GOVERNANCE MODELS IN MATURE INDUSTRIES: CASE STUDIES OF THREE PORTUGUESE PACKAGING FIRMS

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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 are based on efficient, stable, and trustworthy relationships.

Keywords: Governance Model, strategy, RBV, TCT
1. 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, p. 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. 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 an 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.

2. 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.

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). 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.

2.1 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 opportunist 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 opportunist 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.

2.3 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 (Dierricksx 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).

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.

3. 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.

4. 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. Logopla is a producer of plastic packaging, founded in 1976 from the revolutionary idea of creating small packaging factories in the client's facilities. Currently, Logopla has over 30 manufacturing units - or Integrated Production Units (IPU) - in Portugal, Spain, France, U.K. and Brazil. Logopla is one of the largest European plastic packaging producers.

The Models. The governance models assumed by the three firms are deeply differentiated. 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.

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.

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, diary 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**

<table>
<thead>
<tr>
<th>Assets’ Specificity</th>
<th>Minimum Efficient Scale</th>
<th>Number of Clients</th>
<th>Size of Batches</th>
<th>Stability of the Relations</th>
</tr>
</thead>
<tbody>
<tr>
<td>B &amp; A</td>
<td>Low</td>
<td>High</td>
<td>High (a)</td>
<td>High</td>
</tr>
<tr>
<td>COLEP</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
<td>Low/Medium</td>
</tr>
<tr>
<td>Logoplaste</td>
<td>High</td>
<td>Low/medium</td>
<td>One (b)</td>
<td>Medium</td>
</tr>
</tbody>
</table>

(a) One client per IPU.
(b) B&A maintains about 300 active molds.

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.

**4. 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.

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

BARNEY, J., & HESTERLY, W. Organizational economics: Understanding the relationship


