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Abstract

This article explores the IT offshore outsourcing phenomena and discusses the predictors of firm's adoption level of offshoring practice. The authors draw on transaction cost economics, culture theories, integrated social contract theory, and institutional theory to examine the offshore outsourcing impetuses and investigate the related research issues. The multitheoretic lens highlights the interactions among firm, supplier, and business environment and suggests the important role of contingency in predicting the firm's strategic response to offshoring which is manifested by the level of offshoring engagement. This paper contributes to the theory development of IT offshore outsourcing.

Introduction

The global, or offshore, outsourcing of information technology (IT) has received increased attention. Hirschheim et al. defined IT offshore outsourcing as the migration of all or part of the development, maintenance and delivery of IT services to a vendor located in a country different from that of the client (Hirschheim, Loebbecke et al. 2005). Currently, offshore outsourcing involves the movement of these services to countries like India and China where wages are significantly lower. There are two major types of offshore sourcing (1) information processing and (2) information systems services (Hirschheim, Loebbecke et al. 2005). The information processing activities relate primarily to transaction and data processing projects such as help desks and call centers. The information systems services, on the other hand, are concerned with software development activities such as analysis, design, implementation, and maintenance of information systems. The growth of the offshore outsourcing is strong and the trend is predicted to continue (Carmel and Agarwal 2002).

IT offshore outsourcing are typically motivated by (1) reduced labor cost, (2) flexibility in staffing management, (3) access to specialized skills and processes, and (4) "round-the-clock" development (Ferguson, Kussmaul et al. 2004). These compelling benefits have driven the offshore outsourcing to keep growing at a rapid speed. The spending on IT offshore outsourcing was estimated to be $15 billion in 2004 and it is expected to reach $46 billion by year 2007 (Surmacz 2004). Offshore barriers and risks, on the other hand, have also been widely recognized. Major barriers may include limited number of English language speakers, lack of understanding of Western business culture, and a poor reputation for intellectual property protection (TDCTrade.com 2000). Typical risks inherent in the international business trades are also applicable on the offshore outsourcing (Miller 1992). Combined with the insufficient experience in managing offshore outsourcing, the success of offshore outsourcing may be highly threatened.

Despite of the increased attention toward the IT offshore outsourcing phenomena, the research is in great lack to explore the dynamics embedded (Khan, Currie et al. 2003; Davison 2004; Ferguson, Kussmaul et al. 2004; Whitaker, Mithas et al. 2005). Carmel and Agarwal pointed out that the offshore outsourcing has not yet matured (Carmel and

Agarwal 2002). The majority of the firms experiment with the offshore outsourcing ideas through non-core activities and they are not participating into this trend proactively. Despite of the evolving "best practices", it remains largely unknown what may drive a particular firm to offshore and why firms vary in their levels of offshoring. Traditional beliefs (e.g. low labor cost) have gradually been found out to be either inaccurate or insignificant in their capabilities to explain the diversity of firms adoption of IT offshoring (Carmel and Agarwal 2002). As IT offshore outsourcing develops without a systematic pattern and the research to explain the ongoing progress and the diversity of adoption therefore is important. Research in this regard will benefit the firms with better understanding of the offshore outsourcing phenomena: identify potential barriers, evaluate offshoring plans, and improve management strategies.

In this study, we are interested to explore the contingency embedded in the firm's offshore outsourcing context and examine the contingency impacts on firm's offshoring strategies which is indicated by its level of offshore outsourcing. In the next section, we discuss the related research issues in firm level offshoring and develop the nomological networks to investigate the underpinning of firm offshore outsourcing decisions.

Conceptual Background

IT offshore outsourcing is a complex organized phenomena and it introduces a number of research issues related with firm's adoption of offshoring. In this section, we explore and discuss firm, supplier, and business environment factors with their influences on the firms' offshoring strategies. We argue that their interactions and contingency may explain why firms vary in their adoption level of IT offshore outsourcing. The discussion draws from transaction cost economics, culture theories, integrated social contract theory, and institutional theory. The multitheoretic lens helps us identify the key concerns in offshoring adoption and it facilitates the construction of nomological network for offshoring phenomena.

Cost Savings or Cost Losses?

IT outsourcing may take any form from either onshore, nearshore, or offshore. The management decisions of a particular outsourcing form may be largely determined by the economic incentives on production costs incurred (Vestring, Rouse et al. 2005; Whitaker, Mithas et al. 2005). Production costs widely refers to costs incurred from "the physical or other primary processes necessary to create and distribute the goods or services being produced" (ISWorld 2006). Compared with onshore or nearshore, offshoring renders a promising strategy in that it offers the lowest production cost in most cases. The offshore outsourcing grants the firms with access to abundant well trained IT experts at much lower wage rate than domestic employees. The existing offshore outsourcing literature have found consistent evidence that the lowered production cost is among the top incentives that drives firms towards offshore outsourcing practices (Hirschheim, Loebbecke et al. 2005).

Transaction cost economics (TCE), however, suggests that offshoring firms may not be able to appropriate the production cost savings unless they can reduce the transaction cost associated with the management of offshoring (Walker and Weber 1984; Nooteboom 1993; Lacity and Willcocks 1995; Lacity and Willcocks 1995c; Grover, Cheon et al. 1996; Ang and Cummings 1997; Gallivan and Oh 1999; Wang 2002; Kern and Willcocks 2002a). Transaction costs generally refers to the costs of "all the information processing necessary to coordinate the work of people and machines that perform the primary processes" (ISWorld 2006). TCE has been widely used to explain organizational practices of the firm. TCE proposes that firms are formed as a result of cost-minimizing choice; Firms choose to make or buy products/services by calculating the overall costs incurred. While offshoring may greatly reduces the cost of "making" the IT products or services, the managerial decisions on whether to adopt it have to carefully calibrating the transaction cost.

TCE assumes bounded rationality which suggests that decision makers have constraints on their cognitive capabilities and limits on their rationality (Rindfleisch and Heide 1997). The bounded rationality is resulted by the limited or asymmetric information of the transaction parties and the environment in which the transactions take place. The bounded rationality may therefore introduce transaction management problems when firms enter into unfamiliar

domains such as offshoring. Unlike domestic outsourcing, offshoring may introduce high level of environment uncertainty and behavioral uncertainty (Vestring, Rouse et al. 2005). The offshore environment uncertainties are often protracted as "geopolotical" and they typically refer to unexpected movements in the regulations (e.g., propriety protection laws) and economics stabilities (e.g., exchange rate) of the outsourcee countries. Behavioral uncertainty is another unique challenge for offshoring in that the geographical distance and time-zone differences between the outsourcer and outsourcees dramatically increases the performance evaluation difficulties where the behaviors of the outsourcees are difficulty to measure and monitor, technically and economically. TCE also assumes opportunism which is defined as "self-interest seeking with guile" (Williamson 1985). Opportunism suggests that transaction actors may behave opportunistically in manners such as lying, cheating, and violating transaction agreements as to exploit the transaction benefits (Rindfleisch and Heide 1997). Opportunism threats the transactions when they involve specific assets whose values are limited outside of the focal transactions. As transactions grow in size, the specific assets is likely to increase as to provide transaction specific communication, coordination, and control mechanisms.

The IT offshoring outsourcing decisions and strategies therefore may be selected with both costs taken into consideration. Unlike the production cost which is largely determined by the contracts, the transaction cost is less predictable and highly prone to the unforeseeable changes in offshoring scenarios. Bounded rationality posits that firms are unable to make "perfect" ex-ante evaluation and estimate of transaction costs. The "*hidden cost*" embedded in offshoring further makes an informed calculation difficult (Hendry 1995; Barthelemy 2001; Overby 2003). It is, therefore, advisable for firms who consider offshoring options to take a cautious approach and avoid offshoring when high transaction costs are perceived.

Culture-Distance: Are We Understanding Each Other?

IT offshore outsourcing requires outsourcer firms to interact and collaborate with outsourcee companies who are located in countries that are geographically disconnected. This long-distance relationship sharply differentiates offshoring from onshore or nearshore in that much more challenges are introduced besides of the geographical settings (Kumar and Willcocks 1996). One such managerial concern highlighted is the cultural distance (or difference) between the outsourcers and outsourcees (Sabherwal 1999; Khan, Currie et al. 2003). Organization theories posit culture as a crucial factor which impacts firm operations both in and outside of firm boundaries (Harris 1994; Robey and Azevedo 1994). Culture has been found to account for firm behaviors and performance such as corporate strategy, job attitudes, administrative practices, merger and acquisition outcomes, technology transfer practices, and conflict resolution strategies in product innovation settings (Leidner and Kayworth 2006). The cultural conflicts or mismatch between the firms in offshore outsourcing transactions may lead to misaligned, incompatible, and wrong interpretations of business objectives and outsourcing goals (Vestring, Rouse et al. 2005; Whitaker, Mithas et al. 2005; Rottman and Lacity 2006).

Firm differences in culture values are the result of national and organizational culture systems (Leidner and Kayworth 2006). IS research has systematically investigated the difference between western- and non-western cultures as well as the cultural impacts on the development and use of IT activities (Straub 1994; Myers and Tan 2002). Hofstede developed the national culture taxonomy with dimensions along power distance, uncertainty avoidance, individualism-collectivism, and masculinity-femininity (Hofstede 1980). Recent culture literature further proposed new dimensions such universalism-particularism, affective-neutral, specificity-diffuseness, achievement-ascription, and internal-external control (Trompenaars 1996). Culture at organizational levels has also been widely studied (Robey and Azevedo 1994; Robey and Boudreau 1999) and is found to overlap with national culture (Leidner and Kayworth 2006). The organizational culture is centric around business orientations and behavioral norms. Organizational culture dimensions are such as openness to change-innovation, task-oriented organizational growth, bureaucratic governance, competition-confrontation, etc (Ladd and Heminger 2002; Balthazard and Cooke 2004). The organizational culture is rooted on the national culture systems and is further cultivated by the organizational practices (e.g., training and rewards) towards desirable business cultures. Firms in different countries and economy environment therefore are likely to differ in their organizational cultures.

Differences in culture values negatively affect the way firms sense make, evaluate, and communicate with each other (Trompenaars 1996). Cultural differences and their consequences on firm interaction failures (e.g., international trades and business ventures) have been widely observed and recorded in the literature (Adler 1983; Kumar and Willcocks 1996; Whasham 2002; Dube and Robey Forthcoming). Cultural difference is particular relevant and salient in offshore outsourcing as a large portion of the preferred outsourcee countries are non-western culture countries with underdeveloped economy systems. The cultural distance may influence the offshore outsourcing throughout the entire transaction life cycle and a close examination of the differences is of significant importance for offshoring management (Kumar and Willcocks 1996; Khan, Currie et al. 2003).

Governance Choices: Formal Contract and Social Contract

Prior literature has highlighted contracting as one major challenge of IT offshore outsourcing. Formal outsourcing contracts (e.g., service level agreements - SLA) outlines the promises or obligations for parties to perform particular actions in the future (Macneil 1978). Example contract may include clauses of roles and responsibilities of the parties, monitoring procedures, penalties and legal liabilities, behavioral and/or outcome performances (Poppo and Zenger 2002). The detailed and comprehensive formal contracts allows the outsourcer firms to effectively manage the ongoing offshore transactions by measuring service activity outcomes against defined performance metrics, examining measured results for problem determination and root-cause analysis, taking appropriate corrective actions, guiding outsourcee firms behaviors, and making necessary changes to accommodate the lessons learned and new agreement reached. The effectiveness of formal outsourcing contract therefore is largely limited by its capabilities in identifying potential exchange hazards and prescribing governance arrangements to minimize the costs and performance losses that may incur.

Studies of IT offshoring, however, found that formal contracts are difficult to craft (Gopal, Sivaramakrishnan et al. 2003; Khan, Currie et al. 2003). First, firms engaged in offshore outsourcing usually are lack of knowledge on the other parties in transaction. The long distance and cross-cultural variance introduce a great level of information asymmetry between the outsourcer and outsourcee firms and consequently result in inaccurate estimate of vendor capabilities, ambiguous business orientations, and unaligned expectations (Delmonte and McCarthy 2003). Formal contracts that recognizes the *ex ante* exchange conditions are therefore hard to craft. Second, the offshore outsourcing typically involves a high level of *ex post* exchange hazards such as asset specificity, measurement difficulty, and uncertainty as pointed by previous literature (Poppo and Zenger 2002; Gopal, Sivaramakrishnan et al. 2003). The high potentials of ex post hazards necessitate the complex contractual governances which unfortunately are costly to craft and infeasible to develop, due largely to the incomplete contract phenomena (Richmond, Seidmann et al. 1992; Bryson and Ngwenyama 2000).

Recent studies have proposed a number of alternatives for addressing the limitations of formal contracts, among which is the Integrative Social Contract Theory (ISCT). ISCT is one of the most promising theories of business ethics and it is important to explore the inter-organizational and vendor-client relationships where contracting is not an effective governance option (Donaldson and Dunfee 1994; Donaldson and Dunfee 1999). ISCT explains the business and its social relationships from the social contract tradition and it assumes an implicit social contract between business and the social environment. Such social contracts and business ethics (norm-generating) guide the business to behave in commercial transactions and to interact with the business community when formal contracts are missing (Solomon 1992). ISCT posits that the social contract fostered between the transaction parties is capable to maintain and improve organizational relationships and enhance their interactions in case of conflicts and uncertainties (Smith and Hasnas 1999; Xu, Teo et al. 2005; Oosterhout, Heugens et al. 2006).

Social contracts suggested by ISCT therefore may act as an effective mechanisms in managing IT offshore outsourcing. As formal contracts may not fully recognize the ex ante conditions as well as provide flexibility for ex post contingencies, a healthy and constructive social contract between the transaction parties may facilitate with the communication, conflict resolution, and changes adoption (Gopal, Sivaramakrishnan et al. 2003). Social contract maybe cultivated through trustful and good-will behaviors of the souring parties. By examining these indicators, firms evaluate

their outsourcee alternatives and identify the appropriate vendor to begin with offshoring transactions.

Industry Pressure: Move along or Stay back?

Offshore outsourcing has been an increasingly common business practices in the recent years (Carmel and Agarwal 2002). The spending on IT offshore outsourcing was estimated to be $15 billion in 2004 and it is expected to reach $46 billion by the year 2007 (Surmacz 2004). As the number of offshoring firms keeps increasing, the institutional theory suggests that there may emerge institutional influence in IT offshore outsourcing (DiMaggio and Powell 1983; Tolbert and Zucker 1983; Ang and Cummings 1997b). DiMaggio and Powell suggested that industry may place institutional influences on organizations evolve through a process of structuration (DiMaggio and Powell 1983). The structuration process of institutional influences arises from the external constituents (e.g., customers and suppliers) and the pressures from similar organizations (DiMaggio and Powell 1983; Ang and Cummings 1997). These structuraion processes may shape the patterns of a firm's behaviors. Institutional theory has been cited as one powerful tool to explain homogeneity of organizational forms and practices (DiMaggio 1988).

Institutional influence has been empirically tested and verified in souring literatures (Ang and Cummings 1997; Seddon 1997). Lacity and Hirscheim found the "bandwagon" phenomena in outsourcing where a large volume of firms took outsourcing as their organizational strategy simply to follow the trend in the industry and they acted without carefully evaluating the consequence of the outsourcing (Lacity and Hirscheim 1993). When firms facing offshore outsourcing decisions, institutional influence may also act as a crucial factor (Kumar and Willcocks 1996). As more organizations adopt offshoring practices, a firm's decision to move along or stay back with the industrial trend of offshoring may signal complex information and cast multiple implications. First, the adoption of offshoring may be interpreted as a measure of firm's agility to innovation and competitive performance in competitive business environment. Second, the adoption of offshoring may avoid later mover disadvantages and improve the firm performance with "best practice" industry wise (Carmel and Agarwal 2002). The firms therefore have to take institutional influence into consideration when they develop offshore outsourcing strategies.

Some Implications

The previous discussion of the offshoring related research issues has important implications for IT offshore outsourcing literature and the organizational management. These implications concern three areas. First, the multitheoretic lens has implications for predicting the relationship between the firm internal characteristics and the IT offshore outsourcing decisions. Second, the multitheoretic lens has implications for predicting the relationship between the outsourcer-outsourcee relationship and the offshoring strategies. Third, the multitheoretic lens has implications for predicting the relationship between the business environment characteristics and the IT offshore outsourcing decisions. We develop a set of research propositions as in Figure 1.
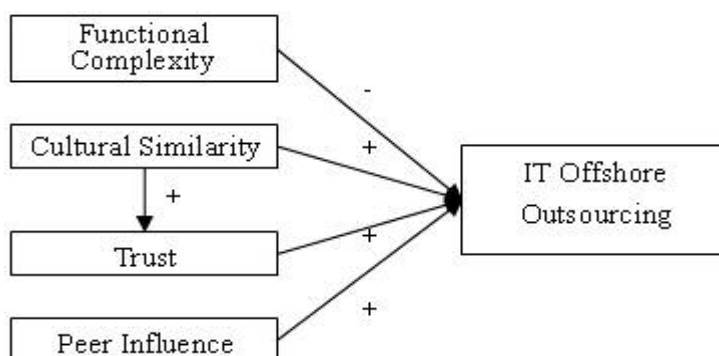

Figure 1. Conceptual Model of IT Offshoring

Internal Influences of IT Offshore Outsourcing Strategy

As we have pointed out in our main argument, IT offshore outsourcing introduces management difficulties and incurs transaction cost due to the great potential of exchange hazards. Firms therefore are more likely to offshore IT systems which are simple and easy to manage. Applying TCE, prior literatures suggest that IS system functional complexity as an indicative characteristics of the IS souring projects (Kishore, Rao et al. 2003; Kishore, Agrawal et al. 2004). Information system functional complexity refers to the degree to which systems of the IS functions are diversified (Ang and Cummings 1997). Organizational wide IS systems are such as IT services, IT infrastructures, and hardware and software systems. The complexity may also be reflected by the IS occupational roles, subunits, levels of authority, and operating sites in the IS divisions of organizations.

Offshoring of complex IS systems may introduce great amount of transaction costs as to offset the bounded rationality and to safeguard against opportunisms (Delmonte and McCarthy 2003). First, projects of complex IS complexity requires higher contracting cost in the process of systems analysis, safeguards designs, and performance metric development. Second, IS functional complexity suggests for high investment in performance monitoring, communication infrastructures, and control and coordination mechanisms. In addition, complex IS systems imply high degree of interdependencies of the organizational wide IS sub-systems which leave the firms vulnerable to offshoring risks. Hence, we expect that the level of firm IS system complexity will be negatively associated with the extent of offshoring extend. In contrast with firms of complex IS systems in place, firms with lower degree of IS functional complexity may be more likely to offshore its IS systems and at a greater extent.

Proposition 1: The level of firm's IS system functional complexity will be negatively correlated with the extent of IT offshore outsourcing

Offshore Vendor Selection Strategy

As we discussed before, cultural distance negatively influences the offshoring parties in their communication and interpretation, goal alignment and expectations, and performance evaluation, etc (Khan, Currie et al. 2003; Hirschheim, Loebbecke et al. 2005). Whasham and Trauth further studied the cultural difference in the work patterns and attitudes, described cross-cultural working on software outsourcing from U.S. to India, and examined work patterns in areas such as relationships and coordination mechanisms (Tauth 1999; Whasham 2002). The cultural difference in offshore outsourcing is resulted from both national culture and organizational culture diversities. Unlike in onshore or nearshore outsourcing, culture is most salient in offshoring and it plays an important role in the sourcing decisions (Spencer-Oatey 2000).

Culture distance therefore is suggested as a predictor of offshoring practice (Carmel and Agarwal 2002; Krishna, Sahay et al. 2004). For example, Krishna et al found that Norwegian outsourcers outsource more to Russian software suppliers than to Asian companies. According to cultural theories, smaller culture distance facilitates the communication and sense making between the parties and consequently reduces the collaboration barriers that may emerge from cultural incongruence (Leidner and Kayworth 2006). On the contrary, firms may be discouraged from offshoring when the culture distance hinders business interactions and increases management risks. Thus:

Proposition 2: The level of cultural similarities will be positively correlated with the extent of IT offshore outsourcing

Previous discussion suggests that social contract is important in the management of IT offshore outsourcing. According to ISCT, social contracts define the expectations of unwritten social norms that govern the behaviors of the vendors and the clients and they are crucial to alleviate the incomplete contract problems and to ensure good-will and ethical behaviors. As it involves unspecified obligations and norms, social contract requires mutual trust to initiate, sustain, and develop (Sabherwal 1999). Firms join offshore outsourcing as long as they trust the other parties to uphold

their side of the social contract. Trust is defined as "confidence that the behaviors of another will conform to one's expectations and in the goodwill of another" (Hart and Saunders 1997). Sabherwal suggested that trust should be viewed differently from its roles in the participation relationships, on the basis of whether participants know each other already and are aware their future relationships (Sabherwal 1999). This suggests that participants in outsourcing activities who are lack of prior relationships and mutual knowledge with one another would in a much greater need of trust to initiate outsourcing projects.

Unlike in onshore or nearshore outsourcing, the lack of prior relationships and interaction is most salient in the offshore outsourcing as the parties involved reside on different countries (Gopal, Sivaramakrishnan et al. 2003). The lack of exposure of the vendors and the limited knowledge toward the vendors may all impact on calculative, competence, and rational-base trust (Paul and McDaniel 2004). They further contribute to the perceived lack of control in the offshore outsourcing project and opportunistic behaviors by the partners consequently (Carmel and Agarwal 2002). On the other hand, the offshore outsourcing risks such as losses of business secrets, intellectual property, and core competence all threats the image of offshore outsourcing (Apte 1996). The trust toward the vendor may greatly reduce the perceived risks involved and be exercised as a safeguard in this regard (Khan, Currie et al. 2003). We therefore propose that the trust toward the offshore outsourcing vendors may encourage the clients in the participation of outsourcing.

> *Proposition 3: The level of trust toward offshore vendors will be positively correlated with the extent of IT offshore outsourcing*

Prior literature suggests that the culture may impact on the trust. Earle claimed that "we trust people we take to be similar to us" (Earle 1995). Anderson and Weitz found there exists relationship between trust and cultural similarity (Anderson and Weitz 1989). Siegrist also suggested that culture similarity evokes social trust (Siegrist, Cvetkovich et al. 2000). Culture theories suggest that cultural similarity reflects the level of consistency in the ideologies, beliefs, assumptions, shared values, mutual understandings, and the collective will (Sackmann 1992). A high level of cultural similarities, therefore, may play important role to align the goals and interests, which enhance the identification-based trust consequently (Sabherwal 1999). Lane and Van der Vyver suggested that the cultural similarity resolves the culture collision, improve business understanding, and consequently contribute to the mutual trust (Lane and Van der Vyver 2005). The vendors and clients who perceive similar cultures are found to be more willing to trust each other (Anderson and Weitz 1989; Lasher, Ives et al. 1991; Fitzgerald and Willcocks 1994*). We therefore propose that cultural similarity may cast a positive impact on the trust perceived between offshoring client and vendor firms.

> *Proposition 4: The level of cultural similarity will be positively correlated with the level of trust*

External Impetus of IT Offshore Outsourcing

We have discussed in our main argument that institutional influences may impact the adoption of IT offshoring outsourcing and introduce bandwagon phenomena (Swanson and Ramiller 2004). The peer influence, among others, acts as a proxy to spread out the idea of offshoring outsourcing practices. DiMaggio and Powell suggested that peer influence is a strong driver to propagate innovations to the entire industry, resulting a homogeneity of organization practices (DiMaggio and Powell 1983; DiMaggio 1988). Unlike onshore outsourcing which is signified by Kodak event, offshoring has developed with relative low attention from the outside. The domestic mindset and inexperience in managing from distance has found accountable for the offshore outsourcing development for a long period (Carmel and Agarwal 2002). The growing understanding of the offshore outsourcing barriers, the enhanced management skills in contracting and vendor selection, and the evolving "best practices" in the offshore activities, offshoring represent an unavoidable trend in visually all industries. As the number of offshoring firms increase in a given industry, higher pressure is resulted and is likely to push the rest of the firms towards the adoption of offshore outsourcing practices. The higher peer influence a firm perceives from the peers in the same industry, the more likely a firm is going to participate into the offshore outsourcing. Thus:

> *Proposition 5: The level of peer pressure will be positively correlated with the extent of IT offshore outsourcing*

Conclusions and Future Research

Despite of the increasing amount of attention on offshore outsourcing, IT offshore outsourcing remains an underdeveloped research area that requires more research works to describe and predict the development of this new business phenomena. In this study, we examine the typical research issues related with the offshore outsourcing contingency and antecedents. The theoretical background draws from transaction cost economics, culture theories, integrated social contract theory, and institutional theory. The paper contributes to the theory building of IT offshore outsourcing.

A number of future studies are worthy of investigation. First, empirical testing of the research model is expected. The unit of analysis in this study is offshoring transactions between vendor and client firms. To collect the data, survey instruments will be developed and validated before distributed to sample firms that have offshoring experience.

Second, we have discussed in this paper a list of important factors on the offshoring decisions. While some of the factors (such as IT system function complexity and peer influence) are generally applicable to onshore and nearshore outsourcing, others (such as cultural similarity and trust) are most salient in offshoring context. Future research may be required to examine the overlap between onshore/nearshore outsourcing and offshoring in terms of their drivers and to identify the factors that are significantly more important for offshoring than its counterparts.

Third, further research is important to explore the selection of offshore outsourcing strategies. General outsourcing strategies include but not limited to (1) single source approach, (2) best-of-breed approach, (3) consortium approach, and (4) buyer-supplier alliances (Bendor-Samuel 2002). As offshore outsourcing introduces unique characteristics such as high transaction costs and risks, the applicability of outsourcing strategies remains largely unknown as to how outsourcing firms determine the appropriate offshoring strategies on an individual basis. A future research that explains and suggests for the best strategies on offshoring structure will bear significant contribution. Existing offshore outsourcing research has provided preliminary findings for the above research issue. Through extensive interviews, Vestring et al. found that the cost leaders -- companies with the lowest cost position given comparable quality and for comparable products -- tend to use a "net" of sourcing vendors in the practice (Vestring, Rouse et al. 2005). Rottman and Lacity in their studies witnessed that the large firms may differ from small firms in their use of supplier portfolio diversity strategy (Rottman and Lacity 2006).

Forth, it is interesting to study *whether* and *how* the preference of offshore outsourcing structures may evolve as the client-vendor relationship develops. Carmel and Agarwal suggested that, during the offshore outsourcing stages, the client may experience a change in sourcing focus from cost to strategic (Carmel and Agarwal 2002). We therefore speculate that a sourcing mode that fosters cost saving may be preferred in the early stage of offshore sourcing while a relationship-centric mode may be employed in the later stages. In line with this speculation, the buyer-vendor alliance may emerge as the preferred offshore outsourcing structure than the other structures at a later stage of offshoring. In addition, Kishore et al. concluded that the project property such as technology maturity casts impacts on the outsourcing modes (Kishore, Agrawal et al. 2004). We, therefore, would be interested to see whether such phenomenon holds in the offshore outsourcing.

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