

## Exploring IT Outsourcing Relationships and Innovation Potentiality:

### A Quest for a Research Framework

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Innovation has gained enormous attention in the IT outsourcing activities but remains poorly documented in the relevant literature. This article presents a brief overview of both innovation and IT outsourcing literatures and provides the theoretical foundations for the research framework. In this context, the sharing of knowledge is considered as an indicator of the innovation potentiality. Furthermore, the different types of knowledge are discussed and contrasted for their relative applicability to studying innovation within an IT outsourcing arrangement. The paper finally concludes with the identification of a research framework that captures the innovation potentiality.

#### Introduction

A recent study from Feeny et.al (2006) points out the lack of innovation within IT outsourcing arrangements. The end users seem to commonly experience “a period of ‘mid-contract sag’ in which the vendor has lost energy and enthusiasm” (Ibid:545). This study stresses a failure to create and leverage knowledge between client and supplier, despite the promises of applying the current ‘Best Practices’. Since knowledge is an input to innovation (Quintas 2002), the sharing of knowledge is an inseparable link from the innovation process. Accordingly, Feeny et.al describe a business case where the relationships between client and supplier are particularly suited to leverage knowledge sharing and innovation. However, very few studies in IT outsourcing have considered the relationships between client and supplier; even then these studies did not consider the consequences of these relationship on the innovation process. To address this situation therefore, this paper aims to explore a suitable framework for examining how IT Outsourcing relationships can be leveraged to pursue a shared innovation objective between client and supplier.

To achieve its objective, this paper is structured into six sections, including this introduction. The background to IT outsourcing is presented in the next section while a highlight of existing IT Outsourcing relationship approaches is presented in the third section. Knowledge sharing as an input to innovation, and the existing approaches for capturing the innovation potentiality are presented in the fourth and fifth sections respectively. Finally, the paper concludes with the innovation potentiality in IT outsourcing research framework.

#### Background

Over the past decade, IT outsourcing has evolved beyond a mere simple idea of achieving cost savings through contracting the services of a cheaper labour, to a new and complex strategic combination to achieve IT resource optimization. Basically, the IT outsourcing rationale was presented as: “(...) a cost-effective way of controlling the costs of the information system function” (Dalcher 2005:10), through which providers “benefit from economies of scale related to mastering a professional service and investing in supporting infrastructure that enables them to offer a first class level of expertise and reputation in that domain” (Ibid:10). Nowadays, IT outsourcing embraces some complex arrangements such as alliances or partnerships where both the client and the sup-

plier share risk and reward (Hirschheim and Dibbern 2006). These new forms of organization in IT outsourcing require that client and vendor be mutually dependent as well as careful management of the resulting relationships between them. “If as we indeed believe, the relationship dimension is critical to IT outsourcing success,... then this presents profound management challenges for the ways in which IT Outsourcing is more typically conducted” (Kern and Willcocks 2001). However, so far this area has not received enough attention as compared to the other IT outsourcing domains. Among the few scholars who have drawn on IT outsourcing relationships, some have focused on the management (McFarlan and Nolan 1995; Klepper 1995a), the behaviour (Klepper 1995), and a synthesis of its main characteristics (Kern and Willcocks 2000a).

#### Existing IT Outsourcing Relationships Approaches

McFarlan and Nolan (1995) view the outsourcing agreement as a strategic alliance and they propose a framework to manage it as such. They describe a strategic alliance as: “(...) allow a firm to leverage a key part of the value chain by bringing in a strong partner that complements its skills” (Ibid:11). Consequently, a strategic alliance is a relationship in which the supplier complements a client’s weakness. However, the characteristics of this relationship are not based on a classic contractual obligation but on a more complex cooperation. Therefore, McFarlan and Nolan suggest many criteria for structuring an IT outsourcing alliance that not only underline the contract but also the monitoring in line with the company’s culture.

Klepper (1995a:249) explores the “mechanisms for the development of long term relationships between clients and vendors in IT outsourcing, or what are sometimes called partnering relationships”. Therefore Klepper describes another type of relationship, he developed the notion of partnership where McFarlan and Nolan use the term of strategic alliance. Each of these notions is frequently used in the IT outsourcing literature without providing a clear distinction between them. It seems that strategic alliance and partnership are both describing the same kind of relationship where the main components would be a high degree of interdependence and a long-term orientation. However, the partnership literature put more emphasis on the sharing of risk and reward, and trust. According to Klepper, a partnership “can only evolve through a progres-

sion of exchanges with steadily increasing trust in and commitment to an on-going relationship by both client and vendor” (Ibid:251). Subsequently, a strategic alliance appears to be the previous stage of a partnership where trust is gradually more present between actors.

Among the mechanisms leading to develop a partnership, Klepper points out that in a partnership each actor expects the other to behave in a certain way. The development of trust between client and vendor is linked to the fulfillment of these expectations. On the other hand, Klepper stresses that the only way to accelerate this process of “expectations development” is to provide incentives for the suppliers who meet these expectations. Therefore, the construction of a partnership is viewed as an investment over time: “The spiraling relationship between expectations and trust is a critical element in partnership development and is a necessary foundation for investment by both parties in assets and capabilities that are specific to the relationship. One can easily conceive of a sequence of contracts between client and vendor over time with steadily increasing expectations, trust and increasing investment in relationship-specific assets” (Ibid:252).

Kern and Willcocks (2000a) designed a conceptual framework which highlights the main characteristics of an IT outsourcing relationship. This model is articulated around five elements: context, contract, structure, interactions and behaviour. The context concerns the particular purposes and expectations (i.e. economical, political, and technical) which will be encapsulated in the contract. The structure is the third element of this model; it describes the management structure and the multi-level escalation procedures. The interactions (formal and informal) are considered by Kern and Willcocks as facilitating the terms stipulated in the contract through an ongoing communication, which will help achieve the expectations and reducing uncertainty between client and supplier. On the one hand, the informal communication includes an ongoing daily talk (i.e. coffee machine) with more familiarity and casualty. On the other hand, the formal communication is characterized by “hard facts” such as official meetings about legal, technical or economical issues (Hakansson and Snehota 1995). Frequent communication is an antecedent of trust and provides improvements to formal and informal communication (Dwyer, Schurr et al. 1987). Subsequently, cultural adaptations are described to be an output of the communication, for instance it can evolve to a common language between both companies. A common culture is also reducing the level of anxiety in employees (Lacity and Hirschheim 1993) but can only be developed after “phasing-in period and a process of adaptation” (Kern and Willcocks 2000a:330). The interactions including formal and informal communication are considered by Kern and Willcocks as an investment requiring time, knowledge and resources from both client and vendor. Therefore, it signals a strong commitment from the parties, since the economic cost can be considerable if the relationship ends (Cassel 1996).

The behavioural dimensions are characterized by Kern and Willcocks (2000a:331) as “commitment and trust, satisfaction and expectations, co-operation and conflict, and power and dependency”. Commitment appears to be critical in the relationships, it is considered as a clear indication of willingness to successfully achieve the expectations. Commitment is also viewed as interdependent with trust: “Trust grows with commitment, and it starts with taking the risk to trust the other

party. As experience with the partner develops, trust will evolve” (Ibid:331). Here again trust appears to be an essential criteria for a successful relationship. Ultimately, all the existing approaches described above are a good starting point for defining the relationships between client and vendor in an IT outsourcing arrangement.

### **Knowledge Sharing: An Input to Innovation**

We can distinguish two notions relative to “newness”, invention which involves something new and innovation which implies something new and practically applied (Lyrette 2002). Invention is usually used for radical discoveries, such as the laser or the transistor. Innovation does not have to come from a radical invention but can be for instance a different way to put things together which creates something new. In 1947, Schumpeter argued that innovation as a routine would have a major influence on the future nature of capitalism. This issue is mainly important to advanced societies, where it is increasingly difficult to remain competitive in the production of goods against countries with a lower cost of labour. In this context, innovation is critical for constantly maintaining and improving a competitive advantage.

In the recent years, a theory elaborating on the relation between innovation and knowledge has emerged. “Knowledge is an input to innovation, inseparable from the innovation process, and is also an output of that process. Innovation is concerned with the new or the novel, the break with the past, with change. (...) When we are innovating, we are also creating knowledge” (Quintas 2002:141). Furthermore there is a growing interest in how organizations manage their intangible assets, such as knowledge. However we can distinguish three type of knowledge: tacit, explicit and implicit. One way to differentiate them is to introduce “the knowledge representativeness” which considers the degree of expression in verbal, codified and written form (Lee 2001). Tacit knowledge cannot be expressed in verbal and written form while explicit knowledge exists in codified or written form. Finally, implicit knowledge can be expressed in verbal, codified or written form, but not yet expressed (Ibid). Furthermore, Polanyi (1966) consider that tacit knowledge can only be learned by apprenticeship and experience. Nonaka and Takeuchi (1995) regard tacit knowledge as hard to formalize, context-specific and personal. However, even in the case of explicit knowledge there is a tacit aspect relative to the process of appreciating or extracting meaning from the information. Thus, the boundaries between tacit and explicit knowledge are undeniably ambiguous. Ultimately, the concept of knowledge is complex and the definitions given in this paper are no more than a hint at the main epistemological concerns that are relevant.

Past studies pointed out the introduction of alliances to gain new capabilities through knowledge sharing (Hamel 1991) and collaboration between actors. Here we define knowledge sharing as “activities of transferring or disseminating knowledge from one person, group of organization to another” (Lee 2001:324). Hence, the innovation process is not a fuzzy grouping of territories of specialists but rather an integrated human resources network. It implies a series of iterative steps where all the actors are interplaying together. This process and the linkages among the human network represent the essence of collaboration. Furthermore, codified information are not very rich in human interpretation, knowledge is embodied in the user’s subjective context, based on experience. The

main concept used to describe this phenomenon is the “wisdom” which belongs to the tacit knowledge. Therefore, creating the environment that allows people to share knowledge and to interact together is critical for the creation of new knowledge (Lyrette 2002). However, the “wisdom” fits in tacit knowledge and is embedded in people, thus its evaluation remains complex. “Gain in human performance and competitiveness remain difficult to measure, which makes it difficult to value leveraging of intellectual capital and know-how that can be found in linkages and networks” (Lyrette 2002:91).

### **Existing approaches for capturing the innovation potentiality**

Since our objective is to link IT outsourcing with the innovation process, there is a need for a method to capture or somehow measure innovation. There are mainly two approaches to achieving this; the first one and the most straightforward is to measure the output to innovation, such as new products, services, or from a financial perspective the return on investment (ROI). While the other, the assessment of innovation in terms of knowledge sharing (Tidd, Bessant et al. 2001; Quintas 2002). In other words, the study of the innovation process can have two perspectives, new outputs or knowledge sharing; the latter can also be regarded as the capturing of innovation potentiality.

Paul Quintas (2002) considered the innovation process from the perspective of knowledge sharing, networks and alliances. The main rationale is that “knowledge cannot be regarded as a commodity that is easy to transfer between collaborating partners. Knowledge acquisition depends on the development of capability, although this may occur within the network community of practice without being internalized by the firm concerned” (Ibid:160). Therefore, the central question is how do we access knowledge from partners? Pavit (1998) concedes that cross-boundary linkages between organizations are weakly understood and cannot be considered only as a flow of codified information since tacit knowledge is ambiguous and unavoidable.

Subsequently, in order to be shared, knowledge requires common knowledge (Grant 1996) or redundant knowledge (Nonaka and Takeuchi 1995). The common or redundant knowledge is comprised of different types, such as a common natural languages, common usage of mathematics and computer code, shared meaning through tacit exchanges (Grant 1996). Actually, a company needs to develop a common knowledge with its partners according to its model of network. Many types of network are described by Quintas, the Coleman network (1990) is characterized by few nodes and dense ties (such as Toyota) whereas the Burt networks (1992) have many nodes with few redundant ties. The redundant and overlapping knowledge is a key determinant for bridging organizations / peoples within a network. Thus, there is a requirement for joint activity, for working together and for learning from the other the common particularities, which will make the bridge between organizations. In this context, the common or redundant knowledge can be used to measure the innovation potentiality of a network. However, the nature of such knowledge is mainly tacit (i.e. shared meaning) and because it is not available to researchers, it remains a major methodological challenge (Quintas 2002). A long-term ethnographic study with a behaviourist approach can be suitable to

research on the indicators of tacit knowledge that betray its existence.

Another perspective to research on innovation and knowledge sharing is provided by Jae-Nam Lee (2001). Lee examines the consequences of knowledge sharing upon the success of an arrangement whereas this paper is more about the link between client / supplier relationships and knowledge sharing. Nevertheless, Lee’s research method seems interesting for drawing on the exchange of codified information between client and vendor in IT outsourcing. In Lee’s research, the explicit knowledge represents the sharing of business proposals, manuals, success / failure stories and journals. The implicit knowledge represents the sharing of know-how, know-where, know-whom and education / training. However, this distinction remains ambiguous concerning the tacit knowledge. For instance, the know-how overlaps codified information which can be written down and tacit knowledge which can only be experienced. This overlapping with tacit knowledge is a vast debate but it is essential to know that some knowledge can only be learned and not shared.

### **Conclusion**

This document encompasses a quest for discovering an appropriate research framework that captures the innovation potentiality. As a result, the innovation process can be studied from the knowledge sharing perspective (Quintas 2002). Since tacit knowledge is hard to be formalized and be embedded in the “wisdom”, the explicit and implicit knowledge are found to be appropriate for a case study research (Yin 2003), although that tacit knowledge can be studied with an ethnographic perspective (Hammersley 1983). The relationships between client and supplier in IT outsourcing can be considered as strategic alliances or partnerships under particular characteristics. Among those features, we find context, contract, structure, interaction and behaviour (Kern and Willcocks 2000a). Subsequently, researching these characteristics which enable the sharing of knowledge is pertinent for an empirical investigation. The five elements of the Kern and Willcocks’ (2000a) model are relevant to research the sharing of knowledge (implicit, explicit and tacit) in each element (context, contract, structure, interaction and behaviour) of an IT outsourcing relationship (Figure 1). Nevertheless, there are two different lines of attack in order to achieve the study, which also means different units of analysis. This implies that we either have to study the knowledge sharing from the organizational side (context, contract and structure) or from the individual perspective (interaction and behaviour). Ultimately, this paper described a cross-boundaries research framework that enables the examination of whether or not the relationships between client and supplier in IT outsourcing have an influence on the innovation process. Innovation has gained interest within IT outsourcing activities (Feeny, Willcocks et al. 2006), therefore some further investigations in this area would be relevant for the research field and for the future IT outsourcing arrangements.

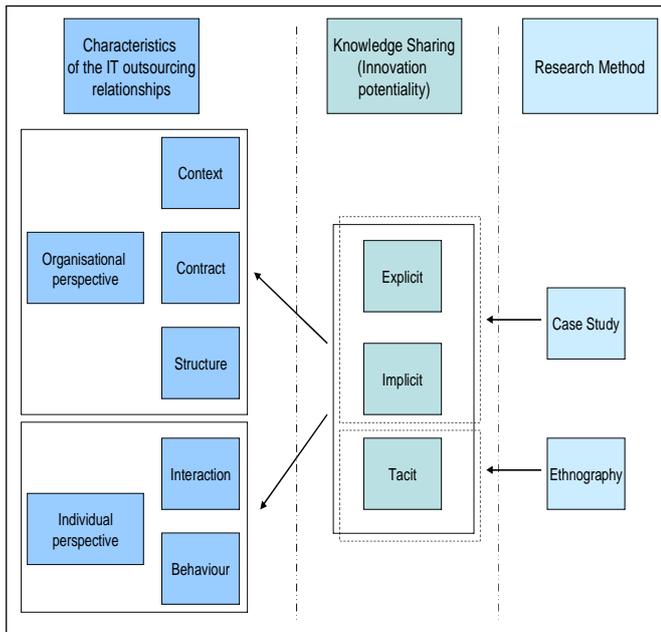


Figure 1: Innovation potentiality in IT outsourcing Research framework

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