



# Outsourcing and financial performance: A negative curvilinear effect<sup>☆</sup>

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## ABSTRACT

This study asks how a firm's degree of outsourcing across all activities influences financial performance. We argue there is an optimal degree of outsourcing, where firms outsource some activities yet integrate others, and that deviations lower performance in a negatively curvilinear fashion. We find empirical support, using 1995 and 1998 data on a sample of manufacturing businesses in the Netherlands, and show that the steepness of the curve increases under conditions of high uncertainty. We show the magnitude of the uncertainty effect on performance outcomes through a post hoc scenario analysis. Thus we provide a specific, theoretically and empirically grounded prediction of how outsourcing affects performance with implications for theory and practice.

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## 1. Introduction

Firms face intense competitive pressures due to factors like technological change and globalisation. In response to these concerns, companies, both large and small, are increasingly outsourcing their activities by shifting what they traditionally handled in-house to external suppliers. There has been so much outsourcing in areas like IT that scholars are now starting to ask whether some of that outsourcing will be reversed, in the form of back-sourcing (Whitten and Leidner, 2006). Outsourcing commonly refers to the purchase of a good or service that was previously provided internally (Lacity and Hirschheim, 1995; Rothery and Robertson, 1995). In line with this broad notion, we define outsourcing in this paper as *the transfer of activities to an external source*.

According to Coase (1937), the existence of organisations can be attributed to market failure that induces transaction costs. Thus firms are constantly weighing the total costs, including

transaction and production costs, of the market and hierarchy modes. In the transaction costs line of research, Williamson (1975, 1981) made important theoretical contributions, which have been empirically justified by various others (e.g., Hennart, 1988; Walker and Weber, 1984). In recent years, resource-based arguments have been added to the explanation of outsourcing (Barney, 1999; Leiblein et al., 2002; Marshall et al., 2007) as have real options (Leiblein, 2003), agency (Holmström and Roberts, 1998) and industrial organisation arguments (Shy and Stenbacka, 2005). Thus a fairly good understanding has emerged as to what drives the decision to outsource, or integrate, a specific activity.

Yet in the empirical reality we observe that firms outsource some but not all of their activities. As extreme examples they, for instance, retain in-house outsourcing decisions and supplier management and externalise auditing activities and the production of electricity. This leaves room for theoretical grounding of the outsourcing phenomenon at the firm level. Any value chain needed to produce products for a customer can be seen as a bundle of activities governed by a nexus of treaties and these activities are performed either internally or externally (Aoki et al., 1990; Williamson, 1995). So for every individual activity a governance choice must be made (make or buy) and the sum of all governance choices determines a firm's overall level of outsourcing, which will differ for every individual firm. In this paper we ask: *how does the overall outsourcing level influence firm performance* (cf. D'Aveni and Ravenscraft, 1994)?

This above research question is answered in four steps. First, we provide a theoretical argument that an optimal degree of outsourcing exists for every individual firm, where the firm's

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overall outsourcing level leads to the best financial performance. Second, we specify the shape of the outsourcing–performance relationship at the firm level, suggesting this relationship is negatively curvilinear in nature. Subsequently, we argue that market uncertainty makes the negative consequences of deviating from the optimum more severe. Third, we provide an empirical test using a sample of over 1100 businesses from census data in the Netherlands which supports the argument and the specified relationship. Fourth, we show that market uncertainty has a negative impact on the outsourcing–performance curve. This implies that taking the right outsourcing decisions becomes more important for firms as uncertainty increases. We illustrate this further through a post hoc analysis, where three scenarios, of low, medium, and high uncertainty are compared.

## 2. Outsourcing

Because there are substantial differences among the various activities that form part of a value chain, most analyses of make-or-buy decisions have concentrated on a limited set of activities, for instance, manufacturing (Leiblein et al., 2002), services (Murray and Kotabe, 1999), information technology (Poppo and Zenger, 1998) or retail activities (Kaipia and Tanskanen, 2003). Extant literature has provided much insight into what determines whether firms integrate (make) or outsource (buy) a particular activity.

Undoubtedly, transaction cost economics (TCE) (Williamson, 1975) has made key contributions to our understanding of make-or-buy decisions, although its limitations have also been highlighted (Barney, 1999; Marshall et al., 2007). Asset specificity has been shown to be a key determinant of make-or-buy decisions (Leiblein, 2003; Walker and Weber, 1984; Williamson, 1981). The lower the asset specificity of an activity, the easier it becomes to write complete contracts, and the more likely is outsourcing. Uncertainty has similarly been identified as a determinant of the make-or-buy decision (Williamson, 1981). The original argument maintains that in highly uncertain environments, contracting will be incomplete, transaction costs will rise and it is hard to reach an affordable agreement with a supplier. If uncertainty is lower, a higher degree of outsourcing is possible, especially if low uncertainty occurs in the joint presence of low asset specificity (Williamson, 1985).

Firm capabilities and resources are a firm-level indicator of what can and can not usefully be outsourced (Barney, 1999). The resource-based view (RBV) predicts that firms with a rich competence base that can be deployed for undertaking a given activity may internalise that activity. For those firms that are less well prepared internally, outsourcing is more viable. Thus having many useful capabilities for an activity reduces the likelihood the activity will be outsourced (Barney, 1999; Leiblein et al., 2002). The most relevant comparison to determine the strength of firm capabilities is with potential suppliers, not with competing firms. Finally, TCE and RBV considerations appear to strengthen one another (Leiblein, 2003).

The outsourcing literature has started to integrate RBV, knowledge and competence considerations in outsourcing decisions (Barney, 1999; Leiblein et al., 2002; Poppo and Zenger, 1998) in addition to transaction cost reasoning. From an industry structure and positioning perspective (Porter, 1985), outsourcing is an approach particularly suitable for cost minimisation strategies given its ability to reduce production and procurement costs. Indeed, outsourcing is most useful in commodity markets and has an effect of strengthening price-based competition (Cachon and Harker, 2002) since external suppliers are more likely to provide standardised solutions, reducing the

possibilities for successful differentiation from competitors. Leiblein (2003) has suggested that the make-or-buy decision can also be framed as a real option, where outsourcing and vertical integration are undertaken to create a platform for future investments and strategising. The larger the uncertainty surrounding decision-making, the more valuable such options will become.

At the industry level, bandwagoning may have an impact on supply structures. If all competitors in an industry outsource, they actually induce an improvement in the scale and efficiency of operations of suppliers. Furthermore, there are other industry factors such as the need for local responsiveness versus global integration (Bartlett and Ghoshal, 1989; Prahalad and Doz, 1987), the existence of supply clusters within reach of the firm, and the effectiveness of using information technology in linking various vertical stages of production and the nature of competitive positioning that are meaningful predictors in the context of outsourcing. We believe industry, including product characteristics, to be the most important level for explaining outsourcing.

There are also national-level explanations for the level of outsourcing. In countries with institutional voids, for example, in terms of weak property rights regimes, vertical integration again is often a preferred solution because it provides the only guarantee against opportunistic behaviour and contractual hazards (Teece, 1986). More generally, the lower the level of market imperfections in a country, the higher the level of outsourcing by firms in that country will be (Williamson, 1985). In conclusion, current literature has identified a range of predictor variables of outsourcing, which can broadly be seen to operate at the activity (transaction), firm, industry and institutional environment levels. Activities will vary in their scores on these variables. Based on the sum of these scores, it will make more or less economic sense for a firm to outsource a given activity.

### 2.1. Outsourcing and performance

The link from outsourcing to performance is less well developed empirically (Gilley and Rasheed, 2000; Masten, 1993). Recent normative literature (Domberger, 1998; Quinn, 1999) and managerial practice, where outsourcing has been one of the buzzwords (Porter, 1997), suggest that outsourcing is one of the key sources for increasing a firm's performance.

Various arguments have been provided for such a positive relationship. Because outsourcing makes a firm more nimble, it allows firms to increasingly focus on its core activities (Domberger, 1998; Quinn, 1999). Outsourcing also lowers production costs because specialised suppliers are used (Hendry, 1995; Kotabe, 1998) and it increases a firm's strategic flexibility to deal with technological or volume fluctuations (Balakrishnan and Wernerfelt, 1986; Semlinger, 1993). Outsourcing helps to avoid the costs associated with bureaucracy typically associated with production inside the firm (D'Aveni and Ravenscraft, 1994; Jensen and Meckling, 1976). Finally, outsourcing opens up the possibility of obtaining rents from relations with suppliers (Dyer and Singh, 1998; Linder, 2004).

But vertical integration also has its merits. Older literature in fact took integration as the default mode through which competitive advantage could be obtained (Capon et al., 1990; D'Aveni and Ravenscraft, 1994; Harrigan, 1986). And the world of practice was long infatuated by the benefits of vertical integration, including its ability to increase bargaining power. This older trend is perhaps best exemplified by the Fordist production model, which takes integration to the extreme.

Integration can produce scope economies, especially at those intersections between activities where value is created (D'Aveni

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