EFFICIENCY OF BUSINESS PROCESS OFFSHORING: A TRANSACTION COST PERSPECTIVE

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One outcome of rapid globalization in the modern economy has been the emergence of the trend of offshoring various business processes to foreign markets. The trend has been hastened by developments in technology and communication, particularly digitization which tilts the economics of distributed work towards greater dispersion. This paper uses the transaction cost approach to develop propositions on the circumstances under which offshoring is likely to lead to efficiency gains for firms. The propositions are seen to lead towards future testable hypothesis that allow for rich empirical testing. The insights offered here should allow firms to make more effective decisions on offshoring of specific business tasks and processes.

1. INTRODUCTION

The distribution of business service functions across the globe, often referred to as offshoring[35], continues to remain an ongoing, important business trend. While some angst against such offshoring emerged in developed countries, the initial calls for protectionism seem to have slowed down as companies, consumers and policy makers realize that such redistribution of productive functions is merely an inevitable outcome of globalization. Further, such offshoring serves to improve the competitiveness of domestic firms, rather than simply "exporting jobs" a la Lou Dobbs.

Given the inevitability of such offshoring, research attention has naturally focused on firms' efforts to organize and manage activities that are not only geographically dispersed, but also cross national boundaries, invoking differences in culture, economics and politics. One question that has emerged is the need for new theories to study such "trade in tasks" (Grossman and Rossi-Hansberg, 2006). While there might be some justification for the development of new theories, others such as George Mankiw suggest that "services offshoring fits comfortably within the intellectual framework of comparative advantage built on the insights of Adam Smith and David Ricardo."

In this paper, we side with the latter view and invoke a traditional economics framework, transaction cost approach (TCA) to develop a set of propositions regarding the organization of offshored activities. In particular we use TCA to discuss what types of functions or activities are best suited for offshoring in terms of effectiveness. The propositions are designed to lead to hypotheses which can then be empirically tested to determine the performance outcomes of offshoring.

2. TRANSACTION COST THEORY: AN OVERVIEW

The transaction cost literature has been applied in the business literature fairly extensively in recent years, particularly in examining questions relating to where the boundary of the firm should be drawn- or vertical integration type questions (e.g. Anderson, 1985; Anderson and Coughlan, 1987; John and Weitz, 1989). The underlying rationale of transaction cost theory can be summarized as follows. In a given situation, to complete a particular task, a firm has a range of alternatives available to it, from contracting out the task to external agents or partners to 'internalizing' the task and having the company's own employees perform the task. The latter alternative provides a firm with more control, but results in higher integration or internalization costs. The 'governance' structure- the mode of operation- that a firm adopts in a given situation to perform a given task will depend largely on the costs particular to that transaction, i.e. the relative costs of integration to costs of external contracting.

The origins of transaction cost research can be traced to the classic work of Coase (1937). Subsequently, the theory

[35] *We use the term offshoring to denote outsourcing that crosses national borders.*

began to attract widespread attention by the early 1960s, owing to the work of Stigler (1961) and Arrow (1962) which shifted the attention of classical economics to the nature of information costs. Williamson (1975;1985;1991;1996) remains one of the most influential proponents of the approach, while adding precision to the original propositions of Coase. While Coase (1937) talked of transaction costs as the costs of "running" a contract, including drafting, negotiating, monitoring and enforcing contracts, Williamson(1996) added possible opportunity cost of inferior governance structures to such direct costs, broadening the framework. Essential elements of the transaction cost approach are briefly reviewed before their specific applications to franchising are considered.

Coase (1937) found the rationale for the existence of the firm in the failure of markets. In the absence of market failure, or what is today referred to as transaction costs, firms should not exist. Williamson (1975) elaborated on the nature of these transaction costs, providing the more detailed, microanalytical framework that forms the basis of the approach today. For any given transaction, transaction costs appear to be driven by the interplay of two aspects of human behavior, bounded rationality and opportunism, and two aspects of the transaction itself, asset specificity and uncertainty. Bounded rationality refers to the ability to specify all the possible contingencies that might be associated with the contract. Opportunism refers to the assumption that given the opportunity to do so, parties involved in the transaction may seek to maximize their own self interest at the expense of the contract. A priori, it is difficult to identify which party is likely to be opportunistic. Asset specificity refers to the presence of transaction-specific assets , or physical and human assets that are specialized, unique to that transaction and cannot be redeployed elsewhere. Finally, uncertainty refers to the difficulties in specifying the circumstances that surround the transaction ex ante as well as the difficulty in verifying the behavior of the other party ex post (i.e. environmental uncertainty and behavioral uncertainty). The primary consequence of uncertainty is that the firm must either specify a comprehensive contract covering all eventualities or assume considerable transaction costs in ongoing monitoring and negotiating.

Under perfectly competitive market conditions, transaction cost theory would argue that given many suppliers or external partners, the threat of replacement is sufficient incentive to prevent opportunistic behavior. Under such conditions, it is less critical to specify all contingencies and market-contracting modes of operation are more attractive. The cost of integration in this situation is higher than the monitoring costs and hence internalization is less attractive. When however, markets fail- for instance, there are a small number of external partners, or all contingencies cannot be specified- then the probability of opportunistic behavior by the external partner is higher. Under these conditions then, internalization of the task is a lower cost alternative than contracting externally to the market. Market failure then becomes a critical condition for the firm to internalize operations.

One important determinant of market failure is the presence of transaction-specific assets. Where asset-specificity is high, the costs of integrating are considered to be offset by the benefits of internalization, making external contracting to the market less attractive. For instance, if the delivery of a certain service requires very specialized know-how on the part of the individual delivering the service, the benefits in internalizing that individual- i.e. making her an employee, rather than an external partner with a contract- offset the higher overheads of employment. On the other hand, when specificity is low, the benefits of such control over internalized operations are lower than the costs of integration. Intuitively, the more the asset-specificity problem, the less perfectly competitive is the market.

Williamson (1992) then discusses three possible broad forms of organization- markets, where external contracting is more attractive; hierarchies, when internalizing is more attractive; and hybrid forms, where firms try to achieve the benefits of both types of organization. Franchising is considered a hybrid form of organization here, combining the flexibility of the market with the reduced uncertainty of the hierarchy. Geringer (1991) and Fladmoe-Lindquist et. al. (1995) among others use the transaction cost literature to discuss the prospects of contractual relationships substituting for the company's own control and operations through ownership, or the benefits of internalization.

3. RESEARCH PROPOSITIONS

Given the discussion above, we now use the tenets of transaction cost theory to develop some research propositions. Fundamentally, the question we seek to answer is under what conditions is it appropriate to vertically disintegrate business process functions across borders. In other words, given the option of conducting a function in the domestic market versus a foreign market, we seek to identify factors that might tilt the effectiveness of the decision in favor of international distribution. It must be noted here that we are not discussing ownership or structure of the offshoring decision. A firm might choose to vertically disintegrate and yet retain legal ownership of the offshore location through a captive unit. From the point of view of this paper, we are focusing on the location decision, rather than the

ownership decision.

From A TCA perspective, the most important source of the transaction cost itself is information. Ethier (1986) suggests that there are two major types of information, the first of which is a source of competitive advantage itself, for instance know how or intellectual property, and the second is information costs related to managing the transaction itself. What's of importance to note is that technology and the nature of communication allow the firm to 'unbundle' certain transactions that otherwise were more efficiently bundled and internalized. Historically, the cost of monitoring such transactions was so high that it made more sense to vertically integrate the transaction within the firm. However, as digitization allows for more efficient monitoring and control over information, the firm might well gain some efficiency by unbundling some of these information functions and perform some of them in different locations. While relative labor costs and productivities will certainly impact this location decision, of more importance perhaps is the nature of the information itself. Where information is characterized by low degrees of complexity, visible economies of scale and scope and is more easily structured and subject to routine, the transaction costs of managing such processes are significantly lower and hence the activity can be more effectively offshored. On the other hand, when the information process in question is characterized by high degrees of complexity, then bounded rationality implies that the output of such processes is harder to observe, standardize and measure. These processes are likely to lead in lower efficiency gains if offshored.

We must emphasize here that the information costs discussed above are not the actual cost of transmitting information, or the "hardware" costs. Rather they refer to the costs of managing the business process itself that stem from the nature of the information associated with the process that give rise to varying transaction costs for different types of business processes.

The other element of managing a transaction relates to what TCA theorists refer to as enforcement costs. These are the follow-on costs to a transaction that includes measurement and monitoring costs. While offshored work in general leads to higher enforcement costs thanks to distance and other differences in national environments, the question is whether the gains from offshoring offset the higher enforcement costs. Again, for structured, routine and less-complex business process, monitoring is easily achieved through monitoring output, allowing for greater gains in efficiency through scale and lower input cost locations. These processes will again be characterized by lower information costs, in turn lowering transaction costs, making them more viable processes to offshore effectively. This leads us to our first proposition:

Proposition 1: Business processes and tasks that are characterized by lower information costs will impart higher gains in efficiency to the firm through offshoring than processes and tasks characterized by higher information costs.

As identified earlier, one of the most important tenets of transaction cost theory is the role of uncertainty in raising or lowering transaction costs. TCA distinguishes between two types of uncertainty, behavioral uncertainty and environmental uncertainty. In a business process setting where information is much more critical element of the task compared to manufacturing, behavioral uncertainty plays a far more important role in increasing transaction costs. Even under conditions of symmetric information between two parties, difficulties in evaluating the performance of a party creates high degrees of behavioral uncertainty. The difficulty can stem from the nature of the business process itself, or from the difficulty in structuring contractual terms. Naturally, as a firm crosses national boundaries, these difficulties are magnified by legal, political and national differences. Higher degrees of uncertainty implies that firms need to either spend significant resources in either designing and enforcing an all-encompassing contract that specifies every single contingency or in monitoring and negotiating behavior to respond to emergent factors not specified a priori. These higher transaction costs will then offset any efficiency gains from offshoring. Therefore, our second proposition is:

Proposition 2: Business processes and tasks that are characterized by lower behavioral uncertainty will impart higher gains in efficiency to the firm through offshoring than processes and tasks characterized by higher behavioral uncertainty.

The other type of uncertainty relates to market or environmental uncertainty. This refers essentially to the business or business environment related ambiguity, such as technologies that might emerge in the future. TCA indicates that as environmental uncertainty increases, the firm is better served by vertically integrating rather than using the market. As the unpredictability of future contingencies increases, the transaction costs to the firm increase, making internalization a more efficient alternative. Again, environmental uncertainty is increased further when the firm crosses national borders owing to differences in the business environment between countries. Therefore, our third

proposition is:

Proposition 3: Business processes and tasks that are characterized by lower environmental uncertainty will impart higher gains in efficiency to the firm through offshoring than processes and tasks characterized by higher environmental uncertainty.

The final aspect of transaction cost theory we consider here is asset specificity. Following our discussion in the previous section, this refers to the extent to which the value of an asset is tied to the particular transaction itself. There are two sides to the asset specificity aspect of TCA. The first is the problem of opportunism by a party to the transaction. High levels of asset specificity will reduce the threat of opportunism by the party that employs the transaction specific asset. When asset specificity is low, firms incur fewer costs in protecting the asset from competitors because the market offers adequate mechanisms for control. On the other side of the story however is the problem of hold up presented by the party that has not invested in the transaction specific asset; this party can threaten to withdraw from the transaction, affecting the value of the assets owned by the other party. In the case of business processes, the problems of hold up and opportunism depend on the nature of the business process itself. Unlike traditional manufacturing functions, asset specificity here is relatively less concerned with physical asset specificity (a plant or a machine that is particular to the production of a specific product) or even site specificity (given that unbundling and digitization renders site specific advantages relatively irrelevant). Of greater importance here are two other aspects of asset specificity, viz. human asset specificity and design specificity. The former refers to the specific knowledge of workers of the technology and production processes, while the latter refers to specific inputs that are designed for the process. The nature of the business process under consideration for offshoring then affects both these types of asset specificity. For structured, routine and low-complexity processes, the incentive for opportunistic behavior or hold up by the client is relatively low, simply because both human asset specificity and design specificity are inherently lower. An offshore vendor that handles simple order taking functions for instance is less inclined toward opportunistic behavior simply because the client can switch at relatively lower costs to another vendor. Similarly, for the vendor itself, moving the processes and personnel to another client's order taking function is relatively low cost. On the other hand switching costs are much higher for complex, non-routine and unstructured processes. In this case, the training and organization skills required for both parties are likely to be harder to codify and the incentive for both opportunistic behavior and hold up are higher due to higher switching costs. For these type of business processes, both human asset and design specificity are likely to be higher, leading to overall higher asset specificity and associated higher transaction costs. This leads us to our final proposition:

Proposition 4: Business processes and tasks that are characterized by lower asset specificity will impart higher gains in efficiency to the firm through offshoring than processes and tasks characterized by higher asset specificity.

4. SUMMARY AND CONCLUSIONS

In this paper, we set out to use the traditional transaction cost framework to develop propositions that inform firms on conditions under which offshoring might lead to greater efficiency gains. The propositions laid out in this preliminary investigation can be easily converted to testable hypotheses subject to empirical verification, which is the next stage of this research project.

Our view is that the transaction cost framework offers a powerful tool to develop insights into the effectiveness of offshoring for firms. As seen above, the framework offers a valuable means to consider aspects of a transaction that affect the costs and hence efficiency of offshoring of specific transactions. We have argued that the relative tilt towards favorable economics of using digital technologies allows firms to unbundled business functions and tasks that hitherto were tied to the 'hardware' used by firms. Such hardware includes human capital, information and other tacit knowledge that was typically location specific and tightly integrated with core business processes and advantages possessed by the firm. Traditional economics also dictated that these processes were internalized and usually centralized by firms, not solely for control reasons, but largely because the lowered transaction costs and promoted efficiency. On the other hand, as unbundling becomes more feasible due to technology and communication, the economics of the market for these intermediate, digital products tilts towards dispersion and locations in the most cost efficient geographies. These result in an unbundling of the value chain to a degree far greater than what firms typically considered. Nevertheless, we argue that the change in such economics notwithstanding, transaction costs still continue to drive the bottom line of the firm. Unbundling and geographic distribution of bits and pieces of the business process value chain does not automatically become a given, or lead to greater efficiency for the firm. On the contrary, traditional economics still holds good; transaction cost theory provides a robust tool to allow firms to

determine under what circumstances such unbundling and offshoring is likely to add value to a firm's operations.

The logical next step in this research is to develop testable hypotheses and empirically test the propositions laid out in this paper. Countries such as India offer a fertile testing ground for these propositions and this study will seek to exploit this empirical context for future research.

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