

# **Boundaries of the firm: Looking for the missing divisional dimension**

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**Abstract:** One literature stream contributes to the analysis of internal structure and organization of divisional companies, studying the functions assigned to headquarters or divisions. Another part of the literature has focused on frontier of the firm issues and the firm's core activities. Few works are in crossing these two traditions. The purpose of this paper is devoted to the pattern of activity within large companies, through the two criteria of decentralization and contracting out. Our goal is to understand whether the determinants are identical for both internal and external boundaries of the firm. This study builds on empirical study dedicated to the publishing industry. Our analysis leads to discuss determinants of internal and external borders. We show that functions or activities with high potential of economies of scale are mainly centralized and internalized. On reverse, those related to core business and non-programmable are mostly at a divisional level and contracted out.

**Keywords:** boundaries of the firm, centralization, contracting out, outsourcing, central services.

Executives, consultants and researchers are interested in the frontiers of the firm and how to control activities to obtain a competitive advantage. Outlining and organizing in-house are not easy to conduct. Designing boundaries is a crucial aspect of organizational design and constitutes a very topical academic debate (Jacobides and Billinger 2006, Safizadeh et al. 2008, Yang and al. 2010). We study both external firm boundaries and internal firm structures and how they interact in order to shape the organizational design of firm and its scope of activities. That is the aim of the article. Crossing the numerous analyses of organizational structures and boundaries of the firm remains uncommon in the management literature. The following outsourcing example illustrates these considerations.

ZEUS<sup>1</sup> is one of the two large French educational publishing groups. In this company two publishers (ATHENA and AERIS) were editing journals for teachers. In 2001, a former review publisher executive was appointed director of ATHENA. S/he was considering that subscription management of these journals for teachers should be contracted out, so as to be executed by professionals. Until 2001, this activity was conducted at the headquarter level by the mutual customer relationship (CR) service with a mail order management software. The ATHENA marketing director was often complaining about delays and marketing functionalities. The ZEUS CEO and the ZEUS mutual CR service director dissent on outsourcing. Then, both the ATHENA marketing director and ZEUS CR director conducted separated formal analysis with contradictory conclusions. Opposition between ATHENA and ZEUS ceased when AERIS left the ZEUS group in 2004. Then ATHENA has become the single user of this activity. Therefore, it could impose on ZEUS the decentralization of this function. As soon as it was realized, ATHENA outsourced subscription management of the journals for teachers.

This example met during a research on outsourcing decisions with an empirical field on French companies. It helps us to raise an original question: Why does it seem necessary to transfer activity at the division level to accompany outsourcing?

In the literature, two streams were developed sequentially. The first focused on the issues of divisionalization, and studied the relationship between headquarters and divisions within large companies. The second focused on the boundaries of the firm, focusing on whether to retain

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<sup>1</sup> Regular and official names and brand names have been changed to protect anonymity.

or entrust certain activities. It is striking to check that these two streams have little dialogue, and have low fertilized each other. That is why we raised the research question about the configuration of activities as follows: Do internal and external boundaries have the same determinants?

Based on Porter (1985), we consider the importance of “an internally consistent configuration of activities that distinguishes a firm from its rivals”. It means that the configuration, distribution and allocation of activities impact the competitive position. Then, we select the activities allocation as a way to compare the two former streams of research. . First, we analyze the position of a function regarding internal boundaries: divisions perform some activities; headquarters perform others (functions in centralized services). This has always been a crucial problem for managers and Chandler (1962) presented two historical examples: procurement function at DuPont (p.167) and General Motors (p.225). Second, we examine the position of a function regarding external boundaries: some activities are contracted out; others are executed internally. Thus, it is relevant to ask whether the determinants to centralize or not, and to contract out or not are similar.

In order to present clearly our research, we need now to present our frame and research way. We assume initially that in a multidivisional corporation an activity may be located at four different positions regarding frontiers.

Figure 1: Frame of analysis (internal and external boundaries)

	<i><b>Intra-firm or internal relationship</b></i>	<i><b>Inter-firm or external relationship</b></i>
<i><b>Headquarter level</b></i>	Central service	Headquarter control of Provider
<i><b>Division level</b></i>	Service in division	Division control of Provider

As far as intra-firm (or internal) boundaries are concerned, headquarter or division levels may be responsible for an activity. Transfer of functions or activities from headquarter to division may be called decentralization. As far as inter-firm (or external) boundaries are concerned, an activity may be executed in house (by the company) or contracted out to an external provider and the transfer is called outsourcing.

Our results show that functions with high economies of scale are mainly centralized and internalized and activities non-programmable and related to core business are at a divisional level and contracted out.

The first section develops some theoretical arguments and hypotheses in order to present our model. Among the many possible determinants found in both types of literature, three characteristics of activities have been selected: economies of scale, the belonging to company core business, and finally, the programmable nature of tasks. Then, the second section presents our sample and methods, discusses results and offers some perspectives.

## **1 THEORETICAL BACKGROUND, HYPOTHESES AND FRAMEWORK**

### **1.1 Theoretical background**

Primarily, the theoretical streams dedicated to divisionalization and organizational structures have been numerous and strong, during the last forty years. Moreover, research on contracting out and outsourcing has undergone many developments over the past decade. Yet the intersection of these two approaches is quite small and sparse. Few studies are available and compelling. The theoretical tools at our disposal have seemed to be insufficient to provide a satisfactory answer. We realized then the gap between internal and external boundaries literature.

First, a large literature in strategic management has focused on the relationship between the firm's headquarters (or corporate level, parent company) and divisions (or business level, SBU) (Allen 1978, Govindarajan 1986, Gupta 1987, Golden 1992, Campbell 2003). Another one has studied the decision to integrate versus contract out (Monteverde and Teece 1982, Anderson 1985, Pisano 1990, Poppo and Zenger 1998, Leiblein and Miller 2003). Despite the call of Takeishi (2001) to bridge inter- and intra-firm boundaries, we have not found available studies which explicitly link these two focuses.

#### *Headquarter and Divisions*

The origin of the first research stream can be detected in the seminal work of Chandler, who has documented the emergence of the multidivisional structure (1962). The multidivisional structure has been a solution for the growth of complexity due to diversification and geographical expansion strategies. Thanks to product divisions (diversification) or

geographical divisions (geographical expansion), Chandler showed it is easier for the corporate headquarter to pursue these strategies. Indeed, Williamson has claimed that the multi-divisional form represents the most important innovation in the history of capitalism in the twentieth century (Williamson 1975).

During decades, the relationships between headquarters and divisions have been carefully studied. Different perspectives have been used for these analyses: structural (through the advantages of the functional/divisional structure debate), decisional (through the centralization/decentralization debate), strategic (through the business/corporate strategies debate), multinational (through the global/local debate)...

As shown by Gupta (1987), the organizational literature can be summarized as follows. A high level of corporate diversification is associated with (1) divisional, rather than functional, structures, (2) more formal mutual coordination of decisions between headquarter and division managers, (3) financial performance-oriented incentive systems for managers of division, and (4) high decentralization, with functional authority largely in the hands of division managers. A large part of these works have dealt with multinational corporations and have then concentrated on a specific form of division: the foreign subsidiary (Bartlett and Ghoshal 1986, Gupta and Govindarajan 1991). Besides, some studies have linked organizational and strategic dimensions of this relation: decentralization and strategy of individual divisions (Govindarajan 1986, 1988, Gupta 1987, White 1986) or SBU's strategy and its performance (Golden 1992).

### *Contracting out*

We are also interested to know why and how companies internalize or contract out. The second stream has offered a couple of arguments to explain why some activities should be integrated or contracted out.

The origin of this research stream can be seen in the seminal work of Coase (1937). He is one of the first, in economics, to identify the firm as a place with two functions. The first is to reduce the cost of access to resources, since the market (i.e. price mechanism) could present an economic cost disadvantage. The second covers the effective coordination of these resources within the firm and under one single authority. In Coase's works, the managerial authority is confused with the functions of leadership provided by the entrepreneur. By extension, in a modern design, it could be identified with either the headquarter or division.

Obviously, this breakthrough has opened up many major routes of research. The theory of transaction costs (e.g. the cost of price searching) analyze the structures of governance, and make or buy decisions. The positive agency theory analyzes the issues of delegation and control within the firm. Both share a common theoretical concern of efficient modes of organization and their respective costs.

In parallel, corporate managers look more and more to contracting out, since a decade. Intense is the pressure to reduce asset investments, to concentrate or outsource certain activities (e.g. inventory, warehouses or real estate). Yet it must also create value for the firm through reduced costs and improved performance.

Contracting out can be interpreted as the development of a relationship between separate entities on the basis of a service scope or granted delivery, subject to the definition of their availability and price. Actually, contracting out equates with more than just improved operational effectiveness. In fact, it is not limited to peripheral tasks, but involves a growing number of the firm's activities and functions that substantially contribute to its added value (Quinn and Hilmer 1994).

In this vein, Alexander and Young (1996) challenge the common wisdom that core activities be kept in-house. They evoked several distinctions between the different types of core activities. Activities critical to performance should be distinguished from activities that create a competitive advantage. The first type concerns activities, such as IT, logistics or facilities management, that support the core businesses, without necessarily being a distinctive feature of a specific firm in its market. The second type refers to activities that create a current or potential competitive advantage for the firm. Contracting out concerns activities that contribute substantially to the firm's added value. By identifying the business functions to outsource, companies can benefit from an increased specialization in the areas on which they choose to focus, through increased learning, shared experience, professional career path incentives or other ways that enhance value. Contracting out influences the resources allocated to the business units as well as the level of vertical specialization.

### *Cost, strategy and control*

Organizing two abundant bodies of literature requires organization, clarity and synthesis. Numerous theories in strategic management develop framework and claim the preeminence over explanations of organizational boundaries. It is interesting to notice that some are pretty well related to our concerns: Thompson (1967) studies the homogeneity of organization

groups and interdependence, Chandler (1962) analyses the relationships between strategy and structure, and Williamson (1991) opposes economizing and strategizing.

Among the huge number of features, three characteristics of activities are selected to study the inter-relationship between internal and external boundaries. The first covers the concept of cost savings and thus efficiency. The second concerns the specific investments in core activities able to creating a competitive advantage. The third deals with management control of activities slightly difficult to be organized and planned. First, the basic logic of economizing is successful, following the three traditions of Pareto, Walras and Williamson. We do not develop the argument for homogenizing the three scholar traditions, but favor the argument that the logic of reducing the cost of asset investments and/or cost of production of products or services is common to the three theoretical traditions. Secondly, the logic of creating a competitive advantage leading to accumulate assets and knowledge to even allow the company to create value. Unless the company is mono-activity, even rationality favors the accumulation of such specific resources at the divisional level.

At the crossing of the two former dimensions (cost and core business), Chandler (1991) has proposed that the headquarters assume mainly two functions: entrepreneurial (i.e. determine strategies and allocate resources to pursue these strategies) and administrative (monitor the performance of the division). Corporate headquarters must strive to create advantages for their companies (Goold, Campbell and Alexander 1994). It means that headquarter would be able to monitor the division work and its investment in specific resources. On a different side, it is interesting to notice that Williamson (1981) assigns headquarters to the monitoring of divisions to minimize opportunism. It means to reduce both enforcement and renegotiation costs. This monitoring headquarters' mission corresponds more or less to the Financial Control style proposed by Goold and Campbell (1987) and could be part of the two other parenting styles (Strategic Planning, Strategic Control). Thirdly, as mentioned earlier the works of Chandler and Williamson show that monitoring and control are central to the issue of delegation, the latter refers to the internal organization or the contracting with an outside vendor. Also, the content of the tasks to monitor and control remains important to measure their efficiency and performance, but also to reduce the cost of the function itself.

In a synthesizing attempt, we will present in this section three main considerations of these choices: cost, strategy and control. For each of these approaches, we will retain one determinant regarding choices of both internal and external boundaries and draw up two hypotheses.

## 1.2 Hypotheses

### 1.2.1 From costs consideration to economies of scale:

Economizing, “the best strategy” (Williamson 1991, p.76), focus on efficiency. Following this approach, a cost advantage provides a company the ability to win the competition. Economies of scale are probably the most common factor of this cost advantage.

Since activity is our unit of analysis, we will here consider economies of scale of an activity, which might be regarded as economies of scope at the firm level. Some activities don't concern the production of the firm (marketing, human resources, accounting...), we then define economies of scale as a decreasing average cost when quantity of output of this activity increases.

#### *Internal boundaries:*

Central functions have been seen as one of the way parent companies attempt to increase value created by divisions (Campbell 2003). Ansoff and Brandenburg (1971: 721) propose three criteria. The function must “(a) be common to more than one division, (b) offer advantages of scale on a multi-divisional basis, and (c) not degrade the efficiency of the respective divisions.” Economies of scale are expected due to fixed overheads (in finance, legal and personnel departments, for example) (Goold and Campbell 1987). Nevertheless, Ansoff and Brandenburg pointed that their last criterion is very difficult to measure. Indeed, these functions become a bone of continued contention between divisional and corporate management. Campbell (2003) notes also that economies of scale are hard to attain and central functions often result in high headquarter costs, delayed decisions and unresponsive support. Then, a very strong trend of headquarters downsizing has occurred (Ferlie and Pettigrew 1996).

Nevertheless, following Ansoff and Brandenburg (1971) we develop the Hypothesis 1a:

*H1a: Functions characterized by significant economies of scale are more likely realized at the headquarter level.*

#### *External boundaries:*



The question of in house versus contracting out constitutes the “archetypal problem” (Williamson 1998, p.30) of transaction cost theory. Following Williamson (1975), this theory posits that economies of scale favor the market instead of vertical integration. Then outsourcing “makes sense” (Barthélémy and Adsit 2003, p.92) “since economies of scale allow specialized vendors to provide services at lower costs.” (Greer and al. 1999, p.88). As far as costs are concerned, the provider benefits from an advantage over the outsourcing company: thanks to several customers, he reaches higher levels of production (Loh and Venkatraman 1992). This induces that companies should outsource in priority functions with high economies of scale (Ang et Cummings 1997, Poppo and Zenger 1998). Other related effects may be mentioned: small companies should outsource more than big companies (Ang and Straub 1998) and high volume functions are less outsourced (Poppo and Zenger 1998, Safizadeh and al. 2008).

Nevertheless, Bettis and al. (1992) pointed out inherent dangers of outsourcing as far as economies of scale/scope are concerned. Outsourcing decreases the overall economies of scope of the outsourcing company, threatening a spiral of manufacturing disinvestment, whereas the supplier benefits more and more from economies of scale.

Following the traditional transaction cost theory approach, we develop the Hypothesis 1b:

*H1b: Functions characterized by significant economies of scale are more likely contracted out.*

#### 1.2.2 From strategy consideration to core business:

##### *Internal boundaries:*

The essence of divisional structure consists in the high self-containment of divisions. They must contain all key personnel and facilities necessary to deal with their particular product-market environments (Allen 1978). In this way, divisions benefit from the advantages of interfunctional coordination (Ansoff 1965, Galbraith 1973, Lawrence and Lorsch 1967).

Due to their strategic role, core business functions need particular attention and must be rigidly controlled and protected (Quinn and Hilmer 1994) to become centers of excellence (Frost and al. 2002). The headquarters “are increasingly dominated by executives whose backgrounds are in areas such as law and finance, which are not integrally involved with the organization's core activities” (Hambrick and Mason 1984, p.199). To build competitive

advantages for the company, the divisions must benefit from divisional resources and autonomy (Birkinshaw and al. 1998).

Following the traditional organizational approach, we develop the Hypothesis 2a:

*H2a: Functions of core business are more likely realized at the division level.*

*External boundaries:*

“One of the great gains of outsourcing is the decrease in executive time for managing peripheral activities--freeing top management to focus more on the core of its business” (Quinn et Hilmer 1994, p.49). That has been one way to apply Resource Based View theories and especially core competencies to the outsourcing question (Lacity and Willcocks 1998, Barthélémy 2001, Levina and Ross 2003, Barthélémy and Quélin 2006). In this approach, every company should concentrate its resources on core business in order to become a worldwide “best in class”. In doing so, companies are able to maximize return on investment, protect from current and potential competitor, increase flexibility and use provider’s investments, innovations and abilities (Quinn et Hilmer 1994, Quinn 1999).

Nevertheless, Baden-Fuller and al. (2000) have identified different (transitory) situations in favor of outsourcing of core business functions. For example, companies entering in a new market may benefit from outsourcing.

Following the traditional RBV approach, we develop the Hypothesis 2b:

*H2b: Functions of core business are more likely realized in house.*

### 1.2.3 From control consideration to non-programmable tasks:

Agency theory has provided a useful framework for the analysis of the ability of the principal (headquarter) to monitor agent (division) (Govindarajan and Fisher 1990, Nohria and Ghoshal 1994, Roth and O’Donnell 1996). According to organizational control theory and agency theory, the choice of behavior or outcome control depends on different factors and especially about knowledge of "cause/effect relations" (Thompson 1967), knowledge of the transformation process (Ouchi 1970) or task programmability (Eisenhardt 1985, 1989, Banker and al. 1996, Govindarajan and Fisher 1990). By promoting "task programmability",

Eisenhardt (1989) has contributed to transform this variable into a characteristic of the task (Kirsch 1996). Applied to our framework, it results that it is hard to control behaviors of a non-programmable function and that headquarter should then transfer this activity to divisions, *ceteris paribus*, so as to control the outcome.

Nevertheless, low programmability is common in highest hierarchical levels (Gerhart and Mijkovich 1990, Roth and O'Donnell 1996, Tosi and al. 1997). Since our unit of analysis is here function and not manager, we will follow the traditional agency theory view and develop the Hypothesis 3a:

*H3a: Non programmable activities are more likely located at the division level.*

Agency theory constitutes one of the dominant theoretical perspectives of boundaries of the firm (Tiwana and Bush 2007, Hancox and Hackney 2000, Bahli and Rivard 2003) despite the initial admonition of their founders: “it makes little or no sense to try to distinguish those things which are 'inside' the firm from those things that are 'outside' of it” (Jensen and Meckling 1976, p. 311). The rare empirical studies provide a good explanatory power (Poppo and Zenger 1998, XXX).

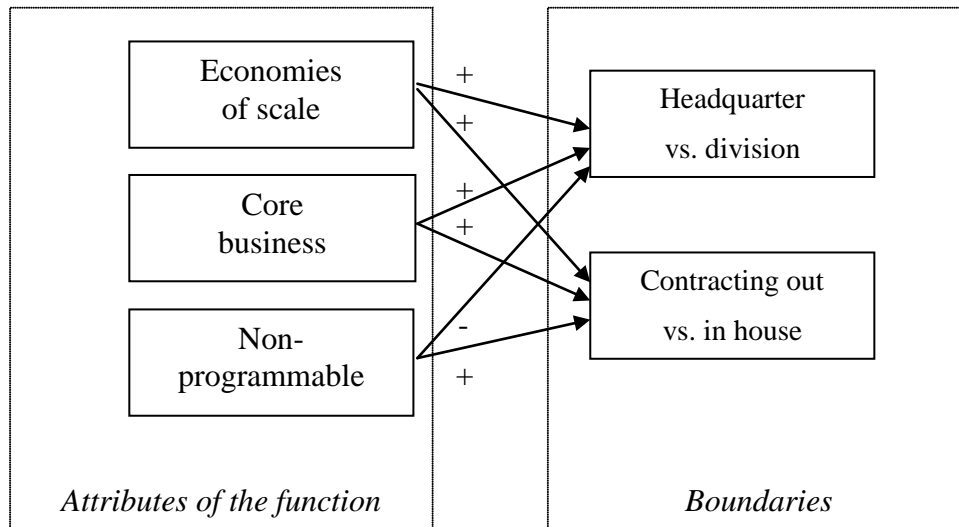
In this framework, the principal–agent relationship involves a firm (principal) delegating the execution of a function to an external vendor (agent) or an employee (agent) (Sia and al. 2008). Following the same line of argument, hierarchy prevails over market, when tasks are easier to observe than results (Ouchi 1970, Eisenhardt 1989, Govindarajan and Fisher 1990). Then, *ceteris paribus*, non-programmable tasks are outcome-controlled and then more likely contracted out.

*H3b: Non-programmable activities are more likely contracted out.*

### **1.3 Proposed framework**

In the prior section, economizing, strategy and control approaches of internal and external boundaries are presented. Our causal model based on the distinction between independent and dependent variables. The former are threefold: cost, core business, and control. The second concerns the organization of the firm, summed across dimensions such as borders. These can be internal (division or headquarter) and external (make or contract out).

Figure 2: Theoretical Framework



The first dimension is reflected in the variable 'economies of scale', according to the economic rule that the more the volume of activity (of the function) increases and costs are lowered. A positive relationship with each of the two dependent variables is expected. The second variable synthesized by the 'core business' whom we expect a positive relationship with both dependent variables. Finally, the non-programmability of a function (or of its main tasks) leads to negatively influence the probability of being at the headquarter level, and positively the probability to be contracted out.

## 2 EMPIRICAL STUDY

In this section, we empirically test our model, constituted of three determinants and six hypotheses. Scholars have many times used publishing industry as background for their organizational boundaries' studies (Sutcliffe and Zaheer 1998, Miles and Snow 2007). There are fourteen French national educational publishers. All have more than fifty employees. Six publishers are independent companies and eight are part of a large publishing group. As far as the headquarter/division relationship is a core dimension of our research question, we will focus our sample on these eight publishers. They are part of three publishing groups. Hachette is one of the top ten publishing world's leaders (with Didier, Foucher, Hachette, Hatier as well-known scholarbook brands), Editis is the main challenger (e.g., Bordas, Nathan, Retz), and Albin Michel a small publishing group (Magnard).

Different features of the educational publishing industry must be considered: a concentrated and lucrative market, a low price-elasticity and a complex technology (Commission des communautés européennes 2004).

## **2.1 Sample and data**

From April 2005 to June 2006, forty-eight semi-structured interviews of twenty top managers in large French publishing groups have been conducted. During these interviews, a first semi-structured part has clarified organizational boundaries of these companies and a second structured part got the data for the statistical analysis. Interviews have been conducted with 2 group managers, 11 directors of a publishing division, 1 assistant director of a publishing division, 4 functional director of division (3 administrative and financial manager, 1 technical director) and 2 management controllers of group.

First, we have established a list of functions of educational publishers. As a starting point, we used the list of functions of the Outsourcing Barometer survey realized by the French subsidiary of Ernst & Young. From the primary list, we removed functions ambiguous or not in use in this industry (e.g., “other administrative services”) and we added some specific functions to this industry (ex: “editing”). This list of 28 functions (see annex A) has then been validated by experts of this industry and then used in structured interviews.

For each of the eight publishing companies of the sample, we have known (through interviews) the position of each function as far as organizational boundaries are concerned:

- Headquarter level = 1, when the function is executed at the headquarter level (and 0 at the division level),
- Contracting out = 1, when the function is (at least mostly) realized by an external provider (and 0 by employees of the publisher or of the publishing group). We have not met any shared services.

In organizational boundaries’ studies, it is common to represent boundaries as binary variables and then to use logistic regression to explain them (Anderson 1985, Monteverde and Teece 1982, Pisano 1990, Poppo and Zenger 1998).

Three experts of this industry and the authors have then coded the independent variables (average intercoder agreement rate exceeds 85%). For the first variable “Economies of scale” (defined as a decreasing average cost), a particular attention has been given to the presence of

fixed costs. “Core business” refers to functions included in the core business of a publisher and is opposed to peripheral functions. “Non-programmable” function is characterized by non-programmable tasks, i.e. “the degree to which appropriate behavior by the agent can be specified in advance” (Eisenhardt 1989: 62). A creative function<sup>2</sup> is an example of such an activity.

Table 1: Frequency tables

Economies of scale		Core Business		Non-programmable function	
Present	121	Core	85	Non-programmable	154
Absent	96	Peripheral	132	Programmable	63

Our sample is made of 217 functions<sup>3</sup>.

The unit of analysis of our research is a function (for example, Wages and salaries, Procurement Management, Internal Audit ...) used by a publisher. The function’s responsibility may be located at the corporation level or business level. The function’s execution may be realized by employees of the publisher (either at division or headquarter level) or by an external provider.

## 2.2 Empirical test of the model

HEADQUARTER LEVEL and CONTRACTING OUT are significantly associated at the 99 percent level (Chi-square with continuity correction: 10.8) but with weak intensity (Cramer’s V: 0.232).

Results of the econometric estimates of the logit regressions (Models A and B) are illustrated in Table 2. The table shows the estimated values of the coefficients of the independent variables and joint significance levels (Wald tests, illustrated at the bottom of the table.).

<sup>2</sup> “Characterized by originality and expressiveness” (American Heritage Dictionary).

<sup>3</sup> 28 functions in eight companies should provide a sample of 224 functions. But some functions (of our list) don’t exist in some of these companies (for example a publisher, who produces only mathematics books, doesn’t use cartography).

Table 2: Logistical regressions results

		Hyp	Headquarter level	Hyp	Contracting out
	Constant		.260		-1.515
control	Contracting out		.586		
	Headquarter level				.682
	Economies of scale	+	.939*	+	-.763*
	Core business	-	-2.275**	-	1.486**
	Non-programmable	-	-1.195*	+	1.373**
	Nagelkerke R <sup>2</sup>		46,4 %		35,2 %

\*: < 0.05      \*\*: < 0.01

First, these results indicate that the association between “Contracting out” and “Headquarter level” is a spurious correlation: they share the same determinants but there doesn’t exist any causal effect between them.

Then, the all successful significance tests and the rather high Nagelkerke R<sup>2</sup> values of our two models strengthen our theoretical framework. These three variables have a great explanatory power in predicting inter and intra-organizational boundaries.

Considering the first model, the regression provides a corroboration of the hypotheses H<sub>1a</sub>, H<sub>2a</sub>, H<sub>3a</sub>. As stated in our literature review, non-programmable and core business functions without economies of scale are more often located at the division level.

Considering the second model, results are more astonishing. Indeed, if H<sub>3b</sub> is corroborated, H<sub>1b</sub> and H<sub>2b</sub> are highly significant, but with opposite sense. It means that non-programmable and core business functions without economies of scale are more often contracted out. Despite a similar logic in economic and strategic view, it is then interesting to notice that determinants of centralization and contracting out are completely opposite in this empirical study.

### 3 DISCUSSION

These results provide an original and interesting pattern.

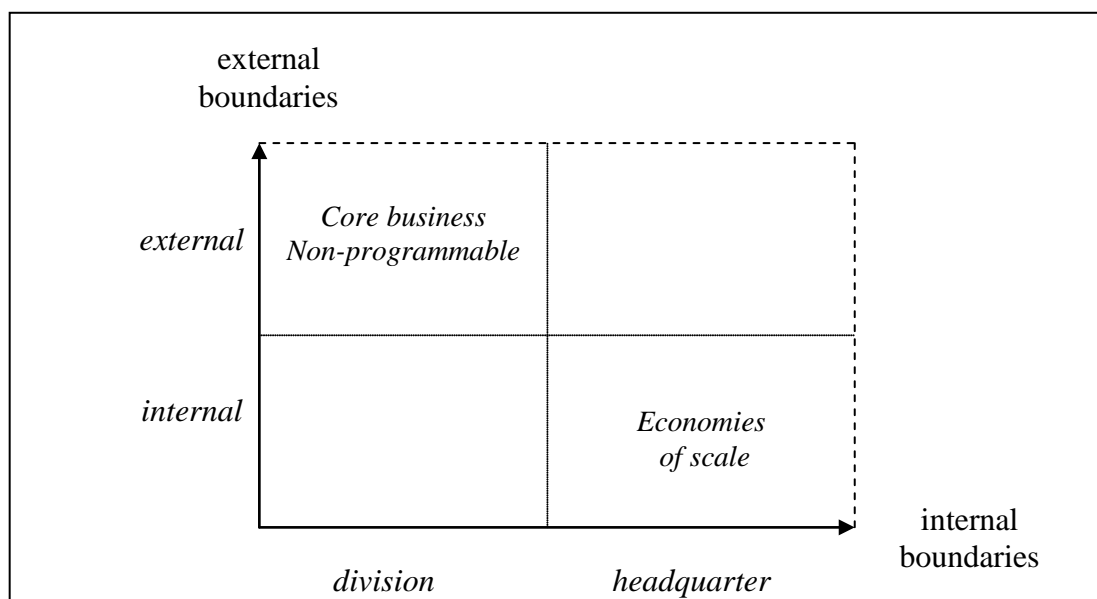
Determinants of internal and external boundaries contribute to a rather bipolar configuration of activities in the multidivisional company (see Figure 2). As far as organizational boundaries are concerned two configurations dominate (among the four possible presented in Figure 1).

On the one hand, some functions are centralized at the headquarter level to benefit from (internal) economies of scale. This result is probably stronger in divisions, whose size corresponds to a SME (small and medium sized firm):

« Using central functions provides of course economies of scale on personnel. It would be hard to decentralize these functions because we should either hire people to do quarter-time work and of course they would refuse, or hire people able to integrate numerous functions in a half-time. But competencies on some functions might not be up-to-date. Through centralizations (concerning of course far more employees), we are dealing with very high-level professionals. Then it's cheaper, since one pays a share proportionate to use, and the quality of the service provided is better.» (A director of a publishing division - 08/06/05)

On the second hand, divisions keep control of both non-programmable activities and core business activities through contracting them out.

Figure 3: Position of a function regarding boundaries depending on its characteristics





Our sample is constituted of publishing groups, which differ by their size (from national to multinational firm) and their corporate policies. Besides numerous mergers in this sector constitute a strong governance inseparability (Argyres and Liebeskind 1999).

Nevertheless, our results present a clear pattern: internally functions at the headquarter level and contracted out functions at the division level are the dominant configurations. Because it runs counter to traditional theoretical explanations of the boundaries of the firm, this pattern should now be analyzed and discussed.

RBV mentions us that core business activities make a substantial contribution to the customer benefits (Hamel and Prahalad 1992). Why a reasonable firm would contract these functions out to get more control of them, despite transaction cost economics principles?

### *Market inside the firm*

As a matter of fact, the make or buy question has been treated by the transaction cost economics through the lens of the market versus hierarchy lens. In the williamsonian approach, the hierarchy is intrinsically defined by the fiat. Employees' opportunism is then limited, as opposed to the potential behavioral risk of the provider, who can use contract complexity at his/her own benefit. Nevertheless, as noted by Alchian and Demsetz (1972), seeing transactions inside the firm as purely characterized by fiat is a delusion.

When divisions are organized as profit centers, their transactions with central services use transfer prices. Distinguishing organizing methods (hierarchy and the price system) and institutions (firms and markets) (Hennart 1993), we consider that these transactions are price-based, although they are intra-firm. As far as organizing methods is concerned, from a division manager perspective, activities executed by central services are similar to contracted out activities. Nevertheless, one major aspect differs: central services are in a monopoly situation, except when headquarter has promoted a policy encouraging competition between central services and external providers.

Numerous transaction cost theory studies have shown that a small number of supplier incite firms to adopt internal organization (Walker et Weber 1984, Pisano 1990, Leiblein et al. 2002). In a transaction-cost perspective, existence of central services constitutes then a puzzling question. Organized through price system, monopoly situation precludes benefits from concurrency. Inside the firm, absence of internal relationship precludes benefits from control.

### *Shirking and control*

By his distinction between organizing and economic institutions, Hennart (1993) enlighten the control dimension of make or buy debate, assimilated to a choice between shirking (in hierarchy) and cheating (in price system).

In a division-based firm, a division manager is evaluated by headquarter through his/her division results. S/he usually delegates numerous tasks to his/her employees and may use fiat to limit shirking. But in a transaction between a division and a central service, there is no (direct or indirect) authority relationship. Since central services are often spatially distant and work for several divisions, their control by divisions is often very problematic.

As a matter of fact, shirking derives from difficulties in metering input productivity (Alchian and Demsetz 1972, Cheung 1983). These difficulties are often met in case of team production, defined as a work using several types of resources and whose result is not a sum of separable outputs of each team member. In a publishing company, the core business functions collaborate altogether to make a substantial contribution to the customer benefits: a good manuscript, a good cover page, nice illustrations, a good page layout and a good typesetting don't provide necessarily an outstanding textbook.

### *Efficiency of central services*

Because it is usually more expensive to neglect shirking than to really control it, central services often exhibit "turpitudinal peccadilloes" (Alchian and Demsetz 1972: 781). Campbell (2003, p. 77) points out the value destruction through central functions and services, due to "their privileged status [which] protects them from the rigours of the market". This perspective can be illustrated through the following quote from interviews:

"Everybody knows that central services management is really hard. For something really core business, artistic and editorial are inseparable and need to be really good [...] if you place your editor in a fight with a guy of a central service (namely almost a civil servant) who works once for someone, once for another and says "Listen ! I'm sorry, man, but tonight, I have something else..."... you blow up the house" (A director of a publishing division - 07/06/2005).

Some companies have adopted very drastic policies toward central services, as the "ABB rule of thumb" of Percy Barnevik (Campbell 2003: 76) about central functions of just acquired companies: 30% are removed, 30% are transferred to division and the rest is maintained, but

under competition with outside supplier. When a group decides to maintain central functions, even in case of lack of formal contract, division managers would need “the power to revise the contract terms and incentives of collaborators” to reduce shirking (Alchian and Demsetz, 1972: 783). But they have not. Then, the potential risk of central services employees’ shirking seems to prevail over the potential risk of provider’s hold-up. That’s why, as far as core business activities are concerned, the divisions would prefer to contract out to external provider rather than to attempt to control central services. Contract seems to be preferred over internal control mechanisms. Beyond a rhetorical problem, division managers don’t seem to have any problems about contracting out core business functions, as follows can illustrate it:

“I think that to be focused on its core business [and outsource peripheral functions] is a way to get some flexibility. Even if, paradoxically, I outsource in my core business” (A director of a publishing division - 02/06/05).

“Our core business is quality of creation. We’re accustomed to outsource it to authors too, since the quality of creation of our products mostly derives from the quality of our authors. And we’re accustomed to live with them without putting them under glass. And the quality of dialog with them makes the quality of our products” (A director of a publishing division - 07/06/05).

#### *Internal price-based mechanisms and collaboration with external providers*

Our results encourage us to emphasize that, henceforth, organizations are increasingly being organized through price-based coordination mechanisms, including for activities deemed to belong to the core business.

“External page layout creation provides more flexibility, freedom, availability and speed. Internal [creation] is really different. By way of example, externally we can order a command on a Friday evening and get it on Monday morning. That’s impossible internally. That matters since we save one week.” (A director of a publishing division - 06/06/05)

Coase (1937) had stressed that the internal coordination could reduce internal operating costs: coordination of activities within the company was highlighted. In this perspective, our work is highlighting the weight of the hierarchical relationship between headquarters and division in the contracting out phenomenon. We are also witnessing the development of specific organizational forms. The representation of the organization is thus made both in terms of nexus of contract (managing external relations) and in terms of hierarchy (internal). We also expect to check the existing internal relationships based on market-like mechanisms (transfer

price, service level agreements), but also some collaborative relationships with external providers. Our analysis asked to consider the organization as a set of operating modes.

#### *Content of activities and control*

The RBV legacy led to think that the development and protection of specific resources and core competencies pass through the internal control. Another shift of perspective also concerns the effectiveness of control. Depending on whether (and how) the tasks are codified and programmable or creative and very hard to monitor, the control and evaluation cannot be the same. This objection refers to the dichotomy offered by the agency theory between control behavior and outcome. As the broadcasting and movie industries which are activities with high human potential, the publishing industry appears to be based on developing a complex product. It requires an accumulation of multiple skills, interdependent, mobilized for the process of developing a product. The project management dominates and can be linked to a broad network of providers and qualified suppliers. Their development can now be done outside the boundaries of the firm, although their control is not more complex than internal.

### **CONCLUDING REMARKS**

In conclusion, we wish to present some perspectives opened by our initial results and lessons that can be drawn. We would also highlight some limits of our work.

By proposing stable attributes of the function as determinants of boundaries, we build a static theoretical framework. Nevertheless, we can examine how this model could be used to analyze outsourcing, back sourcing, centralization or decentralization. First, these concerns occur when a firm's function is in a "serious governance misalignment" (Williamson 1998a, p.47) or when the "discriminating-alignment hypothesis" is not valid anymore (Williamson 1998b, p.75). However, this situation may arise from evolution of the attributes of the function. For example a technological evolution makes a function less programmable or enables it to benefit from economies of scale. A big shift in the environment or a strategic change may move the lines of the core business too.

To go further, we wish to focus our attention on the misalignment, which does not just result from any evolution of the attributes of a function. We can illustrate this point through the outsourcing case of ZEUS presented at the beginning of this article. Because subscription management benefits from economies of scale, a central service organization would be required (coherent with the situation before 2004 and with our model). When AERIS left the

group, ATHENA became the single user (or internal customer) of this function in the whole group. Then, a localization at the headquarter level did not provide any type of extra economies of scale and more than at the division level. This function were then decentralized and outsourced to an external provider (to benefit from its economies of scale). In this case, attributes of the subscription management function has not evolved, it still benefits from economies of scale. But the organizational configuration of the company group has changed the way to deal with these attributes.

Otherwise, most studies analyzing the decentralization of very large companies, such as MNC, through the center-subsidiary relationship has considered center as a principal and subsidiary as agent. Nevertheless, thanks to our thin unit of analysis, we have been able to establish that this relation is more complex. Through a cascade of principal-agent relationships (Radner 1992), division manager acts as an agent in relation to the group manager and as a principal in relation to a central service (though inside the center). This relation is all the more complex than division managers delegate tasks to central services without having at their disposal any formal authority nor any monitoring or bonding mechanisms. This aspect of control ought to take better account of the cascade of delegation, and to incorporate an agency relationship with at least three levels. Our work actually stressed that the relations of delegation, monitoring and control within the same company are much more complex than the theory of agency, even in its modern form, does not allow with its emphasis on the one-to-one and univocal relationship.

Another dimension would undoubtedly have been deserved thorough in our work is the case of cooperation between division and shared service centers. To benefit from economies of scale, there are other possibilities than centralization at the headquarter level. First, due to its experience and specialized assets, a division may execute a function for others divisions, besides its traditional activities. Govindarajan and Fisher (1990) mention that: “ We defined level of resource sharing as the extent to which a focal SBU shares functional activities like marketing, manufacturing, and R&D with other SBUs within a firm” (p. 265). During the last decade, shared service centers have been widely spread (Wang and Wang 2007, Redman and al. 2007). Shared services constitute “the internal consolidation of business support services that were formerly handled by individual business units” (Redman and al. 2007: 1486). A new division is then created, whose mission is to provide the function to other divisions. This division can furnish this service to external partners (Wang and Wang 2007). Shared services

may be considered as an internal outsourcing (Redman and al. 2007) or not (Wang and Wang 2007). We have not mentioned shared service centers in our study, because we have not observed them on our field study and we wanted to keep our model parsimonious. Nevertheless, further research may integrate them in this framework.

Most studies analyzing the decentralization of MNC through the center/subsidiary relation has considered center as a principal and subsidiary as agent. Nevertheless, thanks to our thin unit of analysis, we have been able to establish that this relation is more complex. Through a cascade of principal-agent relationships (Radner 1992), division manager acts as an agent in relation to the group manager and as a principal in relation to a central service (though inside the center). This relation is all the more complex than division managers delegate tasks to central services without having at their disposal any formal authority nor any monitoring or bonding mechanisms. Besides, central services are engaged in a multiple agency relationship, i.e. their tasks fulfill obligations to several divisions (McLean Parks and al. 1998).

Finally, another limit can be related to the fact that just a single industry is present in our sample and may introduce some bias, contingency or specific circumstances. This naturally calls for further tests on of multi-industry samples. However, observations and lessons learned from our study may be true trends that have a precursor character for some other industries. This is already the case of the movies and broadcasting industries in which such complex phenomena of both contracting and organization are observed (Lampel et al. 2000, p.267-268). It may also be true for the fashion and haute couture industry (Jacobides and Billinger 2006). Such industries would be based on a highly specialized resources, and despite the strategic importance of these functions or activities, they are assigned to providers.

To conclude, academics usually make the assumption that an executive has more control over a function, when this function is produced in house than at a provider. In fact, this is not accurate. In a divisional firm, a division manager has more control over a function, when this function is at the division level than at the headquarter level, whether it is in house or contracted out.

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**Annex A: List of Functions and Activities used in the statistical analysis:**

Front office & Reception staff	Market Research
Paper Procurement	Personnel administration
Procurement Management	PC & Desktop
Sales Management	Wages and salaries
Internal Audit	Copyright Management
Cartography	Network & Server Management
External communication (Media Relations)	Facilities management
Accounting	Iconography
Book Cover Design	Software Maintenance
Page Layout	Typesetting
Teacher Relationship	Catalog creation
Promotion	Cleaning and Security Services
Book Distribution	Customer Relationship (Call Centers)
Editing	Internet website & web master