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The Behavioral Consequences of Outsourcing: Looking Through the Lens of Paradox

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Executive Summary

The perspectives of transaction cost economics and the resource-based view of the firm have been used extensively to understand the implications of outsourcing. However, transaction cost economics does not explain how a firm will evolve as it progressively outsources internal functions, and the resource-based view does not operationalize the unspecified competences that will be required over time. On the other hand, the lens of paradox highlights the increased expediency and complexity that outsourcing firms are expected to encounter. In this paper, paradoxes comparing operational expediency gains to increases in management, learning and strategic complexity are discussed, leading to the proposal that often unintended replacement behaviors manifest as extensive boundary spanning and new firm-level competencies are necessary to manage these paradoxes and maintain competitive advantage. In extremum tests of these propositions are provided to demonstrate that the complexity of outsourcing intangibles is informed by a lens of paradox.

Outsourcing has become common practice over the last ten years (Hoecht & Trott, 2006), and firms have embraced it for a variety of reasons, including cost reduction (Hormozi, Hostetler, & Middleton, 2003; Kakumanu & Portanova, 2006), conversion of fixed costs to variable costs (Alexander & Young, 1996), access to advanced expertise and technology (Harland, Knight, Lamming, & Walker, 2005; Hormozi, et al., 2003; Kakabadse & Kakabadse, 2002; Quinn, 2000), flexibility (Jennings, 2002), and the ability to focus on core competencies (Quinn & Hilmer, 1994). However, there are downsides to outsourcing. These include the risk of overdependence on a supplier (Adler, 2003; Barthelemy & Geyer, 2004), information leakage (Hoecht & Trott, 2006; Jennings, 2002; Kakumanu & Portanova, 2006; Mahnke, 2001), failure to estimate hidden costs properly (Barthelemy, 2001; Tadelis, 2007), and loss of competitive capability (Adler, 2003; Barwise & Meehan, 2005; Willcocks & Feeny, 2006).

The implications of outsourcing have been considered using a number of competing theoretical perspectives, most namely transaction cost economics and the resource-based view of the firm. The transaction cost perspective offers a clear set of guidelines that the firm can use to determine when and how to outsource, especially because an "economic organization is shaped by transaction cost economizing considerations" (Williamson, 1985, p. xii). Transaction cost theory can even anticipate the impact of "*ex post* misalignments", at least to the extent that the "difference between rather than the absolute magnitude of transactions costs" (Williamson, 1985, pp. 21-22) can accurately be assessed. As a result, this orientation makes it convenient to model the consequences of outsourcing as a set of economic trade-offs and styles of contracting (Williamson, 2008). The resource-based view offers insights into ways in which a firm's distinctive capabilities and resources relative to those of its rivals can become the basis for competitive advantage if matched appropriately to environmental opportunities (Peteraf, 1993). As a result, numerous researchers have discussed the role of core competency in determining which functions should and should not be outsourced (Jennings, 2002; McIvor, 2003; Quinn & Hilmer, 1994). Hence, the resource-based view has been an important perspective from which to assess the outsourcing decision process (Espino-Rodríguez & Padrón-Robaina, 2006; Holcomb & Hitt, 2007).

The efficacy of using these two approaches is less clear when it comes to understanding the behavioral and organizational requirements which follow from the outsourcing decision, however. A stream of research has shown that outsourcing increases the operational expediency of the firm, either by transferring activities to external providers (Bailey, Masson, & Raeside, 2002; Greaver, 1999; McCarthy & Anagnostou, 2004; Quelin & Duhamel, 2003; Sharpe, 1997) or through the utilization of third party capabilities (Gilley & Rasheed, 2000; Lei & Hitt, 1995; Mol, Van Tulder, & Beije, 2005; Quinn & Hilmer, 1994). While it may be possible to assess the cost implications and benefits of a decision that reduces the size of the firm, it is less clear that transaction cost economics can readily categorize the extent of the behavioral and organizational changes that will occur in this now-smaller firm, especially given that researchers have suggested that outsourcing actually increases – rather than reduces – organizational complexity, costs and effort (Barthelemy, 2001; Harland, et al., 2005; Rothaermel, Hitt, & Jobe, 2006). Similarly, the resource-based view helps define the capabilities that a firm might use to gain advantage, but efforts to explain how firms develop such capabilities have been minimal (e.g., Helfat & Peteraf, 2003). Moreover, the causal ambiguity and path-dependent elements of the resource-based view make it difficult for managers to consciously build or create capabilities (Lado, Boyd, Wright, & Kroll, 2006). Consequently, the limitations of explaining *ex post* adaptation through either a transaction cost or resource-based lens become noteworthy.

The possibility that outsourcing can, on the one hand, reduce organizational complexity and yet, on the other, increase it, creates a logical paradox. It is intuitive to expect that the transfer of activities will eliminate areas to be managed, just as it is also logical to expect that the new dependencies caused by outsourcing relationships can introduce new behavioral requirements – an aspect of outsourcing study that has received little investigative attention. However, it is only when these two tendencies are associated as a paradox that it becomes evident that the new behavioral requirements adopted by the firm are replacing the activities which have been outsourced, possibly creating a causal relationship. For this reason, the fundamental objective of this study is to utilize paradox as a lens by which to investigate the organizational effects caused by outsourcing. Rather than be interpreted as a competing perspective, the paradox lens should instead be seen as an effective complement to both transaction cost economics and resource-based views and one which highlights the behavioral phenomena that occur within organizations as they increasingly resort to outsourcing.

There are a number of worthwhile reasons to embrace a new lens for outsourcing. First of all, organizations do not always realize the return they project (Ellram, Tate, & Billington, 2008; Tadelis, 2007), so there is value in utilizing perspectives which will refine the theories used to evaluate and select outsourcing alternatives. Second, a clearer insight into the factors which cause "ex post misalignments" (Williamson, 1985, p. xii) can enlighten those theories which predict the behaviors the firm will employ after making the outsourcing decision. Finally, the insights generated through this perspective can offer new avenues for behavioral researchers to investigate outsourcing in order to generate actionable implications for managers.

The purpose of this article is to use the perspective of paradox to construct theory on the manner in which firms' behaviors evolve as a result of their outsourcing decisions. The first assertion of this article is that firms progressively transferring functions externally through outsourcing ultimately will replace those operations with new, incremental, and more complex processes and routines. The second assertion is that firms intending to eliminate "non-core" functions through outsourcing will replace those functions with higher-order competencies that become more critical to the long-term survival of the firm, thereby becoming new "core" functions. Hence, outsourcing creates the paradox that reduced effort induces increased effort and seemingly non-critical functions give rise to increasingly critical functions. Firms may be able to evaluate economic trade-offs through comparison of transaction cost derived alternatives, but they can only accept, confront or transcend paradoxes (Lewis, 2000). While the conclusions of this paper build on a number of assertions that have appeared in the literature, its primary contribution is that it is the first study to set these components into a broader framework addressing organizational implications.

The remainder of this article begins with a brief review of the literature on paradox. It is followed by a discussion of the ways in which the operational expediency gains of outsourcing are offset by increases in management, learning and strategic complexity. In the subsequent section two propositions suggesting how firms with effective supply chains can transcend these paradoxes are put forward. Finally, the propositions of this paper are tested *in extremum* and the implications for further research are discussed.

The Nature of Paradox

Paradoxes are becoming a fundamental aspect of organizational life (Clegg, de Cunha, & de Cunha, 2002), and there is a rich stream of literature in which their implications on the management of the firm are discussed (Lado, et al., 2006; Lewis, 2000; Marsh & Macalpine, 1999; Rhinesmith, 2001). Rosen (1994, p. xvii) describes paradox as the "dynamic tensions of juxtaposed opposites", reflecting Cameron's assertion that paradoxes contain "contradictory, mutually exclusive elements that are present and operate equally at the same time" (1986, p. 545). On a general level paradoxes "grab our attention", on a rhetorical level they represent the "opposition between two accepted theses" and on a logical level they juxtapose two arguments which singly are "incontestable" but together are "inconsistent or incompatible" (Poole & Van de Ven, 1989, p. 563).

The presence of such contradictory and inconsistent elements highlights the challenge of managing paradox: reconciling its inherent tensions. Organizational settings are prone to paradox (Luscher, Lewis, & Ingram, 2006), and even fundamental aspects of management are paradoxical, such as whether it is an art or a science (Parnell, 2006). Practitioner-oriented investigations of paradox find that managers in a firm may have trouble dealing with the apparent inconsistencies represented by paradoxes (Marsh & Macalpine, 1999), causing some to conclude that, unlike problems which are solvable, paradoxical situations can only be managed (Rhinesmith, 2001). Nevertheless, paradoxes can provide new levels of insight once it is recognized that these seemingly incompatible positions are interrelated and interdependent. A reflective approach to paradox, in which managers embrace inconsistencies as a source of new information, can enable the firm to explore new and otherwise unseen opportunities (Luscher, et al., 2006; Luscher & Lewis, 2008). To maintain that they are solvable or unsolvable, or to dwell on either possibility, is to therefore ignore the potential offered by the two opposing positions (Clegg, et al., 2002). In the next section of this paper, three specific paradoxes of outsourcing are discussed in order to better highlight the nature of the tensions they create for the firm.

Three Outsourcing Paradoxes

Given that paradox is a fundamental aspect of organizational life and that an inspective lens of paradox may yield important new insights (Clegg, et al., 2002) three paradoxes created by outsourcing decisions are considered in this section to probe the question "What happens to the firm after it outsources?" The first paradox discusses how the perceived reduction in operational scale causes the firm to exert incremental managerial effort; the second explains how efforts to simplify the firm's operation cause the firm to need additional learning, and the third discusses how the outsourcing of seemingly non-core competencies can create strategic dependence on new competencies.

Paradox 1: Operational Expediency vs. Management Complexity

Infrastructure reduction is implicit in the definitions of outsourcing found in the literature. Previous researchers have described outsourcing in terms of the transfer of activities to a third party (Bailey, et al., 2002; Greaver, 1999; McCarthy & Anagnostou, 2004; Quelin & Duhamel, 2003; Sharpe, 1997), the acquisition of services from a third party (Gilley & Rasheed, 2000; Quinn & Hilmer, 1994), or the utilization of the capabilities of a third party (Lei & Hitt, 1995; Mol, et al., 2005). While outsourcing can sometimes be relatively unobtrusive to the staff of a firm (e.g., the transfer of technology hosting to a service provider), at other times it can be very disruptive, resulting in the relocation of staff and equipment to the outsource service provider (Willcocks & Feeny, 2006).

Despite the fact that outsourcing enables firms to reduce their operating infrastructure, it interjects the requirement for management to support the functional areas that were outsourced. In their study of microcomputer industry firms that sourced functions internally and externally, Rothaermel, Hitt and Jobe (2006) note that management effort increases as firms enter into greater numbers of outsourced relationships until such efforts reach the level where management can become overloaded. At that point the transaction costs of outsourcing outweigh the benefits of the relationships. In the literature there are indications that extensive management effort is the largest category of hidden cost for the outsourcing firm (Barthelemy, 2001) and should therefore be seen as a significant risk area (Harland, et al., 2005).

While transaction cost-based analysis provides an effective tool with which to suggest such managerial effort, that view does not necessarily provide the behavioral insights needed to operationalize the new management responsibilities firms will be forced to develop. Foremost among these requirements are the ability to influence external parties, effect timelines which are not under their direct control, and react to conditions and challenges posed by their outsource providers. Willcocks and Feeny (2006) note that outsourcing requires different skills, attitudes and behaviors from those found in traditional functions, and Takeishi (2001) comments that firms generally need to develop abilities to coordinate such activities. This is not merely a challenge of quantification; it represents an area of potential risk since many firms do not inherently have the capability to manage these skilled resources (Adler, 2003).

Firms therefore need to expend additional effort to hire and/or develop such individuals. Lonsdale (1999) suggests creating a strong cross-functional team or, at least, a person with strong cross-functional skills, to manage the ongoing process with the outsource provider. However, the effort of doing this should not be discounted since cross-functional teams are considered the most complex team structure to implement within the firm (Sheard & Kakabadse, 2004). Barthelemy (2001) calls for the formation of a department within the firm to capitalize on outsource management expertise, noting that such a department could be expected to be more valuable than outside consultants since it would operate with the context and culture of the outsourcing firm.

Although the elimination of the outsourced function generally results in the reduction or elimination of the direct operational tasks associated with the function, firms will also expend increased effort in order to administer the indirect aspects of that function. In other words, operational functions moved outside the locus of the firm create the need for additional managerial functions within the locus of the firm. This first paradox of outsourcing therefore indicates that outsourcing requires the firm to coordinate skilled individuals, new functions, attitudes and behaviors that are not traditionally present in the firm (Willcocks & Feeny, 2006). While reducing the need for some, or all, of the existing infrastructure, outsourcing creates the need for new, replacement infrastructure. Since firms often outsource functions that are not within the same knowledge domain (such as manufacturing, information technology, human relations, payroll and other accounting functions), as firms progressively outsource each area it is highly likely that outsourced functions will be replaced by investment in incremental managerial effort.

Paradox 2: Operational Expediency vs. Learning Complexity

Various models have been proposed to categorize the phases of the outsourcing process. However, these models tend to focus more on the selection stages of the outsourcing process than its management requirements. These models begin to suggest the increased level of learning complexity that is highlighted by the second paradox.

Johnson (1997) identifies six phases of outsourcing (strategic analysis, identifying the best candidates, defining requirements, selecting the providers, transitioning the operations, and managing the relationship). Greaver (1999) describes seven phases (planning initiatives, exploring strategic implications, analyzing costs / performance, selecting providers, negotiating terms, transitioning resources, and managing relationships). Lonsdale and Cox (1998) introduce the element of termination in their six phases (assessment of criticality of business activity, assessment of supply market, selection of appropriate types of supplier relationship, supplier selection, supplier management, and re-tender or return in-house). Momme (2002) also suggests six phases, defining them in terms of functional requirements (competency analysis, assessment and approval, contract negotiation, project execution and transfer, managing relationship, and contract termination). Finally, using the perspective of the cost implications of outsourcing, Barthelemy (2001) proposes four phases (vendor search and contracting, transitioning to the vendor, managing the effort, and transitioning after outsourcing).

It is in the areas of relationship management and resource transitioning that the need for new knowledge-based routines surfaces. These knowledge-based routines include the assessment of core competencies and competitive advantage (Christensen, Verlinden, & Westerman, 2002; Espino-Rodríguez & Padrón-Robaina, 2006; Jennings, 2002; McIvor, 2000; Quinn & Hilmer, 1994; Sislian & Satir, 2000), comparison of pre-sourcing alternatives (Davenport, 2005; McIvor, 2003; Pati & Desai, 2005), technology scanning (Feeny & Willcocks, 1998; Willcocks & Feeny, 2006; Willcocks, Feeny, & Olson, 2006), relationship management (Birchall, Tovstiga, & Chanaron, 2001; Hoecht & Trott, 2006; Holcomb & Hitt, 2007; Momme, 2002), and organization learning capability (Espino-Rodríguez & Padrón-Robaina, 2006; Mahnke, 2001; Spekman, Spear, & Kamauff, 2002). This is consistent with McIvor's (2003, pp. 392-393) argument that an organization shifts into more skill-bound modes as it progressively outsources functions to third parties:

> It has been shown that when a company increasingly outsources the production and assembly of its products, the majority of activities being performed internally are the support activities of the value chain such as design, engineering, procurement, and customer service. The management and integration of these activities are predominantly people and skill based tasks.

Effective management of outsourced relationships is an important skill for a firm to acquire. A firm may outperform its competitors by specializing in managing such supplier relationships (Kay, 1993), and studies note that firms which invest in relationship-building mechanisms perform better than those which do not (Espino-Rodríguez & Padrón-Robaina, 2006; Kale, Dyer, & Singh, 2002; Rothaermel & Deeds, 2006; Takeishi, 2001). However, this is generally a competency that needs to be learned and developed (Holcomb & Hitt, 2007). Loasby (1998, p. 139) adds that "no person can know enough to control a complex firm…Managing capabilities is itself a capability."

Willcocks and Feeny (2006) provide an example of the need to maintain capability for one such area, technology scanning, in their case study of information technology (IT) outsourcing at DuPont. Even though outsourcing had begun to produce the anticipated economic benefits, DuPont found that it had sacrificed the ability to gain strategic value from its IT function. DuPont corrected this through internally managed competency modeling and career development self-services, improving the skill set of the workforce and making them more able to provide ongoing IT leadership. In a world-wide survey of 650 companies, Koudal and Coleman (2005) noted that the majority of the companies' value chains lacked capability to generate new products and sustain them over their lifecycles. Dispersion of operations around the world was found to reduce costs, but most of the companies identified by Koudal and

Coleman (2005) had not learned how to develop the technology to run the innovation and production lifecycle process effectively.

Supply chain know-how required by outsourcing firms is not limited to scanning behaviors or the presence of coordinating technologies, however. Tadelis (2007) has noted that the hidden costs of outsourcing most often involve the transfer of knowledge and scope of work along with effort of relationship management. Spekman, Spear and Kamauff (2002) found that elements of supply chain relationships, such as trust, commitment, communication, decision-making style and company culture, lead to greater learning in the supply chain which, in turn, positively influences the performance of the value chain. However, they also argue that such skills are neither automatic nor easily adopted, especially given that residual mistrust from previous, adversarial procurement relationships can be slow to erode. Firms engaged in multiple, short-term strategic outsourcing initiatives may therefore encounter difficulty developing the conditional trust necessary to guide the relationship (Adler, 2003; Hoecht & Trott, 2006). Knowledge-sharing routines (Dyer & Singh, 1998), as well as mechanisms to accumulate past experience, articulate it and codify processes (Zollo & Winter, 2002) are therefore needed to improve performance and overcome coordination problems.

Although outsourcing eliminates the routines performed when that function was managed internally, firms that outsource will also need to learn new, higher-order routines which enable them to interact with its expanded value chain. In other words, functions moved outside the locus of the firm create the need to learn more complex behaviors within the locus of the firm. This second paradox of outsourcing therefore implies that outsourcing requires firms to learn and employ complex behaviors which they do not typically possess (Holcomb & Hitt, 2007). Such routines are often tacit, requiring repeated exchanges that are highly dependent on communication and relationship factors (Szulanski, 1996); as such they are more difficult for the organization to adopt. As firms progressively outsource incremental functions it is therefore likely that they will replace those functions with more complex, interrelated routines.

Paradox 3: Operational Expediency vs. Strategic Complexity

A critical consideration in the outsourcing decision process involves which functions may safely be transferred to third parties. The nature of core competencies is encapsulated in the resource-based view of the firm, which "emphasizes the importance of resources in guiding firm activity and the management of a firm's portfolio of capabilities as central to competitive advantage" (Holcomb & Hitt, 2007, p. 465). Barney (1991) suggests that resources that are valuable, rare, imperfectly imitable, and without equivalent substitutes enable a firm to sustain its competitive advantage. Firms wishing to conform to these four conditions should therefore not outsource those functions which (a) offer it the opportunity to exploit opportunities or neutralize threats, (b) are unique relative to competitors, (c) are difficult for competitors to imitate, and (d) are difficult for competitors to offer substitutes. Nevertheless, some researchers have suggested that it is appropriate to outsource core functions if outsourcing in some way improves on the firm's level of competency. Such situations can include cases where the outsource provider offers access to complementary resources of higher quality and lower cost than those developed in-house (Espino-Rodríguez & Padrón-Robaina, 2006), or when those providers offer a greater level of cooperative experience (Holcomb & Hitt, 2007). Hoecht and Trott (2006) even suggest that some core competencies may be outsourced if they can be better executed by the service provider. However, other researchers note that firms can misjudge such situations, either because they mistakenly outsource critical functions because they are cost centers (McIvor, 2000) or because those functions are things which the firm does not execute well (Lonsdale & Cox, 1997).

Assuming that firms can correctly determine core competencies today, there are many factors which make it impossible to predict which functions will be core in the future. Such an evolutionary perspective is not inconsistent with the resource-based view of the firm as originally envisioned by Barney (2001), and scholars have acknowledged that core competencies can change over time (Harland, et al., 2005; Mahnke, 2001), requiring the possible reversal of earlier strategic outsourcing decisions. Jennings (2002) argues that the processes of buyer learning, diffusion of proprietary knowledge, process and market innovation and experience in and of themselves can serve to change the competitive emphasis and potential for particular value chain activities; in so doing they disrupt the "seamless integration of activities" (p. 29) necessary to maintain competitive advantage.

When the relevance of individual core competencies changes, or when firms determine that they are no longer capable of sustaining leadership solely on the basis of competencies they retain internally, it may be in their best interests to retrieve a previously outsourced function and reintegrate all or a portion of it (Willcocks & Feeny, 2006). This can also occur when it is feared that the outsource provider will lose its leadership (Barthelemy, 2001, 2003; Barthelemy & Geyer, 2004), use its learned skills for the benefit other firms (Takeishi, 2001), take advantage of information leakage (Mahnke, 2001), or become a competitor (Cox, 1999; Hoecht & Trott, 2006). These can result in unexpected costs and effort should the firm need to switch outsource providers or return the function in-house (Barthelemy, 2001; Tadelis, 2007).

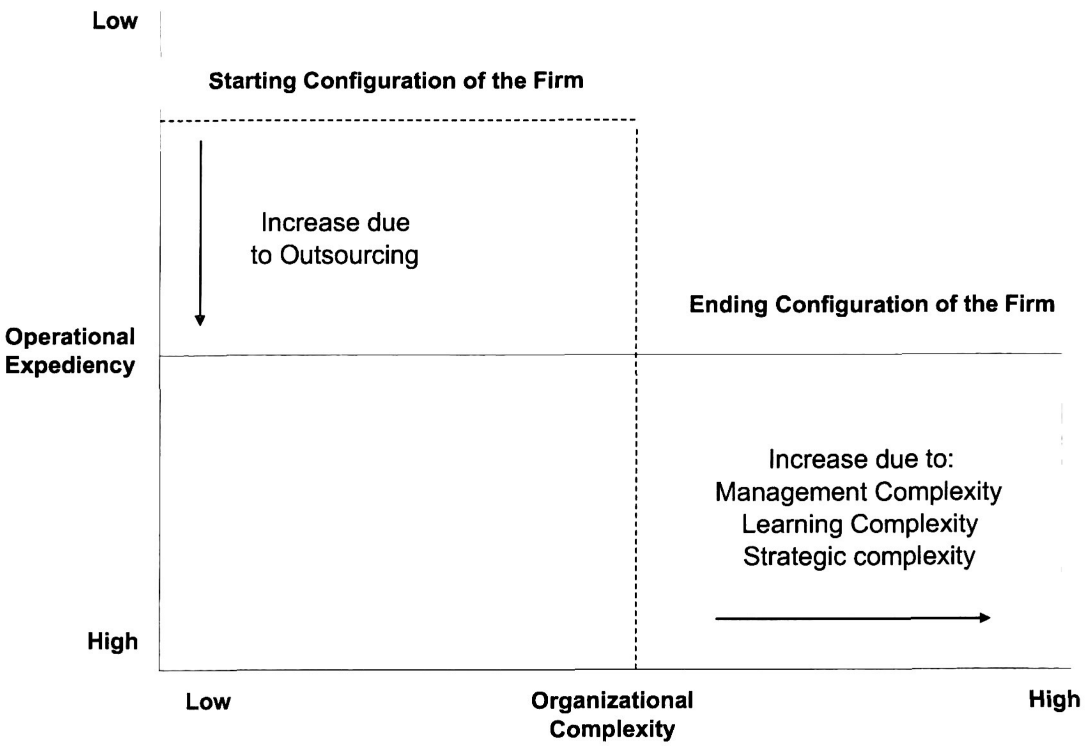
When a shift in core competencies or the failure of an outsource provider occurs, the firm not only needs to invest management effort into reassessment of outsourcing agreements and consideration of options (Momme, 2002), but it may also need to deal with the potential reintegration of the outsourced function. This is often problematic due to path-dependency and the fact that previous knowledge may be forgotten (Sadowski, Dittrich, & Duysters, 2003). Since core competencies represent "the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies" (Prahalad & Hamel, 1990, p. 82), forgotten knowledge equates to lost competencies or, at a minimum, lost ability to reactivate those competencies.

This tendency can be mitigated if a firm retains its absorptive capacity, which Cohen and Levinthal (1990, p. 128) describe as "the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends." Largely a function of a firm's level of prior related knowledge, absorptive capacity enables a firm to react to outside information and, ideally, develop and implement strategies to foster innovation. However, the act of outsourcing can diminish the absorptive capability of the firm by deactivating its ability to integrate, build and reconfigure internal and external competencies (Teece, Pisano, & Shuen, 1997). Though access to external knowledge can enhance learning (Burt, 1992) and potentially enrich absorptive capacity (Rothaermel, et al., 2006), firms that do not maintain proper absorptive capability can find that they lose both their previously-held knowledge and their ability to react to changing contexts (Mahnke, 2001). As a result, a firm faced with the need to reintegrate a previously outsourced function may not have the know-how to do so (Harland, et al., 2005; Kakumanu & Portanova, 2006).

Although outsourcing can enable the firm to focus on its core competencies, it can also jeopardize its long-term capacity to develop the critical capabilities which will be required in the future. To mitigate this, firms must create different competencies to maintain their competitive capability. In other words, functions moved outside the locus of the firm create the need for new strategic competencies within the locus of the firm. This third paradox of outsourcing suggests that outsourcing of "non-core" competencies may lead to the evaporation of sustainable competitive advantage, even though seemingly "core" competencies are retained. Firms which focus on successful strategies can ultimately become less competitive (Miller & Chen, 1996), either because management reinforces successful behaviors at the expense of those which are out of favor (Miller, 1993) or because shared mental models cause members of the firm to downplay non-conforming information (Jacobs & Heracleous, 2005). In recent empirical studies of firms that outsource, long term lack of growth in innovation and productivity has been shown to offset the near-term advantages of cost reduction (Windrum, Reinstaller, & Bull, 2009). This is because outsourcing reduces the number of structural components – and hence organizational subroutines – firms are able to manipulate to match their environment. Access to fewer subroutines limits firms' options for reconfiguration, which in turn reduces their ability to develop more adaptive organizational systems in response to competition. As firms that operate successful supply chains progressively outsource functions, it is therefore likely that they will need to replace those functions with new competencies that protect their ability to generate advantage.

These three paradoxes of outsourcing suggest that the overall effort exerted by firms that outsource increasing numbers of functions are not, on the whole, decreased as is often implied through the transfer of functional responsibilities to a third party (McCarthy & Anagnostou, 2004; Sharpe, 1997). Instead, effort can increase as operational expediency is replaced by organizational complexity. This is illustrated in Figure 1.

Figure 1: The outsourcing paradoxes



Reconciling the Outsourcing Paradoxes

The literature suggests a range of alternatives for dealing with paradox. Clegg et al. (2002) note that these options can include: (a) elimination of the paradox, (b) selection of one of the opposing positions with the dismissal of the other, (c) selection of a middle position based on the contingent demands of the situation, and (d) integration of the opposites into a synthesis. Lewis (2000) proposes a similar framework, suggesting three means of managing paradox: acceptance (learning to live with the contradictions), confrontation (constructing a more accommodating relationship between the contradictions) and transcendence (recognizing the tensions and contradictions as being complementary and interwoven).

If managing paradox truly means capturing its enlightening potential (Lewis, 2000), then the three outsourcing paradoxes described in this analysis may have the capacity to better inform the manner in which firms evolve as a consequence of their outsourcing decisions. The evolutionary nature of this process can make it difficult, or even impossible, for the firm to anticipate future behavioral requirements. It is for this reason that the predictive power of transaction cost analysis is constrained by its own acknowledgement of "bounded rationality"

(Simon, 1961; Williamson, 1985). Similarly, the ability to consciously adapt resources is limited by the causal ambiguity inherent in the resource-based view (Barney, 1991; Lado, et al., 2006).

In the following section of this paper it is argued that firms transcend the trade-offs implicit in the three paradoxes through a form of replacement behavior. As firms operating successful supply chains achieve increased operational expediency through the outsourcing of operational functions they also replace outsourced functions with new and more complex behaviors and competencies. In the first part of this section the proposition that firms develop boundary spanning behaviors to replace challenges from increased management and learning complexity is advanced. In the second part it is suggested that new critical competencies replace outsourced competencies.

Behavior Replacement

As has been previously discussed, outsourcing increases management complexity (Rothaermel, et al., 2006). Though the locus of the functional operation may have shifted outside the boundary of the firm, there is still the need to manage the relationship with the outsource provider as well as to coordinate the implications of the outsourced function within the firm. This combined internal and external coordination (Takeishi, 2001) presents the need for behaviors that do not typically exist in the traditional, vertically organized firm (Adler, 2003; Willcocks & Feeny, 2006).

Boundary spanning behaviors serve the role of coordinative functions within an organization, particularly in cases where a firm must interoperate with entities in complex and variable environments outside of its realm of authority. Thompson notes that boundary spanning units are employed to adjust to "constraints and contingencies not controlled by the organization" (1967, p. 67), adding that, in complex environments, firms carrying out unique and custom tasks calling for a combination of selected capabilities will deploy boundary spanning specialists into project oriented, task forces for operational purposes. Aldrich and Herker (1977, p. 228) add that in such complex environments a firm may have a "variety of boundary roles of units with different structural characteristics".

Takeishi (2001) argues that boundary spanners can be particularly effective in outsourced situations due to their ability to improve internal and external communication flow and problem solving. The skill set of a boundary spanning individual generally reflects a combination of technical competency in the specific knowledge area and personal attributes to link with other areas (Tushman & Scanlan, 1981). As such they are usually "highly regarded experts in their field" whose jobs entail "the definition and demarcation of high-risk areas within their home organizations and the selection and supervision of those 'externals' that would be granted access to the business functions and processes identified as high risk" (Hoecht & Trott, 2006, p. 407).

Boundary spanning units operate both as internal liaisons and as gatekeepers (Katz & Tushman, 1983). Internal liaisons establish communications between their group and other groups within the organization, while gatekeeping boundary spanners interface with external, technical sources of information. The ability to traverse between as well as within organizations calls upon the ability to engender cross-functional cooperation, information sharing and joint planning (Morash, Droge, & Vickery, 1996) as well as ambassadorship, scouting and task coordination skills (Ancona, Bresman, & Kaeufer, 2002). Because the boundary spanning function orchestrates information acquisition and control, domain determination and interface, and physical input control, it has been shown to exert a significant influence on organization strategy (Jemison, 1984).

Firms that outsource functions continue to rely on the output of those functions, now being provided by third parties. The coordination of activities within the firm that may have previously been executed by the internal functional unit now must be carried out by boundary spanning units. In addition, coordination of activities outside the firm with the outsource service provider or other third parties becomes an additional responsibility of the firm and will also be carried out by boundary spanners. Regardless of whether these boundary spanning behaviors are performed by existing personnel or specially designated groups, the important consideration for the firm is how it will retain the advantages of coordination when it no longer controls the outsourced function. Therefore, firms operating an effective supply chain may be expected to replace function-specific behaviors with sophisticated boundary spanning behaviors.

P1: As a firm's operational behaviors are moved outside the locus of the firm through outsourcing, continued success requires that they are replaced by boundary spanning behaviors related to the function so as to cope with increased management and learning complexity.

Competency Replacement

While it is reasonable to assume that firms that outsource functions to third parties are able to transfer the execution of the function, it is less clear that the firm can also transfer responsibility for the strategic value of that function. Willcocks and Feeny (2006) note that even though a function such as information technology could be performed effectively by the outsource service provider and deliver the anticipated financial benefits, the outsourcing firm will still be required to retain scanning capability in order to maintain its strategic capability in information technology. Adler (2003) documents a similar phenomenon in a case involving human relations outsourcing. Despite the fact that the outsource service provider assumed administrative elements of compensation, benefits, payroll, organizational development, performance management, employee development, training, recruitment and relocation, the outsourcing firm retained responsibility for HR policy, strategy, professional resources and labor relations and remained actively involved in the definition of the service provider's offering.

While these cases might prompt one to conclude that outsourcing firms are retaining previously-performed strategic functions, such as scanning and policy determination, and merely transferring operational activities, there is reason to believe otherwise. Firms managing functions internally do not necessarily possess the ability to develop collaborative styles necessary to develop trust, commitment, communication and decision-making style to effectively manage supply chain relationships (Spekman, et al., 2002). This competency not only needs to be developed (Holcomb & Hitt, 2007), but it needs to be developed in terms of "people and skill based tasks" (McIvor, 2003, p. 393). Since it cannot be assumed that individuals in the former functional units will naturally possess such skills, it may be more appropriate to consider that the firm will need to learn those new competencies which will replace existing skill sets.

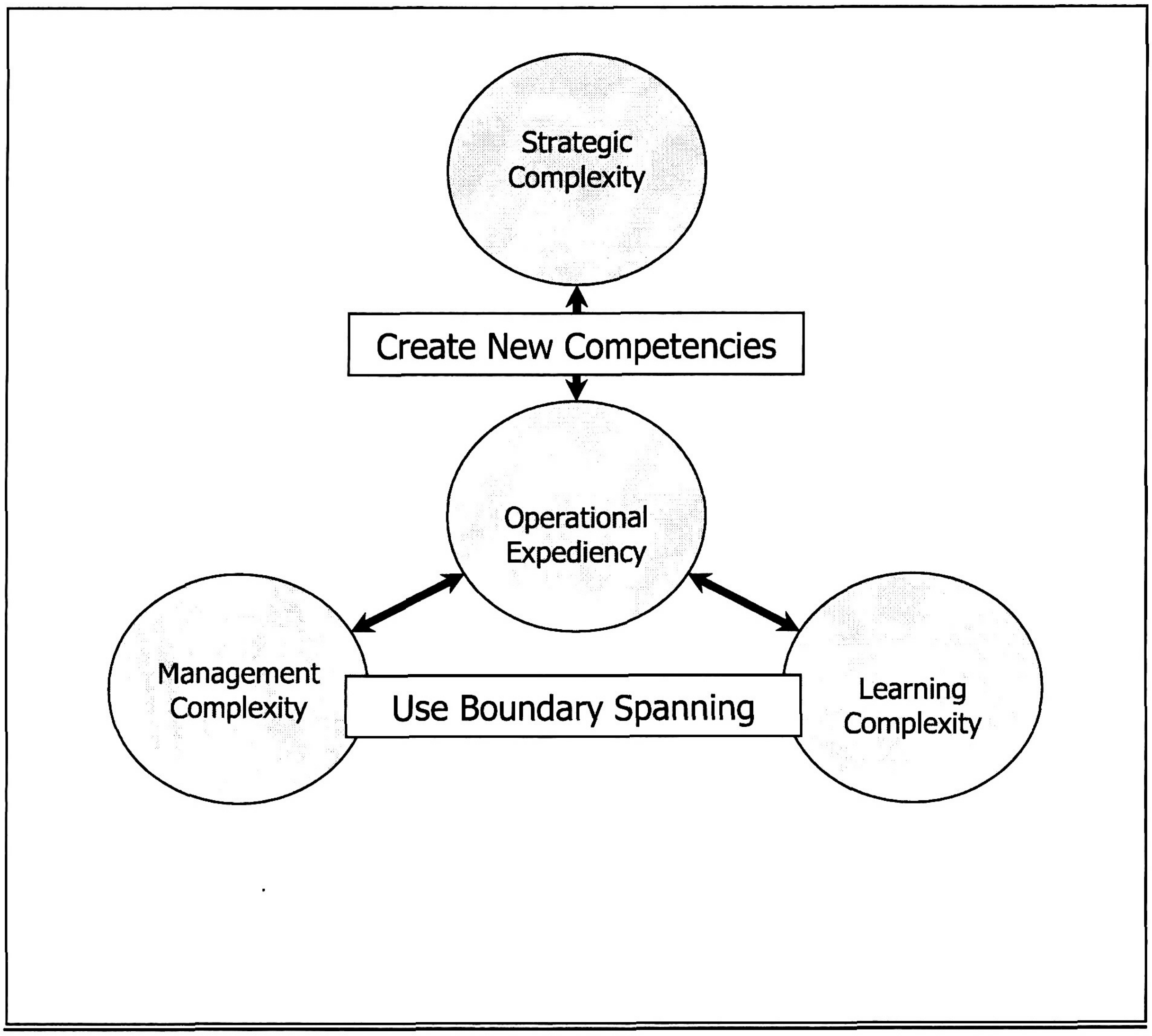
The case for learning these incremental competencies may be further understood in the context of the ability of the outsourcing firm to maintain sustainable competitive advantage. As was noted above, firms that do not maintain proper absorptive capability can find that they lose both their previously-held knowledge and their ability to react to changing market situations (Mahnke, 2001). Loss of absorptive capacity, or merely the inability to react to the changing skill set of its outsourcers in a timely manner, can render the firm powerless to respond to future requirements. Some scholars (Barthelemy, 2001; Harland, et al., 2005; Mahnke, 2001) recommend outsourcing only those activities which are clearly non-core or outsourcing only a portion of core functions as a preventive measure to protect against this eventuality. Even though it may contradict expected logic for a firm to continue to invest in the areas it has outsourced, this phenomena has been reported in the literature (Tiwana & Keil, 2007).

Firms that outsource functions to third parties need to continue to perform scanning and strategic planning activities in order to retain touch with the prevailing state of technology and markets. However, such firms are challenged by the need to perform these activities externally, without the benefit of direct span of control over third parties, and in a context calling for inter-organizational relationship management skills it may not possess. In this way functional competencies are replaced by new and complex requirements. The need to sustain competitive advantage elevates the criticality of learning these new skills, as they can become more significant than the functions they replace.

P2: As a firm's operational activities are moved outside the locus of the firm through outsourcing, continued success requires that they are replaced by a new set of critical firm-level competencies in order to maintain competitive advantage.

The reconciliation of the outsourcing paradoxes is illustrated in Figure 2.

Figure 2: Reconciling the outsourcing paradoxes



Discussion

The central thesis of this article is that the paradoxes caused by outsourcing can enlighten our understanding of how firms evolve their capabilities and strategies over and above transaction cost and resource-based considerations. A review of the literature suggests that new functions, such as cross-functional teams, specialized outsourcing departments and highly-qualified boundary spanners, are introduced into the organization in order to manage the various processes of the outsourcing life cycle. There is likewise some consensus that routines need to be acquired in order to deal with the ongoing technology scanning, relationship management and organizational learning necessary to effectively manage all the implications of outsourcing. Finally, there is a consistent stream in the literature warning that firms which outsource can face unforeseen competitive risks which will require them to maintain residual capability in that area in order to sustain advantage. Since many of the definitions – and much of the rationale – for outsourcing are based on the premise that it reduces and/or transfers costs, infrastructure, and complexity, the proposals put forward in this analysis argue that firms reconcile these outsourcing paradoxes by replacing transferred functions with boundary spanning behaviors that are more complex. In doing so, they likewise replace seemingly "non-core" competencies with "core" competencies.

Test in Extremum

Rather than argue these propositions of replacement theory anecdotally, one can test them *in extremum*. The previous discussion pertained to typical arrangements in which an organization outsources a part of its operations. In order to test the robustness of the theory developed, extreme values of the extent of outsourcing are now examined. First, the behavior within a firm that outsources none of its operations is discussed. This is followed by analyzing the firm after it has outsourced all of its operations. These analyses shed light on the propositions by depicting a firm in both its fully integrated and disintegrated states. More importantly, it helps highlight the operational differences that the outsourcing firm faces as it sheds more and more of its functions.

Consider the following hypothetical example of a firm moving from full internal integration to full disintegration. The starting assumption is that all of the fully integrated firm's functions are managed internally, so this theoretical firm is completely capable of developing, producing, marketing and servicing its products. In order to function in a competitive environment the firm has the need to scan the external environment and communicate with external stakeholders, but this is largely the extent of its external boundary spanning requirements. There is the need to coordinate activities among the various functional units of the firm, but such coordination is facilitated by a common set of organizational objectives, vocabulary and reward structures. Because the firm has developed as a self-sufficient, ongoing entity, one can assume that it has developed a high level of proficiency internally that enables it to remain competitive in the market. These proficiencies, manifest as internal routines to absorb and transfer knowledge, permit it to adapt to market conditions.

In the interest of reducing costs, headcount and, with it, the organizational complexity of managing these tightly integrated functions, the firm subsequently determines that it will progressively outsource all of its functions until such a point that the only remaining actor is the chief executive officer (CEO). (For purposes of this example one can assume that each of the individual outsource service providers is able to offer comparable operational capabilities to those previously maintained by the firm.)

Since every function will be performed externally by outsource providers, there is now the need to manage these function across organizational boundaries. Therefore, the lone CEO will need to provide the coordination between, for example, the outsourced engineering, manufacturing, marketing and sales groups. What was formerly an internally managed function of knowledge transfer and coordination has become an external boundary spanning function. Consequently, the CEO will operate as the sole boundary spanning unit for the firm, providing coordination and communication as a theoretical "internal" liaison between the various "virtual" functions while also operating as a gatekeeping boundary spanner providing access to the actual external service providers (Katz & Tushman, 1983). The nature of the firm's behaviors have significantly changed as a result of outsourcing: coordination is now managed by different individuals at a higher management level and in an environment where the disparate groups no longer share a common set of organizational culture or objectives. Even though the functional groups in the previously fully-integrated firm were likely to have had interactions with external groups, those interactions would not have been very complex, especially if they were oriented to market-based supplier relationships. Hence, the nature of the boundary spanning behaviors for this fully disintegrated firm is likely to be much more challenging than was previously the case.

The implications of this scenario become more significant in relation to the ability of the fully disintegrated firm to maintain its competitive position in its markets. Since the firm's functions are now performed by third parties, its competitive resources are no longer rare, imperfectly imitable, or non-substitutable (Barney, 1991) because they can be acquired by any other firm willing to contract with those providers. The external outsource service providers would be expected to market their proficiency to all potential clients, so the focal firm will be acquiring services which have effectively been "leveled out" across the market (Hoecht & Trott, 2006; Takeishi, 2001). Unless the lone CEO of this example firm adopts the appropriate scanning, absorption and knowledge transfer skills necessary to direct the development of differentiated and innovative products through its outsourced service providers, the firm's capabilities will become commoditized. Therefore, in order to sustain the opportunity for competitive advantage the lone CEO would need to replace the behaviors associated with seemingly interchangeable, "non-core" competencies with behaviors representing critical, "core" competencies.

These outsourcing paradoxes raise significant, yet somewhat subtle, management challenges for organizations. Researchers note that firms are becoming more multifaceted (Miller & Chen, 1996), which reflects Ashby's (1956) law of requisite variety: the diversity of an organizational system must match the variety and complexity of its environment. In a global economy which encourages outsourcing across country boundaries, the challenges of managing boundary spanning efforts and developing competitive capabilities become even more complex due to conditions of reduced transparency, cultural diversity and organizational differences. With increased environmental complexity, the overall structure of the organization tends to become more complex and decentralized, requiring the individual parts within the organization to become more tightly coupled and cohesive (Weick, 1979).

The propositions advanced in this paper express the need for organizations to develop incremental and coordinated capabilities as a result of an outsourcing decision. Ironically, outsourcing's perceived benefit of operational simplification can potentially lead management to create a climate where simplicity replaces complexity, jeopardizing a firm's ability to compete in complex, changing markets (Leonard-Barton, 1992; Miller, 1993; Windrum, et al., 2009). Transaction cost economics categorizes such factors as misalignments, but that perspective's limitation is that it does not provide the fine-grained guidance to theorize necessary relational behaviors for the firm. By utilizing a lens based on paradox, it is possible to create a more complete model of outsourcing dynamics and organizational after-effects.

Conclusions and Implications

Conventional wisdom celebrates outsourcing as a way to reduce organizational cost and infrastructure. The impetus for this paper is the concern that such a view encourages managers to focus on the benefits of outsourcing but to ignore its risks. As has been discussed above, there are a number of challenges posed by outsourcing, but they are largely unanticipated by managers since they are not evident in the short term. After all, it can seem counterintuitive to expect that reducing infrastructure will increase management effort, that simplifying the organization would increase learning requirements, or that focusing on core functions could reduce strategic flexibility. Moreover, many of these challenges only become evident sometime after the outsourcing decision is made, so it is possible to even disassociate the effect from the cause.

By framing outsourcing as a set of paradoxes, management is forced to consider the juxtaposed opposites (Rosen, 1994) of expediency and complexity that they need to understand as they begin to disintegrate their firms. At a minimum, the propositions posited in this paper suggest that firms will need to (a) learn how to excel in boundary spanning behaviors so that they can cope with demands for increased management and learning requirements, and (b) develop new competencies that allow them to differentially reconfigure non-captive capabilities in order to retain hopes of competitive sustainability. These propositions in turn give rise to a number of research and managerial implications.

Research Implications

The empirical testing of these propositions is suggested for future research. The nature of the topic is such that interpretive rather than functional research approaches should be used. In particular, a phenomenological approach is recommended, as the object of the research pertains to explaining behaviors and consequences not explained by extant theories of transaction cost economics and the resource-based view of the firm.

The propositions posited are at general level and additional research aimed at operationalizing the findings is also warranted. This would provide practitioners with a framework to implement the strategic and management implications of the theory. At a strategic level, the appropriate leadership, learning and risk mitigation approaches demanded by outsourcing should be considered. At a management level, the economics, technology and human behavior dimensions implied by the dynamics of a boundary-spanning approach need to explored.

Implications for Managers

In light of the relatively high incidence of failed or malfunctioning outsourced operations (Tadelis, 2007), the findings of this research provide some important insights for management. First of all, firms can be expected to undergo new leadership challenges in a world where an increasing number of their operations will be performed by outsource service providers who are outside their direct control. Consequently, the strategic and learning complexity that replaces the outsourced functions also introduces a new requirement for leadership that is likely to push firms toward more transformational styles (Luvison & Bendixen, In press). Furthermore, as firms' operations become increasingly extended across a network of global providers, they will need to learn to become proficient at managing a virtualized infrastructure. As the structure of firms becomes more virtual, their leaders will need to ensure that they not only monitor their providers but that they also consider how they can encourage the development of their providers' capabilities (Bell & Kozlowski, 2002) since providers' failure to do so will in turn limit the firms' ability to competitively adapt.

Second, the role of organizational behavior as a vehicle of firm strategy needs to be considered. Barney (1991, 2001) suggests that the resource-based view of the firm supports the importance of organizational, social and individual phenomena because these resources satisfy the criteria necessary to sustain competitive advantage. In this way, it is believed that reframing the consequences of outsourcing in terms of behaviors and competencies suggests an increased interdependence between strategy and behavioral elements. The implication is that leaders will need to adapt many of the intraorganizational mechanisms they now use to embrace and motivate internal employees to their expanded network of outsource service providers.

Third, business firms are exposed a number of risks; some of these are controllable, or partially controllable, and others are not (Wu, Blackhurst, & Chidambaram, 2006). The very act of outsourcing causes firms to face strategic and operational risks since outsourcing exposes them to the internal and external risks of their providers. A commensurate reduction in supply reliability cannot be guaranteed, and firms need to strategically match their value at risk. However, the challenges highlighted by the outsourcing paradoxes discussed in this paper also suggest that firms will be subject to new *internal risks*. These include the risk that the organization cannot successfully implement the necessary change management processes to adjust management styles, learning routines and organizational culture in accordance with the demands of its new environment.

In conclusion, the decision to outsource operations clearly needs to be considered for its long-term benefits, and managers are cautioned not to be tempted by apparent short-term financial gains. Outsourcing creates a strategic complexity within the organization which is not without cost. The development of new firm-level competencies is both time-consuming and may require investment in technology as well as human and social capital. In particular, the firm will have to implement boundary spanning behaviors and develop relational skills. These skills will prove essential for the governance of the relationships between the firm and its outsourcing partners.

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