

The Impact of Outsourcing on Business Performance: An Empirical Analysis

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Corporate decisions related to “make or buy” have significantly changed over the last 20 years, since the rush towards concentration on core business of the 1980s has progressively lost grasp. Although long-term alliances and mega deals are replacing the existing spot contracts, both academic literature and managerial practices still lack appropriate models for coping with such decisions. As a consequence, the traditional accounting approach, extensively based on emerging costs and cost savings, seems to be less and less effective in the governance of such phenomena. On the other hand, the managerial literature still suffers significant gaps in modeling the relations between outsourcing and business performance. The attention paid to the subject in past decades has not been matched by the rigor in assessing the actual impact on business performance. This paper aims to fill some of the existing gaps by presenting an original empirical study based on the analysis of the impact of outsourcing decisions on business performance.

Keywords: outsourcing, financial performance, firm boundaries

Introduction

The configuration of the value chain and the definition of the perimeters of influence of the firm are the pillars for companies’ business models. The decisions related to “make or buy” evolved during the past 20 years, generating a wide range of possible solutions of outsourcing (from smart sourcing to offshoring). In general terms, by recurring to outsourcing, companies have to deal with a very sensitive equilibrium between internal activities and external purchases. Figures from the OECD STAN database¹ show that despite outsourcing has reached its peak of popularity during the late 1980s and the 1990s boosted by the rush to corporate downsizing and the reengineering bandwagon, it has been growing over the last decade by rate of 30%-35% until 2007 (revenues per year), and a restart is expected by 2011 (OECD, 2007).

The basic model of confronting emerging costs and cost savings is still dominant, despite the several

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¹ OECD STAN database is the structural analysis database of Organization for Economic Cooperation and Development. Latest release at the time of submission (March 1, 2011): OECD countries—time period of 1970-2009 (Retrieved from <http://www.oecd.org>).

theoretical perspectives by which the subject has been analyzed in several fields of management. In actual terms, it seems that because of its multi-faceted nature, outsourcing is still far from being defined, studied, and practiced as a homogenous phenomenon, mostly when it comes to performance evaluation.

In managerial terms, the outsourcing practices have varied a lot over the past two decades, spanning from the externalization of support activities to some core processes, from primarily service-based activities to productive processes, such as in the case of modular production (Brusoni & Prencipe, 2001; Prencipe, Davies, & Hobday, 2003). Today, firms manage a portfolio of outsourced activities that may include relatively low-skill activities (e.g., call centers) as well as knowledge-intensive services (e.g., market research and analysis). The present scenario sees the flourishing of information technology (IT) outsourcing (Tettelbach, 2000), the increasingly widespread of finance and accounting outsourcing (FAO) and medical outsourcing, and the emergence of knowledge process outsourcing (KPO), a very promising niche within the broader concept of business process outsourcing.

Moreover, although outsourcing practices have once been embraced with a general favor, the widening of their span has inevitably clashed with some pressures by internal and external stakeholders. The generally aspicated strategic focalization around firms' core businesses is not any more the sole explanation for outsourcing, while globalization is enabling multiple sourcing, global outsourcing, and offshoring. As a consequence, firms are not exposed to the mere coordination of value chain activities at an inter-organizational level. More and more, they have to face issues related to knowledge management, lack of specialization, know-how, labor protection (Slack, Chambers, & Johnson, 2004; Staiger & Antràs, 2008; Ruiz-Torres & Mahmoodi, 2008), and even protectionism aims.

The described enhanced complexity of the supplier-customer relations in outsourcing calls for a deep reflection on its definition and actual span of action. Broadly speaking, outsourcing refers to the acquisition from outside the firm of inputs, services, or processes (Amiti & Wei, 2005; Boldea & Brandas, 2007). Other scholars view outsourcing as an element of the overall firm's strategy, implying a decision by the firm not to make a service/product internally and instead purchase it externally (Quinn & Hilmer, 1994; De Fontenay & Gans, 2008), while others focus on global sourcing and define outsourcing as the integration and coordination of production and marketing on a consolidated basis (Kotabe, 1990; Murray, Kotabe, & Wildt, 1995). Further, other scholars emphasize the relational nature of the decision to outsource.

In this paper, the authors refer to outsourcing as the procurement of supplies or services related to a whatever value chain activity from legally independent firms (outsourcers). More specifically, outsourcing is defined as domestic, if firms source from suppliers from the same (home) country, whereas offshoring refers to the practice of outsourcing business functions in another country in order to reduce costs, typically where the costs of labor are lower.

This paper presents an empirical analysis conducted on a final sample of 84 companies (matched with an equivalent sample), taking into consideration various aspects relevant for outsourcing: business performance, costs structure, labor force, business performance compared with the reference industry, and financial structure of the company.

This paper is structured as follows. Section 2 presents the construction of the theoretical framework and presents a critical analysis of the main explanatory theories which have been used for dealing with outsourcing, namely, transaction costs economics (TCE) and resource-based view (RBV). Section 3 depicts the model and hypotheses, whereas Section 4 presents the methodology used for the empirical analysis, while the following

sections show the main findings. Sections 6 and 7 contain the discussion of results and illustrate the limitations of this study.

Theoretical Framework

Outsourcing has been considered as a field of investigation in many different fields, spanning from the management of information systems to the international business (Marchegiani, Pirolo, Peruffo, & Giustiniano, 2010; Mayer & Salomon, 2006; Rothaermel, Hitt, & Jobe, 2006). Despite the heterogeneity of its definition, scholars agree that the decision to outsource concerns a reliance of firms on external sources of inputs, services, processes, or other value-adding activities (Amiti & Wei, 2005; Lei & Hitt, 1995; Gilley & Rasheed, 2000), balancing the span of activities that a firm performs internally versus those that are acquired from outside (Arnold, 2000; Espino-Rodríguez & Padrón-Robaina, 2006; De Fontenay & Gans, 2008). Lacity and Hirschheim (1993) and Barthélemy (2001) both agreed on defining outsourcing as the decision to outsource activities previously made in-house by recurring to medium- or long-term agreements, also including the transfer of activities and personnel to third parties. This perspective is also compatible with the further development of the phenomena of outsourcing that have been registered during the past decade, i.e., offshoring, global sourcing, smart sourcing, etc..

As a result of these diverse perspectives in research, studies often produce contradictory results (Kotabe & Swan, 1994; Mol, van Tulder, & Beije, 2005). Such a heterogeneous puzzle implies that scholars and managers have to face some unanswered questions (De Fontenay & Gans, 2008): the impact of outsourcing on the performance among others. Although it has not always been specified in clear terms, the main motivation (antecedent) and expected result (outcome) turn around the potential contribute to the value creation through the potential decrease of direct and indirect costs related to some activities of the firm. In order to explain the motivations and the outcomes of outsourcing, TCE and RBV are the two most evocated theoretical streams in such field (Espino-Rodríguez & Padrón-Robaina, 2006; Mayer & Salomon, 2006; Reitzig & Wagner, 2010).

Based on the seminal works of Coase (1937) and Williamson (1975), TCE assesses the choices between self-producing (internal transactions) and outsourcing activities (market transactions) by comparing the internal costs (hierarchy) and the costs of “using” the market (Jones & Hill, 1988). Nevertheless, subsequent research has shown that TCE may overrate rationality in firms’ behaviors due to a lack of cognitive capacity to assess appropriability (Oxley, 1997; Pisano, 1990) or observability (Hölmstrom, 1979). Further, from a TCE perspective, it seems that outsourcing becomes crucial when markets are not able to allocate resources and reduce uncertainty. In this sense, outsourcing could represent a means of reducing selection, negotiation, reorganization, and control costs (Coase, 1937), particularly when the resource dependence of companies (Pfeffer & Salancik, 1978) is high. Additionally, some limits of “indirect assessment” and a lack of rigor in measurement characterize the translation of Williamson’s (1975) original idea of “specificity” into object specificity (Arnold, 2000), asset specificity (Aubert, Rivard, & Patry, 2004), and brand specificity (Chen, 2009).

The RBV provides some useful insights to avoid these limits of “over-rationality” typical of the TCE. In particular, considering the antecedents for outsourcing, the RBV approach shows that the decision to outsource is taken according to a firm’s capabilities compared with those of its suppliers. Espino-Rodríguez and Padrón-Robaina (2006) divided this perspective into two categories: (1) a focus on “the propensity” to outsource; and (2) the “relation” between the decision to outsource and organizational performance. Combining

the TCE and RBV, Mayer and Salomon (2006) found that “contractual hazards” provided firms with an incentive to internalize, independently of firms’ capabilities. However, in the presence of weak technological capabilities, it is more likely that firms will outsource. Therefore, RBV complements TCE in the treatment of outsourcing by focusing on the positive aspects of in-house strategic activities (Espino-Rodríguez & Padròn-Robaina, 2006) and resources (Prahalad & Hamel, 1990). Notwithstanding the consistent amount of papers using RBV to complement TCE, the extant literature focuses either on the propensity to outsource or on outsourcing’s relation to organizational performance (Espino-Rodríguez & Padròn-Robaina, 2006) but often ignores the implementation dynamics (process) and the related costs. Two important exceptions are represented by the idea of “governance capability” proposed by Mayer and Salomon (2006) and the evolutionary perspective on vertical disintegration introduced by Mahnke (2001).

Despite the significant number of papers, some main controversial points still characterize the extant literature. The first concern relates to the assessment of the strategy implementation which cannot be assessed if the specific targets are undeclared or unclear on the premises. Specifically, despite the recurring emphasis on performance improvement (e.g., Lee & Kim, 1999; Leiblein & Miller, 2003; McCarthy & Anagnostou, 2004; Mol et al., 2005), many studies estimate such a variable through mere perceptions of advantages, cost cutting and efficiency, market share, and overall exports (Bertrand, 2011; Frear, Metcalf, & Alguire, 1992; Kotabe, 1998; Kotabe & Swan, 1994; Scully & Fawcett, 1994). Nevertheless, some studies mentioned indicators of financial or market performance, but measured through “comparison with competitors” (Gilley & Rasheed, 2000; Mol et al., 2005) or through indirect measures of outsourcing success (Lee & Kim, 1999). The second concern is connected to the poor attention that is often given to crucial organizational aspects that ultimately impact operational costs and firms overheads. Despite the emphasis on the performance improvement shown by most of the extant literatures (Lee & Kim, 1999; Leiblein & Miller, 2003; McCarthy & Anagnostou, 2004; Mol et al., 2005), many studies assess it by “perceptions” related to: “advantages” as managerial responses to related statements (Scully & Fawcett, 1994), “cost cutting” and “improved performance” (Frear et al., 1992), “firm’s global market share” (Kotabe & Swan, 1994), “efficiency advantages” (Kotabe, 1998), and “overall export” (rather than export intensity) (Bertrand, 2011). Further, indicators of financial or market performance are sometimes mentioned but are still measured through “comparison with competitors” (Gilley & Rasheed, 2000; Mol et al., 2005) or “indirect measures of outsourcing success” (Lee & Kim, 1999).

The aim of this study is to show which the main variables are that have impacts on business performance related to outsourcing. In such a sense, outsourcing cannot be approached as a simple “make or buy” decision, but, instead, it should be considered as a corporate strategy, put in place by top management to improve the performance of firms (Marchegiani et al., 2010). Despite that this point is still debated, researches rooted on the examination of core competencies, mostly adopting the RBV perspective (Espino-Rodríguez & Padròn-Robaina, 2006), showing that outsourcing is not merely a means of cost reduction, but it also implies a transfer of intellectual capital. From this perspective, the development and maintenance of competencies might be necessary to achieve a competitive edge against competitors and drain resources, allowing top management to improve performance.

Since the mid-1990s, researchers have focused on identifying alternative reasons that may explain outsourcing: cost of capital reduction (McFarlan & Nolan, 1995; A. Kakabadse & N. Kakabadse, 2002), improvement in cost measurability (Barthélemy & Geyer, 2000), access to external competencies (Quinn & Hilmer, 1994; McFarlan & Nolan, 1995; A. Kakabadse & N. Kakabadse, 2002), conversion of fixed costs into

variable ones (Alexander & Young, 1996), and control of internal departments (Lacity & Hirschheim, 1993; Alexander & Young, 1996).

Notwithstanding the consistent amount of works on this topic, literature still lacks empirical researches on the real impact of such strategies on business performance. Additionally, despite the consistent amount of papers using the RBV to complement the TCE, the authors noticed a general caveat for the outsourcing process and actual returns (performance). The literature focuses either on the propensity to outsource or on the relation of outsourcing to organizational performance (Espino-Rodríguez & Padrón-Robaina, 2006) but often ignores the implementation dynamics (process). The idea of “governance capability” developed by Mayer and Salomon (2006) can be viewed as an important milestone leading to a deeper understanding of the practical organizational drawbacks as well as their impacts on performance.

Model and Hypotheses

The model that the authors propose moves from the consideration that many scholars refer to the reactions of the financial markets to the announcement of an outsourcing strategy and its effects on a firm’s value (Bryce & Useem, 1998; Oh, Gallivan, & Kim, 2006; Hayes, Hunton, & Reck, 2000) and to the relationship between firm performance and vertically-related activities in its value chain (Reitzig & Wagner, 2010). The model is also consistent with the present contingent moment in which the shrinking of profits induces managers to reconsider the setting of their value chains and to look for new outsourcing solutions for increasing the value added (Clarioni & Giustiniano, 2011).

The impact on performance is mainly due to the simultaneous pressure of three stakeholders:

- (1) Shareholders pushing managers to take all necessary transactions to increase the equity value;
- (2) Lenders requiring efficient and profitable management to ensure getting their money back;
- (3) Financial markets and investors constantly demanding results above expectations.

Thus, the authors put forward the following hypothesis:

H1 (business performance): After outsourcing, total revenues (*TR*), earnings before interest, taxes, depreciation, and amortization (*EBITDA*), *EBIT*, return on assets (*ROA*), return on equity (*ROE*), and enterprise value (*EV*) are expected to increase.

Further, many studies recall the idea that the adoption of an outsourcing strategy could be related to the growing pressure on management to remain competitive by “accomplishing more with less”. Achieving efficiency, effectiveness, and consequently greater productivity through strategies such as restructuring, downsizing, and reengineering activities (Insinga & Werle, 2000) are all results that could eventually contribute to the achievement and sustainability of competitive advantage (Gilley & Rasheed, 2000) and overall firm performance (Rothaermel et al., 2006). Conversely, the improper use of outsourcing can destroy the future of a business (Bettis, Bradley, & Hamel, 1992).

Entrusting activities of the value chain (previously in-house made) to external suppliers should therefore impact not only the absolute business performance but also the competitive advantage which is relative by definition, excluding the cases of monopoly. Firms develop their brands by releasing resources quickly invested in activities in the management of which they are supposed to excel. The goal of top management is to achieve and maintain competitive advantage over competitors or reduce possible gaps. For this reason, the difference in performance between sample firms and the benchmark of competitors was analyzed.

Thus, the authors put forward the following hypothesis:

H2: After outsourcing, the positive gap between each firm and its benchmark, measured by return on assets (*DROA*) and return on equity (*DROE*), is expected to increase; in negative, such a gap is expected to decrease or change sign.

Many papers conclude that outsourcing proves to be a balancing between lower production (external) costs and lower (local) transaction costs (McCarthy & Anagnostou, 2004; Mol et al., 2005; Chen, 2009; Bertand, 2011). These conclusions seem to be quite vague, whereas the authors do not apply the same rigor in estimating production costs and transaction costs. On a different layer, the same consideration could be made for the use of biasing hypothesis like “firms with a better technology have a larger share of the market”, which, in turn, should imply cost savings (Lommerud, Meland, & Straume, 2009, p. 113). In some other cases, the measured dependent variables do not explain the expected performance (e.g., degree of vertical integration) (Harrigan, 1985). Outsourcing is considered effective, when it is able to create an increased availability of resources that companies could quickly invest in activities where value assets or distinctive competencies are present. These investments exceed the cost savings. Further, even though outsourcing was long considered as a means for cutting expenditures, cost reduction was only achieved under specific conditions. If outsourcing consisted of the mere implementation of the same activity at a lower cost, an internal reorganization would represent the most efficient way to reach the goal (Lacity & Hirschheim, 1993). Reducing costs in the short run is not a discriminating factor in achieving higher performance, while running investments in core competencies is. In this sense, Quinn and Hilmer (1994), Alexander and Young (1996), and A. Kakabadse and N. Kakabadse (2002) were the first to consider outsourcing as a strategy that could contribute to business development.

Thus, the authors put forward the following hypothesis:

H3 (cost structure and level): After outsourcing, general expenses (*GE*) and variable costs (*VC*) are expected to decrease.

Outsourcing covers a wide range of activities, both in manufacturing and service sectors. Therefore, bounding the field to franchises and supplies (Walker & Weber, 1984, 1987), components (Kotabe & Omura, 1989; Swamidass & Kotabe, 1993; Kotabe & Swan, 1994), complementary components (Kogut & Zander, 1992; Milgrom & Roberts, 1990), intermediate products (Mol et al., 2005), intermediate goods (Lommerud et al., 2009), modular productions (Brusoni & Prencipe, 2001; Prencipe et al., 2003), interfirm modularity (Tiwana, 2008), strategic modularization (Kotabe, Parente, & Murray, 2007), firm complementarity (Parmigiani & Mitchell, 2009), inter-task interdependence (Kumar, van Fenema, & von Glinow, 2008), the degrees of standardization of production and product innovation (Murray et al., 1995), support activities (Tettelbach, 2000), or selected primary activities (Ruiz-Torres & Mahmoodi, 2008) seem to be more and more limitative. Most of the reported papers consider the organizational solution for outsourcing as an issue that is relevant only for the organizational aspects. Nevertheless, it has a significant impact on the focal company's financial structure. The authors underline that the organizational forms have a significant impact on the financial structure of the firm and recall that over-indebtedness can generate financial stress and finally lead firms to bankruptcy. Besides, Loh and Venkatraman (1992) stated that the growth of debt had represented the major reason for cutting costs and for using outsourcing consequently.

Thus, the authors put forward the following hypothesis:

H4 (financial structure): After outsourcing, the gearing (*G*) is expected to decrease.

Methodology

Given the criticism expressed by many of the existing studies illustrated in previous sections, the authors deliberately choose not to introduce any categorical variable for assessing the degree of outsourcing. Hence, the authors do not relate the amount of outsourced activities to business fundamentals. Further, the authors believe that researches on the impact of outsourcing on business performance should rely on a set of quantitative performance indicators which are to be observed both *ex ante* and *ex post* any outsourcing decisions. Outsourcing is considered as the phenomena that discriminate between the focal companies and the equivalent (non-outsourcing) gathered in the matching sample. Such a choice relies on the assumption that the database used in this paper contains evidences of operations overtaking a determinate significant threshold.

The model that the authors propose assesses the impact of outsourcing on business performance and its drivers over a time span covering five years: the year when outsourcing occurred ($t = 0$), two years before ($t = -2$; $t = -1$), and two years after ($t = 1$; $t = 2$). The model relies on the use of descriptive statistics for testing the proposed hypotheses. The significance of the results has been estimated by assessing the actual weight of observation.

In details, the analysis is based on the comparison between an actual sample of companies which have outsourced activities and a match sample of “twin” companies having the same characteristics. The dominant trends have been detected by calculating the average value of the variables and by comparing the evidences of the sample of outsourcing companies with non-outsourcing companies. The normalization of the data permits the usage of the skewness and the kurtosis for testing the hypotheses.

Sampling

The sample was obtained by querying the Osiris database². Over the universe of the companies which have outsourced assets or activities during the time period of 2000-2009, the authors selected the ones for which they were able to identify. The preliminary samples of $N = 107$ have been obtained by simultaneously querying the database for four main variables: standard industrial classification (SIC) code, geographic location, reference period, and trading on regulated financial markets.

The Securities Exchange Commission (SEC) defines SIC codes as “the standard industrial classification codes which indicate the company’s type of business”³. They are numeric codes identifying the core business of an organization. Information becomes more and more detailed, as digits increase from two to four. Geographic location is the country where corporations produce most of their value chain activities, from sourcing to sales through operations. Among the major focal countries are the USA, the UK, Canada, and the Euro-zone. In the first sample, a date for each observation is also reported. Securities of identified firms must be traded on regulated financial markets. The final sample gathers companies with the same SIC code, active in the same geographic location, with outsourcing activities in the same reference period, and trading on regulated financial markets.

From the initial sample of 107 companies, a final sample of 84 observations was obtained. The firms, all listed in stock markets, are based in several countries and spread in all continents: nine in Australia, seven in Canada and in the Euro-zone, 11 in Scandinavia, 16 in the USA, 30 in the UK, and one each in China, Japan,

² Osiris contains information on over 45,000 companies from over 140 countries including 34,000 listed companies and 11,000 unlisted or delisted companies (Bureau van Dijk Electronic Publishing in the year of 2010).

³ Retrieved from <http://www.sec.gov/info/edgar/siccodes.htm>.

Singapore, and South Africa.

The difference between the two samples is due to the impossibility to always find a comparable company that outsourced some activities. In the cases where comparables were not found, the reference period and SIC code were deliberately expanded six months, one or two years, without changing the geographic location. If results were still unsatisfactory, the authors intervened on the SIC code by reducing the digits considered until two digits, substantially, the core business, gradually became less precise and exhaustive. If results were not obtained even under those conditions, the observation was eliminated from the sample. The alteration of the geographic location, a key element of the study, did not seem consistent, while trading was thought of as a control variable.

Model

Once the sample was obtained, 13 variables, potentially assessed by top management when outsourcing both as antecedents and expected outcome of outsourcing, were defined, i.e., *TR*, *EBITDA*, *EBIT*, *ROA*, *ROE*, *EV*, total assets (*TA*), *GE*, *VC*, number of employees (*E*), deviation from the benchmark—the same SIC code—*DROA* and *DROE*, and *G*. These absolute values and indicators were grouped into five macro-classes: business performance (*BP*), costs structure (*CS*), *E*, business performance compared with the reference industry (*BRI*), and financial structure (*FS*).

For each organization in the sample, those variables were quantified for five fiscal years by using the database datastream (the year of 2010): the fiscal year when top management outsourced (e.g., $t = 0$), the two fiscal years before (e.g., $t = -2$, $t = -1$), and two fiscal years after (e.g., $t = +1$, $t = +2$).

Since firms were operating in different countries, the values reported by datastream in local currency have been converted into US dollars (\$), applying the spot exchange rate between currencies at the date of outsourcing. These values should have been purified by inflation: Given the upper bound of 2% set by the European Central Bank (ECB) and defining time zero as the fiscal year of outsourcing ($t = 0$), values of two previous ($t = -2$, $t = -1$) and following ($t = +1$, $t = +2$) fiscal years were respectively capitalized and discounted.

Once the data were made consistent and comparable, the authors estimated the following values:

- (1) Average value of the first three fiscal years (AFTY [$t = -2$, $t = -1$, $t = 0$]);
- (2) Average value of the last three fiscal years (ALTY [$t = 0$, $t = +1$, $t = +2$]);
- (3) Difference between the average values ALTY and AFTY (DTY);
- (4) Average, normalized standard deviation, skewness, and kurtosis of values DTY.

If data of the previous two fiscal years ($t = -2$, $t = -1$) were unavailable (*omissis*, NA⁴) and the third ($t = 0$) was zero, the last observation was also considered unavailable. If data of the outsourcing fiscal year ($t = 0$) were zero and the observations of the following two fiscal years ($t = +1$, $t = +2$) were unavailable (*omissis*, NA), the first observation was also regarded unavailable.

Findings

Table 1 shows the absolute value of observations accompanied by the percentage calculated on the whole sample.

Given the descriptive nature of the analysis, the number of observations is crucial to assess the significance of the results. Six out of 16 variables exceed 70 observations, equaling to 83.33% of the survey:

⁴ Not available (NA).

ROA (83%-98.81%), *TA* (81%-96.43%), *EBIT* (79%-94.05%), deviation from the benchmark *DROA* (76%-90.48%), *EBITDA* (75%-89.29%), and *TR* (70%-83.33%). *ROE* (49%-58.33%), *VC* (52%-61.90%), and deviation from the benchmark *DROE* (54%-64.29%) represent the variables with the least number of observations instead.

Table 1

Sample in Units (% of Survey and Deltas)

Variable	Sample	Survey (%)	$\Delta+$	$\Delta-$	$\Delta+$ (%)	$\Delta-$ (%)
Performance						
<i>TR</i>	70	83.33	57	13	81.43	18.57
<i>EBITDA</i>	75	89.29	41	34	54.67	45.33
<i>EBIT</i>	79	94.05	40	39	50.63	49.37
<i>ROA</i>	83	98.81	45	38	54.21	45.79
<i>ROE</i>	54	64.29	20	34	37.04	62.96
<i>EV</i>	57	67.86	38	19	66.66	33.33
Cost structure						
<i>TA</i>	81	96.43	55	26	67.90	32.1
<i>GE</i>	63	75.00	52	11	82.54	17.46
<i>VC</i>	52	61.90	44	8	84.61	15.39
Employment						
<i>E</i>	58	69.04	41	17	70.68	29.32
Δ vs. industry						
<i>DROA</i>	76	90.48	43	33	56.58	43.42
<i>DROE</i>	49	58.33	25	24	51.02	48.98
Financial structure						
<i>G</i>	64	76.19	32	32	50.00	50.00

Table 1 also exhibits the positive and negative deltas between the two sub-periods (*ALTY* [$t = 0, t = +1, t = +2$] and *AFTY* [$t = -2, t = -1, t = 0$]), presenting variables grouped into five macro-classes: *BP*, *CS*, *E*, business performance compared with the *BRI*, and *FS*. Delta (e.g., *DTY*) is defined as the difference between the mean values of the two sub-periods (*ALTY* [$t = 0, t = +1, t = +2$] and *AFTY* [$t = -2, t = -1, t = 0$]).

TR, *EBITDA*, *EBIT*, *ROA*, *EV*, *GE*, *VC*, deviation from the benchmark *DROA*, and *DROE* are consistent with the assumptions, presenting more positive deltas. Conversely, *ROE* and *G* did not confirm the hypotheses. *TA* and *E* present ambiguous evidence, explainable by the fact that firms can achieve sustainable competitive advantages, if they are able to reallocate human and financial resources in profitable activities.

Table 2 shows average and normalized standard deviation, skewness, and kurtosis of the delta (*DTY*) between the two sub-periods (e.g., *ALTY* [$t = 0, t = +1, t = +2$] and *AFTY* [$t = -2, t = -1, t = 0$]).

TR, *EBITDA*, *EBIT*, *ROA*, and *EV* are consistent with the assumptions, respectively recording an average increase of 67.16 \$/million, 43.59 \$/million, 50.19 \$/million, 11.39%, and 77.94 \$/million. *ROE* is the only variable which does not confirm the hypotheses, declining by 2.15%. Normalized standard deviation is between a minimum of 2.556 (*TR*) and a maximum of 3.780 (*EBIT*).

As reported in Table 2 and with the exception of *ROE* (-0.110), business performance variables are positively skewed. The positive skew, between a minimum of 0.176 (*EV*) and a maximum of 3.689 (*TR*), indicates that the tail on the right side is longer than the left side and that the bulk of the values lies to the left of the mean.

Table 2

Data in \$/Million, Percentage, and Units

Variable	Average Δ	Normalized σ	Skewness	Kurtosis
Performance		Cobus		
TR	67.16	2.556	3.689	14.985
EBITDA	43.59	2.894	2.844	13.894
EBIT	50.19	3.780	3.197	13.575
ROA	11.39%	-	3.050	10.080
ROE	-2.15%	-	-0.110	9.650
EV	77.94	3.115	0.176	1.931
Cost structure				
TA	69.06	3.207	2.414	8.201
GE	21.71	4.831	4.811	28.06
VC	42.06	2.469	4.070	17.738
Employment		Google scholar		
E	535	6.664	3.460	17.239
Δ vs. industry				
DROA	12.76%	-	2.859	9.123
DROE	0.96%	-	-0.500	6.717
Financial structure				
G	-1.85	-	-1.358	11.793

Note. Source: Festré and Giustiniano (2011).

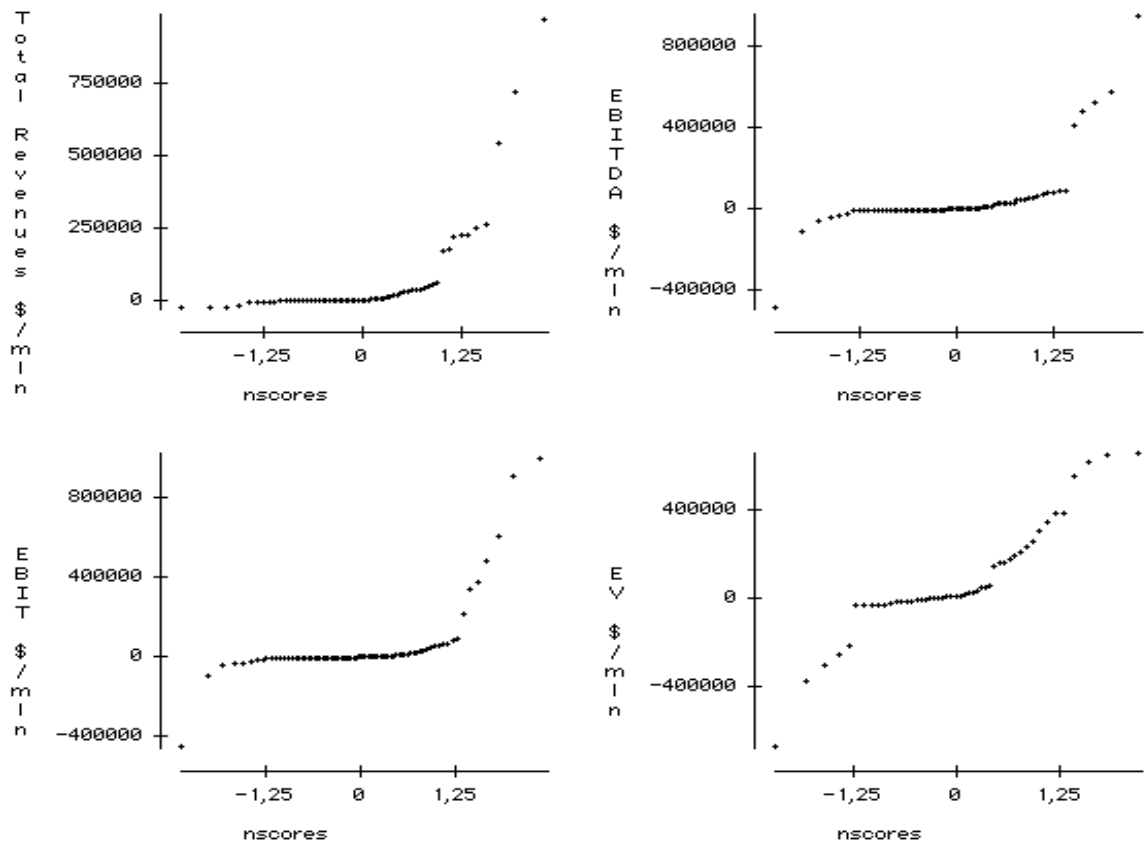


Figure 1. n scores for TR, EBITDA, EBIT, and EV.

As shown in the graphs of *TR*, *EBITDA*, *EBIT*, and *EV* (see Figure 1), distributions are leptokurtic, pointing higher peak around the mean and fatter tails. Kurtosis is between a minimum of 1.931 (*EV*) and a maximum of 14.985 (*TR*).

Within cost structure macro-classes, *GE* and *VC* (see Figure 2) are in line with expectations with a growth of 69.06 \$/million, 21.71 \$/million, and 42.06 \$/million respectively. Normalized standard deviation is between a minimum of 2.469 (*VC*) and a maximum of 4.831 (*GE*). Cost distributions of variables are positively skewed and leptokurtic. If skewness is between a minimum of 2.414 (*TA*) and a maximum 4.811 (*GE*), kurtosis is between a minimum of 8.201 (*TA*) and a maximum of 17.738 (*VC*).

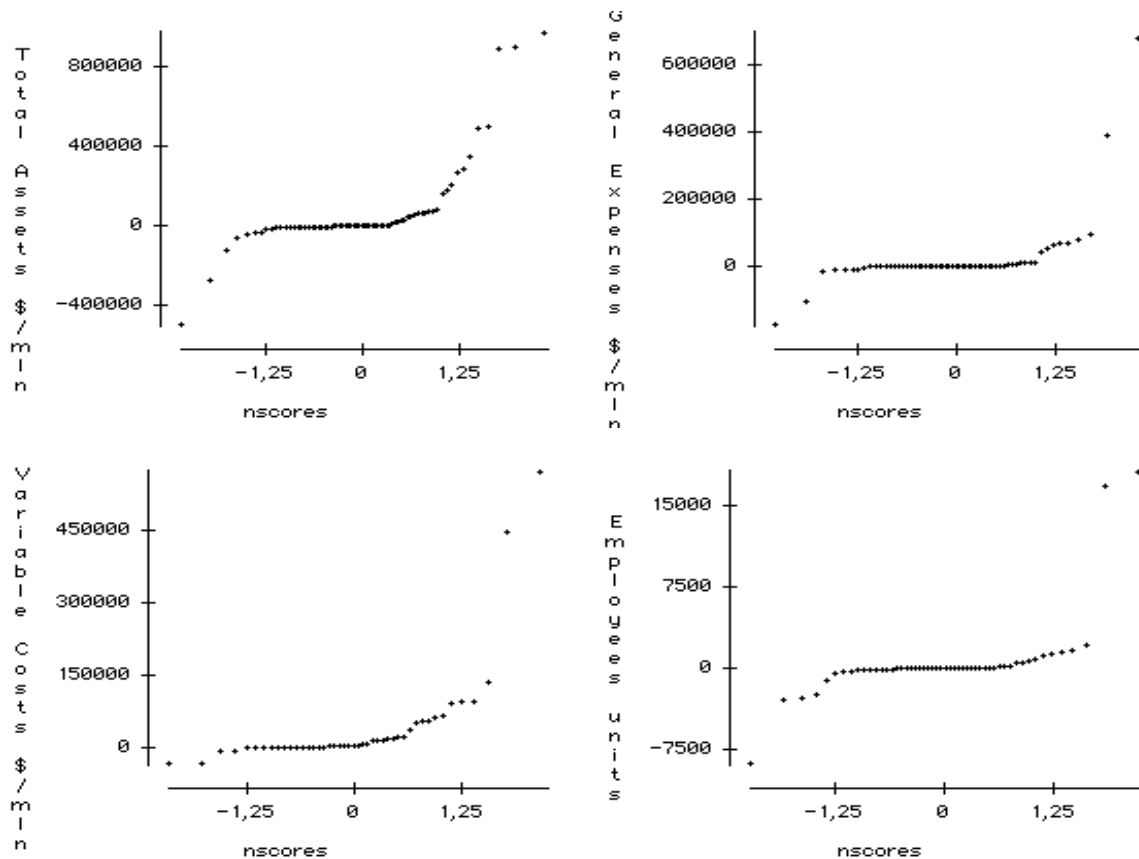


Figure 2. n scores for *TA*, *GE*, *VC*, and *E*.

The expectations of an increase of the gap compared with the reference industry—a decrease if the gap is negative are confirmed: If *DROE* recovers 0.96%, the improvement of *DROA* is more pronounced and equals to 12.76%.

Even if skewness is not uniquely determined, being both negative (-0.500, *DROE*) and positive (2.859, *DROA*), distributions are leptokurtic. Kurtosis is between a minimum of 6.717 (*DROE*) and a maximum of 9.123 (*DROA*).

G drops by 1.85, confirming the hypotheses. Even though the skewness is not uniquely determined, being negative (-1.358, *G*), a Kurtosis of 11.793 (leptokurtosis) is presented (see Figure 3).

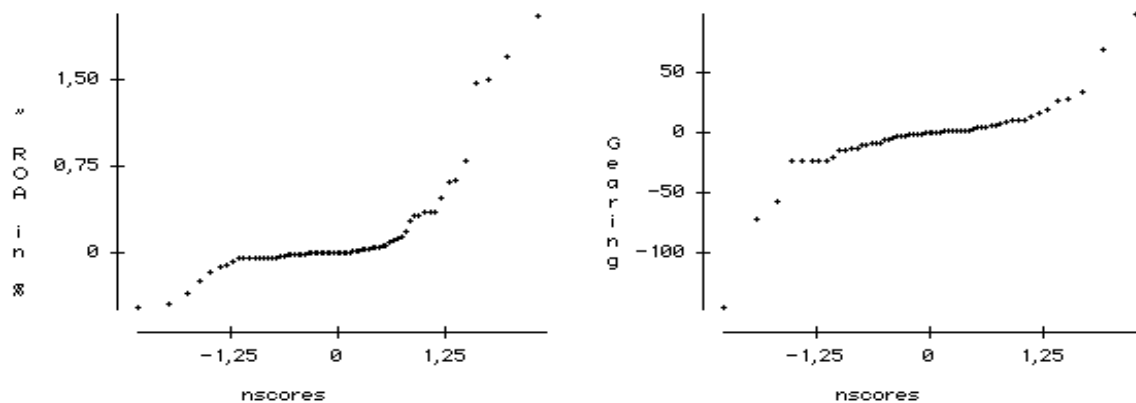


Figure 3. *n* scores for ROA and *G*.

Discussion

According to the analysis presented above, it seems that outsourcing could contribute to giving companies a sustainable competitive advantage, confirming most of the hypotheses. *ROE* was the only indicator to worsen between variables of business performance. However, the equity, denominator of *ROE*, was not analyzed. The observations were 54, equaling to 64.29% of the whole sample. Outsourcing does not generate a cost reduction, and resources are promptly invested in activities where organizations are leaders. As already mentioned, the shape of the elaboration about labor force (*E*) and *TA* could also be interpreted as the potential of strategic refocusing effect on the core business. Namely, it appears that outsourcing allows the top management to obtain resources that promptly could be invested in activities of the value chain where firms have excellent skills and competences.

The employment growth supports the increase in cost spending. These are two crucial results. They show that outsourcing is a growth-oriented corporate strategy and not a mere means for cost reduction, as alleged by the most accredited literature. The lower gearing and the increase of the gap compared with the benchmark—the decrease, if the gap is negative in terms of *DROA* and *DROE*, strengthen these conclusions.

To improve this study while keeping the same model, it would be useful to:

- (1) Not limit the quantification of the impact to only two years after outsourcing ($t = +1$, $t = +2$), since each variable is likely to react based on specific maturities;
- (2) Quantify the impact of outsourcing on each following fiscal year;
- (3) Identify a set of governance variables to evaluate the influence of shareholders on the top management;
- (4) Consider, additionally, transaction costs due to selection, negotiation, reorganization, and control.

Limitations and Future Research

One significant limitation of the study is related to difficulty in finding accountable data on the actual amount of deals. Such data would enable identifying an important explanatory variable useful for the elaboration. The authors recall that they explicitly choose not to estimate any variable through dummies, categorical, or perceptive variables, given the critical evaluation they made about the lack of rigor presented in many studies.

Further, since the attended performance is claimed as the main driver by many studies, it should be

considered as an antecedent itself (continuous black line), in terms of expectation. In terms of outsourcing decisions, the ultimate (ex ante) antecedent for outsourcing should be modeled as an expectation (at time $t = 0$) on future performance. Hence, given a chosen parameter (e.g., *ROE*), a real understanding of the impact of outsourcing should be assessed by measuring the levels of the same parameter over time.

Another limitation of this paper is very common in the extant literature: While outsourcing has been extensively explored by the core firm standpoint, some deep analyses should be complementarily conducted from the suppliers' perspectives (Kotabe et al., 2007; Jean, Sinkovics, & Cavusgil, 2010). Chen (2009) emphasized the fact that in such a globalized world, with firms scattering their value chains worldwide, some reciprocal buyer-seller relationships could take place, and therefore, the research models should take them into consideration.

The recent general economic downturn has rendered evident that the general idea of cost reduction does not necessarily lead to profit sustainability. It could even be misleading if not related to the consideration of the whole business strategy. This is also a weak point in the extant literature, except some partial exceptions (Kotabe & Swan, 1994; Kotabe et al., 2007; Mol et al., 2005; Trent & Monczka, 2003). A more complete model should then include the business strategy as a relevant element in assessing the impact of outsourcing on business performance. Similar considerations could be drawn for the presence of the firm in new, emerging, or converging industries, where the pressure of some external factors (such as unionization or technological innovation) could differ from the ones in "traditional" industries coded by the SIC system.

Another important element for future research relates to the nature of the outsourcer/supplier. Many studies accept the implicit assumption of the supposed homogeneity of the outsourcees gathering together the counterpart (suppliers/outsourcers) in fictionally homogeneous entities (Bettis et al., 1992; Quinn & Hilmer, 1994). Reality shows that the size and the nature of the supplier could importantly impact the cost related to the governance of the relation.

Finally, the necessity of referring to available and reliable data influenced this paper, when it comes to the size of companies. Since the size of the companies is very important in the listing mechanisms of the stock markets, the analysis made by the authors is based on this aspect and privilege large corporations. On the contrary, real life shows that small- and medium-sized enterprises (SMEs) also engage in outsourcing relations with very heterogeneous partners.

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