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IMPLICATIONS OF TRANSACTION COST, RESOURCE BASED, AND INSTITUTIONAL THEORIES ON VERTICAL INTEGRATION

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ABSTRACT

Intense competition leads to uncertainty and stimulates higher innovation and adoption rates (Ettlie, 1983; Lewin et al., 1987), which will, in turn, increase competition. This competition is further fueled by evolutions in network communication and globalization initiatives promoted worldwide. The increasing trend in competitive pressures will influence the organizational structure of business now and will continue to operate in a global environment. If an organization chooses to produce products/services internally, it incurs higher production costs but lower transaction costs; yet, when buying from a market/vendor, it incurs lower production costs and higher transaction costs. These transaction costs are now significantly lower because of evolution in network communications.

The resource-based view (RBV) contends that if the strategic values of a target function/process, and if the organization possesses internal resources (physical, human capital, and organizational capital) to perform the activity, then it is beneficial to retain the business function/process in-house, while conversely, it is beneficial for the organization to outsource the business function/process. Consequently, the organization can allocate its limited resources to other activities that produce higher return values and acquire required strategic resources from countries which have highly skilled labors and structured methodological knowledge. Institutional theory focuses on gaining social recognition and cultural support and contrasts the arguments of transaction cost theory and RBV, arguing that an external environment's institutional pressures (formal and informal) limit potential outsourcing. This paper intends to evaluate these theories and identify their implications on sourcing decisions and diffusion in vertical integration of organizational structure.

Environment and Virtual Corporation (Outsourcing or Collaborative Production/Services)

Increasing globalization will result in increased competition, thereby creating more pressure on organizations to improve economic performance (Griesinger 1990). Therefore, organizations continuously add and delete layers, levels, and sections to remain competitive (Greer 1995). The first half of the 1990's and 2000's witnessed layoffs, cutbacks, and hiring freezes. Downsizing, rightsizing, restructuring, retrenchment, and outsourcing are current philosophies used for deintegrating the firm, i.e. reducing personnel and units, and thereby, the size of the organizations (D'Aveni and Ravenscraft 1994). These approaches look for higher productivity with fewer people. As organizations restructure, downsize, rightsize, and reengineer, they increasingly question the need to perform many traditional business activities themselves when there are expert providers

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available in the marketplace. The outsourcing decision has been framed as a make-or-buy decision (Venkatesan 1992), as a vertical integration issue (Walker and Weber 1984), and as a governance issue (Williamson 1985). Conversely, *outsourcing* implies doing the same work with no personnel or disintegrating functions (partial or full) from the organization and purchasing the same services by long-term contracts from external sources. Offshoring or offshore outsourcing is the provision of services from a country that is geographically remote from the client enterprise (Arora and Arora 2004).

In the 1960's, only 10% of the U.S. economy had global competition, whereas, in the 1970's, that figure rose dramatically to 70% (McNurlin and Sprague 2006). In response to global competition, companies had to **focus** on core businesses in the 1980s and provide **value** to their share holders price, based on discounted cash flow. These two drivers – focus and value – are still leading companies to restructure and focus on core businesses by asking themselves, “Where do we really add value?” Thus, outsourcing, another name for vertical disintegration of firms, is part of the drive for focus and value and is not solely a functional issue, says Bergstein; rather, it is a business issue. Because top management stresses value, they must consider outsourcing in all their functions (McNurlin and Sprague 2006). Further, in a global economy, the outsourcing/offshoring of non-core functions become essential and provides higher productivity to the organizations (Brandel 2005, King 2003, and Weiss, 2003). The vertical disintegration through outsourcing can also help organizations in becoming flexible and able to operate with a leaner management structure, reducing risks and becoming very responsive to environmental changes. Furthermore, it helps increase competence and critical-mass volume of work (Applegate et al., 2007). In the past, the transaction cost, resource-based and institutional theories strongly supported the vertical integration of organizations. However, in a fast changing environment, these theories do not hold the earlier stand.

In the beginning of industrial revolution, mostly everything was produced in the same industry. As the product slowly became complex and the scale of operations started increasing, the risk level elevated and the management of entire operations within the corporation became unfeasible. This has resulted in vertical disintegration of the corporations and outsourcing stepped-in in the manufacturing sector. Initially, the work was completed where the company was physically located, but as travel and communication became easier in the 1970s and 1980s, manufacturing started moving offshore.

Economic development in Japan and Europe in the 1990s generated an environment that helped outsourcing practices, which is motivated by a desire to achieve improvements in the organizational structure, revenue enhancements, and cost reductions. Outsourcing was introduced in Japan in the 1980s, and a recent survey reports that 40 percent of Europe's 500 largest companies are engaged in offshore outsourcing. Outsourcing is also not new to the U.S. For decades, the U.S. firms shifted blue-collar jobs to the low wage countries, but now they are outsourcing white-collar jobs to save money and boost profits. Manufacturers of autos, computers, clothing, shoes, telecommunication equipment and other products have been using multiple inshore and offshore sources to obtain components of their products for quite a long time. The offshoring of IT began in 1980s with the transfer of hardware work (the production of computer chips) to Asia (Nakatsu and Iacovou, 2005). The authors cite major companies relocation of key manufacturing operations to China during the late 1980s and early 1990s to take advantage of its cheap labor and other incentives offered by the Chinese government under Special Economic Zones. Similarly, manufacturing operations had been outsourced to Mexico under NAFTA. Since then, U.S. companies have shifted their emphasis on higher-value microprocessors. This shift, combined with globalized production and international trade, resulted in IT hardware

up to 30% less expensive than it otherwise would have been. As Y2K approached, many U.S. companies decided to outsource their information technology to India. ITAA estimates that spending for global sourcing (near-shore and offshore outsourcing together) of IT will increase from \$10 billion in 2003 to \$31 billion in 2008.

Benefits

In addition to savings in labor cost, the indirect benefits of outsourcing may be the most important. By outsourcing nonstrategic activities, organizations can devote more time and attention to core activities that give them a competitive advantage. Outsourcing can reduce the size of the organization and make it less hierarchical, allowing it to focus on obtaining, developing, and motivating the people who create value. It can also allow a shift in management attention toward strategy, coordination, and the skills that promote competitive success (Quinn, Doorley, and Paquette, 1990). By identifying their core competencies and strategically outsourcing other activities in which the firm has no unique capabilities, the firm engages in what is termed “strategic outsourcing” (Quinn and Hilmer, 1995, p.1) and can generate a number of benefits, including:

- Extracting maximum benefits from internal activities, since they represent what the firm does best.
- Maximizing their competitiveness and protecting or even expanding their market share.
- Effectively utilizing supplier’s capabilities.
- Decreasing risks, shortening cycle times, and fulfilling customer needs.

These views of a competitive advantage represent a shift in management thinking and open the door to what some call “The Virtual Corporation” that produces world class products and delivers world class services by organizing suppliers and vendors to do many of the activities in the value chain or many of its business processes.

Global Industry Value Chain: Outsourcing decisions are organizationally driven, improvement-driven, financially driven, revenue, or cost-driven (Outsourcing Index, 2003). Offshore outsourcing can be viewed as a component of corporate and industry international expansion and restructuring. A recent McKinsey Global Institute Report (Farrell, 2003) identifies five horizons of the global industry value chain:

- Market entry: Entering a country for purposes of market expansion.
- Product specialization: Specialization takes place in different locations, and each location may engage in final goods trade with each other.
- Value chain disaggregation: Product components are manufactured in certain locations and assembled elsewhere.
- Value chain reengineering: Reengineering processes to capture additional advantages from production cost differentials.
- New market creation: New market segments are penetrated as a matter of capturing the full value of a company’s global activities

According to another McKinsey study, effective outsourcing implies identifying and managing the “natural owner” of every activity in the value chain. Since offshore outsourcing arises from the basic reality of the global environment, any company, in any country, may be the natural owner! This can then lead to a drastic restructuring, including “unbundling” of the companies affected. Indeed, as total interaction costs among companies and industries are changing,

companies around the world are reorganizing by providing the answer to their question: what business are we in? (Hagel and Singer, 2004, p.1).

Vendors' Advantage: The critics of outsourcing often rest their case on assumptions that internal functions should be able to do what vendors do, if they only applied good management practices and worked efficiently. Sometimes this is true, but in other instances it is not. Consider the ways vendors could hold an edge (Klepper and Jones, 1998):

- *Scale*
 - Multiple clients allow a vendor to operate at a scale unattainable by any single organization.
 - A large vendor can buy and fully utilize large, powerful, and more efficient equipment than clients who operate at a smaller scale.
 - A large-scale vendor has a considerable advantage in negotiating price and service with providers of equipment and software.
 - Large-scale vendors can maintain a bench of technical experts with greater range and depth than any of their clients because the vendor can utilize their expertise efficiently and effectively when spread over multiple clients on a flexible, as needed basis.
 - Large-scale vendor management can specialize, focus, and gain repeated experience with management of tasks that would only come around once in the careers of many IT managers. As a result, vendor management may be more skilled and experienced, as a result.
- *Experience:* Because of the variety of clients and circumstances vendors encounter, vendors have a depth and range of experience that individual clients cannot match. Vendors can go through multiple restructuring and conversions that could only happen once in the experience of in-house personnel. Just as the best surgeons tend to be those who do many operations of the same type, day-in and day-out, vendors who do the same difficult tasks repeatedly gain an advantage over those who do them infrequently or only once.
- *Specialization:* The ability to specialize in skills also extends to experience with new technologies. Organization's employees will only encounter conversion to a new operating system or client-server architecture once, but through experiences with multiple clients, vendors' employees can have this experience numerous times and gain a real advantage in knowledge, speed, and efficiency. Secondly, being on the cutting edge in technology and methods is a big attraction to hiring and retraining the most talented people. Vendors can often offer these experiences on a more consistent basis to personnel than the typical IT department. For this reason, vendors often have very good employees with the latest experience, something difficult to reproduce in other organizations.

Economic Review

Quinn et. al., (1990) stated to think of a corporation as a collection of services that provide value. To think in these terms is to concentrate on the activities that create most of the value, which is added in style, image, durability, after-sales maintenance, and the like, as much as in the actual fabrication of a product. The leverage comes in analyzing all the services that comprise the company, discovering which actually give or could give the firm an edge over competitors, concentrating on doing a world class job in delivering these strategic services internally and acting to "eliminate, limit, or outsource" the rest. Instead of analyzing market share, Quinn et. al., (1990) urged managers to analyze the strength of the service components of their business relative to its competitors.

Outsourcing/offshoring is growing in many areas of the firm (Marinaccio 1994, Robinson and Kalakota 2005) including human resources, information technology, marketing, logistics, transportation, warehousing, security, maintenance, legal services, and research and development. Motives for outsourcing include transaction cost economies, reduction of business risk, greater access to highly skilled assistance, and synergism through focused activities in other core areas. This outsourcing benefits firms by limiting the drawbacks of vertical integration which include: (1) greater cost as throughputs from different stages of production are delayed because of processing incompatibility (Harrigan 1983), (2) reduction of industry mobility and increased exit barriers creating strategic inflexibility which traps firms with obsolete strategies and technologies (Harrigan 1985), (3) compel units to purchase throughputs internally, away from competitive pressures of the open market (Quinn 1992), and (4) greater integration increases problems of coordination among complex and interdependent activities (D'Aveni and Illinitich 1992). However, the findings of these studies was limited to the past periods. Since the environment changes very quickly, our study is focused on extending these past studies with a focus on transaction cost, resource-based, and institutional theories.

According to the economic theory, free trade of goods and service creates wealth when private firms compete and innovate to increase profitability and productivity. Businesses can also outsource non-core activities to reduce waste and cut costs. The authors cite reduction in operating costs, freeing up of internal resources for other purposes, and an improvement in the profit margins as the main reasons to outsource (Arora & Arora 2004). As an example, outsourcing/offshoring of IT work has provided larger cost savings for the public, as well as private, sector's growth, which has been the fastest growing area since the late 1990s. The reduction in transaction costs associated with finding vendors, monitoring their work, and sending their work overseas is helping to reshape the modern company. Transaction cost theory assists managers in thinking about whether to buy, build, or partner (Robinson & Kalakota 2005), and with diminishing transaction costs and continued globalization, off-shoring will grow steadily. Therefore, it is anticipated that with lower transaction off-shoring costs, companies will be able to focus on narrow product slivers or business activities and have external parties complete the rest. This implies that off-shoring might actually be good for developed countries because increasing the living standards in other countries increases their citizens' demand for consumer products that can, in turn, be supplied by highly efficient companies in developed countries.

Furthermore, white-collar off-shoring has been inevitable, argues author Altman (2004), because service sector productivity in the United States has not kept up with manufacturing sector productivity. In the early 1950s, each service sector employee produced about \$39,000 in output (in 2000 dollars), while in manufacturing, the output was \$48,000. Now, 50 years later, service productivity has increased to \$54,000 (a 47% increase), whereas manufacturing productivity is at \$207,000 (a 330% increase). Due to international competition manufacturers have been forced to increase their productivity to stay in business, mainly by increasing the quality of their products (Altman 2004). It should come as no surprise that service companies are tapping cheaper sources of labor because of globally available telecommunications technology. Altman (2004) believes that this global competition in services will force American companies to increase the productivity of their workforce and the quality of their services in the same way.

Transaction cost, Resource-based, and Institutional Theories

Transaction Cost Theory (TCT)

focuses on achieving the cost efficiency associated with completing a transaction (David and Han 2004), arguing that organizations should take into consideration the total cost (production

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and transaction) of product or services when deciding on the “make-or-buy” strategy (Barringer and Harrison 2000, Williamson 1979). These production costs include the cost of capital, labor and materials (Williamson 1975), while transaction costs encompass negotiating, monitoring, controlling, and managing transactions (Williamson 1975). If an organization chooses to produce products/services internally, it incurs higher production costs, but lower transaction costs; yet, when buying from a market/vendor, it incurs lower production costs and higher transaction costs. Three dimensions of transaction affect production and transaction costs: asset specificity, uncertainty, and frequency.

The **Asset Specificity** of a transaction is “the degree to which the assets used in support of the transaction can be redeployed to alternative uses and by alternative users without sacrifice of productive value” (Williamson 1975, p.282). Special purpose equipment for the given product is considered a higher degree of asset specificity.

Uncertainty relates to the level of complexity (Lacity and Hirschheim 1993), and **Frequency of a Transaction** is “the number of times the buyer seeks to initiate the transaction” (Lacity and Willcocks 1995, p. 205). A higher asset specificity or higher frequency will increase production, while higher uncertainty increases transaction costs. The offshore outsourcing benefits organizations from low labor cost (DiamonCluster International 2004, Hoffman and Thibodeau 2003, Morstead and Blount 2003, Terdiman 2002), while its transaction costs increase due to the geographical locations of the buyer and vendor, time zone differences, and differing government rules and regulations (Qu and Brocklehurst 2003). However, in the current environment, technology changes very fast and innovations can be duplicated in a month (Porter, 1996). Therefore, in most of cases, vendors will be more knowledgeable and competent in their product/service line, and individual organizations cannot keep up with the changes in such products or services. The asset specificity, uncertainty, and frequency will have a limited effect once an organization decides to collaborate with vendors through outsourcing or any other form of partnership.

The Resource-based View (RBV)

contends (Barney 1991) that if the strategic value of an organizational process/function is high, and if the organization possesses resources (physical, human capital, and organizational capital) internally to perform the activity, then it is beneficial to retain such processes/functions in-house (Roy and Aubert 1999, Roy and Aubert 2001). However, if the strategic value of a target activity is low and the organization does not possess resources internally to perform the activity, then it is beneficial for the organization to outsource the activity (Aubert and Weber 2001, Roy and Aubert 1999, Roy and Aubert 2001) in order to allocate its limited resources to other activities that produce higher return values (Lacity and Willcocks 2001, Quinn 1999) and acquire required strategic resources such as accounting (tax filing), radiography skill set, technical IT skill sets, technological assets, and IT managerial skill sets (Dibbern et al. 2004, Dibbern and Heinzl 2002, Duncan 1998, Loh and Venkatraman 1995) from countries such as India, which has highly skilled professionals and IT laborers and structured methodological knowledge (Qu and Brocklehurst 2003).

In the current environment, it is very difficult for the organizations to keep its competency level in all functional areas. It becomes mandatory for the organizations to rely on external supports for most of non-core activities. The assured reliance is possible through collaborative arrangements including outsourcing.

Institutional Theory focuses on gaining social recognition and cultural support (Lawrence 1999) and contrasts the arguments of TCT and RBV, arguing that an external environment's institutional

pressures (formal and informal) such as *coercive, mimetic, and normative* (DiMaggio and Powell 1983) limit potential outsourcing decisions (Barringer and Harrison 2000, DiMaggio and Powell 1983, Greenwood and Hinings 1996, Meyer and Rowan 1977).

Coercive: pressures are exerted by resource-dominant organizations, government and other regulatory bodies, and parent corporations (DiMaggio and Powell 1983, Teo et al. 2003); confirmation is required for survival.

Mimetic: pressures arise from environmental uncertainty (DiMaggio and Powell 1983) and in such situations, organizations tend to model themselves after those who are well established, legitimate leaders in their environment (DiMaggio and Powell 1983, Meyer and Rowan 1977).

Normative : pressure is associated with professionalization, and in such situations organizations follow the norms set externally by society, by professional activities, or by other influential organizations and networks (DiMaggio and Powell 1983). The domestic outsourcing literature shows that many organizations fall into the 'bandwagon effect' (Hirschheim and Lacity 2000, Lacity and Hirschheim 1995), where they simply follow their peers to outsource. Loh and Venkatraman (1992) asserted that after Kodak announced its outsourcing contract on the IT industry, the number of outsourcing contracts increased significantly. However, Ang and Cummings (1997) found that governmental pressure has a negative impact on the organization's intention to outsource. Additionally, the success stories of offshore outsourcing in organizations such as GE, Nortel, and MasterCard (NeoIT 2004) instill confidence in other organizations, as well as provide a template for others eager to follow them (DiMaggio and Powell 1983, Greenwood and Hinings 1996). Conversely, the oppositions raise concerns of potential job and knowledge loss to the home country (Koch 2003, Morello 2003b), along with their customers' (King 2004, Patrick 2004) and stockholders' opinions (Furlonger et al. 2003) towards offshore outsourcing, since it affects their stock price (King 2004). Additionally, new government regulations (DiamondCluster International 2004, Smith et al. 1996) that impose stricter policies against offshore outsourcing, such as Connecticut, recently introduced the U.S. Workers Protection Act (Thibodeau 2004) and Washington State's regulations that bar state agencies from using offshore vendors (King 2004).

Affordability

As discussed earlier, the cost of outsourcing a business process/function will be lower than in-house operation. If an organization decides to undertake all activities in-house, its cost (direct and indirect) will be much higher with growth in the organization's operational level (Figure 1). Can these organizations afford resources to maintain all processes and functions to that level? It is often difficult to measure the benefit and justify the maintenance of such processes/functions in-house, yet senior managers are attracted to outsourcing as a way of making costs predictable and assuring that the organization is paying the "market price" for such services.

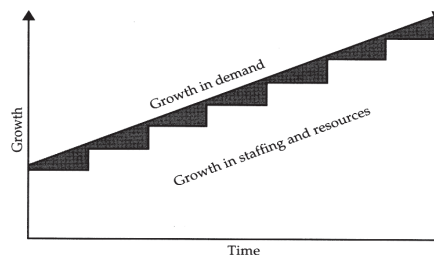


Figure 1: Growth in Staffing and Resources to Develop and Maintain business processes/functions (Source: The concept is adopted from – Managing the IT Services Processes by Noel Bruton, 2004, Butterworth Heinemann, U.K., pp.14)

Concluding Remarks

The fast changing and unpredictable environment is motivated to relook at the transaction cost, resource-based, and institutional theories and their implications on vertical integration of the organizations. In the following period organizations need to be flexible and adaptable as well as control the costs of its operations. Such flexibilities and cost control are possible through outsourcing or business partnership, which will help organizations in reducing risk and remaining competitive in a global environment.

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