

EXPLORING THEORETICAL FOUNDATIONS OF OUTSOURCING: A KNOWLEDGE-MANAGEMENT PERSPECTIVE *

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ABSTRACT

While the focus of information technology (IT) outsourcing has traditionally been on routine, structured tasks such as program coding, more and more knowledge-intensive and strategic IT activities are recently being outsourced. There are many reasons in favor of this outsourcing practice, but also some arguments against it. The purpose of this paper is to explore theories that could shed some light on the implications on IT outsourcing from the viewpoint of knowledge-management (KM). The paper draws from existing literature on IT *outsourcing* as well as *knowledge management*.

INTRODUCTION

Many research studies on the subject of IT outsourcing conclude that IT outsourcing provide the client organizations with numerous benefits [9] [18] [19]. Some studies also discuss, in general terms, various risks associated with this practice [36]. One important area of outsourcing risk is potential loss of the corporate knowledge, and the resulting strategic disadvantage due to improper outsourcing practice. However, there is a general lack of substantial and clear indication in the literature regarding the significance and consequence of knowledge gain/loss as a result of outsourcing. The purpose of this paper is to explore theoretical foundations in the literature to shed some light on the *extent* and *type* of knowledge gain or loss due to outsourcing of IT functions.

This exploratory research paper draws from existing literature on *outsourcing* as well as *knowledge management*. Results of this research may lead to more useful theory-based guidelines for developing strategies to mitigate potential risks of corporate knowledge loss in IT outsourcing deals. A brief introduction of outsourcing and its implications on corporate KM is presented first to provide a context for selecting relevant theories. Next, a review of the theoretical foundations that could explain KM implications of outsourcing is provided. Finally, research and practical implications are discussed.

A BRIEF REVIEW OF OUTSOURCING

Outsourcing and offshoring are generally embraced as an integral component of corporate strategy in today's organizations. One of the most prominent reasons organizations outsourced their IT activities in the past, was to reduce their high cost of application development. As high as 80% of the respondents in a previously conducted survey cited the desire to reduce IT costs as a key reason for outsourcing all or part of their IT operations [18]. Another common reason for resorting to IT outsourcing is a firm's desire to focus its resources on those activities that are considered its strengths, often referred to as core competencies. Organizations further support their outsourcing decisions by reasoning that vendors possess economies of scale that are unavailable to an individual firm. Vendors have access to more powerful equipment, are able to negotiate better deals with hardware and software providers, employ a very specialized labor force, and operate at much higher levels of production [3].

Organizations generally expect to reduce their overall IT costs, focus on their core competencies, and gain superior technical resources when outsource part or all of their IT functions. Among all reasons to outsource, the one that has emerged as a major reason in recent years is to gain competitive advantage through partnership by sharing information and knowledge [9] [19]. However, without a careful consideration of the issues related to the enterprise-wide IT knowledge, any gain in the above areas can be offset by a significant loss of control, IT expertise, and of overall corporate knowledge base.

Four types of knowledge are identified and discussed in this research (details not included in this summary paper). *Tacit knowledge* refers to the knowledge that resides in the minds of people such as a company's employees, customers, and vendors. The *explicit knowledge*, on the other hand, is that which has been externalized and/or documented. Knowledge can also be classified based on the context within which it is created. *Company-specific knowledge*, for instance, is the knowledge created and embedded in the context of a specific supply chain in the organization. *General knowledge*, on the other hand, is applicable in many different contexts and is often possessed by a large number of people, both within and outside a specific work environment. What will happen to the corporate knowledge base when a part or all of IT activities is outsourced?

IT OUTSOURCING: THEORETICAL BACKGROUND

Several theories have been discussed in the literature to explain outsourcing from various viewpoints [11]. Following presents a summary of the theories discussed in this paper that can shed some light on the impact of outsourcing on corporate knowledge.

Transaction-Cost Theory: A firm's sourcing strategy is based on a number of factors including the cost of securing IT products and services from external sources. According to transaction-cost theory, if the cost of monitoring, controlling, and managing the transaction with an external source is too high then the firm's reliance on internal resources, either existing or resources acquired through vertical integration, is more appropriate [13] [38].

Core Competency Theory: Considering the fact that resources are limited for all organizations regardless of their size, the core competency theory asserts that corporate resources are best utilized if they are allocated to those activities the organization can perform best [14] [30] [31]. These activities are the organization's core competency and provide the organization with strategic advantage.

Boundary Spanning Theory: Organizational boundaries reflect division of labor across individuals and fields. Therefore, the nature and type of specialization, know-how, and human capital may be explained through the study of organizational boundaries. Furthermore, since organizations as open systems have flexible, penetrable boundaries, the nature and extent of inter-organizational collaboration and information exchange is dependent on boundary spanning capabilities and skills of the organizations involved [10] [12]. Monge and Eisenberg [23] describe *Boundary* spanning as providing the communicative linkages that organizational members need to exchange information with the organizational environment.

Resource-Based Theory: Certain corporate resources are rare and highly valuable that can provide the organization with considerable competitive advantage. According to this theory, to the extent a firm can protect these resources against imitation, transfer, or substitution it will have a sustainable strategic advantage [33]. Focus on effective management of relevant *assets and skills* may lead to sustainable

competitive advantage [1]. A major part of such organizational assets and skills constitute the enterprise knowledge base including both tacit and explicit knowledge [25]. This knowledge-base contains valuable firm-specific knowledge residing partly in the collective memory of the personnel and partly in the enterprise data repository.

Resource Dependency Theory: This theory examines organizational power to acquire, maintain, and control resources in relation to its environment. Organizations that are short in essential resources are dependent on, and will seek to establish relationships with, others to acquire needed resources. The more a firm reduces its resource dependency on others by acquiring and maintaining needed resources the higher is the firm's competitive advantage. Therefore, the organization's power in managing and controlling exchanges and ownership of key resources, including human capital, is a key determinant of the extent of its competitive advantage [29].

SUMMARY AND CONCLUSION

The theories summarized above, among others, provide a general context to explain both opportunities and risks of cross-boundary knowledge transfer among organizations engaging in outsourcing deals. Table 2 summarizes knowledge-management implications of five underlying theories discussed in this paper.

Outsourcing decisions are often based on analyses that emphasize short-term, tangible benefits and costs. Intangible costs, which often accrue over a longer period of time, are usually not apparent right away – nor are they straight forward to quantify. One important source of intangible costs of IT outsourcing is the loss of irreplaceable skills and knowledge – particularly the company-specific, tacit knowledge. Loss of a company's valuable knowledge resources through either attrition of its valuable knowledge-workforce or transfer of that knowledge to outsourced workers and organizations could lead to an erosion, or complete loss, of the company's strategic and competitive advantage in the long run.

To reap the benefits of IT outsourcing while avoiding the high costs of losing enterprise knowledge, organizations must estimate potential long-term consequences, considering both the tangible and intangible aspects. The theoretical views presented above may lead to a better understanding of the level and type of IT outsourcing that is most appropriate for a particular enterprise. However, future research studies are needed in formulating hypotheses on the impact of IT outsourcing on each of the four types of knowledge.

Future research studies that should be conducted in this area may include *case-base studies* (among others). In case-base studies, the significance of knowledge-drain risks in each quadrant of Table 1 may be explored and evaluated through comprehensive case studies. These case studies can reveal the magnitude of each risk factor and provide an insight into the lessons learned by companies that actually experienced, and the way they dealt with, the KM risks in each of the four areas. This may also help creating a proper strategic alliance between the outsourcing company and its client that avoids, or minimizes, various knowledge-drain risks.

***NOTE:**

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