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Outsourcing or restructuring: The dynamic choice

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ABSTRACT

This paper examines the role of outsourcing when a firm attempts to establish its true level of production costs in an uncertain context. Outsourcing may provide additional information to the firm about the efficiency of its organizational structure. The information flow that outsourcing gives to the firm creates a real option by delaying the final decision relating to its definitive organizational mode, so that temporarily outsourcing and then resuming operations may be the optimal management decision for the firm.

1. Introduction

In the last few decades, many industries have followed a trend to successively outsource additional segments of the value chain. According to Brown and Linden (2005), U.S. firms in the semiconductor industry followed a historic process of outsourcing to foreign (mainly Asian) firms: first assembly (since the late 1960s), then fabrication (since mid-1980s) and finally design (started in the 1990s). Similarly, in recent years there has been a trend to outsource information technology (IT) activities when companies face their make-or-buy decision; a unique and unprecedented trend that has included the business process and business services outsourcing functions.[1]

Nevertheless, in the process of offshoring (and outsourcing) activities, some manufacturers have rediscovered the virtues of making things at home. A prominent example is Kenwood, a Japanese electronics firm: it shifted production of mini-disc players from Malaysia back to its facilities in Japan, an "insourcing" process that increased its profits.[2] Similarly, in IT activities forming part of firms' value chain, "there have recently been a few reports of 'insourcing,' of Western firms taking back services previously outsourced to India. One of the most publicized cases is the computer firm Dell, which involved call-centre help desks and affected only part of their Indian operations."[3]

Many other sources report on firms that complain about the results of outsourcing being well below expectations.[4] To illustrate, a recent survey by Bain & Co., a consulting firm, found that a hefty 82% of large firms in Europe, Asia, and North America are outsourcing, and 51% are outsourcing offshore. However, almost half say

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[1] For recent accounts on the importance of outsourcing processes, see also Bardham and Kroll (2003), Grossman and Helpman (2002, 2005).

[2] *The Economist*, "(Still) made in Japan," 7 April 2004.

[3] *The Economist*, "The Remote Future," 19 February 2004.

[4] A report along these lines from Forrester Research consultants is cited in Knowledge@Wharton (2005).

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that outsourcing does not meet their expectations.[5] Similarly, a recent study of the organization of IT functions and their costs for a sample of 130 large German companies in banking, retailing, manufacturing, and insurance concluded that "hiving off" the firm's IT operation did not have necessarily increase efficiency or save money (Bloch, 2005).

To be sure, much of the firms' restructuring that led to outsourcing was poorly designed and executed in the first place, with too much emphasis on cost cutting[6]—mainly labor cost reductions when offshoring to developing countries—and too little emphasis on the sound evaluation of the organizational implications. In other words, disappointment with outsourcing (sometimes to the point of withdrawing altogether) seems to be, at first glance, the result of a poor cost-benefit analysis in the make-or-buy decision. For instance, it has been argued that Japanese manufacturers excel at "products whose functions require many components to be designed in careful detail and mutually adjusted for optimal performance." Since these activities require close teamwork, the manufacture of such products should be retained within the firm.[7]

However, cancelling outsourcing cannot always be attributed to poor organizational redesign. This paper demonstrates that, in an uncertain environment, it can make strategic sense for a firm, when restructuring its internal organization, to temporarily outsource, i.e., to create an initial outsourcing process and then to resume the activity back at the firm. A restructuring approach that involves keeping non-core competencies within the firm (the reorganization "made" in-house) is likely to require substantial expenditures and organizational commitment. In this context, it seems realistic to presume that outsourcing may provide relevant information for the restructuring decision. Outsourcing may allow the firm to delay its definitive organizational form with respect to the make-or-buy decision until more information about the environment has been accumulated. Specifically, temporary outsourcing, instead of a strong commitment to maintain only core competencies within the firm in a downsized organization, may be the firm's optimal strategic response to an uncertain framework. Put differently, the firm may postpone the investments that would be required of a restructuring process to maintain in-house production, and choose to outsource for a limited time rather than outsource indefinitely.

With technological uncertainty that resolves over time, outsourcing may be a real option for the firm, providing the opportunity to tailor a decision to future information. The firm may restructure in-house production and learn its true level of efficiency, or it may outsource the activity and learn the value of its intrinsic costs from other firms. For a given efficiency level, the firm will clearly prefer the option of in-house manufacturing, since market relationships involve substantial transaction costs. Hence, in a static situation, it trades off the transaction costs of using the market against the restructuring costs of in-house production.

In a dynamic context, however, outsourcing is a real option, as noted above, since the firm may postpone internal restructuring and use the market relationship with a supplier (outsourcing) as a source of information about the efficient organizational structure.[8] Then, once additional information about the value of outsourcing has been gathered, the firm may reevaluate the decision and balance between restructuring and outsourcing (i.e., it may assess whether it is really worth investing in restructuring in-house production) and choose the optimal level of downsizing. This paper demonstrates how the dynamic optimal choice between immediate restructuring of in-house activities and outsourcing is affected by the possibility of delaying investments. It also shows how temporary outsourcing may form part of the optimal strategy for the company. In fact, outsourcing for a certain period of time and then resuming operations may be a deliberate management policy to defer the decision on in-house restructuring and definitive outsourcing until sufficient information about their costs and benefits has been obtained.

The decision to partially or entirely outsource activities is usually analyzed within a make-or-buy decision framework that evaluates the static trade-off between the transaction costs of market activities and the inefficiencies of internal production. The economic analysis has been built on Williamson's transaction cost theory (Williamson, 1975, 1985) in order to explain whether is it better to integrate a given activity within the firm or to outsource it. A body of literature, commencing with Grossman and Hart (1986), has formalized Williamson's insights. This literature treats the industry environment as given, and focuses on the individual decision of a firm. Hence, it neglects the interdependence between the firms' choices in an industry. More recently, in response to recent trends, some authors have begun to investigate cross-sectional and cross-regional differences in outsourcing behavior. In particular Grossman and Helpman (2002, 2005) examine the make-or-buy decision and the location of outsourcing activity, at home or abroad. Finally, Simester and Knez (2002), in a recent empirical study, document the importance of bargaining and coordination costs both with external suppliers and within the firm. These authors confirm that these costs are higher with external suppliers, and that they contribute to activities being made in-house.

The literature on transaction costs has been able to accurately analyze the costs and benefits of outsourcing at a given moment in time. However, the models are static and do not consider the impact of uncertainty and irreversibility on the outsourcing decision. To illustrate, Bachetta and Dellas (1997) analyze the impact of the speed of information on the restructuring decision of

[5] *The Economist*, "Time to bring it back home," 3 March 2005.

[6] See, in *The Economist*, "Time to bring it back home," 3 March 2005, "Catering for supplies' strikes", 18 August 2005.

[7] "A Twenty-first-century strategy for Japanese manufacturing", by Takahiro Fujimoto, *Japan Echo*, February 2004, as reported in *The Economist*, "(Still) made in Japan", 7 April 2004.

[8] An excellent survey on manufacturing flexibility and real options can be found in Bengtsson (2001).