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The Client and Service Provider Relationship in IT Outsourcing Project Success:

The Moderating Effects of Organizational Attitudes on Knowledge Sharing and Partnership Quality

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ABSTRACT

The role of organizational attitude for an effective knowledge sharing (KS) in IT outsourcing (ITO) relationships has not been adequately addressed. In this paper, the authors investigate the relationship between KS and ITO success as well as the potential moderating effect of organizational attitude on the relationship between KS and partnership quality in ITO. By leveraging structural equation modeling (SEM) on survey data from 153 ITO projects, results show that organizational attitudes significantly influence knowledge sharing and partnership quality, which in turn results in successful ITO project. Moreover, the relationship between knowledge sharing and partnership quality is more pronounced when the partner firms have positive attitudes to KS. The authors further showed that partnership quality mediates the relationship between knowledge sharing and the success of an ITO project. Finally, the results of this study indicate that positive organizational attitude improves knowledge sharing between the client and service providers (i.e., vendors) and creates stronger outsourcing partnerships.

KEYWORDS

Knowledge Sharing, Offshore IT Outsourcing, Organizational Attitude, Partnership Quality, Structural Equation Modeling (SEM)

INTRODUCTION

Knowledge sharing (KS) is more prevalent in inter-organizational projects, especially in high-end information technology (IT) projects, where clients and service firms need to exchange knowledge to ensure project success (Zimmermann et al., 2018). Knowledge sharing largely depends on the organizational environment, and thus, its processes and the attitudes of supplier firms towards it are different from those of client firms. Organizational attitude determines the degree of partnership, which ultimately serves as a key predictor of outsourcing project success. This study contributes to the existing

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literature on information technology (IT) outsourcing by exploring the role of organizational attitudes towards KS. Knowledge-embedded IT outsourcing requires KS between supplier and client firms. This is also an opportunity for suppliers to learn from client firms and have positive organizational attitudes to understand detailed project knowledge to make it successful.

The outsourcing of IT-related tasks has become a common practice for modern firms in a number of industries, as they are confronted with higher levels of complexity and uncertainty. It has allowed them to focus on performing their core activities while delegating their non-core IT functions to third parties (Kern & Willcocks, 2002). Grover et al. (1996) defined IT outsourcing as "a strategy for acquiring IT services from external service providers" (p. 91). Offshore IT outsourcing—relates to a partnership between a client and service provider in which the latter is located outside the client firm's home country. Many researchers have evaluated the strategic outsourcing relationship where both parties share their views and learn from each other (Bapna et al., 2016; Bates & Khasawneh, 2005; Kim, Nan, Kim, & Park, 2021; Mohiuddin et al., 2019).

As companies' business activities expand, they seek to achieve salient objectives with the help of individuals and organizations with technical expertise that exceeds their own (Hanafizadeh & Zareravasan, 2020; Lacity et al., 2010). To this end, an increasing number of firms have outsourced their IT business functions to external service providers (Chang et al., 2017). Although these outsourcing practices have largely been successful thus far, their continued growth and success depend on a number of factors. In the past, companies sought to secure cost-effective access to personnel with specialized skills and the growth of IT outsourcing resulted from consistent successful alliances between service providers and receivers, as well as the skill with which they shared organizational knowledge (Blumenberg et al., 2009; Rottman, 2008). The success of the projects mostly relies on how effectively and efficiently service providers and clients share their knowledge (Chang et al., 2017). Such a collective knowledge-sharing process not only facilitates the development of a shared mental model, but also helps to build complementary resources through KS. The influence of knowledge on organizational success has motivated substantial investigation into effective KS methods in IT outsourcing. Effective knowledge sharing between IT clients and suppliers is largely contingent on the former's attitude towards KS. Although many studies on knowledge sharing have focused on intra-organizational knowledge sharing (Al-Emran et al., 2018; Chang et al., 2017), we seek to explore inter-organizational knowledge sharing.

A number of scholars have explored organizational KS and its effect on the success of outsourcing projects (Anwar et al., 2019; Liao et al., 2009). In outsourcing relationships, KS is often treated as inherently strategic, so its management is critical for cultivating and leveraging effective outsourcing partnerships. The knowledge-based view (KBV) of the firm considers knowledge as the most strategic resource that serves as the (a) foundation upon which a firm's competitive advantages stand, and (b) a key determinant of that firm's success (Caputo et al., 2019; Grant, 1996; Eskelund et al., 2020). Similarly, Hitt et al. (2001) contended that knowledge is a firm's most critical asset, making the firm's capacity to generate and share knowledge central to its operations. However, because firms come from diverse cultures, environments, and backgrounds, knowledge sharing can prove challenging (Liu et al., 2020). Likewise, the degree of knowledge sharing may also vary from firm-to-firm, especially firms from emerging country, as it is mostly determined by organizational policies and practices that shape organizational attitudes (Bock et al., 2005). Therefore, outsourcing firms' recent efforts have focused on fostering favorable, supportive, and promising approaches. If an organization is positively predisposed towards KS, then it is more likely to share knowledge with other firms. Given the potential problems that could arise as a function of misaligned attitudes towards KS, service providers and clients should share a common vision and goals, as well as a positive attitude toward KS (Obeso, 2020).

Successful KS can create value for the involved partners and therefore, how fostering KS in successful IT outsourcing is important. Several researchers have shown that organizational context, interpersonal relationship, team culture, policies and practices, individual characteristics, and motivational factors are the primary drivers of effective KS (Nguyen et al., 2021; Wang & Noe, 2010).

There are, however, scarcity of research in context of IT outsourcing (Lee, 2001; Liao et al., 2009). There is insignificant research on role of socio-psychological factors on KS in IT outsourcing context (Gururajan & Fink, 2010; Xia et al., 2020). This study explores how organizational attitudes moderate the influence of knowledge sharing on partnership quality in successful IT outsourcing projects. Because (a) KS occurs naturally as a function of outsourcing partnerships, and (b) organizational attitude contributes to a firm's decision to share knowledge, both of these factors (partnership quality and organizational attitude) are of fundamental importance in outsourcing research. The main objective of this study is to enhance the understanding of the effect of organizational attitudes on KS, which serves as the foundation of strong outsourcing relationships for successful IT outsourcing projects.

Theoretical Background and Hypotheses

Knowledge Sharing

Researchers have offered a number of definitions of knowledge in the literature. Schubert et al. (1998) defined knowledge as the condition of knowing something with familiarity gained through experience. Alavi and Leidner (2001) interpreted knowledge as personalized information related to facts, judgments, ideas, and observations. Alternatively, some researchers have viewed knowledge as a process of simultaneously knowing and acting, which focuses on the application of expertise (Wang et al., 2014). The differing perspectives on knowledge have yielded disparate views on knowledge management. The KBV considers knowledge as a basis for core competencies, since it is hard to imitate, copy, or even disseminate and requires integration across a broad set of capabilities (Spender, 1996, p. 57; Liu, & Yu, 2021). The KBV perspective also emphasizes the importance of exploiting knowledge resources both within and outside firms. Consequently, modern organizations not only create knowledge within firms but also acquire knowledge from external sources by creating strategic alliances with other firms. They are increasingly paying attention to how they can learn and develop their own capabilities through strategic partnerships (Bates & Khasawneh, 2005; Loebbecke et al., 2016).

Nonaka (1994) segregated knowledge into two types: tacit and explicit. He argued that tacit knowledge is intrinsically tied to the individual who possesses it and can be difficult to articulate. Given the nature of its acquisition, tacit knowledge represents information that has been processed in an individual's mind through deliberation, learning, and judgment. In contrast, explicit knowledge can be articulated, codified, and communicated in both symbolic and natural languages. Polanyi (1967) described another knowledge that can be expressed verbally and symbolically, called it "implicit knowledge." It roughly corresponds to tacit knowledge. Explicit knowledge is transferred more easily than implicit knowledge. However, the latter is often described as more important than the former. To cultivate and optimize implicit knowledge, organizations must be motivated to exchange it. Knowledge creates value when it is shared and applied where it is most needed. Therefore, a firm's competitive advantage does not rely on knowledge creation, but knowledge diffusion and application (Grant, 1996). This study focuses on explicit and implicit KS between client and service firms.

KS, in turn, facilitates the effective application of knowledge and innovation, which ultimately yields competitive organizational advantages (Chang et al., 2017). Likewise, KS is critical to the effective cultivation of outsourcing relationships and the survival of IT firms. Lee (2001) defined KS as "transferring and disseminating knowledge from one person, group, or organization to others" (p. 324). Thus, KS is at the heart of generating new ideas and developing new opportunities through employee socialization and learning (Lin, 2007). Firms that engage in inter-organizational knowledge sharing must develop routines and competencies to manage complex knowledge sharing across their boundaries (Loebbecke et al., 2016, p. 8; Uniyal et al., 2021). In addition, they need to develop inter-organizational, collaborative, and shared environments to facilitate active engagement in knowledge sharing. However, KS is not always an easy endeavor as employees tend to share knowledge only if they feel that it is in their interest to do so. Supplier firms from emerging markets, with the aim

of developing organizational capability, develop a knowledge-intensive culture by encouraging and aggregating behavior, such as knowledge-sharing values and norms (Alavi & Leidner, 2001, p. 114). Top management also plays an important role in supporting and promoting effective KS by nurturing favorable organizational attitudes. Strong and positive organizational attitudes towards KS encourage employees to share knowledge with and learn from partners (Bates & Khasawneh, 2005). A number of factors related to organizational culture tend to influence organizational attitudes (Bock et al., 2005).

IT outsourcing brings flow of new knowledge between vendor and client firms, where the main goal is to increase shared knowledge. When done properly, both firms can develop their capabilities in the outsourced activities and develop a long-term relationship (Chang et al., 2017; Gong & Blijleven, 2017), beyond enhancing performance and contributing to the success of a single project (Blumenberg et al., 2009). Service providers and client firms generally share knowledge and information with each other, which ultimately results in greater benefits for both (Zimmermann, et al., 2018). Moreover, the quality of partnership between them depends on the amount of knowledge that each party shares with the other (Goo & Nam, 2007; Teo, 2012). Lee (2001) claimed that KS is a determinant of partnership quality. By sharing knowledge, partners in an outsourcing relationship can sustain their effectiveness over time. Given the positive outcomes associated with it, it seems that sharing both explicit and implicit knowledge results in better (and more effective) relationships between the parties in IT outsourcing.

Organizational Attitude

Ajzen and Fishbein's (1980) theory of reasoned action (TRA) postulates that attitudes and subjective norms affect an individual's intention to perform a behavior, which in turn affects an individual's actual participation in that behavior (Lin & Lee, 2004; Mohiuddin et al., 2018). The extended version of the TRA, the Theory of Planned Behavior defines an attitude towards a behavior as "the degree to which a person has a favorable or unfavorable appraisal of the behavior in question" (Ajzen, 1991, p. 188). Their definition suggests that attitudes with different targets are distinct, as individuals have a predisposition towards an object, behavior, or thing, which influences a positive or negative and favorable or unfavorable response. In contrast, organizational attitudes influence employees' behavior and attitudes resulting from interpersonal or inter-organizational interactions and also reflect general employment policies and practices that regulate their behavior in any action (Shore et al., 1990). These interpersonal or interorganizational interactions are mostly affected by the formal organizational characteristics in which they take place. Therefore, an employee may feel quite positively about an action because of supportive policies and practices within the organization, but negatively towards an action due to a lack of those factors. These positive and negative feelings about actions should then contribute to more specific attitudes such as confidence and commitment (Shore et al., 1990, p. 58).

Organizational attitudes towards KS are largely a function of employees' attitudes and subjective norms in relation to it (Ajzen & Fishbein, 1980). Using the TRA, Zhikun and Fungfai (2009) found that attitude is a stronger predictor of KS behavior than subjective norms. Bock et al. (2005) revealed that positive or favorable attitudes and KS have a positive, reciprocal relationship, and a sense of self-worth influences perceptions of subjective norms related to KS. Szulanski (1996) found that in addition to individual motivations, contextual elements also compel employees to share knowledge with others, including the nature of their social networks, shared goals, trust among partners, and support from top management. Other factors that affect attitudes towards KS include organizational structure, rewards, commitment, satisfaction, perceived behavioral control, and loss of knowledge power (Seba et al., 2012). Organizational culture also significantly affects attitudes towards and intentions to engage in KS because employees' attitudes are shaped within an organizational structure that is largely influenced by its culture (Zhang and Ng, 2012). Therefore, this study considers organizational attitude as an aggregation of individual attitudes.

In outsourcing relationships, the degree of KS among partners is mostly governed by organizational attitudes. However, a common trait among employees is that they do not easily share

their knowledge with others and tend to hoard knowledge (Gururajan & Fink, 2010; Yeo & Marquardt, 2015). Some researchers (Alavi & Leidner, 2001; Chang et al., 2017; Jones et al., 2006) claim that an organization can effectively promote KS by altering employees' attitudes toward that end. In this situation, employees believe that through KS, they can help their organization as a whole to achieve their goals. Given the close relationship between attitudes towards KS and the actual act of KS, it is important for organizations to cultivate positive attitudes towards KS among employees (Robinson et al., 2005, p. 15). Despite adequate knowledge sharing, an organization is unlikely to realize a strong relationship in IT projects without showing promising conditions. This is particularly true when knowledge sharing has been based more on organizational support (Constant et al., 1994). Such an organizational climate would allow employees to increase their sense of self-worth, which, in turn, makes them more likely to develop favorable attitudes toward KS. In contrast, if there is a lack of organizational support and perceived benefits, individuals' unwillingness may hinder their tendency to share knowledge (Bock et al., 2005, p. 98).

Partnership Quality (PQ)

Partnership refers to an inter-organizational relationship that can contribute to the mutual achievement of partners' shared goals. Scientific research has demonstrated that a good relationship between clients and IT service firms can significantly contribute to a project's success (Blumenberg et al., 2009), whereas others emphasize the careful overseeing of mutual agreements and managing strong relationships between partners for creating successful outsourcing projects (Goo & Nam, 2007; Qi & Chau, 2013). On the contrary, unsuccessful relationships or bad partnerships can cost up to 70% more than successful relationships can (Claybaugh & Srite, 2009). Therefore, it is important to have a reciprocal relationship and collaborative mindset between the two parties to achieve successful IT projects.

The interactions that serve as the basis for these relationships can be of two types: integrative and distributive (Grover et al, 1996). Integrative interactions are characterized by cooperative behavior, where a buyer and seller seek to achieve mutual benefit through bargaining. In contrast, distributive behavior is motivated by gains achieved at the expense of another party. Generally, firms that engage in integrative behavior to achieve mutual goals tend to form long-term partnerships. In order to leverage each other's capabilities, outsourcing service firms and clients need to have strong partnerships to avail complementary resources from partner organizations.

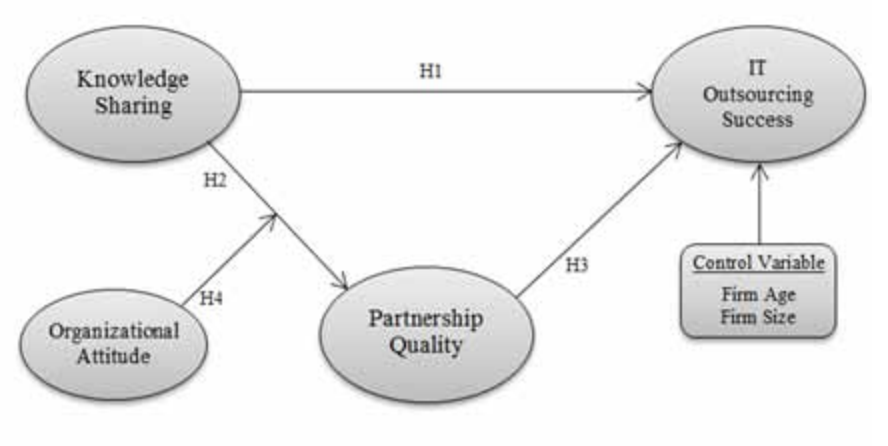
Partnership quality, however, refers to the extent to which the outcome of a partnership matches partners' expectations (Lee and Kim, 1999). As outsourcing projects are joint alliances between client and vendor firms, both parties focus on developing fruitful partnerships. This is because the nature of the partnership determines the parties' capacity to achieve their mutual objectives and build competitive advantages in their respective businesses (Liu & Yuliani, 2016). Similarly, McFarlan and Nolan (1995) argued that for outsourcing IT projects, success is contingent upon the relationship being managed as a strategic alliance. If a single project is completed effectively, a short-term strategic alliance can become a long-term inter-firm partnership (Lee, 2001). Thus, outsourcing partnerships between clients and service providers can transcend traditional business relationships.

Lee and Kim (1999) proposed a theoretical framework for partnership quality based on a social perspective, and observed that partnership quality was found to be positively influenced by factors such as participation, communication, information sharing, and top management support. It was negatively affected by age of relationship and mutual dependency. Fynes et al. (2005) focused on supply chain relationship quality and found that a good partnership quality between buyer and supplier based on mutual trust, joint problem-solving approach, commitment to fulfillment of pre-specified promises, helps to avoid complex and lengthy contracts. Several other authors claimed that building and maintaining a higher quality partnership (and therefore a strong strategic alliance), trust, commitment, communication quality, cultural similarity, shared goals, and mutual benefits can be advantageous (Kern & Willcocks, 2002; Lu et al., 2016).

Research Model

The proposed research model draws from theoretical frameworks to assess the moderating effect of organizational attitude on the relationship between KS and the quality of partnerships between outsourcing partners. Figure 1 presents a research model that illustrates the nature of the relationships to be explored.

Figure 1. Research model (moderating effect on the relationship between KS and PQ in IT projects)



Hypotheses Development

In any business alliance, partner firms interact with each other for updates, requirements, and needs of the projects that lead to the sharing of knowledge and information between them. Mesquita et al. (2008) conducted a study on KS in strategic alliances and found that organizational learning, as well as sharing explicit and implicit knowledge between partners, can generate a spillover of knowledge flow, intentionally and unintentionally, between parties. This knowledge flow between partners leads to a greater understanding of the projects and unsolved issues that contribute to better execution of that project (Park & Lee, 2014, p. 155).

In outsourcing partnerships, client firms seek partners' expertise to exploit their own competencies (Rottman, 2008). In contrast, service providers need information from client firms to collect complete and detailed project requirements regarding outsourced services, and solve the issues of effective and efficient management of IT projects. Thus, a two-way flow of knowledge exists between client and service firms whereby IT product design and concept, prototype, and sometimes guideline and training knowledge is transferred from client firms to service firms and technology-specific knowledge is transferred from service firms to client firms (Quinn, 1999). This flow of knowledge mostly depends on inter-firm KS willingness and commitment (Fehrenbacher & Wiener, 2019).

Information sharing among parties is necessary to help partners identify critical issues and eventually leads to financial performance (Carr and Kaynak, 2007). This can ensure improved management of outsourcing projects, innovative solutions, and better decisions that ultimately improve firms' performance. Lee (2001) and Choi et al. (2010) argued that KS between parties can lead to better team performance because of improved decision-making and coordination. Liao et al. (2009) examined the relationship between KS and information systems (IS) success and demonstrated that the degree to which clients and service providers exchange knowledge is significantly associated with outsourcing effectiveness. Related to this, Gonzalez et al. (2005) showed that consistent KS ensures

that firms remain abreast of all relevant business conditions, which enables outsourcing partners to face potential changes and challenges over time and lead to better firm performance. We assume that the higher the amount of KS between the parties in a project, the greater the probability of executing the projects effectively and efficiently. Given the above, we offer the following hypothesis for testing:

H1: Knowledge sharing influences the success of IT outsourcing.

Partnership quality refers to the degree to which both parties in a relationship recognize and understand that each firm's success is contingent (at least in part) on the other firm (Lee & Kim, 1999). Partnership quality is also dependent on how long partners have interacted; continuous business between two parties over a protracted period of time can yield partnership quality. Henderson's (1990) model suggests that sharing knowledge with partners can yield benefits to both clients and service providers, which promotes the maintenance of a long-term relationship between them. Supply chain management researchers have shown that knowledge sharing leads to stronger partnerships (Rashed et al., 2010). Kern and Willcocks (2002) found that the success of outsourcing partnerships is largely dependent on the partners' agreement on the degrees of KS.

H2: Knowledge sharing influences partnership quality.

Successful partnerships enable outsourcing partner firms to achieve organizational objectives and to build a competitive advantage that they cannot attain alone (Lee and Kim, 1999). Therefore, both parties in outsourcing relationships put emphasis on building quality partnerships to effectively manage and make IT projects a success. In many studies on outsourcing (Grover et al. 1996), researchers have found that the quality of a partnership between a client and service provider affects the likelihood of an outsourcing project's success. Goo and Nam (2007) showed that trust and commitment, two important dimensions of partnership quality, positively affect the likelihood that an outsourcing project will be successful. Lee (2001) analyzed the relationship between KS and outsourcing success and found that more frequent KS led to greater partnership quality, which ultimately influenced outsourcing success. Therefore, we assume that KS has a positive effect on outsourcing partnerships, leading to the successful completion of an IT outsourcing project and propose the following hypotheses:

H3: Partnership quality influences the success of IT outsourcing projects.

Attitudes towards KS refer to positive and negative feelings an individual has towards the intention to share knowledge with others (Bock et al., 2005). In this study, organizational attitude towards KS similarly refers to an organization's positive or negative evaluations of KS behavior. In their exploration of employee attitudes towards KS, Constant et al. (1994) found that organizational culture and policies, and personal traits influence individual attitudes towards the sharing of knowledge and information. Similarly, others argued that organizational attitudes towards KS largely depend on the organizational structure, reciprocal relationships with partners, trust, rewards, satisfaction, and loss of knowledge power (Ajzen, 1991; Shore et al., 1990). They also found that belief in organizational ownership encourages favorable attitudes toward KS.

As argued earlier, favorable attitudes (confidence and commitment) towards engaging in KS behavior is vital for strong outsourcing partnerships. If organizations have open and positive attitudes towards KS with one another, it may result in a strong relationship between those organizations, regardless of how much KS they engage in (Lin, 2007). It must be noted that outsourcing partnerships are crucial for project success. Considerable time, effort, commitment, sacrifice, and responsibility are required to retain such a relationship. Absence of adequate collective support to manage relationships in the organization will lead to an unwillingness to share knowledge. Bock et al. (2005) explored the

factors supporting or inhibiting an organization's KS intentions and found that organizations with a favorable attitude towards KS have a greater chance of transferring knowledge between them. It is also logical in outsourcing relationships to recognize that a favorable attitude can produce a more committed and durable sequence of action and involvement in the knowledge sharing process at the various stages of outsourcing relationships to help realize strong partnership quality. However, negative attitudes can hamper an individual's proclivity to share knowledge. Therefore, we assume that organizational attitudes moderate the relationship between KS and partnership quality. Although the degree to which firms engage in implicit and explicit KS may significantly affect partnership quality, positive attitudes towards KS should strengthen the relationship between them. Therefore, we propose the following hypothesis:

H4: Organizational attitude moderates the effect of knowledge sharing on partnership quality.

RESEARCH METHODOLOGY

Sample Selection and Data Collection

We adopted a survey method to test our hypotheses. The target respondents with three years of experience in providing IT outsourcing services to international clients. To collect data, we contacted senior executives of the Bangladesh Association of Software and Information Services (BASIS), a national trade body for software and IT services in Bangladesh, to ensure their full support of the survey administration and collection processes, and to obtain higher response rates. The survey questionnaires were distributed to selected member firms of the BASIS. Bangladesh is considered an emerging IT outsourcing destination (Gartner, 2010) and recognized amongst the top 30 by the Global Service Location Index (Kearney, 2014).

Following the key informant approach, which suggests that certain individuals represent the best source for firm-level information, we directed our questionnaire to project managers of targeted firms as they directly manage IT projects. A total of 470 BASIS member firms which participate in IT outsourcing projects were contacted. 157 questionnaires were collected, at a response rate of 33%, and 4 incomplete responses were removed. A data-set of 153 responses was considered for the final analysis. Due to the small sample size, we used the partial least squares structural equation modeling (PLS-SEM) (Reinartz et al., 2009). Table 1 provides summary information regarding respondents to the survey.

Measurement

The survey instruments were developed by adapting existing measures from previous studies. Though some prefer to use five-point Likert scales (Nan et al., 2020), we measured all constructs using seven-points ranging from "strongly disagree" to "strongly agree" since a seven-point scale records more accurate evaluation of an interface and maintains a good balance between having enough points of discrimination without having too many response options (Finstad, 2010). As a form of validation, we used an initial version of the questionnaire checked by experts on IT. All the measures are listed in Appendix 1. To gauge KS, we adopted measures developed by Lee (2001), who claimed that KS indicates the transformation or dissemination of knowledge from one firm to another. For the purposes of this study, we utilized the measures of organizational attitude developed by Ajzen and Fishbein (1980). Measures of partnership quality, which indicate the nature and utility of an inter-organizational relationship for achieving shared goals, were taken from Lee and Kim (1999). Finally, we measured IT outsourcing success in terms of strategic, economic, and technological gains. The metrics used to measure these were developed by Grover et al. (1996) and Lee (2001).

We controlled for firm size and age in all tests of our hypotheses. Firm size can influence the success of an IT outsourcing project because larger firms are more likely to have the greater

Table 1. Demographic characteristics of respondents (N=153)

Outsourcing Type	No.	%	No. of Employees	No.	%	Year of Experience	No.	%	Revenue (100000 BDT)	No.	%
Application Dev. & Maint.	37	24.2	0- 50	65	42.5	1-3 years	34	22.2	<1	22	14.4
IT Consulting	27	17.6	51-100	55	35.9	3-5 years	57	37.3	1-5	39	25.5
Data Entry	24	15.7	101-500	27	17.6	5-10 years	45	29.4	5-10	44	28.8
Networking	30	19.6	501-more	6	4.0	10 years +	17	11.1	10-50	37	24.2
IT Management and Security	28	18.3							> 50	11	7.2
Other	7	4.6									
Total	**153**			**153**			**153**			**153**	

resources to drive success (Lacity et al., 2010). We measure firm size by the number of employees in the outsourcing firm during the survey period. We also incorporate firm age into our analysis as a control variable. As firms get older, they gain valuable experience and have more opportunities to learn from clients and develop better mutual understanding, which influences successful outsourcing projects (Qi & Chau, 2013). We measure firm age by counting the number of years since the firm was first established.

After designing the questionnaire, the initial version was pre-tested by faculty members and practitioners who reviewed each item to improve content and construct validity. Next, a pilot test was conducted with 33 outsourcing projects from the same target group to refine the questionnaire items, which required considerable effort and time to answer. Using their recommendations, we developed our final questionnaire, which consisted of 24 items: seven items for knowledge sharing, five for organizational attitude, five for partnership quality, seven items for outsourcing success, and two to measure the control variables.

Common Method Bias

To test the common method bias, we performed Harman's single-factor test to determine whether a substantial amount of common method variance is present (Podsakoff et al., 2003). In this test, common method variance manifests as a single factor or a general factor accounts for the majority of the covariance among the measures. To mitigate the likelihood of common method bias, we subjected all scale items of similar constructs to a principal component analysis with a varimax rotation. The results of this analysis yielded seven factors with eigenvalues greater than 1.0, which collectively accounted for 71.02% of the total variance. The results also showed that the first factor captured only 43.57% of the variance in the data, indicating the absence of a substantial amount of common method variance. In accordance with Podsakoff et al. (2003), we included a common method factor in the PLS-SEM model with indicators that included all the principal constructs' indicators. We then calculated each indicator's variance explained by the principal construct and method. As shown in Appendix 2, on average, the substantive constructs explained 69% of the variance. The common method construct accounted for 1.3% of the variance. The ratio of substantive variance to common method variance was approximately 55:1. In addition, most of the method factor loadings were non-significant. Taken together, these results indicate that the common method bias does not significantly affect our findings.

DATA ANALYSIS AND RESULTS

Measurement Model

This study used the PLS-SEM method to examine the proposed model and hypotheses because of its ability to evaluate both the measurement and structural models simultaneously. Compared to other structural modeling approaches, the PLS-SEM approach requires minimal demand on the sample size to validate a model and does not require the underlying data to be multivariate normal. In our PLS model, all construct items were modeled as reflective indicators of their underlying latent constructs, and a bootstrap procedure was utilized with 500 subsamples to generate t-statistics, as path models do not directly provide significance tests and confidence interval estimates of path coefficients (Chin, 1998).

We first assessed the content, convergent, and discriminant validities of our measurement model. Because all measured constructs and items were taken from previous studies in which they were validated, the items' content validity was assured for this study as well. Convergent validity was then examined using two indices: composite reliability and average variance extracted (AVE). Nunnally (1978) established the widely accepted threshold of 0.7 as the minimum score to ensure convergent reliability, indicating a high reliability of items for a construct, and a minimum score of 0.5, or above, as the acceptable threshold for AVE, meaning that the variance captured by indicators is greater than the measurement error (Fornell & Larcker, 1981). The composite reliability values for our measures ranged from 0.746 to 0.895 and the AVE values range from 0.612 to 0.716 (see Table 2). Finally, we assessed the discriminant validity of the model by evaluating the square root of the average variance extracted (Fornell & Larcker, 1981). All items had factor loadings more than 0.7 except three (0.643, 0.657, and 0.698), which still can be accepted as studies reported that a good standardized loading factor of each measurement should be above 0.5 and ideally 0.7 or higher (Hair et. al. 2006; Truong & McColl, 2011;). Table 2 also indicates that the square root of AVE for each construct is greater than the respective correlations between that construct and all other constructs.

Table 2. Inter-construct correlations, consistency, and reliability

	CR	Alpha (α)	AVE	KS	OA	PQ	ITOS	F_age	F_size
KS	0.789	0.756	0.639	**0.754**					
OA	0.746	0.712	0.612	0.412	**0.711**				
PQ	0.895	0.865	0.716	0.369	0.346	**0.813**			
ITOS	0.866	0.842	0.684	0.318	0.288	0.553	**0.794**		
F_age	1.00	1.00	1.00	0.145	0.111	0.165	0.163	1.00	
F_size	1.00	1.00	1.00	-0.110	-0.180	-0.095	-0.110	-0.238	1.00

Note: Bolded diagonal elements are the square root of average variance extracted *CR: Composite Reliability, AVE: Average Variance Extracted KS: Knowledge Sharing, OA: Organizational Attitude, PQ: Partnership Quality, ITOS: IT Outsourcing Success, F_age: Firm age, F_size: Firm size*

In addition to the validity and reliability analysis of the measurement model, it was also evaluated using confirmatory factor analysis (CFA) to determine the model fitness. CFA was applied to evaluate how well the measured variables represented the number of constructs. The CFA model fitness values are listed in Table 3.

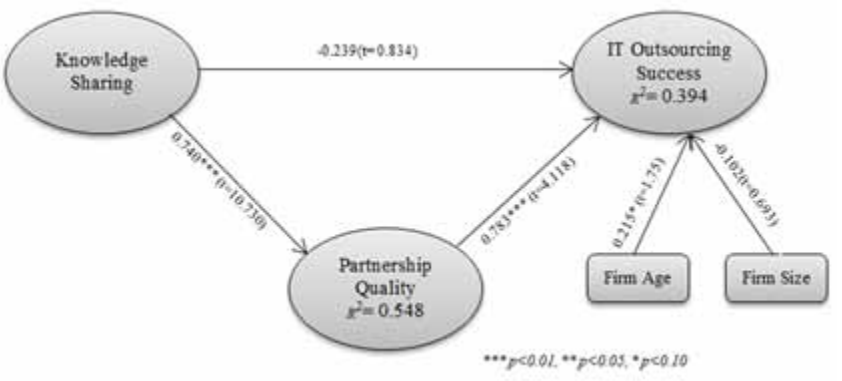
Table 3. Fit indices

Model Fit Index	Recommended Threshold	Measurement Model (CFA)	Decision
X^2/df	<3.0 (Schumacker & Lomax, 2004)	2.892	Accepted
Comparative Fit Index (CFI)	>0.9 (Byrne, 1994)	0.962	Accepted
Tucker Lewis Index (TLI)	>0.9 (Byrne, 1994), Browne & Cudeck, 1993	0.961	Accepted
Normed Fit Index (NFI)	>0.9 (Byrne, 1994), Browne & Cudeck, 1993	0.933	Accepted
Goodness Fit Index (GFI)	>0.9 (Byrne, 1994)	0.901	Accepted
Room Mean Square Error of Approximation (RMSEA)	<0.08 (Byrne, 1994), Browne & Cudeck, 1993	0.044	Accepted

Structural Model

The PLS analysis, including the path coefficient, path significance, and variance explained for each dependent variable, is shown in Figure 2. As shown, KS had no significant direct positive effect on the success of an outsourcing project ($\beta = -0.239$, $t = 0.834$), and therefore provides no evidence to support Hypothesis H1. However, knowledge sharing had a significant indirect effect on the dependent variable (IT outsourcing success) through partner quality, which significantly mediated the relationship between KS and IT outsourcing success. The results also show that the path coefficients from KS to partnership quality ($\beta = 0.740$, $t = 10.730$) and from partnership quality to IT outsourcing success ($\beta = 0.783$, $t = 4.118$) were significant ($p < 0.01$). This result provides mutual support for H2 and H3.

Figure 2. Results of PLS analysis



Although the data failed to support H1, they supported H2 and H3 (both $p < .01$). Our results indicated that the standardized path coefficients ranged from -0.239 to 0.783, and the R^2 values ranged from 0.394 to 0.548. The R^2 value of 0.394 for IT outsourcing success indicates that the model explains a substantial amount (39.4%) of variance in relation to IT outsourcing success.

In addition, firm age has a marginally significant effect on outsourcing success ($\beta = 0.215$, $t = 1.75$, $p < 0.10$) (Olsson-Collentine et al., 2019), but firm size was not a significant predictor ($\beta =$

-0.102, t = 0.693). This result provides evidence that past experiences directly affect outsourcing effectiveness.

Moderating Effect of Organizational Attitude

In addition to the evaluations of the direct effects described above, we also used the 'multigroup analysis' (MGA) method to explore the possibility that organizational attitude towards KS affected the relationship between KS and partnership quality (Chin, 1998). The complete formula we used to test the moderating effect of organizational attitude is:

$$t = \frac{path_{sample\_1} - Path_{sample\_2}}{\left[\sqrt{\frac{(m-1)^2}{(m+n-2)} * S.E._{sample1}^2 + \frac{(n-1)^2}{(m+n-2)} * S.E._{sample2}^2}\right] * \left[\sqrt{\frac{1}{m} + \frac{1}{n}}\right]}$$

We divided all data into two groups based on responses concerning organizational attitude, which yielded one group of data in which respondents expressed positive attitudes about KS (N = 87) and another group of data in which respondents expressed negative attitudes (N = 66). To compare the effects of the moderating factor on both groups, we used PLS to obtain parameter estimates. In addition, we used bootstrapping methods to find the standard errors of the estimates and t-statistics. Table 4 shows the path coefficients and corresponding standard errors for the two groups. By comparing these metrics across the two attitude types, we were able to compute a t-value to test the moderating effect of KS. Given a t-value of 3.65 ($p < 0.01$), the data provided evidence to suggest that organizational attitude does indeed moderate the relationship between KS and partnership quality. This result supports H4.

Table 4. t-test for the difference in path between groups (H4)

Path		Positive Att.	Negative Att.	t-value	Result
Knowledge sharing -> partnership Quality	Path Coefficient	0.789	0.537	3.653***	Supported
	Standard Error	0.0541	0.0393		

We also evaluated the 'interaction effect' of organizational attitudes and knowledge sharing on partnership quality. The results suggest that these two variables interact to affect partnership quality ($\beta = 0.312$, $t = 2.89$, $p < .01$). Their interaction also accounts for approximately 65.7% of the variance in partnership quality. To evaluate the magnitude of the interaction effect and in accordance with Chin et al. (2003), we assessed the differences in the *r-square* statistic. As shown in Figure 2, the *non-interaction model* accounts for 54.8% of the variance in partnership quality. In contrast, the *interaction model* explained 65.7% of the variance. The results of the hierarchical difference tests reveal an interaction effect size of 0.24 (=[0.657-0.548]/[1-0.548]), indicating a medium effect (Cohen, 1998).

Furthermore, Figure 3 illustrates the interaction effect with a plot with a dichotomization (low/high) of KS on the x-axis, partnership quality on the y-axis, and positive and negative attitudes towards KS, respectively, represented by separate lines. This illustration is of an ordinal nature; it shows that the interaction occurs when the rank of order of treatment effects is constant, but the differences between the treatments are not. These differences vary based on the specific pairings of the treatments (Pedhazur, 1997).

Figure 3. Moderating effect of the organizational attitude on the relationship between knowledge sharing and partnership quality

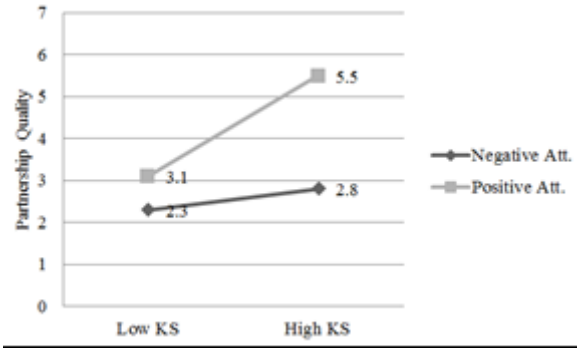


Figure 3 shows that the marginal mean of partnership quality for firms that engage in low levels of KS and have negative attitudes towards it is 2.3. This value increases slightly (by 0.5) when firms engage in high levels of KS. That is, in outsourcing relationships, employees with negative attitudes are less likely to share knowledge as a means to cultivate a relationship with their partners. In contrast, for firms with positive organizational attitudes towards KS, high degrees of knowledge sharing yield a mean-score of partnership quality (PQ) of 5.5, this is substantially higher than when firms engage in low levels of knowledge (3.1). The mean score of partnership quality significantly increases by 2.4 (5.5-3.1) as the level of extensiveness of knowledge sharing goes from low to high. Taken together, these results ultimately suggest that high degrees of KS coupled with positive attitudes towards it provide firms with the best chance to build a strong partnership with clients in outsourcing relationships.

The interaction effect of knowledge sharing and organizational attitude on partnership quality is much more substantial than their individual effects. This indicates that the cultivation of good relationships with IT outsourcing partners requires the development of positive organizational attitudes towards KS. The effect of the combination of these two predictors is greater than the sum of its parts. The development of positive organizational attitudes towards KS cannot be achieved simply by mandating changes in employee behavior. Instead, it requires the active participation of multiple employees. Specifically, Ajzen and Fishbein (1980) recommended changes in both employees' individual behaviors and norms regarding attitudes towards KS. In addition, firms should emphasize the development of organizational culture to develop positive attitudes towards KS with partners.

Results

Table 5 summarizes the results of hypothesis tests. With the exception of H1, all the other hypotheses received empirical support. Because the path coefficient and t-value ($\beta = -0.239$, $t = 0.834$) associated

Table 5. Result of hypotheses tests

	Path Name	Path coefficient	t-value	Results
H1	Knowledge Sharing -> IT Outsourcing Success	-0.239	0.834	Not-Supported
H2	Knowledge sharing -> Partnership Quality	0.740	10.730***	Supported
H3	Partnership Quality -> IT Outsourcing Success	0.783	4.118***	Supported
H4	Organizational Attitude -> KS & PQ		3.653***	Supported

with the relationship tested in H1 were non-significant, our results failed to demonstrate that KS has a direct positive effect on IT outsourcing success.

Support for H2 and H3 suggests that KS significantly affects the success of an outsourced IT project through partnership quality (i.e., the mediator). These two relationships help clarify the underlying mechanism through which KS improves outsourcing performance. To validate the mediating role of partnership quality in this relationship, we first estimated the effect of KS on partnership quality ($\beta = 0.740$, $t = 10.730$, $p < .01$) and the effect of partnership quality on outsourcing success ($\beta = 0.783$, $t = 4.118$, $p < .01$). These results support H2 and H3. We then estimated the direct effect of KS on outsourcing success (without controlling for partnership quality). This test yielded a path coefficient of 0.636 ($t = 5.097$, $p < .01$). As shown in Figure 2, when partnership quality is covaried out of the analysis, the relationship between KS and outsourcing success becomes insignificant ($\beta = -0.239$, $t = 0.834$). Taken together, these results suggest that partnership quality mediates the relationship between KS and outsourcing success.

H4 predicts that the effect of KS on partnership quality varies as a function of organizational attitudes towards KS in the context of IT outsourcing relationships. Table 4 illustrates the degree to which this relationship differs if organizational attitudes are subjected to a median split. The results of the analysis in ($t = 3.653$, $p < .01$) indicate that different organizational approaches (i.e., attitudes) affect the discrete components of KS. Moreover, the interaction between organizational attitude and KS positively and significantly affects partnership quality. These results indicate that when a firm has a positive organizational attitude, it is more likely to cultivate strategic alliances with outsourcing partners, which ultimately influences outsourcing success. In contrast, negative organizational attitudes towards KS tend to yield loosely coupled associations with partners.

DISCUSSION

In this study, we explored the moderating effect of organizational attitude on the relationship between KS and partnership quality. The results of our analyses showed that KS indirectly affects IT outsourcing success, indicating that the former is not directly associated with the attainment of outsourcing benefits. Specifically, the results suggest that the effect of KS on outsourcing success is more pronounced when mediated by partnership quality (Lee, 2001). This finding is in stark contrast to earlier work in this domain (Blumenberg et al., 2009; Park & Lee, 2014), which showed that KS is significantly associated with outsourcing benefits. In the context of IT outsourcing, the degree to which firms share knowledge (and by extension, cultivate good relationships with partners) is heavily dependent on the people that comprise those firms, as it is the firms' employees that actually create, share, and apply knowledge (Koo et al., 2009). Leveraging knowledge is only possible when people willingly share their knowledge with others because knowledge is created by individuals. Therefore, a key challenge for contemporary organizations is the encouragement of employees to share their knowledge, thereby contributing to the development of strong partnerships with other organizations.

Furthermore, we found that attitudes towards KS affect partnership quality. Specifically, positive attitudes towards KS result in more knowledge sharing, which in turn results in stronger relationships between partners (Lin, 2007). This means that firms that are more open in terms of KS tend to build stronger strategic alliances, which ultimately influences the success of outsourcing projects. Positive attitudes encourage employees to share a greater amount of knowledge and information with their organizational partners. If employees have positive attitudes towards KS, there is a greater chance of a strong relationship between partnered organizations (Bock et al., 2005). One possible explanation for this finding is that, within the context of IT outsourcing, partnerships transcend simple business relationships, as both parties dedicate to strengthen the outsourcing relationship for successful IT projects. In contrast, organizations with negative attitudes towards KS tend to form weak outsourcing partnerships. Given this possibility, these empirical findings provide some nuance to our understanding of why some IT outsourcing projects succeed while others fail.

According to the findings, positive attitudes towards KS are highly effective in strengthening partnerships in successful IT outsourcing projects. This finding suggests the need for a stronger partnership between clients and service providers, as the nature of these partnerships can significantly affect the success of an IT outsourcing project. Here, the respective roles of organizational attitude and KS, as well as the interaction between them, are critical determinants of partnership quality and IT outsourcing success. Whatever the components of attitude towards KS, successful managers can eliminate barriers or problems by using positive thinking and appropriate methods such as creating an opportunity for KS, creating motivation for KS, creating a KS culture, and so on (Constant et al., 1994). Thus, this provides insights for managers of other emerging countries IT firms that seek to influence outsourcing performance by employing an orchestration of specific knowledge-sharing mechanisms. This result is significant, as it extends past work on IT outsourcing from a focus on individuals to a focus on partnerships.

Limitations and Future Research

Although this study offers several notable findings, it suffers from some limitations that can be addressed by future research. First, this study was cross-sectional in nature, and therefore assessed respondents' perceptions of organizational attitudes towards KS and partnerships at a specific time. Ideally, this research would be performed longitudinally, thereby allowing the measurement of perceptions of an IT outsourcing partnership at the beginning and end of a project. Given this, future researchers may seek to perform in-depth case studies or employ longitudinal designs. Either type of methodology would allow for assertions related to outsourcing partnerships over time.

Second, this study is limited to Bangladeshi IT service firms. However, the effect of organizational attitudes on KS and IT outsourcing partnerships may differ in other cultures. Therefore, caution should be exercised when generalizing the findings of this study to other cultural environments. Outsourcing practices and organizational attitudes towards KS in other markets and contexts can differ. Future researchers could benefit from a comparative study on the effect of organizational attitudes on IT outsourcing success from both individualistic and collectivist cultures and countries.

Third, although some researchers have suggested using a small sample size (200 samples) to ensure the reliability and validity of the structural modeling (Anderson and Gerbing, 1998; Holbert and Stephenson, 2002), this study collected and analyzed data from 153 IT outsourcing firms making the sample size smaller than desirable. Future research could focus on using a larger sample size to ensure randomness.

Finally, in this study, we only gathered data from one partner in the outsourcing relationship—the service provider. However, the success of an IT outsourcing project depends not only on the work and perceptions of service providers, but also on the service receiver. As such, collecting data from clients in outsourcing partnerships may further extend our understanding of IT outsourcing. In addition, future research may benefit from investigating the relative impact of factors (personality traits, job characteristics, transformational leadership, and so on) on organizational attitudes towards knowledge sharing in IT outsourcing. Future research can also benefit from evaluating the respective effects of hostility and governance on effective KS. Future research can also address more specific details related to KS, specifically, how different kinds of knowledge are shared to greater or lesser degrees in the context of IT outsourcing.

Implications For Research

The findings of this study have several implications. First, research on KS has primarily dealt with issues related to the exchange of knowledge within organizations or units. In this study, however, we have sought to broaden our understanding of KS by investigating how it occurs between emerging country offshore suppliers and client firms. In contrast to previous studies and general assumptions, we show that the "client-vendor" relationships that characterize most IT outsourcing partnerships do not promote KS between partners. However, when both the supplier and client consider each other

as strategic partners (thereby cultivating a collaborative working atmosphere), effective KS may occur. When employees believe that their counterparts in partnered organizations are willing to share knowledge, they are likely to do the same.

Second, this study contributes to the literature on KS in the context of IT outsourcing relationships by exploring the role of organizational attitudes towards KS from the perspective of IT firms in emerging countries. Attitudes vary from firm to firm, country to country, and the attitudes towards knowledge sharing of firms in emerging countries are governed by constraints, values, norms, and organizational culture. By altering organizational attitudes to a favorable level, managers can create value for their organizations through KS, as shared knowledge is more valuable than isolated knowledge. Specifically, positive organizational attitudes enhance KS by creating confidence and commitment among employees. Therefore, managers can encourage and facilitate KS by improving organizational attitudes towards it (Husted et al., 2012).

Third, this study broadens the scope of the TRA to include interorganizational interactions. In doing so, the current research implies that effective KS occurs in organizational environments characterized by social motivations rather than monetary transactions. This research also contributes to the knowledge-based view (KBV) by showing that a positive organizational attitude can improve the quality of a partnership and the KS that occurs within it.

Implications For Practice

First, this study's findings may be of interest to project managers of other emerging IT outsourcing firms that seek to create strong partnerships with client firms. Outsourcing partnerships offer both firms to create a shared knowledge base, where service firms have the opportunity to acquire specific client knowledge regarding complete and detailed project requirements such as new IT trends, IT product design and concept, prototype, and sometimes guidelines and training that enable them to develop their capabilities and perform those activities more effectively. This joint partnership between clients and IT service providers can encourage the use of a specific knowledge basis for the execution of joint processes, procedures, and techniques. Consequently, the object of learning from partners' expertise derives greater value from outsourcing initiatives.

Second, our study emphasizes the positive organizational attitude that manifests through the behavior of a firm's human resources. Positive attitudes that improve KS and the quality of partnerships can contribute to an organization-wide commitment to solve complicated problems and confidence in developing capabilities. Therefore, managers should strive to build a favorable organizational environment that promotes teamwork and collaboration. Empowering collaboration among employees as well as partners and facilitating the use of collective knowledge can make outsourcing IT organizations more innovative.

Finally, this study can help managers of IT firms in emerging countries configure their business strategies in terms of KS with client firms. Management must develop a clear mission and goal so that everyone in the organization can appreciate and contribute to knowledge. As such, managers must implement policies that cultivate an open atmosphere in which employees understand the benefits of KS, as well as free thinking that facilitates the generation of new ideas in an enthusiastic, supportive atmosphere. Doing so can help managers maintain their relationships with client firms. First, managers should evaluate the existing organizational atmosphere as well as barriers to KS. If possible, these barriers should be modified to maximize the likelihood of effective knowledge transfer.

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APPENDIX A: QUESTIONNAIRE ITEMS USED FOR STUDY CONSTRUCTS

All items solicited responses on a seven-point Likert scale with 1= strongly disagree, 2= disagree, 3= somewhat disagree, 4= neutral, 5= somewhat agree, 6= agree, and 7= strongly agree.

Constructs		**Items**	**Loading**	***t*-value**
Knowledge sharing (Lee, 2000)		We and our partner share-		
Explicit Knowledge	KS1	business proposals and reports with each other	0.893	20.428
	KS2	business manuals, models, and methodologies with each other	0.813	9.453
	KS3	each other's success and failure stories	0.875	18.625
	KS4	business knowledge obtained from newspapers, magazines, journals, and television.	0.841	15.241
Implicit Knowledge	KS5	know-how from work experience with each other	0.766	9.124
	KS6	each other's know-where and know-whom	0.738	8.452
	KS7	expertise obtained from education and training	0.853	12.351
Organizational Attitude (Fishbein & Ajzen, 1975; Bock et al.,2005)		In outsourcing relationship with clients, -		
	OA1	we willingly help out our clients.	0.766	9.245
	OA2	we help each client in whatever ways ask	0.887	13.542
	OA3	we make beneficial decisions for our clients under any circumstances.	0.657	10.215
	OA4	we willingly provide assistance without expectation	0.773	12.912
	OA5	we perform pre-specified agreements and promises very well.	0.715	12.453
Partnership Quality (Lee & Kim, 1999)		In outsourcing relationship, -		
	PQ1	our knowledge sharing with our client is good	0.755	8.761
	PQ2	our knowledge sharing with our client is useful	0.792	14.235
	PQ3	our knowledge sharing with our client is an enjoyable experience	0.698	11.531
	PQ4	our knowledge sharing with our client is valuable to us	0.754	8.541
	PQ5	our knowledge sharing with our client is a wise move	0.714	8.218
IT Outsourcing Success (Groven et al., 1996; Lee, 2001)	ITOS1	We and our clients are always satisfied with the result of the outsourcing project	0.785	12.351
	ITOS2	The result of the outsourcing project is useful for both parties.	0.766	8.301
	ITOS3	Our partners intend to continue the outsourcing relationship with us.	0.643	7.124
	ITOS4	We have enhanced our IT competency	0.755	8.145
	ITOS5	We have learnt something new from our clients	0.846	18.214
	ITOS6	We have experienced increased economic benefits	0.892	20.451
	ITOS7	We are experiencing continuous process improvement	0.873	20.341

Control Variables

We measured the control variables by asking the respondents:

CV1: How long has your organization been involved in outsourcing operations? (firm age)
CV2: How many employees does your organization have? (firm size)

APPENDIX B: COMMON METHOD BIAS ASSESSMENT

Construct	Indicators	Substantive Factor Loading (R1)	$R1^2$	Method Factor Loading (R2)	$R2^2$
Knowledge Sharing	KS1	0.853	0.728	0.085	0.007
	KS2	0.765	0.585	0.055	0.003
	KS3	0.812	0.659	-0.061	0.004
	KS4	0.885	0.783	0.147	0.022
	KS5	0.880	0.774	-0.212**	0.045
	KS6	0.856	0.733	0.056	0.003
	KS7	0.815	0.664	0.061	0.004
Organizational Attitude	OA1	0.845	0.714	0.054	0.003
	OA2	0.845	0.714	0.265**	0.070
	OA3	0.750	0.563	-0.112	0.013
	OA4	0.835	0.697	0.056	0.003
	OA5	0.812	0.659	0.051	0.003
Partnership Quality	PQ1	0.830	0.689	0.082	0.007
	PQ2	0.915	0.837	0.054	0.003
	PQ3	0.845	0.714	-0.212**	0.045
	PQ4	0.763	0.582	0.082	0.007
	PQ5	0.816	0.666	0.041	0.002
IT Outsourcing Success	ITOS1	0.872	0.760	0.131	0.017
	ITOS2	0.758	0.575	0.056	0.003
	ITOS3	0.769	0.591	-0.125	0.016
	ITOS4	0.855	0.731	0.057	0.003
	ITOS5	0.846	0.716	-0.121	0.015
	ITOS6	0.923	0.852	0.045	0.002
	ITOS7	0.823	0.677	0.063	0.004
Average			0.694		0.013

APPENDIX C: ITEM LOADINGS AND CROSS LOADINGS

	KS	OA	PQ	ITOS
KS1	**0.893**	0.326	0.532	0.543
KS2	**0.813**	0.328	0.423	0.523
KS3	**0.875**	0.435	0.368	0.465
KS4	**0.841**	0.538	0.515	0.634
KS5	**0.766**	0.278	0.512	0.419
KS6	**0.738**	0.467	0.456	0.516
KS7	**0.853**	0.453	0.525	0.538
OA1	0.459	**0.766**	0.438	0.545
OA2	0.453	**0.887**	0.299	0.359
OA3	0.438	**0.657**	0.312	0.467
OA4	0.351	**0.773**	0.211	0.348
OA5	0.559	**0.715**	0.513	0.634
PQ1	0.543	0.373	**0.755**	0.673
PQ2	0.452	0.412	**0.792**	0.365
PQ3	0.435	0.362	**0.698**	0.398
PQ4	0.426	0.463	**0.754**	0.556
PQ5	0.476	0.321	**0.714**	0.455
ITOS1	0.454	0.423	0.636	**0.785**
ITOS2	0.541	0.334	0.661	**0.766**
ITOS3	0.491	0.342	0.493	**0.643**
ITOS4	0.503	0.582	0.607	**0.755**
ITOS5	0.432	0.533	0.594	**0.846**
ITOS6	0.213	0.461	0.486	**0.892**
ITOS7	0.321	0.434	0.513	**0.873**

Note: Numbers in boldface type indicate that the item loaded on its assigned construct to a greater degree than on the other constructs, thereby suggesting adequate convergent and discriminant validity.

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