. Ils remplissent donc le premier critère de la définition du capital immatériel de Lev présenté ci-dessus.

Une ressource difficilement échangeable et contrôlable

Lev avait mis en évidence la difficulté de contrôler le capital immatériel, en particulier celui qui a trait à la connaissance. La propriété d'une ressource physique est garantie par un cadre légal, la propriété d'une marque est protégée par des mécanismes de copyright et la propriété de l'innovation interne par des brevets ou par la culture du secret. Par contre, tous les éléments constitutifs de la qualité d'une relation entre client et fournisseurs ne peuvent pas être sécurisés par des approches contractuelles qui ne décrivent que ce qui peut être mesuré en termes de produit ou de service.

Les fournisseurs identifiés comme partenaires mettent à la disposition de leur client des ressources spécifiques. C'est entre autre la complexité des interactions qui les rend spécifiques: l'expérience de travail en commun (Gulati et al., 2011) ainsi que l'interdépendance (Gulati and Sytch, 2007) sont ainsi fortement corrélées à la création de valeur. De fortes interactions sociales entre client et fournisseurs sont corrélées positivement à l'innovation (Huang and Chang, 2008). La relation collaborative avec de fortes interactions entre équipes ne peut être réalisée de manière pérenne en dehors du contexte dans lequel elle a été développée. Le potentiel de valeur du fournisseur n'est pas transféré automatiquement au bénéfice de son client et ne peut être transféré dans une autre dyade client-fournisseur sans une nouvelle démarche d'acquisition de cette expérience. Pour que les acheteurs puissent réaliser ce transfert, ils doivent modérer la pression qu'ils mettraient sur leurs fournisseurs en considérant uniquement les objectifs financiers de l'entreprise acheteuse (Henke Jr. and Chun, 2010; Peters, 2000). Ce capital relationnel est donc essentiel pour protéger les composants propriétaires au sein d'une dyade (Kale et al., 2000).

On pourrait avancer que certains choix stratégiques permettent de contrôler et protéger cette source de connaissance. Le contrôle du fournisseur par son acquisition peut être une option mais le capital nécessaire peut ne pas être disponible ou devoir être alloué à des objectifs plus critiques. L'acquisition peut également manquer de logique industrielle lorsque la compétence recherchée n'est qu'une faible partie de l'entreprise cible. Enfin, certaines études indiquent que le taux de succès des opérations d'acquisition est inférieur à 50% (Marks and Mirvis, 2010). L'acquisition du fournisseur est donc rarement une option réaliste.

Les fournisseurs peuvent choisir de s'engager au sein de l'Entreprise Etendue d'un client particulier après avoir comparé les options qu'ils ont avec d'autres clients. Puisqu'ils ont également un choix de s'engager dans le partenariat, ils peuvent tout aussi bien se désengager. Le contrôle du niveau d'engagement de la ressource fournisseur est difficile et ne peut être garanti par simple contractualisation. Donc les fournisseurs qui contribuent à la création et au renforcement des avantages concurrentiels de l'entreprise peuvent être considérés comme une ressource immatérielle puisqu'ils sont sources de bénéfices futurs et que la relation ne peut être protégée expressément par une approche contractuelle.

Les approches de mesure actuelles sont-elles adaptées ?

La section précédente a montré que les fournisseurs clé de l'entreprise peuvent être considérés comme une ressource immatérielle. Nous allons passer en revue les outils existants de la mesure de la performance fournisseur pour identifier les éléments qui peuvent servir à construire un outil adapté à la mesure de la performance d'une relation dont l'objectif est la création de valeur. Nous identifierons ce qui leur manque pour remplir l'objectif que nous nous sommes assignés. Puisque nous avons identifié que la relation fournisseur est un capital immatériel de l'entreprise, nous structurerons notre analyse pour mesurer les deux traits du capital immatériel : la créance sur le bénéfice futur et le renforcement du contrôle sur le devenir de la relation.

La mesure du potentiel d'un bénéfice futur

La mesure de la performance en gestion des fournisseurs commence par la réduction des coûts, documentée dès les premiers articles sur le sujet (Monczka and Trecha, 1988). L'approche la plus simple consiste à utiliser une maille serrée, l'évolution historique des prix des biens ou services achetés. Cependant, même si elle est encore utilisée fréquemment, cette approche a rapidement montré ses limites dès qu'un horizon stratégique, plus long, devait être pris en compte et que les conséquences de la décision d'achat dépassaient une utilisation instantanée de produits identiques. Le coût total d'usage ou TCO est venu enrichir l'évaluation basée sur l'évolution historique des prix d'achat (Ellram, 1993). Le TCO intègre et évalue tous les postes budgétaires présents et futurs impactés par la décision, par exemple les coûts d'acquisition et d'installation, non récurrents, et les coûts d'opération durant tout le cycle de vie de ce qui est acheté, en prenant en compte tout autant la main d'œuvre que les consommables et les coûts de fin de vie. Le TCO est donc un outil qui vise à comparer différentes options sur leur durée de vie. Comme l'évolution du prix sur base historique, il reste principalement une approche comptable basée sur les coûts plutôt que sur la création de valeur.

En quoi les approches par les coûts sont-elles insuffisantes ? La réduction des coûts est souvent associée à la « capture de valeur » dans le langage achat. Cependant, elle n'est un gisement de création de valeur que pour les acteurs qui peuvent mettre en place avec succès une stratégie de différenciation qui leur permet de maintenir leur prix de vente : la valeur est transférée du vendeur à l'acheteur. Dans l'environnement hypercompétitif qui est prévalent dans la plupart des industries (D'Aveni et al., 1995), tous les acteurs d'un même secteur réduisent leurs coûts en appliquant des approches opérationnelles similaires, que ce soit la productivité interne ou la pression sur les fournisseurs. Dans ce cas, la baisse des coûts se traduit en général par une baisse du prix de vente. En effet, comme l'entreprise ne se différencie pas et n'offre pas de bénéfices spécifiques, elle ne peut maintenir la rente économique liée à la baisse des coûts des intrants. Les acheteurs de leurs clients leur appliquent les mêmes approches de réduction des coûts et récupèrent à leur bénéfice les gains de productivité ou d'achat jusqu'au client final. Une des caractéristiques de l'hypercompetition est de tendre vers la concurrence parfaite qui ne laisse aux acteurs aucun profit au-delà du coût des moyens de production et du capital. Pour lutter dans cet environnement hypercompétitif, le développement continu de nouveaux avantages concurrentiels devient la seule option pour créer de la valeur (D'Aveni, 2010). C'est une tâche que peu d'entreprises peuvent faire en se basant uniquement sur leurs ressources internes.

En outre, la valeur externe issue d'une relation collaborative n'est souvent réalisée que plusieurs mois ou plusieurs années après le début de la collaboration avec un fournisseur, quand les produits ou services sont mis sur le marché avec succès. Comme c'est un bénéfice futur qui est attendu, l'approche comptable à court terme ne peut donc suffire pour apprécier tout le bénéfice des partenariats car le pilotage de la ressource fournisseur ne peut attendre le résultat financier futur des actions engagées au présent. Plus fondamentalement, les résultats financiers transactionnels ne sont pas une mesure de la contribution à la position concurrentielle apportée par le fournisseur.

Dans le cadre du pilotage de la relation fournisseurs, ce besoin de mesurer la valeur externe a été abordé par l'analyse des précurseurs de la création de valeur et la mesure des leviers de création de cette valeur. Ainsi, le « Linear Performance Pricing » a été utilisé dans l'industrie automobile non seulement pour faciliter la sélection des fournisseurs les plus capables d'apporter une solution mais aussi dans des projets d'optimisation des spécifications (Newman and Krehbiel, 2007). Cet outil améliore le travail collaboratif en de clarifier les leviers de compétitivité de l'entreprise cliente et en focalisant l'optimisation de la valeur perçue par le client final. Il restait cependant cantonné à une optimisation technique. Il ouvre la voie à l'utilisation de proxys de valeur pour évaluer la performance dans la relation fournisseur.

La mesure de la qualité de la relation

Puisque l'apport du fournisseur au développement d'avantages concurrentiels durables n'est pas contrôlable par un cadre contractuel, il faut renforcer la relation et la sécuriser. Pour cela, il faut donc mesurer les éléments structurants de la relation collaborative, essentiels pour défendre l'accès privilégié aux compétences des fournisseurs. Comme dans tous les efforts visant à la création d'avantages, il n'est pas suffisant que la relation avec le fournisseur soit bonne. Il faut qu'elle soit meilleure que celle existant entre les membres de réseaux d'entreprise concurrents. La qualité de la relation entre les parties n'est pas limitée à la confiance mais est aussi établie par les mécanismes de socialisation qui sont positivement corrélés à la performance de l'entreprise (Cousins et al., 2008).

Comment alors mesurer ce capital relationnel ? Les premiers efforts d'évaluation de la relation datent des années 90, avec le « Relationship Assessment Program » ou RAP (Lamming et al., 1996). Ce modèle développait le concept de la relation comme une entité indépendante qui unit les deux organisations pour créer des flux mutuellement bénéficiaires. Il permettait aux deux parties d'évaluer la relation conjointement pour améliorer la performance de la dyade et son potentiel de développement de valeur et de réduction des inefficacités. Les dimensions fournisseur et client étaient parallèles et incluaient des facteurs externes comme l'environnement concurrentiel, et internes comme les compétences disponibles chez chacun des partenaires. Les participants exprimaient leur perception des éléments importants qui influencent ou facilitent la relation. Aujourd'hui, une évolution du RAP, le SCRIA est utilisée dans l'industrie aérospatiale en Grande Bretagne. Il a ainsi évolué vers des applications pilotées par des organismes privés (Johnsen et al., 2008) et donc n'est plus un standard validé par des recherches convergentes et applicables par tous.

Le « OEM Supplier Working Relation Index » de la société Planning Perspectives (Henke Jr., 2004), ou WRI, mesure la qualité de la relation entre fournisseurs et donneurs d'ordre par un questionnaire axé sur cinq dimensions : la qualité de la relation client-fournisseur, la communication du client, le soutien de la part du client, les entraves posées par le client, et les opportunités de profit pour le fournisseur. C'est probablement la mesure de la relation fournisseur client la plus connue car ses résultats pour l'industrie automobile nord-américaine sont rendus publics chaque année depuis 2001. Une bonne performance de cet index a été relié à la réduction des coûts, à l'amélioration de la qualité et de l'innovation, et l'optimisation des inventaires (Henke Jr. and Chun, 2010; Milas, 2005). Comme le SCRIA, cet index est privé. C'est un outil unidirectionnel, qui mesure la perception du fournisseur, sans nécessairement la confronter avec la perception de l'acheteur, alors que cette confrontation serait génératrice d'opportunités d'amélioration du travail collaboratif, comme semblait l'indiquer le RAP.

Une autre approche de mesure de la relation est l'évaluation des éléments fréquemment mentionnés comme constitutifs de l'immatériel comme l'apport d'innovation ou de compétences par le fournisseur. L'analyse des éléments précurseurs de création de valeur par les compétences du fournisseur était discutée en termes d'efficience, de capacité d'innovation et de capacité du réseau en mettant en évidence la différence entre l'efficacité, qui est un indicateur à court terme et la production de valeur par l'innovation à moyen et long terme (Möller and Törrönen, 2003). Ceci mettait en évidence l'importance de la palette de compétences du fournisseur dans la création de valeur. Cette recherche a mis en évidence le besoin de mesurer le potentiel de création de valeur sur plusieurs horizons, à court, moyen et long terme. Elle ne prenait cependant en compte que l'évaluation du fournisseur plutôt que de la dyade. De plus, l'étude était présentée comme conceptuelle pour mieux classifier la relation au sein de la dyade, ne faisant que toucher superficiellement l'impact de la qualité de cette relation.

L'engagement amont des fournisseurs dans les projets de recherche est un autre indicateur de la qualité de la relation fournisseur-client (Johnsen, 2009). L'innovation, l'apport intellectuel des fournisseurs ne se limite pas à la performance technique mais également à leur apport en termes de contribution au processus d'innovation, au développement conjoint de nouvelles solutions (Le Dain et al., 2011). L'index « Early Supplier Involvement » ou ESI (Bidault et al., 1998) était construit à partir des réponses à trois questions sur le choix d'engagement des fournisseurs très en amont du processus de développement ou d'innovation. Cependant ce travail portait seulement sur 24 cas et n'établissait pas de corrélation entre l'index ESI et la performance des entreprises ainsi engagées.

Les approches composites

Le besoin de mieux mesurer le capital immatériel a débouché sur le développement des mesures composites de type « Balanced Scorecards (BSC) » ou « Intangible Asset Monitor » (Sveiby, 1997) qui cherchent à évaluer le capital immatériel en utilisant des proxys. CAPS Research a proposé en 2005 de créer un Balanced Scorecard pour la fonction achat, en se basant sur les travaux de Kaplan and Norton (2007) et en l'adaptant (Carter et al., 2005). Cependant, cette BSC adaptée aux achats ne prend pas en compte la qualité de la relation bilatérale avec le fournisseur. De plus, même si les auteurs mentionnent "Programmes d'innovation" comme thème de mesure, les exemples présentés n'ont pas le niveau de formalisme de l'index ESI. Enfin, cette BSC Achat ne mesure pas le potentiel de création de valeur à long terme par la construction d'avantages concurrentiels.

La ressource que représente le fournisseur partenaire doit être appliquée correctement à des leviers de création de valeur pour créer cette valeur. Le "Collaboration Index" (Simatupang and Sridharan, 2005) avait appliqué une approche composite d'alignement des coûts, des risques et des bénéfices, ainsi que de deux éléments relationnels: le partage d'information et la synchronisation des décisions. Dans un environnement simple (des détaillants et leurs fournisseurs), ces éléments étaient corrélés à un proxy de la création de valeur établi par la mesure de la performance logistique et du taux de satisfaction client. Cependant les auteurs visaient à corréler leur index à la performance opérationnelle et non à la performance stratégique, c'est-à-dire le développement d'avantages concurrentiels. Le proxy de création de valeur était simple : la capacité des détaillants à mieux satisfaire leurs clients en ayant un meilleur taux de service. Cette étude ne mesurait pas non plus le niveau d'implication des fournisseurs mais simplement l'utilité de mieux partager avec ceux-ci les informations collectées sur les tendances d'achat des clients des détaillants, en utilisant de simples indicateurs comme le partage des informations collectées aux caisses. Cette approche ouvre la voie vers l'intégration de la convergence des intentions dans un outil de mesure de la relation client fournisseur.

Une autre approche composite est l'AHP (Analytic Hierarchy Process). Il a été développé pour amener plus de rigueur dans la sélection du fournisseur sur la base de facteurs multiples, quand le prix n'est pas le seul facteur déterminant (Bhutta and Huq, 2002). La sélection de fournisseurs impliqués dans des projets collaboratifs est améliorée par une approche de ce type, mais l'AHP n'est pas adapté à la gestion de la collaboration au-delà du choix du fournisseur. Les recherches pour améliorer l'AHP ont plus porté sur les méthodes de traitement des données composites que sur l'élargissement du champ d'application d'une approche composite en dehors du processus de sélection du fournisseur. Ainsi le DEA (Data Envelopment Analysis) est clairement positionné comme un outil de sélection des fournisseurs (Ramanathan, 2007) et non comme un outil de mesure de l'efficacité de la relation collaborative pour contribuer à la création d'avantages concurrentiels durables.

Ces approches composites ont ouvert des pistes de recherche pour développer un outil de mesure de la valeur dans le cadre de la gestion d'une relation dans la durée sans pour autant satisfaire suffisamment à la définition de la création de valeur, ni à la mesure de la contribution préférentielle de certains fournisseurs à l'agenda stratégique de leur client. Elles ne prennent pas en compte le point de vue de ces fournisseurs, et donc leur motivation à transférer de manière privilégiée leur compétence vers leur client au sein de l'Entreprise Etendue.

Construire une approche multidimensionnelle

Les outils de mesure de la performance achat doivent aider au management stratégique de l'entreprise, à la mesure des progrès (Pohl and Förstl, 2011) à la contribution des fournisseurs à la création de valeur et au développement d'avantages concurrentiels durables. Puisque les fournisseurs clé sont une ressource immatérielle de l’entreprise, il faut mettre en place un outil de mesure qui intègre le potentiel de création de valeur de ces relations et la protection de ce potentiel. Les propositions mentionnées ci-dessus abordent des composantes de cet outil mais aucun ne cherche à piloter la relation fournisseur par toutes ses dimensions dans le but de créer des avantages concurrentiels durables. Une approche composite plus structurée doit être développée pour mieux prendre en compte la complexité du pilotage d’une Entreprise Etendue. De nouveau, nous utiliserons comme guide les deux critères dérivés des observations de Lev pour caractériser le capital immatériel : les fournisseurs sont-ils une source de bénéfices futurs ; la pérennité de la relation est-elle évaluée ? Ces critères seront utilisés pour construire un tableau de bord de la performance de l’Entreprise Etendue.

Les sources de bénéfices futurs

Dans notre tableau de bord, nous proposons de mesurer les bénéfices futurs par deux familles de composants : les flux de trésorerie et les outils classiques de mesure des projets. Ce sont des mesures techniques et budgétaires, relativement faciles à collecter et dont le résultat est peu sujet à débat pour identifier la réalisation du bénéfice futur qui est l’objectif ultime de la relation durable entre un client et ses fournisseurs clé.

La Valeur par les flux de trésorerie

L'approche la plus communément proposée pour estimer la valeur d'une entreprise est celle des flux de trésorerie actualisés. Même si cette méthode présente des imperfections, elle permet de mettre en évidence les éléments constitutifs de la valeur future pour les actionnaires. La somme des revenus moins les coûts et les dépenses d'investissement représente les flux de trésorerie. Les flux futurs sont actualisés, pondérés en fonction du risque, représenté par le coût moyen pondéré du capital. Pour créer de la valeur la relation fournisseurs comme toute autre activité de l'entreprise doit contribuer à faire augmenter les flux de trésorerie présents et futurs (revenus - coûts - investissements). Le projet peut aussi contribuer à la réduction du risque sur le projet ou le produit final, ce qui réduit la décote des flux futurs. Il faut le faire de manière agile et proactive pour que les flux futurs croissent le plus rapidement possible.

La première composante de notre tableau de bord propose de mesurer l'innovation par le potentiel de création de valeur de l'ensemble des projets visant à améliorer un des quatre leviers identifiés ci-dessus : l'augmentation des revenus par la construction ou le renforcement de la compétitivité de l'offre, la diminution des coûts par une meilleure efficacité de la chaîne de valeur, la diminution des besoins en capitaux par une meilleure allocation des ressources de production ou de recherche, la diminution du risque et l'amélioration de l'agilité. En mettant en évidence ces composants, le pilotage des projets adoptera un horizon plus long que sur les simples mesures des coûts et du respect du timing des projets.

La Capacité Opérationnelle

Le pilotage traditionnel, orienté sur l'efficacité opérationnelle est évidemment maintenu. C'est la partie la plus visible du résultat de la relation. La crédibilité d'un tableau de bord orienté création de valeur demande que ces éléments soient pris en compte. La deuxième composante de notre tableau de bord sera donc composée des éléments de pilotage opérationnels classiques de performance technique, de qualité, délais, coût et de flexibilité (Neely et al., 1995). Dans cette optique, les mesures de coût et de délais restent les plus fréquentes (Driva et al., 2000). Il faudra veiller à bien pondérer leur importance dans l'évaluation du résultat opérationnel.

La pérennité des relations

Evaluer la pérennité de la relation et s'assurer que le fournisseur priorise ses efforts est plus complexe. Il faut d'abord s'assurer que les objectifs sont compatibles, mais aussi que la relation est développée continuellement pour en extraire son potentiel maximum.

La Congruence des intérêts

Comment mesurer la congruence d'intérêts et la volonté de mettre en place des ressources exclusives avec un objectif commun ? L'efficacité de la protection du capital de connaissance créé ou apporté par le fournisseur peut s'inspirer des approches utilisées pour protéger la connaissance développée de manière interne par le personnel : l'alignement des bénéfices, la contractualisation, et le report dans le temps de la réalisation des bénéfices (Liebeskind, 1996). On retrouve ces éléments dans un modèle qui lie le capital social et la création d'avantages organisationnels (Nahapiet and Ghoshal, 1998). La création de capital intellectuel est liée à l'anticipation de la valeur à créer et à la motivation, elles-mêmes fonctions de dimensions structurelles (le réseau, l'organisation), cognitives (le langage et les codes partagés), et relationnelles (la confiance, les normes, les obligations communes). Dans leur étude Knack et Keefer font le lien entre la confiance et la coopération et montrent leur corrélation à l'efficacité économique ; ils mettent également en évidence un niveau d'antagonisme faible ainsi que des règles de fonctionnement formalisées qui sont associées au développement de la coopération et de la confiance (Knack and Keefer, 1997).

Dans les dyades fournisseur-client, cette confiance est essentielle au travail collaboratif créateur de valeur partagée car elle permet aux partenaires d'anticiper les bénéfices à venir et réduit la tentation de comportements opportunistes. Sans confiance, pas d'acceptation de report dans le temps et donc pas de mise en commun avec un client de manière privilégiée des capacités du fournisseur. L'alignement des bénéfices doit être considéré comme probable par le fournisseur sur la base de l'information qu'il reçoit.

Pour la composante relationnelle de notre tableau de bord, nous devons donc mesurer la confiance et la congruence, ou la faible polarisation entre les partenaires sur les bénéfices attendus, les attentes des clients finaux, et l'articulation du partage de ce bénéfice pour les différentes parties prenantes. Le volume et le timing de l'échange d'information peut être un proxy pour la confiance entre les parties.

Comme pour les mesures en gestion des ressources humaines, des enquêtes de satisfaction sont l'approche la plus efficace : elles viseront à mesurer la connaissance des objectifs communs, la perception de l'échange efficace d'information, et la confiance. L'évaluation doit se faire sur base historique avec un objectif d'amélioration des facteurs décrits, mais aussi sur base concurrentielles, avec la mise en évidence du statut de fournisseur ou client privilégié par rapport aux concurrents.

La Culture de la Collaboration

Dans la plupart des projets en entreprise, on peut considérer que les participants ont été choisis en fonction de leurs compétences techniques traditionnelles. Cependant, ces compétences techniques ne sont pas l'élément critique. Dans un projet pluridisciplinaire, il faut que tous les membres soient formés au leadership (Appelbaum and Gonzalo, 2007). Ceci est encore plus pertinent si à la complexité pluridisciplinaire, on doit ajouter la complexité organisationnelle, ce qui est le cas lorsque la relation se construit au-delà des frontières de l'organisation. Dans ces projets, la coopération en amont du projet est positivement corrélée avec la performance du projet (Olson et al., 2001). Il en est de même dans les projets dans l'Entreprise Etendue (Hoegl and Wagner, 2005). Dans les relations collaboratives entre acheteurs et fournisseurs, les compétences relationnelles sont sources d'avantages stratégiques pour les entreprises qui s'y engagent (Paulraj et al., 2008). A l'inverse, la distance culturelle a un effet négatif sur la collaboration (Simonin, 1999).

Les compétences humaines dans la relation interentreprises sont le ciment et le moteur des indicateurs précédents. Pour notre quatrième et dernière composante, nous proposons d'évaluer les capacités comportementales nécessaires en conduite de projet : l'écoute, la créativité, la capacité à convaincre et motiver tous les participants, et la capacité à gérer l'adversité. Cette mesure de la culture collaborative peut se faire sur des indicateurs observés comme la fréquence de communications ou la mise à disposition en temps voulu des informations nécessaires au projet. Ce tempérament collaboratif peut être également évalué par des simulations ou des questionnaires testant les attitudes en face d'événements précis. Cette dernière approche aurait l'avantage de développer des comparaisons entre départements ou entre dyades sur base d'un référentiel identique.

Mise en Place

Une approche Miroir

Puisque les intérêts doivent être congruents, et que l'objectif est de mesurer l'efficacité du projet au sein de l'Entreprise Etendue, chaque partie doit mesurer les mêmes éléments afin d'aligner les perceptions sur la valeur créée et sur la confiance partagée. Comme dans les projets pluridisciplinaires ou l'évaluation de la performance doit se faire sur la contribution commune (Appelbaum and Gonzalo, 2007), il faut développer une mesure qui regarde tous les acteurs avec le même outil. Pour le réaliser nous proposons une approche miroir similaire aux premiers travaux sur le RAP : les mêmes questions doivent être posées aux fournisseurs clé et à l'entreprise qui anime ainsi son réseau comme un ensemble cohérent d'intérêts congruents. Les index collaboratifs documentés, qui se positionnent uniquement dans l'optique d'un des deux éléments de la dyade, ne permettent pas suffisamment de se positionner dans la mesure de la qualité du partenariat, de l'alliance. La construction d'une approche « miroir » par laquelle chaque élément de la dyade est apprécié avec le même jeu de critères est un élément structurant de notre cadre de mesure, puisqu'il devient lui-même un témoin de la confiance et de la transparence entre les deux parties.

Le bénéfice d'un intermédiaire neutre

Les deux composants relationnels font appel à des questionnaires pour évaluer perceptions et comportements. Elles sont donc plus difficiles à mettre en place. Il n'y a pas encore de standard qui permette de calibrer la perception, car c'est un champ relativement nouveau dans l'évaluation des relations interentreprises.

La réalisation de ces deux mesures, pour lesquelles l'opinion du fournisseur est confrontée à la vision de l'entreprise cliente demande un climat de confiance et de confidentialité des réponses. C'est particulièrement important si l'entreprise est à un tournant dans sa stratégie de pilotage de la relation fournisseur et doit surmonter un passif historique de relations conflictuelles. L'entreprise doit se poser la question de savoir comment s'assurer que les fournisseurs auront à cœur d'émettre librement leur opinion, qu'elle soit positive ou négative, soit pour l'entreprise soit pour les individus responsables directement de cette relation. Il faut alors préférer un intermédiaire neutre pour administrer les questions plus sensibles relatives à la qualité de la relation. Cet élément est également un contributeur au renforcement de la confiance entre les deux parties.

Conclusions

Cet article propose une approche de mesure dont l'objectif principal est d'aller au-delà de la vision tactique et opérationnelle observée en entreprise pour focaliser sur la création de valeur et d'avantages concurrentiels le pilotage de la relation avec les fournisseurs clé au sein de l'Entreprise Etendue. La mesure de la performance n'a plus comme objectif de sélectionner et de départager des fournisseurs mais de gérer des relations fournisseur en tant que ressources stratégiques.

Quatre composantes distinctes doivent être évaluées pour mesurer les deux caractéristiques d'un actif immatériel

Une créance sur un bénéfice futur	Une ressource difficile à protéger
1. La création de valeur pour les deux parties par l'augmentation des flux de trésorerie, la diminution des risques et l'agilité 2. L'obtention de résultats opérationnels concrets	3. La congruence des intentions à court et long terme 4. La culture collaborative des acteurs du développement de la relation

Table 10: Les 4 dimensions de mesure de la performance dans l'Entreprise Etendue

Les composantes méritent d'être évaluées du point de vue des deux parties pour refléter effectivement le potentiel de création de valeur de l'Entreprise Etendue et non uniquement la perspective du donneur d'ordre.

Pour valider l'approche proposée, de prochaines études doivent analyser des cas d'application en entreprise. En opérationnalisant l'approche, en créant des questionnaires spécifiques, ces études enrichiront la boite à outil des professionnels tout en fournissant de nouvelles données quant à la contribution stratégique des fournisseurs à l'entreprise. Il sera particulièrement intéressant d'explorer l'opérationnalisation des approches miroir de mesure des dimensions création de valeur, confiance et culture collaborative.

Il serait également intéressant d'explorer les éléments culturels qui contribuent au développement de la créativité et de l'innovation en groupes de fournisseurs et de clients. La recherche sur les projets pluridisciplinaires pourrait être étendue aux projets inter-organisationnels.

La performance stratégique des entreprises étendues est un domaine important de la recherche car elle permet de sortir de la trappe du moindre coût comme élément prépondérant du pilotage de la relation fournisseur car ces approches créent un environnement d'hyper-compétitivité qui réduit ou annule la valeur ajoutée d'une marque par rapport à ses concurrents et supprime le potentiel de création de rentes par les avantages concurrentiels durables.

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