



IPL

escola superior
de tecnologia e gestão
instituto politécnico
de leiria

Working paper séries

Documentos de trabalho

Governance Models in Mature Industries: Case Studies of Three Portuguese Packaging Firms

Manuel Portugal Ferreira
Instituto Politécnico de Leiria, Portugal

Fernando A. Ribeiro Serra
UNISUL Business School, Brasil

André Leite
UNISUL Business School, Brasil

2007

DEPARTAMENTO DE
GESTÃO E ECONOMIA

Working paper 5/2007, July 2007

**Governance models in mature industries: Case studies of three
Portuguese packaging firms**

Manuel Portugal Ferreira*

Escola Superior de Tecnologia e Gestão

Instituto Politécnico de Leiria

Morro do Lena – Alto Vieiro

Leiria – Portugal

portugal@estg.ipleiria.pt

Phone: 011-351-244-843317

Fax: 011-351-244-820310

Fernando A. Ribeiro Serra*

Diretor da Unisul Business School

Universidade do Sul de Santa Catarina

Rodovia SC 401 – km 19

Canasvieiras – Florianópolis

fernando.serra@unisul.br

Phone: 55 48 32347213

Fax: 55 48 32610000

André Leite

Unisul Business School

Universidade do Sul de Santa Catarina

Rodovia SC 401 – km 19

Canasvieiras – Florianópolis

andreleite@unisul.br

* globADVANTAGE – Center of Research in International Business & Strategy

2007

Governance models in mature industries: Case studies of three Portuguese packaging firms

ABSTRACT

In this work the transaction cost theory and the resource-based view support four propositions on firms' governance models in mature industries. Through the case study of three Portuguese packaging firms we examine three distinct strategic governance models in a mature industry. One firm utilizes market-based governance mechanisms, and concentrates its production in a few selected locations. Another firm vertically integrates almost the entire value chain of the product to provide full service to its clients. The third firm operates in a model of integrated outsourcing, with the installation "wall to wall" of small or medium manufacturing units in its clients' facilities. The models client-supplier assumed by these firms and presentend in this work are based on efficient, stable, and trustworthy relationships, considering both transacton cost theory and resouce base view.

Keywords: Mature industries, resource-based view, transaction costs, buyer-supplier

INTRODUCTION

What should firms do in mature industries? Should they make, or should they buy? How do firms in mature industries design the governance models for client-supplier exchanges? These questions have been debated in organization and strategic management research as the dichotomy 'make' or 'buy'. This dichotomy can be traced back to the logic of economic rationale proposed by Adam Smith (1776: 759) as "it is the maximum of every prudent master of the family, never to attempt to make at home what it will cost him more to make than to buy", or to the work of Coase (1937) on the nature of the firm. Coase (1937) stated that firms that decide to internalize the allocation of resources, and substituting the market mechanisms, exist because the transaction costs are high. The essence of Coase's thought is that firms and markets are alternative forms of organization for managing the same transactions. Whether a firm makes it or buy turns largely on the transaction costs of managing the transaction in the firm, as compared with mediating the transaction through the market (WILLIAMSON, 1996).

However, the dilemma whether to make it or to buy is still current, is transversal to multiple industries and organizations, and is far from being solved. Furthermore, this dilemma has rarely been subjected to questioning in mature industries. In emergent industries firms may need to internalize more activities of the product value chain to overcome a multitude of market imperfections. Conversely, in mature industries it is likely that outsourcing relationships dominate as firms seek to concentrate on their competencies, and avoid committing to investments in fixed assets in non core activities. In particular, it seems reasonable to suggest that in mature industries outsourcing relationships may be highly calculative (Hite & Hesterly, 2001) and unstable.

Despite the extensive scholarly conversation on the theory of the firm, remains a lack of consensus on the conditions that define firms' boundaries. Recent research has suggested that firms benefit from focusing on their core competences (Prahalad & Hamel, 1990). These are the activities in which firms create value added and allow the generation of above normal returns (Mahoney & Pandian, 1992; Peteraf, 1993). Therefore, only these activities should be internalized within the boundaries of the firms, and the remaining operations should be contracted in the market (Coase, 1937). Williamson (1975, 1985) argued for the importance of aligning governance structures with transactions, and the selection of the best-tailored governance model for each transaction. Other scholars argued that only activities where the firms use their valuable, rare, non-imitable, and non-substitutable (VRIN) resources sustain a competitive advantage (Barney, 1991) and should be carried in-house. In actuality, while some firms increasingly transact with the market, other firms internalize activities they previously outsourced. Furthermore, the dichotomy 'make' or 'buy' may be overcome with entirely new governance models (see also Powell, 1987; Williamson, 1985) leading Kogut et al. (1992) to suggest that the dilemma is not whether to make or to buy but rather whether to make or to cooperate (see also Gulati, 1998).

In mature industries, it may be that the choice of governance form is facilitated. Mature industries tend to have many characteristics that reduce market imperfections and transaction hazards. For example, mature industries are typically populated by efficient competing firms, mitigating small numbers bargaining and the potential for opportunistic behaviors (Williamson, 1985). Mature industries also tend to have well developed institutions that monitor market performance. In addition, in mature industries, competitive

advantages generally do not reside on the control of the manufacturing process, or tangible resources (Barney, 1991), rather they tend to be based on the possession of unique firm-specific knowledge (Grant, 1996), or manufacturing efficiency (Vernon, 1966).

In this study we analyze the governance models selected by three firms in the same (although heterogeneous) industry, and contrast the suggestions of two main research streams. The literature review highlights potential tensions between the transaction costs theory (TCT) and the resource based view (RBV). In a nutshell, the TCT suggests the internalization of activities whenever the costs and risks of outsourcing are high and some conditions apply, while the RBV advises the internalization when the strategic importance of the activities is high, the transactional hazards are low, and the firm possesses appropriate resources. We also explore the extent to which a heterogeneous product, different efficient scales, diverse investment requirements in fixed assets, varied transportation costs, and the frequency of the interaction client-supplier influence the organizational model of the firms beyond the TCT or RBV prescriptions.

This paper is organized in three main sections. In the first section, we briefly discuss the theoretical background and formulate basic propositions based on insights from transaction costs and resource based view in the context of mature industries. The analysis of the case studies, in the second section, synthesizes a description of the three firms studied, and the factors assessed to have a more significant impact on the governance models selected by the focal firms. Finally, the discussion is based on the analysis of the cases, and suggestions for future research.

SELECTING FROM THE ORGANIZATIONAL MENU IN MATURE INDUSTRIES

Strategic management research conveys several largely disparate perspectives to boundary and governance management. For example, transaction cost theory (Coase, 1937; Williamson, 1975, 1985) examines the relative efficiency of alternative governance models. The resource based view (RBV) of the firm observes the firms boundaries supported by valuable, rare, non-imitable, non-substitutable tangible and intangible resources that have the potential to generate abnormal returns. This section briefly reviews these two streams of research in the context of mature industries leading to the formulation of four propositions on the design of governance models in mature industries. These propositions will be subsequently discussed utilizing three cases of Portuguese packaging firms.

Mature Industries

Although the majority of the firms operate in mature industries there is noticeably scant research examining how firms compete in mature industries. However, it is well established that firms adjust their strategies to the life cycle of the industry (Porter, 1980; Bush & Sinclair, 1992). In emerging industries firms seem to compete to define standards (Tushman & Anderson, 1986), speed to place innovations in the market (Schoonover et al., 1990), and to differentiate from competitors (Porter, 1980). Conversely, in mature industries, cost-based strategies seem to predominate (Porter, 1980) and products may become less differentiated. However, this characterization may be incomplete because firms need to adjust to changes in the industry's structure, in the nature of competition, and to the clients' response to their own industry's changes (Bush & Sinclair, 1992). For instance, the self-production of metallic packaging by the US producers, declined from

54% in 1985 to a mere 19% in 1996 (The Canmaker, July 1997). The US producers used to manufacture their own containers, but they are increasingly outsourcing the manufacture of the containers to external efficient suppliers. For small and medium sized packaging manufacturers this trend towards outsourcing represents an opportunity to survive and expand.

In mature industries, competitive advantage does not rely on the control of the manufacturing process, rather firms are more likely to sustain their competitive positions on the control of intangible assets (e.g., knowledge) embedded in the products, and on customer-oriented strategies (Bush & Sinclair, 1992; Porter, 1980). For example, Nike, Inc. internalized the extremes of the value chain (R&D and marketing - where intangible resources are more pronounced) and outsources the manufacturing process to independent suppliers. Multinational enterprises (MNEs) seem to be major drivers of this shift towards outsourcing in mature industries because globalization forces MNEs to redefine the boundaries of their relationships with clients, suppliers and competitors. This change is attributed to macro factors such as the trend towards diminishing transport costs, the decrease in tariff barriers to international trade, the gradual elimination of bureaucratic and administrative barriers (Dunning, 1995), and the reduction of transaction costs driven by advances in communications (Coombs & Metcalfe, 2000). A visible outcome of these changes is MNEs' rationalization of production, particularly in undifferentiated product segments, through the concentration of manufacturing in a small number of locations, as is occurring in the European Union (EU). This means that some MNEs gradually disintegrate and seek relational forms of outsourcing.

In mature industries, given the pressure towards cost effectiveness, it would seem reasonable to suggest that outsourcing relationships would tend to be unstable. Competition in mature industries is based on achieving the lowest possible cost (Porter, 1980) which is better attained if firms resort to spot transactions, and maintain arm's length relations. That is, the lowest cost is obtained when firms arbitrage between suppliers in an attempt to obtain the lowest bid for their order. In this case market based exchanges are unstable, calculative, and opportunistic.

Transaction Costs Theory

Transaction costs theory (TCT) is often used to explain the decision to internalize or externalize activities. TCT seeks to explain why firms exist, and why firms do what they do, or why they don't do what they don't do (Madhok, 2002). Given the neoclassical assumptions of perfect markets, atomistic agents, perfect flows of information, we may reiterate Coase (1937) and Williamson (1975, 1985) concerns: why are not all transactions organized through the market, and instead some transactions are organized inside firms? Thus far, scholars seem to agree that the choice of governance model is supported on the analysis of the relative costs and benefits of each governance form and on the transaction costs involved in exchanges. The fact is that according to Coase (1937) under some conditions, exchanges are not efficiently organized using markets and require internalization. The state of maturity of the industry is likely to change the relative impact of the transaction costs in client-supplier exchanges.

According to Williamson (1985) firms' will internalize activities, rather than resort to external suppliers if three conditions are verified. First, if the degree of uncertainty involved in the transaction is high. Uncertainty is manifested in the agents' bounded

rationality that originates incomplete contracts due to the difficulty (or impossibility) of foreseeing all possible future situations in the contracting moment, and the potential for opportunistic behaviors when one of the partners pursues his own self-interest. Without uncertainty bounded rationality would be irrelevant (Barney & Hesterly, 1996). Second, if the tie-in nature of the investments in fixed assets specific to a relation is high. Specific assets to a relation may have no value for other relationships and thus the party that makes asset-specific investments may be held-up in opportunistic behaviors by the partner. Therefore, when the exchange requires investments in assets specific to the exchange the focal firm may opt to internalize the exchange to reduce transaction costs. Third, if the firm has to buy recurrently from the suppliers. Recurrent transactions may be better carried out internally in the firm (e.g., vertical integration) rather than in the market (outsourcing) under conditions of uncertainty and potential opportunism.

In mature industries the market tends to be efficient and it would seem reasonable that firms would outsource virtually all operations. This is partly because there are alternative efficient suppliers with the necessary equipment and skills to carry out the activity, therefore reducing their bargaining power, and the likelihood they will engage in opportunistic behaviors. Conversely, it is also reasonable to suggest that it is when the industry is emerging or in a growth stage that firms would benefit from vertically integrating. Vertical integration permits firms to overcome multiple market imperfections, and vertical integration is a plausible organizational form for the reduction of transaction costs, elimination of supply uncertainties, creation of barriers to entry, and, in selected cases, for maintaining flexibility to market changes (Porter, 1980; Williamson, 1985). Hence, under a transaction costs perspective, bounded rationality, opportunism, asset

specificity, uncertainty and recurrence of the transactions will converge to determine which transactions are internalized and which are conducted via the market (Williamson, 1985; Barney & Hesterly, 1996).

In sum, the TCT suggests that firms should internalize activities when the transactional hazards are high, regardless of the strategic importance of the focal activity, and externalize (or outsource) when these hazards are low. However, this answer provides only a partial view because the relative stability of the outsourcing relationship will likely be influenced by the strategic importance of the activity, thus contributing to lower or heighten the transaction costs involved. For example, activities of low strategic importance may be carried out through unstable relationships - i.e., relationships that are redesigned after each exchange. Conversely, activities of high strategic importance may require stable relationships to prevent unintended spillovers of knowledge shared, and to promote cooperation in such activities as product innovation. It is also important to state that the transaction costs are the costs of running the economic system. "Viewing the economic system from the standpoint of contract, transaction costs can be thought of as the costs of contracting" (Williamson, 1996).

Resource Based Models

The RBV focuses on firms' internal organization and resources to understand how firms achieve a sustainable competitive advantage. The RBV argues that the sources of value creation lie in a few valuable, rare, non-imitable, and non-substitutable resources (Barney, 1991, 1999). These resources develop in an evolutionary learning process in a path dependent manner shaped by firm-specific histories (Dierrickx et al., 1989), and determine the set of activities in which firms are involved (Wernerfelt, 1984; Barney,

1999). Resources may be virtually any factor – all assets, knowledge, processes or organizational characteristics - that is specific and controlled by the firm (Barney, 1991). Mascarenhas, Baveja and Jamil (1998), for example, concluded that successful firms rely on three types of competencies: superior technological know how, reliable processes, and close external relationships. Superior resources allow firms to generate above normal rents (Peteraf, 1993).

According to the RBV firms' competitive advantage is essentially endogenous. Managers will be interested in controlling the resources that are likely to lead to value creation, higher value added, and that may expand the set of market opportunities. Thus, in a RBV perspective, firms expand towards similar activities, or activities that require a similar set of resources, routines and skills (Argyres, 1996; Nelson & Winter, 1982), or technologies (Kogut, 1991). In partial opposition to the TCT the RBV seemingly advises not to outsource those activities where the firm has a superior competitive advantage or those activities that have a significant leverage potential (Porter, 1980).

Firms in mature industries are more likely to compete on the basis of their intangible resources such as brand names, or knowledge (e.g., Liebeskind, 1996; Grant, 1991, 1996), than on their tangible resources. Tangible resources are more easily imitated and rents from these resources are not easily appropriated. Therefore, firms may outsource to external firms activities that involve tangible resources, particularly when developing these resources internally is not likely to be a source of future competitive advantage. Specifically, it is probable that some form of tacit knowledge resides on the core of firms' competitiveness because tacit knowledge is sticky and cannot be easily transferred (Grant, 1996; Szulanski, 1996). Thus, firms may be more efficient than markets to govern

exchanges that involve tacit knowledge, but the explicit knowledge is easily transferred with low marginal costs and therefore it is easily exchanged through outsourcing relationships. In addition, knowledge will likely be less sticky (Szulanski, 1996) in mature industries because the impediments to knowledge flow are minimized. In mature industries, dominant designs and standards are established, and firms have an architectural understanding of the interconnections between knowledge bits (or components) (Tushman & Anderson, 1986; Tallman et al., 2004). Firms' boundaries and inter-firm governance models are then determined by firms' ability to exploit resources outside traditional technological and/or organizational boundaries. Mature industries are characterized by low transaction hazards, as described previously, but the strategic importance of the activity, and not the potential transactional hazards, is likely to determine the governance model selected. Specifically, in a RBV rationale, firms are more likely to outsource activities that are of low strategic importance and not based on the actual resource pool held by the firm.

To conclude, the above literature review highlights possible tensions. Transaction costs theory recommends internalization when the risks and costs of contracting in the market are high, the transaction is of the recurrent type and there is potential for opportunistic behaviors. This is, for example, the case when assets are highly specific to an outsourcing collaboration. Conversely, the RBV confines its suggestion to the internalization of activities for which the firms possess the valuable, rare, non-imitable, and non-substitutable resources required and to activities that are of high strategic importance. The previous discussion leads us to formulate four, and partly contrasting, propositions that will be examined in the context of the three cases studies presented in the next section.

Proposition 1. *Firms in mature industries are likely to use outsourcing models.*

Proposition 2. *Firms in mature industries are likely to outsource activities only when the transaction hazards are low.*

Proposition 3. *The strategic importance of the activity outsourced affects the stability of the outsourcing model, such that firms in mature industries are more likely to form stable outsourcing relationships when the strategic importance of the activity outsourced is high, and more likely to form flexible (unstable) outsourcing relationships when the strategic importance of the activity outsourced is low.*

Proposition 4. *Firms in mature industries will be more likely to outsource when the activity is of low strategic importance and to insource if the activity is of high strategic importance and based on the resources held by the firm.*

METHODOLOGICAL ASPECTS

Case studies may focus on single or multiple cases (Ellram, 1996; Yin, 1994), and be used with an array of objectives: descriptive, theory testing or theory generation (Eisenhardt, 1989; Jensen & Rodgers, 2001). The three focal cases seek to test theories rather than to generate new theories. We followed the methodology proposed by Yin (1994): (a) the selection, description, and conceptualization of the study object, (b) the alternative explanations for the facts observed, and (c) the discussion and conclusions based on the explanations that seem more coherent with the facts. The collection of firms' specific information involved primary (i.e., interviews with top managers) and secondary sources (e.g., company reports, industry outlooks) (cf. Eisenhardt, 1989). The interviews were unstructured and conversational. We sought to understand the governance decisions, the competitive environment, and the growth strategies of the three focal firms. Although the

packaging industry comprises firms whose products are made of paper/carton, glass, metal and plastic, firms in this industry reveal high competitiveness and very different governance models.

CASE STUDIES

The Companies. Barbosa & Almeida (B&A) is a glass-packaging manufacturer. Founded in 1912, as a "satellite" of the Portuguese national brewing company, B&A thrived for continuous technological modernizations. In an oligopolistic reaction to foreign competitor's entry in the domestic market (Knickerbocker, 1973), in 1993 B&A engaged in an international strategy with the acquisition of a company oriented to foreign markets. In 1996 B&A acquired two other manufacturing plants in Mozambique and in 1999 a greenfield investment in the Spanish Extremadura. Presently, B&A is investing in North Africa, sells abroad more than 50% of its production, and manufactures in foreign countries about one third of its production.

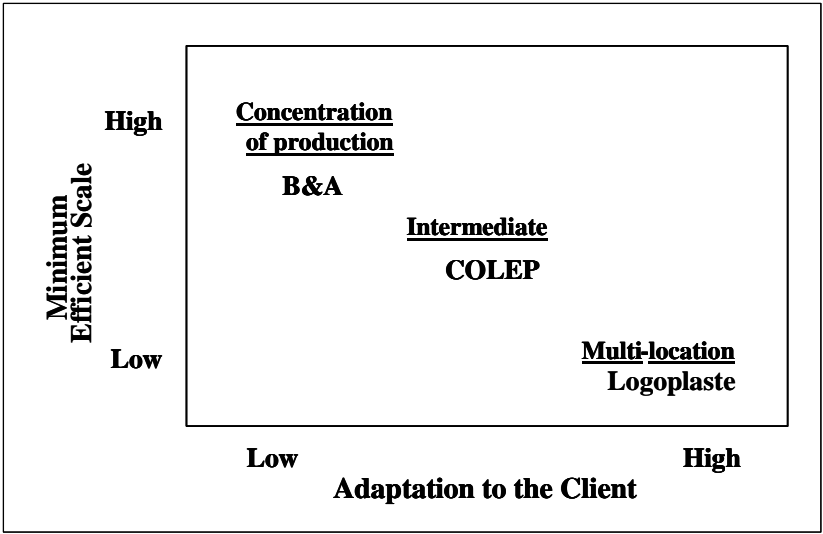
COLEP is a manufacturer of metallic packaging, founded in 1965. Over the years COLEP has been gradually vertically integrating all the activities of the value chain from the cut of the metallic leaf, typography, manufacture of several components (plastic and metallic), production of packaging (plastic and metallic), formulation and filling of containers, and distribution in the Iberia. In 1993 COLEP acquired a manufacturing unit in Spain, and in 1999 completed a greenfield investment in Poland. COLEP is one of the largest contract fillers in Europe.

Logoplaste is a producer of plastic packaging, founded in 1976 from the revolutionary idea of creating small packaging factories in the client's facilities. Currently, Logoplaste has over 30 manufacturing units - or Integrated Production Units (IPU) - in

Portugal, Spain, France, U.K. and Brazil. Logoplaste is one of the largest European plastic packaging producers.

The Models. The governance models assumed by the three firms are deeply differentiated, as illustrated in Figure 1. B&A assumes a classic model of centralization of production in large factories from where B&A serves its clients through almost pure market relationships. The manufacturing of glass containers requires the production of large batches of uniform products (high minimum efficient scale) to minimize the unitary production costs, and is only viable for large scale enterprises. B&A is seemingly a classical example of a large supplier in a mature industry supplying a product that is difficult to differentiate.

Figure 1 – The models adopted



COLEP shows a level of high vertical integration to respond to the full outsourcing of the clients' manufacturing activities. COLEP lowers the minimum efficient scale (MES) by integrating the different stages of the value chain, although it is evident that the upstream activities have higher minimum efficient scales than downstream activities. By

internationalizing the production of *contract filling* to Spain and Poland, COLEP sought coordination advantages maximizing the utilization of the production capacity of adjacent integrated activities. This strategy led COLEP to internationalize the highest value added activity and increase the geographical mobility of its products. The model assumed by COLEP supports an intermediate degree of dispersion but with some degree of coordination among factories.

Logoplaste developed a model of integration "wall to wall" with the clients' productive structure at a level of almost vertical integration. Logoplaste's model seems to accrue from two main factors: (a) the relatively lower minimum efficient scale of plastic containers when compared to the manufacturing scales required by metallic or glass packaging manufacturers, and (b) higher transport cost of empty bottles (despite the low weight of the plastic containers, they occupy large volume). Logoplaste's model of multi-location is possible due to the low manufacturing scale needed by each factory, which favours the investment in small to medium, but highly efficient, manufacturing units exclusively targeted to one customer. In fact, each Logoplaste's subsidiary has a distinct minimum efficient scale, designed to the specific needs of the client.

Transaction Costs. The transaction costs incurred by the clients of the three firms are reduced. First, it is not feasible for any of the three firms to integrate the downstream producers of manufactured goods (e.g., wine, beer, preserves, dairy products, oil). Second, the existence of alternative efficient packaging manufacturers - which is typical of mature industries - guarantees that all three firms maintain competitive prices. Third, the relationships established with the customers throughout the years transmit trust and stability to the relations, and mitigate potential opportunistic behaviors. For example, the durable

relationships between COLEP and its customers (some for more than 30 years) reduce transaction costs, increase familiarity and trust (Gulati, 1995). Furthermore, opportunistic behaviors are not foreseeable. For instance, the risk faced by COLEP's clients could be majored by the possibility of opportunistic behaviors such as the release of a COLEP's own brand, since the customers entrust COLEP with the chemical formula for the contract filling segments (e.g., shaving cream). However, there is virtually no risk associated with the dissipation of knowledge because the clients only outsource contract filling of products in the maturity or decline stage of their life cycles – for which the control of the manufacturing process is no longer critical, as we suggested previously. Further, the potential of opportunistic behaviors by Logoplaste is lessened by its interest on spatial and inter-temporal relationships (same customer in several locations).

Fourth, exchanges with these three firms render unnecessary multiple market recruiting and reduce supply uncertainty. For example, B&A supplies a large scope of products (bottle formats) and clients do not need to contract different bottle formats to different suppliers. COLEP offers a full service (from the production of the container, contract filling, and distribution) that also renders unnecessary multiple market transactions with different suppliers. Finally, each Logoplaste's subsidiary is absolutely adjusted to the needs of its client. Logoplaste's model not only eliminates supply uncertainty, recruiting and contracting with other suppliers, but also increases communication and information flows, is transparent, and increases the joint innovative potential.

Finally, we observe very limited asset specificity, although in varied degree, but it does not seem to justify per se different organization models. In the case of glass packaging, asset specificity is only in terms of the mould, which needs to be adapted to the

specific shape of the container. In the case of COLEP's metal containers, asset specificity is even lower, and the complete manufacturing process is completely adjustable without any significant cost increase to the needs of the clients. However, Logoplaste's model is supported on absolute assets' specificity attached to each project. Logoplaste's asset specificity is technical, location, dedicated assets, and human (employees) (see Williamson, 1985). The high asset specificity is stabilized by a detailed contract between Logoplaste and its clients.

Table 1 – Comparison of the three firms

	Assets' Specificity	Minimum Efficient Scale	Number of Clients	Size of the Batches	Stability of the Relations
B & A	Low	High	High (a)	High	Medium
COLEP	Medium	Medium	Low	Low/Medium	High
Logoplaste	High	Low/medium	One (b)	Medium	High

(a) One client per IPU.

(b) B&A maintains about 300 active molds.

Expansion. The notable international expansion of the three firms warrants a short overview of the organizational forms adopted and possible explanations. The three firms have differentiated expansion strategies. B&A needs to concentrate production to benefit from using its production capacity. This model is occasionally hindered by geographic distance forcing foreign direct investment in manufacturing foreign subsidiaries, such as in the recent cross border acquisitions in Mozambique and the greenfield start-up in North Africa. Given that intra-firm flow of intermediate products is unfeasible, the possibilities for inter-subsidiaries coordination are insignificant.

COLEP also tends to concentrate production, but to a lesser extent and only in some activities of the value chain that permit inter-subsidiary coordination. Metallic packaging is highly immobile and international expansion seeks: first, to locate proximate to clients, second, to permit intra-firm flow of intermediate inputs. Coordination among subsidiaries

allows COLEP to maximize the utilization of the different minimum efficient scales of the production stages vertically integrated. For example, lithography has a much larger efficient scale than contract filling and thus to maximize lithography production COLEP can efficiently ship the metallic leaves to other subsidiaries.

The manufacturing of plastic containers has much lower efficient manufacturing scale economies making possible the Logoplaste's model of wide geographic dispersion. Logoplaste expands in an idiosyncratic model that relies on absolute adaptation of each manufacturing subsidiary to each client. The need for coordination among subsidiaries is minimal, and seeks only to promote inter-firm transfer of knowledge developed (i.e., innovations) in one subsidiary to other subsidiaries.

Business Relationships. The three firms work within polygamous relationships (Jones et al., 1997). That is, they cooperate with rival clients of whom they possess specific knowledge, and the innovations originated in one relationship may be passed on to other clients. For example, we observed the fundamentally polygamous character of COLEP's ties, in that the partnership COLEP-Johnson Wax coexists with COLEP's contract manufacturing for Johnson Wax's competitors. We found a similar situation in Logoplaste's supply of competitive companies (e.g., dairy products, oil) over which Logoplaste has privileged information. *Ceteris paribus*, this could indicate potential transaction hazards. However, transactional hazards are mitigated, as we observed above.

COLEP's high level of vertical integration allows it to assume the full outsourcing of its clients needs. For example, in the relation between COLEP and Johnson Wax, Johnson Wax takes responsibility for the extremes of the product value chain, but outsources the entire actual manufacturing of selected product segments. COLEP is

generally entrusted with the chemical formula of the products for contract filling, which requires the firm to be able to carry in-house all the stages of manufacture of those products.

Logoplaste's model resembles an insourcing solution and is based on absolute trust of its clients. Logoplaste evidences a form of integrated exchanges supplier-customer, characterized by an almost absolute linkage between the customer's and supplier's production lines, only possible by localizing the supply chain "wall to wall" the customer's facilities. This model involves substantial flow of sensitive information. Logoplaste carries long-term and stable relationships with the clients, regulated by a relational system that incorporates: an "open-book" regime, providing a global service, the full realization of the investment in fixed assets, and the responsibility for the administration of the production lines of the client. For each customer, Logoplaste creates a new factory totally adapted to the product, process, and pace of the client's production. In addition, even the employees' contracts and benefits are adjusted to the specific customer. This model results in high stability of the relationships (e.g. 24 years with Nestlé and Yoplait, 11 years with Coca-Cola and 7 years with Danone and Unilever). In Logoplaste, the specificity and nature of the product associated with the relatively small MES renders investment as the most rational mode for expansion. The trust developed with the customers favours the replication of the relational model in other markets (e.g. foreign) and sustains international expansion.

DISCUSSION AND CONCLUSION

The economic structure of advanced nations relies increasingly on inter-firm governance models where specialized firms exchange knowledge and goods. While the classical legal view of firms as legal entities is framed within the 'make or buy' decision

(Coase, 1937), a discussion on how independent entities are re-united in interdependent partnership models evidences trade-offs that may lead some firms to internalize value chain activities, and others to outsource these activities to external, independent firms. This seems incompatible with the transaction costs theory of the firm, which argues that integration is necessary to avoid the potential for hold-up created when irreversible investments are made. However, resolving conclusions on the benefits and perils of outsourcing require the analysis of not only the transactions costs involved in each exchange, but also the resources possessed by the firm, the firm's ability to establish stable business relationships, the stage of maturity of the industry, and a focus on the economics of the products. Therefore, the three cases studied highlight a number of issues that possibly emerge in other firms and industries.

The analysis of the cases shows that all three firms select different governance models, despite the maturity of the industry. However, in accord to our first proposition all three packaging firms are outsourced by the clients, which reflect not only the maturity of the packaging industry but also of the industries of the client firms. Furthermore, the cases provide some support for outsourcing relationships when the transaction hazards are low. In fact, the models adopted by the three packaging firms reduce considerably the transaction costs involved. One firm is bound to a strategy of concentration of production in a few locations from which it supplies both domestic and foreign markets. This model is driven by the homogenous and difficult to differentiate nature of the product and the high minimum efficient scale required. Another firm increasingly focuses on the highest value added segment ("*contract filling*") to override locational constraints. This firm developed a considerable level of vertical integration that rendered it a credible partner for the

customers' integral outsourcing. The third firm emphasizes its unique organizational model in the "*wall to wall*" supply of its customers, with absolute integration and exclusive adaptation to the customer's manufacturing lines. All three firms seem to have developed solutions for the reduction of transaction costs, solutions to increase familiarity and trust with their clients, and a focus on their internal resources or capabilities. All three firms assume governance models that, although different, respond to the outsourcing needs of their clients.

Consistent with the stage of maturity of the industry we found that all three firms operate within stable outsourcing schemas. Our third proposition suggested that stable outsourcing relationships would be more likely when the activity outsourced was strategically important. However, in mature industries the strategic importance is more likely to reside on knowledge held that permits constant innovations, not in the manufacturing of the container. Hence, we fail to find support for this proposition and reiterate that stable outsourcing models are used for activities of low strategic importance.

The fourth proposition advanced the importance of the resources held. In effect, as we discussed previously, the competitive ability in mature industries is based more on obtaining low overall production costs, which may be better achieved by stabilizing the relationships with suppliers to avoid the transaction costs in searching, negotiating and contracting with multiple vendors. In mature industries cost-based competition requires firms to strive for continuous cost reductions. In the packaging industry, transportation costs of the containers to the client are the major barrier to international trade (exports) justifying locational concerns by the packaging manufacturers. This is a factor related to the economics of the product that stands beyond direct governance prescriptions of the two

theories reviewed. Two main elements in the economics of the packaging stand clear: first, the manufacturing minimum efficient scale that permits the multi-location small to medium-sized plastic packaging factories, but obliges the concentration in large scale factories for manufacturing glass packaging. Second, the transport costs of empty containers, as noted above. All three firms entail a reduction of transport costs. Although glass containers have higher value than their metallic or plastic counterparts, their weight and volume render unviable long distance exports and forces B&A to produce closer to customers. COLEP overcomes transportation barriers focusing on a strategy that is based on increasing the unitary value of its products. The relatively higher unitary value of the contract filled products (e.g. full aerosol cans) permits transport at longer distances. Logoplaste absolutely eliminates transport costs by locating its production facilities contiguous to the clients' - creating a new IPU exclusively oriented for each client.

Beyond the Theories' Predictions

The theoretical views of transaction costs and resource based view (see figure 2) do not specifically account for models of strategic outsourcing (Quinn & Hilmer, 1994; Venkatesan, 1992) in mature industries. In mature industries, it seemed reasonable that firms would resort to relational formats of exchange, which allow the leverage of the firms' resources. It would be likely, thus, that the client firms would carry essentially unstable relationships, and would not commit to long-term relationships, but rather would seek occasional suppliers to maximize their own cost-based advantages. The cases studied reveal that, in fact, models of strategic outsourcing reinforce both the supplier and the client firms' specialization in their areas of competence (resources), but these are balanced with long-term cooperation with complementary entities in the value chain. The reduction of the

transaction costs may simply emerge because the firms are interested in maintaining inter-temporal and inter-spatial cooperation.

Figure 2 – Comparing the theories

		Strategic Importance	
		Low	High
Governance Hazards	High	TCT: Insource RBV: Outsource	TCT: Insource RBV: Insource
	Low	TCT: Outsource RBV: Outsource	TCT: Outsource RBV: Insource

An alternative view to the TCT and RBV is based on social networks. Networks are intermediate governance structures between the market and the hierarchy (Powell, 1990) whose essence is fundamentally relational, and therefore neither based on contracts nor on prices. Network theory advises the formation of stable and trustworthy outsourcing relationships with selected partners. However, network literature is unclear to the impact of transaction hazards and the strategic importance of the activity on the governance models. Should firms establish relational exchanges when the transactions carry high potential hazards? Should firms outsource even if the strategic importance of the activity is high? In fact, it is difficult to discern in which circumstances network literature does not advise cooperative relationships. Notwithstanding, the network perspective is based on the idea that collaborations ease the access to a variety of resources that enhance firms ability to survive and prosper (Hannan & Freeman, 1977; Coleman, 1988; Hite & Hesterly, 2000),

and learn through social exchange processes (Rice & Aydin, 1991) to cooperate and coordinate their activities (Powell, 1990). Thus, by entering a network of relations a focal firm selects which activities it wishes to carry in-house and which it outsources.

The role of networks is possibly substantially different along the industry life cycle. In emergent industries firms may be more likely to enter networks to pool resources and jointly influence industry standards, and the institutional environment (Tushman & Anderson, 1986; Meyer & Rowan, 1977). Conversely, in mature industries entering business networks may be a means to pool resources for commercialization and incremental, competence-enhancing, innovations (Tushman & Anderson, 1986).

A number of points can be made from this study. First, in accord to extant research, firms in mature industries have, stereotypically, little potential to sustain competitive advantages based on their tangible resources. We may however look at the firms' networks, as these cases seem to illustrate a common denominator: stable partnerships with the clients, to uncover potential intangible valuable, specific, and non-imitable relational resources. In mature industries, with stable and diffused technologies, the existence of multiple efficient suppliers guarantees that opportunism is substituted by trust (Coles & Hesterly, 1998). Second, this is more complicated when the clients are in uncertain environments (which to some degree is characteristic of the consumer goods firms), and the transactions are of the recurrent type, as is the case in the packaging industry. Third, the nature of the product impacts on the ability to exchange in a traditional format and forces firms to search for hybrid formats. Fourth, the strategies and governance models of the firms are not purely observable by individual theories. Rather, firms compose their governance models attending the specific nature of the industry, products, and clients.

Hence, propositions on the governance models of firms need to be contextual, which supports a case study approach. Finally, though network literature *per se* entail externalized relationships (outsourcing relationships are, in fact, the object of networks), it is interesting to contrast it with more established theories such as the RBV and TCT.

Future research may consider the test of hypothesis using larger scale samples. It would be interesting, for example, to discover inter-industry patterns in governance models that overcome the markets or hierarchies debate. Another suggestion that results from this study has to do with the problem of investment indivisibility. It is not always economically viable to create mini-factories, as does Logoplaste. Furthermore, while governance models seem related to the level of uncertainty (Coles & Hesterly, 1998) it is not clear what extent of uncertainty may lead to one model versus another. Similarly, it is not clear the type of uncertainty that most strongly shapes boundary management. Future research may focus on determining how different forms of uncertainty adduce differentiated governance models.

To conclude, the examination of firms' governance models needs assess the transaction costs, the resources held by the firm, the state of maturity of the industry, and the firms' ability to retain business relationships. Relational models seem to provide better insights to governance models in mature industries than the TCT or the RBV in isolation. We observed that stable business relationships are more important than spot market exchanges for firms' growth and international expansion. For the researcher this is an interesting issue transcending the traditional prescriptions, and encompasses the development and exploitation of firms' capabilities, namely relational capabilities. Given that firms' resources and capabilities co-evolve with boundary decisions (Poppo & Zenger,

1998), the actual question may not be 'make or buy' but, as suggested by Kogut, Shan and Walker (1992), whether to 'make or cooperate' to survive and expand in mature industries.

REFERENCES

- Argyres, N. (1996). Evidence on the role of firm capabilities in vertical integration decisions, *Strategic Management Journal*, 17, 129-150.
- Barbosa & Almeida. *Relatórios de contas da Barbosa & Almeida*, 1995, 1996, 1997.
- Barney, J. (1986). Strategic factor markets: expectations, luck, and business strategy, *Management Science*, 32(10), 1231-1242.
- Barney, J. (1991). Firm resources and sustained competitive advantage, *Journal of Management*, 17(1), 99-120.
- Barney, J. (1999). How a firm's capabilities affect boundary decisions, *Sloan Management Review*, Spring, 137-145.
- Barney, J., & Hesterly, W. (1996). Organizational economics: Understanding the relationship between organizations and economic analysis, *Handbook of Organization Studies*, Glegg, S., Hardy, C., Nord, W. (Eds), Sage Publications, Thousand Oaks, CA, 115-147.
- Borgatti, S., & Everett, M. (1992). Notions of positions in social network analysis, *Sociological Methodology*, 22, 1-35.
- Bush, R., & Sinclair, S. (1992). Changing strategies in mature industries: A case study, *The Journal of Business & Industrial Marketing*, 7 (4):63-72.
- Coase, G. (1937). The nature of the firm, *Economica*, 4, 386-405.
- Colep. (1997). *Prospecto de Oferta Pública de Venda de Acções da Colep*, Vale de Cambra
- Coles, J., & Hesterly, W. (1998). The impact of firm-specific assets and the interaction of uncertainty: an examination of make or buy decisions in public and private hospitals, *Journal of Economic Behavior & Organization*, 36, 383-409.
- Eisenhardt, K. (1989). Building theories from case study research, *Academy of Management Review*, 14(4), 532-550.
- Ellram, L. (1996). The use of the case study method in logistics research, *Journal of Business Logistics*, 17(2), 93-138.

- Granovetter, M. (1973). The strength of weak ties, *American Journal of Sociology*, 78, 1360-1380.
- Granovetter, M. (1983). The strength of weak ties: A network theory revisited, in P. Marsden and N. Lin (Eds.), *Social structure and network analysis*. Thousand Oaks, CA, Sage.
- Grant, R. (1991). The resource-based theory of competitive advantage: Implications for strategy formulation, *California Management Review*, Spring, 114-135.
- Grant, R. (1996). Prospering in dynamically-competitive environments: Organizational capability as knowledge integration, *Organization Science*, 7(4), 375-387.
- Gulati, R. (1995). Social structure and alliance formation patterns: A longitudinal analysis, *Administrative Science Quarterly*, 40(4), 619-652.
- Gulati, R. (1998). Alliances and networks, *Strategic Management Journal*, 19(4), 293-317.
- Hamel, G., & Prahalad, C. K. (1990). The core competence of the corporation, *Harvard Business Review*, May-June, 79-91.
- Hinds, P., Carley, K., Krackardt, D., & Wholey, D. (2000). Choosing work group members: Balancing similarity, competence, and familiarity, *Organizational Behavior and Human Decision Processes*, 81(2), 226-251.
- Holm, D., Eriksson, K., & Johanson, J. (1996). Business networks and cooperation in international business relationships, *Journal of International Business Studies*, 1033-1053.
- Jensen, J., & Rodgers, R. (2001). Cumulating the intellectual gold of case study research, *Public Administration Review*, 61(2), 235-246.
- Jones, C., Hesterly, W., & Borgati, S. (1997). A general theory of network governance: Exchange conditions and social mechanisms, *Academy of Management Review*, 22(4), 911-945.
- Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: Building relational capital, *Strategic Management Journal*, 21, 217-237.
- Kogut, B., Shan, W., & Walker, G. (1992). The make-or-cooperate decision in the context of an industry network, in Nitin Nohria and Robert Eccles (Eds), *Networks and*

- organizations: Structure, form, and action*, Harvard Business School Press, Boston, Massachusetts, chapter 13, 348-365.
- Liebeskind, J. (1996). Knowledge, Strategy, And the theory of the firm, *Strategic Management Journal*, 17, 93-107.
- Mahoney, J., & Pandian, J. (1992). The resource-based view within the conversation of strategic management, *Strategic Management Journal*, 13, 363-380.
- Markides, C. (1997). To diversify or not to diversify, *Harvard Business Review*, Nov.-Dec., 93-99.
- Penrose, E. (1995). The theory of the growth of the firm, in Foss, Nicolai (Ed.), *Resources, Firms and Strategies*, Oxford Management Readers, Oxford University Press, 1997.
- Peteraf, M. (1993). The cornerstones of competitive advantage: A resource-based view, *Strategic Management Journal*, 14, 179-191.
- Podolny, J. (2001). Networks as the pipes and prisms of the market, *American Journal of Sociology*, 107(1): 33-60.
- Poppo, L., & Zenger, T. (1998). Testing alternative theories of the firm: Transaction cost, knowledge-based, and measurement explanations for make-or-buy decisions in information services, *Strategic Management Journal*, 19, 853-877.
- Porter, M. (1980). *Competitive strategy: Techniques for analyzing industries and competitors*, New York; The Free Press.
- Powell, W. (1990). Neither markets nor hierarchies: Network forms of organizations, *Research in Organization Behavior*, 12, 295-336.
- Quinn, J., & Hilmer, F. (1994). Strategic outsourcing, *Sloan Management Review*, Summer, 43-55.
- Rice, R., & Aydin, C. (1991). Attitudes toward new organization technology: network proximity as a mechanism for social information processing, *Administrative Science Quarterly*, 36, 219-244.
- Schoonhoven, C., Eisenhardt, K., & Lyman, K. (1990). Speeding products to market: waiting time to first product introduction in new firms, *Administrative Science Quarterly*, 35(1), 177-207.
- Shah, P. (1998). Who are employees' social referent others? Using a network perspective to determine referent others, *Academy of Management Journal*, 41(3), 249-268.

- Smith, A. (1776). *The wealth of nations*. Vol. I, Livri IV, Chapter II, edition of 1993, Edition of the Fundação Calouste Gulbenk.
- Tushman, M., & Anderson, P. (1986). Technological discontinuities and organizational environments. *Administrative Science Quarterly*, 31(3): 439-465.
- Venkatesan, R. (1992). Strategic sourcing, to make or not to make, *Harvard Business Review*, Nov.-Dec., 98-107.
- Wernerfelt, B. (1984). A resource-based view of the firm, *Strategic Management Journal*, 5, 171-180.
- Williamson, O. (1975). *Markets and hierarchies, analysis and antitrust implications*. Free Press, New York.
- Williamson, O. (1985). *The economic institutions of capitalism*. New York, Free Press.
- Williamson, O. (1996) *The mechanisms of governance*. New York, Oxford University Press.
- Yin, R. (1984). *Case study research*. Beverly Hills, Sage Publications.