Differences Between Clients' and Vendors' Perceptions of IT Outsourcing Risks: Project Partnering as the Mitigation Approach

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ABSTRACT ■

Information technology (IT) outsourcing has been a business practice for more than two decades. Researchers have suggested successful risk management as a key factor in successful IT outsourcing projects implementation. The documented investigations, however, have mainly addressed risk management only from a single perspective of either clients or IT vendors. Considering only one perspective allows for an omission of possible risks considered critical by the other party, as suggested by agency theory. This study explored the potential perception inconsistency regarding the risks between the client and the vendor for IT outsourcing projects by using a quasi-Delphi approach. The analysis results indicated some inconsistencies in the risks perceived by the two parties: (1) the clients regarded (a) lack of vendor commitment to the project and (b) poor vendor selection criteria and process as top critical risks but the vendors didn't; and (2) on the other hand, the vendors perceived (a) unclear requirements and (b) lack of experience and expertise with project activities as significant risks but the clients didn't. Insights into how the client and the vendor perceive risks may help both parties determine how to partner and manage project risks collaboratively to succeed in outsourcing.

KEYWORDS: risk perception; risk identification; IT outsourcing project; project partnering; project management

INTRODUCTION ■

Information technology/system (IT) outsourcing has been extensively adopted in various industries over the past two decades (Bahli & Rivard, 2013). IT outsourcing involves using technological or professional IT resources from a third party. Organizations adopt IT outsourcing to develop IT or to enhance their IT capacity for purposes related to cost effectiveness, schedule efficiency, or risk transfer (Willcocks & Lacity, 1999). Although some organizations consider outsourcing as a risk-mitigation approach, IT outsourcing involves the risks of undesirable outcomes, such as difficult IT management (Choudhury & Sabherwal, 2003; Natovich, 2003) and cost escalation (Bahli & Rivard, 2013). A previous survey on IT outsourcing showed that approximately one-third of outsourced IT projects produced an ineffectual or negative outcome (Lacity & Willcocks, 2012). More than 50% of outsourced IT projects were terminated before the contract expired and switched to other vendors or in-house development (Qi & Chau, 2012; Whitten & Leidner, 2006); therefore, managing the risks in IT outsourcing projects is imperative for organizations to achieve their goals.

Numerous studies have investigated the risk factors of outsourced IT projects. They illustrate several essential risks such as unsuitable vendors and inadequate or incomplete contracts (Gefen, Wyss, & Lichtenstein, 2008). In general, an IT outsourcing project involves two organizations: clients and vendors (IT providers). Based on their agency relationship, the client and the vendor often perceive project success and risks differently because of diverse organizational goals and structures (Taylor, 2007). From the cost perspective, the client desires a reliable product to be delivered on schedule, without defects and within budget. The vendor desires a high-profit project to be accomplished on time with no overrunning costs or surprises. This perception discrepancy may lead to misunderstanding and conflict between the two parties. Both the client managers and the vendor managers share the responsibility for managing projects successfully. Conflicting risk estimates cause the project managers to approach risks differently. The conflict reduces the effective management of the risks (Kutsch & Hall, 2005). Moreover, IT outsourcing contracts are negotiated partially on potential risks; therefore, understanding how different the client and the vendor managers view risks is critical in creating contracts that fall into the win–win category. To provide comprehensive information for risk management, this study explored the perception inconsistency between the client and the vendor regarding project

risks and addressed the following questions: What are the agreements and disagreements between the client's and vendor's perspectives on risk factors in IT outsourcing projects? What are some of the approaches that can be used to reduce the disagreements and mitigate the divergent risk factors? To answer these questions, we used a quasi-Delphi technique with two groups of IT outsourcing experts: client managers and vendor managers. The analysis results revealed that each party cannot anticipate every risk scenario, and there is the need to see the inconsistent perception of risks and then address risks from both perspectives in a partnership arrangement. Insights into how both parties perceive risks may help both the client and the vendor to understand their perception discrepancy and determine how to manage project risk collaboratively to achieve outsourcing success.

Literature Review and Theories

IT Outsourcing

IT outsourcing is an activity conducted by an organization that involves the substantial use of technological or IT professional resources external to the organization (Loh & Venkatraman, 1992). An organization adopts IT outsourcing to develop IT or to enhance its IT capacity for reasons, such as cost effectiveness (Loh & Venkatraman, 1992), schedule efficiency (Khan, Niazi, & Ahmad, 2011b), and risk transfer (Willcocks & Lacity, 1999). Researchers have indicated that reducing cost is the primary impetus of outsourcing (Lacity, Willcocks, & Solomon, 2012). However, despite the benefits of IT outsourcing, outsourcing projects lead to numerous problems; for example, at the early stages, the client might encounter hidden costs such as those of selecting a vendor, contracting, and transitioning activities to the vendor (Barthelemy, 2001; Xue, Sankar, & Mbarika, 2004). The problems related to IT outsourcing exceed those related to in-house IT projects. If vendors underestimate the difficulties of IT outsourcing,

they pay less attention to the potential risks (Osei-Bryson & Ngwenyama, 2006). The difficulties in IT outsourcing include the lack of information sharing (Aundhe & Mathew, 2009), management of the working relationship between the client and the vendor (Natovich, 2003), and monitoring of vendor behavior during implementation (Choudhury & Sabherwal, 2003). Evidence shows that a lack of project management skills can lead to outsourcing failure (Nakatsu & Iacovou, 2009).

Studies intended to help companies implement outsourcing have explored the knowledge of selecting vendors (Barthelemy, 2001; Khan, Niazi, & Ahmad, 2011a), managing relationships (Qi & Chau, 2012), establishing contracts (Aubert, Patry, & Rivard, 2005; Osei-Bryson & Ngwenyama, 2006), and identifying potential risks (Natovich, 2003; Willcocks, Lacity, & Kern, 1999). Both selecting vendors and establishing contracts are imperatives for outsourcing decisions. Vendors demonstrating complementary and core competency capabilities can provide high-level technical capability and manage costs effectively (Levina & Ross, 2003). The ability of clients and vendors to work together to seamlessly implement or integrate the outsourced projects is crucial to project success (Xue et al., 2004). Seamless implementation requires effective risk management. An outsourcing contract must incorporate effective mitigation mechanisms for managing the uncertainty and risks of both client and vendor.

Risk Identification

Risk identification is an essential step in risk management and has been extensively studied in software projects and IT outsourcing projects. Numerous studies have emphasized the importance of risk management for IT outsourcing projects (Nakatsu & Iacovou, 2009; Taylor, 2007). An empirical study demonstrated that project management risks have significant effects on the system performance in outsourced projects (Liu & Wang, 2014). The risks discussed

in IT outsourcing literature are similar to those in general IT project management literature, except for several risk factors such as the risk of an incomplete contract (Aubert et al., 2005) and poor vendor selection (Willcocks et al., 1999). For the risk factors that are mentioned in both types of literature, some may be exacerbated in the outsourcing context, such as the lack of communication, misunderstanding of requirements, and poor change management.

Although researchers have extensively examined the risks in IT outsourcing projects, their investigations have been limited to a single perspective of either the client's or the vendor's. For example, evidence shows that a lack of technical expertise and inadequate vendor staffing are two critical risk factors from the perspective of the client (Nakatsu & Iacovou, 2009). Natovich (2003) also emphasized risk factors that the client could face in IT outsourcing situations, such as the lack of vendor commitment and conflicts with the vendor because of disagreements about the scope and definition of contractual requirements. All of these researchers have emphasized the importance of the vendor's ability and commitment to project success. By contrast, Aundhe and Mathew (2009) identified risks from the perspective of the vendor and categorized them into either project or relationship dimensions; they also specified how the ability of the client, the quality of the contract, and the traits of the project influence project risks. Taylor (2007) interviewed vendor managers and indicated several client-related risk factors such as the lack of ability and willingness to manage a project and the lack of preparedness for a new system. These studies revealed the fact that the perception of risks varies among stakeholders.

Previous research has indicated a gap in the expectations and perceptions of project outcomes among multiple stakeholders (Jiang, Klein, & Discenza, 2002a). The gap leads to user dissatisfaction with the product or service of the

project. Different stakeholders may have different opinions regarding potential risk factors, and their opinion influences risk control planning (Keil, Tiwana, & Bush, 2002); therefore, an inconsistent perception of risks has attracted numerous researchers' attention and must be examined. Reconciling stakeholder perceptions of project risks is an important issue in IT literature (Keil et al., 2002; Liu, Zhang, Keil, & Chen, 2010; Schmidt, Lyytinen, Keil, & Cule, 2001). In one study, a survey was conducted to identify risk factors from the perspectives of senior executives (Liu et al., 2010), and the results were compared with the findings in literature (Schmidt et al., 2001). However, these results cannot be applied to IT outsourcing projects, because the stakeholders pursue their own interests as dictated by agency theory. Since vendors pursue an object of project efficiency and clients consider objectives of product scope and quality (Moynihan, 1996; Taylor, 2007), each will have unique views of skill requirements, relationships to be built, and individuals to be satisfied (Earl, 1996; Tafti, 2005).

Project Partnering

Agency theory suggests that both the principal and agent are motivated by self-interest and maximal profit, and the agent may not act in the interests of the principal (Levinthal, 1988). Compared with in-house IT service providers, IT outsourcing results in lower user satisfaction and lower quality of project outcome because of conflicting goals between clients (i.e., principals) and IT vendors (agents) (Gorla & Somers, 2014). When the IT competence of clients is insufficient, they may face a hidden characteristic problem before entering into a contract, such as vendor selection. A contract often fails to specify all contingencies and elaborate all details because of bounded rationality, incomplete information, and uncertainty (Aubert et al., 2005). When an IT outsourcing project is only a contract-based activity, a contract missing critical elements can be a crucial risk factor

in the IT outsourcing (Lee & Kim, 1998). Research has indicated that project planning and control have little contribution to the process performance of projects with a high level of inherent uncertainty (Jun, Qiuzhen, & Qingguo, 2011).

This study proposes project partnering as a tool to reduce inconsistent risk perception between clients and vendors. Project partnering, in the information systems literature, is a concept that emphasizes creating a cohesive team with a single set of goals and established procedures for collaboration (Jiang, Klein, & Discenza, 2002b). The concept of project partnering is to overcome the unique pursuits of each agent. An effective partnership can achieve common ground and more readily avoid the problems dictated by agency theory. From this perspective, the management goal is to enhance the positive effect of stakeholders' participation and behavior on mutual understanding and consensus and to establish trust and mutual support during IS development. The trust and mutual support reduce conflict among project stakeholders and, thus, enhance project performance (Liu, Chiang, Yang, & Klein, 2011). Project partnering also suggests the combination of skills, knowledge, and experience in a project team that produces economic value (Jiang, Klein, & Chen, 2006). The management intervention strategy designed on the basis of the project partnering concept is to enhance collaboration among stakeholders, identify potential risks, and to contribute optimal solutions and effective work before the project commences. Through project partnering, user–developer relationships and communication quality can be considerably improved; this is critical because poor communication quality can reduce the effectiveness of requirements elicitation (Jiang, Klein, Van Slyke, & Cheney, 2003). Communicative quality (i.e., seeking consensus and mutual understanding) is a crucial mediator in the effect of risk management on project success (De Bakker,

Boonstra, & Wortmann, 2011). From the risk management perspective, project partnering has been regarded as an effective management strategy for mitigating critical user-related risks in IS development projects (Liu, Yang, Klein, & Chen, 2013).

Methodology

This study employed a variation of the Delphi survey method developed by Schmidt (1997). The Delphi survey provides a statistical measurement that enables comparing distinct perspectives. The Delphi method has been used extensively in information systems research to yield reliable risk rankings (Schmidt et al., 2001).

Composition of the Panels

The panelists in this study were experienced IT project managers from organizations that have been involved in IT outsourcing activities for several years. The sampling frame was obtained from members of the Project Management Institute (PMI) and multiple organizations from Taiwan and Indonesia. Initially, a total of 62 project managers agreed to participate in the first round: 41 on the client panel (28 from Indonesia and 13 from Taiwan) and 21 on the vendor panel (10 from Indonesia and 11 from Taiwan). Eventually, the number of panelists was reduced to 46, consisting of 26 client panelists (15 from Indonesia and 11 from Taiwan) and 20 vendor panelists (9 from Indonesia and 11 from Taiwan). It was not necessary for the two panels to be identical in size (Schmidt et al., 2001). Table 1 lists the demographic characteristics of the sample; on average, the IT experience of the panelists was eight years, and they had managed at least two outsourced IT projects. The panelists worked in different organizations in a wide range of industries.

Data Collection

The quasi-Delphi survey adopted in this study consisted of two phases. The first phase was designed to collect the

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	Client Panel			Vendor Panel		
	Mean	**Maximum**	**Minimum**	**Mean**	**Maximum**	**Minimum**
Work experience (years)	7.5	25	2	8.8	25	2
Number of projects[a]	15.5	30	2	16.9	41	6
Number of outsourced projects	4	6	2	7.5	16	2
IS employees in the company	42	300	10	190	500	10
	Number		**%**	**Number**		**%**
Size of panel	41			21		
Gender						
Male	38		92.7	15		71.4
Female	3		7.3	6		28.6
Organization industry						
IT services	15		36.6	19		90.5
Manufacturing	9		22	—		—
Distribution	4		9.8	—		—
Government	2		4.9	—		—
Financial services	3		7.3	—		—
Medical	3		7.3	—		—
Others (include telecommunications)	5		12	2		9.5

[a]All IT projects, including in-house and outsourced projects.

Table 1: Panel demographics.

risks of IT outsourcing projects. The second phase was designed to rank the identified risks. Data were distributed using paper-based questionnaires, electronic mail, and online survey tools. The data collection lasted two months. The questionnaires were provided in two languages—English and Chinese—and reviewed by bilingual professionals; a pretest for each phase was conducted before the survey.

In Phase 1, a list of 34 risk factors was assembled from the literature and presented to several panelists (Table A1). In Phase 2, the panels were divided into clients and vendors, and each panel was allowed to participate in three ranking rounds independently. The ranking rounds were complete when an acceptable level of consensus (Kendall's W > 0.5) was reached (Schmidt, 1997). The W coefficient was calculated for each round. In addition, the inversion of the ranking of risk factors was performed to compute the W coefficient. None of the panelists

provided additional risk factors for an open-ended question that asked for an additional risk factor, suggesting that the considered list was perceived as a complete list by the panelists.

In the first round, each panel was presented a list of 34 risk factors derived from Phase 1. The panelists were asked to rank and rate each risk factor on a 7-point Likert scale (1 = *not important*, 7 = *most important*). The rating was used in separate analyses. The mean ranking of each risk factor was computed. At the end of this round, the risk factors were listed in the order of the mean ranking received from each panel, sorted from the highest to the lowest. The process was repeated in Round 2 and Round 3, respectively. To narrow down the list for next round, the top 20 risk factors in Round 1 were selected based on the highest mean rank, as suggested in the literature by Schmidt (1997). In the third round, the panelists were asked to rank their top 10 most critical risk factors from a list of 20, and to provide

explanations for their selections. At each round for the client panel and the vendor panel, we examined the significant differences in the mean scores of the responses between the participants from Taiwan and Indonesia. The scores were then combined because no significant differences were found.

Results of Data Analysis

Phase 2 of the quasi-Delphi survey resulted in a moderate level of consensus among the panelists (W > 0.5). Tables A2 and A3 show the ranked list of the 20 risk factors perceived as important from Round 1 to Round 3 by both panels, respectively. It is interesting to note that the respondents had similar average rankings for all the risk factors in the beginning, and in the third round the ranking differed much. The final round resulted in a Kendall's W coefficient of 0.638 on the client side, and a W coefficient of 0.572 on the vendor side. According to the literature (Schmidt, 1997), the two values indicate

a considerable degree of confidence in the results.

Kendall's rank-order correlation coefficient (T) was computed to test the agreements between the two panels, and $T = 0.289$ (>2.018, two-tailed) was obtained, suggesting that the two panels viewed risks differently. Table 2 lists the comparisons between the risks ranked as most important by the two panels. Of the 20 risk factors chosen by the client, only 15 (75%) were chosen by the vendor, and vice versa. One of the top three risks ranked by the client was considered to be of little importance by the vendor. The results show different perceptions of IT outsourcing project risk by different parties.

To compare the most critical risk factors between the clients and vendors, the panelists were asked to rate the relative importance on a 7-point Likert scale in the first round of the Delphi process. Figure 1 illustrates only the risk factors that scored, on average, higher than three for either the client or the vendor. The clients and vendors evidently did not agree on the relative importance of specific risk factors.

Table A4 shows that mean risk importance levels for the client and the vendor on the risk factors in Figure 1. Among the risk factors, the lack of vendor commitment had the highest difference value. The levels differ significantly, except for items D, F, and I. Each risk factor in Figure 1 is mapped on the Venn diagram (Figure 2), which depicts conceptually the perceptual differences and concordance between the clients and vendors. The intersection between the two sets represents the region of consistency in which the client and the vendor have considerable agreements in the perceived crucial risk factors. The left region represents the risk factors perceived as crucial by the client but not by the vendor, and vice versa for the right region.

In Round 3, the panelists were asked to explain their reasons for selecting the top-ranking factors. We discussed their reasons for the two top risk factors in the consistent region, and then for those

Risk Factors	Client	Vendor
A. Lack of communication between the client and vendor	1	2
B. Incomplete contracting	2	1
C. Lack of vendor commitment	3	10
D. Lack of top management support	4	5
E. Lack of schedule and budget management	5	4
F. Inadequate planning	6	9
G. Vendor financial instability	7	
H. Poor vendor selection criteria and process by the client	8	8
I. Requirements misunderstanding (or unclear)	9	6
J. Lack of experience and expertise with project activities	10	3
K. Inadequate staffing	11	17
L. Failure to consider all costs	12	19
M. Poor change management	13	7
N. Lack of active management of the vendor on the contract and relationship	14	12
O. Lack of knowledge transfer	15	
P. Biased portrayal by the vendor	16	
Q. Customization of the product	17	
R. Lack of documentation management	18	20
S. Lack of project management know-how	19	16
T. Lack of audit and control from the client	20	
U. Lack of effective development methodology		11
V. Client readiness		13
W. Improper definitions of roles and responsibilities		14
X. Lack of team morale		15
Y. Conflict between the client and vendor		18

Table 2: Comparison of the client and vendor rankings.

in the inconsistent regions. Included in the discussion is a storyline about how project partnering reduces the inconsistent regions.

Region of Consistency Regarding Risk
The clients and vendors agreed that only five of the same risk factors were crucial, as indicated by the inconsistent region in Figure 2. These risks include: lack of communication between the client and the vendor (A), incomplete outsourcing contract (B), lack of top management support for the project (D), lack of schedule and budget management (E), and inadequate project planning (F).

The lack of communication between the client and the vendor was ranked

as the second most crucial risk by both panelists. Communication quality has been proven to be a crucial factor influencing the success of IT outsourcing (Mao, Lee, & Deng, 2008). The vendor panelists indicated that face-to-face interactions between the two parties rarely occur, leading to requirement misunderstanding and volatility. Requirement volatility is regarded as a crucial factor in outsourcing project success (Liu & Wang, 2014). The following remarks from the panelists support this claim:

> "Lack of communication may cause misunderstanding and the requirements may not be clearly defined … Not everything can be solved through email; face-to-face

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Figure 1: Risk factors rated by the clients and vendors (rated by relative importance, 1 = not important; 7 = most important). Please refer to Table 2 for the complete names of the risk factors.
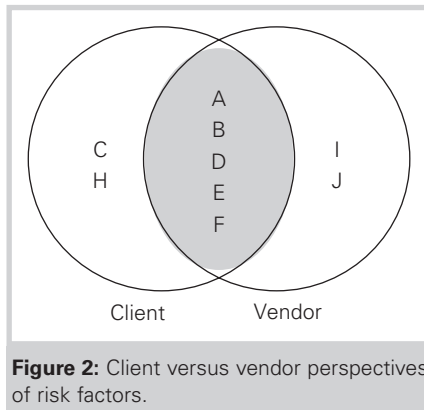
Figure 2: Client versus vendor perspectives of risk factors.

communication is still needed" (Vendor). "Effective communication must be maintained to keep the project progress on track.... Without effective communication, the project may be completed with unsatisfactory or disappointing outcomes" (Client).

An incomplete outsourcing contract was considered as the most important risk by the vendors. Researchers have mentioned that improper contract strategies lead to negative consequences (Aubert et al., 2005). For example, a short schedule may cause difficulties in comprehensively testing the IT product. Although a contract specifies in detail what the vendor must do, the dynamic circumstances of a software project can limit the availability of such information at the beginning. Nevertheless, some uncertainties cannot be foreseen when

contract variation clauses are implemented. The comments support this issue:

"In a complex project, incomplete contracting usually leads to long debates between the vendor and client" (Client). "Incomplete contracting can cause other serious threats such as conflicts in the project" (Vendor).

Region of Inconsistency Regarding Risk
The clients ranked two important risk factors that were not considered important by the vendor: lack of vendor commitment to the project (C) and poor vendor selection criteria and process (H). The vendors perceived two risk factors as important that the clients did not: unclear requirements (or requirement misunderstanding) (I) and lack of experience and expertise with project activities (J).

Researchers have empirically reported that commitment positively influences outsourcing success (Mao et al., 2008). According to the opinion provided by the client panelists, the clients viewed the lack of commitment as a possible signal that the vendor does not perceive importance in the project. When the priority of the project is low, the human resources or activities allocated to the project by the vendor tend to be limited. The lack of vendor commitment can occur when the vendor dedicates more effort to other valuable

projects and pays less attention to the project. The vendor panelists did not consider the risk factor crucial. This is consistent with the finding that project managers often perceive risk factors that they cannot control as more precarious (Du, Keil, Mathiassen, Shen, & Tiwana, 2007), as expressed by the clients:

"They paid little attention to the problems because they were occupied by multiple projects" (Client). "We may face some distress if the vendor cannot accomplish all the demands as promised in the initial plan" (Client).

Unclear requirements were considered as a critical risk factor by the vendors. Unclear requirements can lead to frequent reworking, which costs additional time and resources. Requirement specification variability is regarded as the most critical risk dimension in the Indian software industry (Sharma, Sengupta, & Gupta, 2011). Researchers have stated that unclear requirements are a primary cause of incomplete and unsatisfactory outcomes in outsourcing (Verner & Abdullah, 2012). The following remarks are from both groups of panelists:

"When the requirements are not clearly defined, frequent alteration is required during the execution of the project. Thus, the project might be difficult to accomplish" (Vendor). "It may cause the project

to produce an unwanted final output; this is very serious, and it may also cause cost overruns" (Vendor).

Discussion

The analysis results indicated that the perspectives of the client and vendor panels had significantly different ratings toward certain risk factors in outsourced IT projects. These differences can be overcome with project partnering.

The findings of the analysis can be combined into one storyline. The storyline indicates the importance of reevaluating our thinking regarding the explanation and resolution of the disputed risk factors. To outsource an IT project, most companies start by presenting a request for proposal to potential software or hardware suppliers. The companies then choose vendors on the basis of the extent to which the vendors' proposals satisfy their requirements, including scope, budget, and schedule. A contract is then established on the basis of the proposal for the outsourcing project. In these circumstances, two scenarios depict the project risks: designing a contract with a large gray zone and the lack of partnership between the client and the vendor. First, the contract may have a large gray zone leading to an unsatisfactory outcome. The client and the vendor often have different interpretations of the contract. The inconsistent interpretation might originate from their misunderstanding of the proposal. Because specifying all uncertainties and elaborating all details in a contract is impractical, the unexpected contingencies, uncertainty, and inconsistent interpretation create a large gray zone in the contract.

A well-designed contract created with a condensed control is imperative to reducing production and transaction costs. However, controls in a contract to include the inherent complications in outsourcing are difficult to express (Mao et al., 2008). The gray zone creates an inconsistent perception toward requirements and risks. The inconsistency toward requirements can

lead to requirement uncertainty, which may result in scope creep and conflict (Liu, Chen, Chen, & Sheu, 2011). Scope creep renders an original project plan unrealistic (i.e., Item F) and induces managers to lose their commitment (i.e., Item C). The perception inconsistency toward risks causes disagreements regarding planning resources or risk responses for risk management. Conflicting risk estimates between stakeholders causes project managers to deny, delay, or ignore the potential threat of risks, which in turn affects or prevents the effective management of the risks (Kutsch & Hall, 2005). When one party emphasizes a threat, the opposite party may oppose the idea of preventing the threat because they think that spending effort or resources for it is unnecessary. They may expect a different approach with different effort or resources to manage the risk, which leads to conflict, suspicion, and distrust between the client's and the vendor's project managers.

A long-term relationship or partnership may be lacking between the vendor and client. Without such a relationship, both parties are inclined to focus on their self-interest and on earning high profits. In this case, efforts to develop the project can easily become contract-oriented, implying that only the items listed explicitly in the contract are addressed. The vendors would emphasize their efforts on the project according to how they interpret the contract; therefore, they are inclined to encounter difficulties in reaching a consensus or attaining coordination in the gray zone of the contract, especially when they have a low intention of creating a long-term relationship. If both parties have a low intention of overcoming uncertainty and supporting each other, the outsourcing project might result in dissatisfied users, dysfunctional systems, and unrealized project objectives. Accordingly, how the vendor party responds to the gray zone of the contract can considerably influence the outcome of the project.

Commitment involves the belief that an ongoing relationship is essential enough to exert substantial effort for maintenance, or that the task is worth accomplishing. If team members have a loose commitment to a project, they will lack quality interaction, trust, and knowledge sharing, which hinder project success (Suhonen & Paasivaara, 2011). Through commitment, the vendor is likely to respond to the gray zone of a contract to ensure the quality of the project outcome. When vendors have a long-term relationship with clients, they are more likely to exhibit a high commitment to ensure that the project outcome is satisfactory to the clients. Gray zones create doubts regarding the effectiveness of contract-driven controls in mitigating the risks. Project partnering is a crucial management intervention that can be used to ensure a consensus among stakeholders (Jiang et al., 2002b). Research results indicate that the relationship between the client and the vendor is important to outsourcing success because of improved social interactions (Lee & Kim, 1998).

Project partnering mitigates the problem of the lack of long-term relationship between the client and the vendor. Project partnering establishes a platform that enables different stakeholders to discover inconsistent perception of requirements and risk factors before the project commences. When client and vendor managers perceive the importance of project risk factors differently, they dedicate resources to different threats and disagree on the resource allocation or risk management approaches that are planned by the other agent. Through project partnering, the client and the vendor are likely to acknowledge the gray zone of the project contract at an early stage in project development. An early discovery of the inconsistent understanding of project requirements can prevent task repetitions and reduce the total cost of developing the project and the conflicts between the client and the vendor. In addition, frequent social interaction can

assist the client and vendor in sharing the project vision or project goals, thus enhancing their commitment to the project. Shared vision is a major function in project partnering and it can prompt collaborative attitudes and knowledge sharing among team members (Liu, Chiang, et al., 2011).

Conclusion

The contributions of this study are fourfold. First, the analysis results of this study show that the clients and vendors perceived the importance of project risks differently, particularly those that originate from the opposite side. To answer the proposed questions, we identified inconsistent zones representing risk factors that were ranked as crucial by the clients but not by the vendors (or vice versa), as well as a consistent zone. The mapping of these zones provides a basis for a more thorough analysis of risk in outsourced IT projects.

Second, this study extends the project partnering concept to IT outsourcing projects. The scenarios described in the storyline indicate that the conception inconsistency of risk factors in IT outsourcing projects can be reduced by using the partnering relationship approach. This enabled us to clarify how contract-driven projects have high possibilities of failing and how the mechanisms underlying project partnering improve the outcomes of such projects. Under the common conditions in which the vendor and client have no partnership or long-term relationship, the contract-oriented control has a limited ability to resolve crucial risks; thus, project managers must adopt project partnering as a management intervention to reduce the gap of stakeholders' expectations and perceptions (Jiang et al., 2002a). Additional in-depth analysis of the mechanisms of project partnering must be conducted with reference to the risks associated with IT outsourcing to understand the role of project partnering in project outcome and performance.

Third, this study supports the fact that consonance must be extended to other project stakeholders, in addition to IS users and developers (Klein & Jiang, 2001). Initially, disagreements regarding some risks may not seem consequential; however, the disagreements can lead to disparate objectives in risk planning and monitoring and may also be an impetus to conflicts and hostility, leading to dissatisfaction with the outcome and process of the project. To manage IT outsourcing project risks effectively, the perceptions of both clients and vendors regarding the crucial risk factors must be shared. We suggest that managers must understand the different perceptions between clients and vendors at the initial stage of project management and plan communication procedures and project activities adequately.

Lastly, this study provides the foundation for further research on an alternative risk assessment model. In addition to the perception discrepancy of project risks, the results indicate the risk factors that management must be aware of and control. In the assessment process, mitigating the perception discrepancy is essential for effectively prioritizing the risks and planning resources. This study contributes to relevant research from the perspective of determining which risk factors must be paid more attention in IT outsourcing research.

This study also yields several critical management implications for IT outsourcing projects. First, the agreements of perceived risk factors between clients and vendors are essential; if perceptions differ, then the objectives of risk management will also differ. The perception difference, perhaps because of a lack of communication, exerts a negative effect similar to that caused by discrepancies in project goals. A concerted effort to unify clients and vendors in the process of risk evaluation is thus imperative. Researchers have suggested that establishing a partnering relationship among stakeholders is an effective management strategy for reducing the

risk factors associated with the users of the projects.

Identifying the specific risks of those disagreements can lead to effective methods for addressing discrepancies in risk perception. The problem of the lack of communication indicates that vendor managers must identify several questions. With whom should they or their team (or users) communicate? What does the client or outsourcer want to know and when? What is the optimal way to conduct communication? By establishing communication channels between the clients and vendors, requirement misunderstandings can be resolved at an early stage. Particular activities that stimulate and enhance communication include establishing a collaborative relationship between the personnel of the two parties and conducting scheduled and unscheduled meetings between the clients and vendors.

Unclear requirements, a lack of experience, and inexperience with project activities have emerged as major risks originating from clients. This implies that numerous IT outsourcing projects are initiated without sufficient feasibility studies or requirement analysis. The risk of unclear requirements influences the practicability of project planning for resources, time, and budget. To prevent unclear requirements, top management and competent personnel should be involved in and committed to the project. Furthermore, both clients and vendors must assume shared responsibility for eliciting requirements. Training for requirement elicitation and project activity involvement must be conducted seriously and timely by both parties. Shared responsibility can be achieved by designing activities that establish a partnering relationship (Jiang et al., 2006). Such activities include formulating a formal charter of shared responsibilities and identifying potential conflicts and problem areas at the contract stage. Partnering activities enable a collaborative relationship, with the potential to increase vendor commitment. Researchers have suggested that sharing responsibility with users is a process approach

for system development (Chen, Liu, & Chen, 2011). This approach can create a propensity for trust that transcends the inherent relationship between clients and vendors, thereby enhancing their communication to achieve consensus.

We acknowledge a limitation of this study, mainly regarding the sample and data collection procedures. First, the panelists may not have been representative of the population of personnel involved in IT outsourcing projects. The risk perception of project managers may vary according to their continent or working environment. Thus, drawing specific conclusions from the divergence of risk perception between the clients and vendors of a particular country could be limited. Nevertheless, this limitation did not influence the conclusion regarding the existence of discrepancies in the critical risk perception of IT outsourcing projects.

Acknowledgments

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Appendix A

No	Risk Factors	Type/Source	First Author, Year
1	Incomplete contracting	O/B	Aubert, 2005; Willcocks, 1999
2	Poor vendor selection criteria and process by the client	O/C	Willcocks, 1999
3	Lack of active management of the contract and relationship	O/V	Willcocks, 1999
4	Lack of top management support	G/B	Keil, 2002; Liu, 2010; Nakatsu, 2009; Taylor, 2007
5	Biased portrayal by the vendor	O/V	Aubert, 2005
6	Lack of experience and expertise with outsourced project activities	O/B	Nakatsu, 2009
7	Inadequate staffing	G/B	Aundhe, 2009; Nakatsu, 2009; Schmidt, 2001; Taylor, 2007
8	Lack of communication	G/B	Nakatsu, 2009
9	Lack of commitment	O/B	Nakatsu, 2009; Natovich, 2003
10	Requirements misunderstanding (or unclear)	G/B	Liu, 2010; Nakatsu, 2009; Schmidt, 2001
11	High expectations with multiple objectives for outsourcing	O/C	Taylor, 2007; Willcocks, 1999
12	Poor change management	G/B	Schmidt, 2001; Taylor, 2007
13	Business uncertainties or technical change	G/B	Earl, 1996; Willcocks, 1999
14	Lack of organizational learning	G/B	Earl, 1996
15	Client readiness	O/C	Moynihan, 1996; Sumner, 2000; Taylor, 2007
16	Lack of schedule and budget management	G/B	Aundhe, 2009; Schmidt, 2001
17	Lack of documentation management	G/B	Schmidt, 2001; Taylor, 2007
18	Customization of the product	O/B	Sumner, 2000; Taylor, 2007
19	Complexity of the product	G/B	Moynihan, 1996; Taylor, 2007
20	Lack of project management know-how about outsourced projects	G/B	Aundhe, 2009; Nakatsu, 2009
21	Failure to consider all the costs	G/B	Earl, 1996; Nakatsu, 2009
22	Difficulty in breaking the contractual engagement	O/B	Natovich, 2003
23	Lack of knowledge of the new technology	G/B	Earl, 1996; Nakatsu, 2009
24	Lack of an effective development methodology	G/B	Keil, 2002; Liu, 2010; Taylor, 2007
25	Possibility of weak management	G/B	Earl, 1996
26	Conflict	G/B	Keil, 2002; Schmidt, 2001
27	Lack of audit and control	O/C	Tafti, 2005
28	Outdated technology skills	O/V	Earl, 1996
29	Improper definitions of roles and responsibilities	G/B	Keil, 2002; Schmidt, 2001
30	Lack of team morale	G/B	Taylor, 2007
31	Lack of knowledge transfer	G/B	Aundhe, 2009
32	Measurement problem of the system's value	O/B	Aubert, 2005
33	Vendor financial instability	O/V	Earl, 1996
34	Inadequate planning	G/B	Schmidt, 2001

Note. O denotes "unique for outsourced IT projects"; G denotes "for both general and outsourced IT projects"; V, C, and B, respectively, denote vendors, clients, and both.

Table A1: Risk items, the associated project type, and the risk source.

Final Rank	Risk Factors	Mean Rank		
		Round 1	Round 2	Round 3
1	Lack of communication between the client and vendor	5.93	7.19	8.50
2	Incomplete contracting	5.88	6.15	7.58
3	Lack of vendor commitment	5.90	6.58	7.38
4	Lack of top management support	5.61	5.00	5.50
5	Lack of schedule and budget management	5.73	3.88	4.46
6	Inadequate planning	5.63	3.69	4.00
7	Vendor financial instability	5.20	2.69	3.62
8	Poor vendor selection criteria and process by the client	5.88	2.69	3.19
9	Requirements misunderstanding	5.61	2.92	3.15
10	Lack of expertise with project activities	5.41	2.15	2.27
11	Inadequate staffing	5.51	2.62	2.04
12	Failure to consider all the costs	5.34	1.92	1.15
13	Poor change management	5.34	1.23	0.88
14	Lack of active management of the vendor	5.49	1.31	0.85
15	Lack of knowledge transfer	5.41	0.96	0.31
16	Biased portrayal by the vendor	4.98	0.54	0.08
17	Customization of the product	5.07	1.00	0.04
18	Lack of documentation management	5.44	1.15	0.00
19	Lack of project management know-how	5.12	0.96	0.00
20	Lack of audit and control from the client	5.15	0.35	0.00
Kendall's W		0.149	0.359	0.638

Table A2: Ranking results for the client panel.

Final Rank	Risk Factors	Mean Rank		
		Round 1	Round 2	Round 3
1	Incomplete contracting	6.30	7.72	8.90
2	Lack of communication between the client and vendor	6.20	6.61	7.85
3	Lack of expertise with project activities	6.05	3.78	6.65
4	Lack of schedule and budget management	6.00	5.67	5.75
5	Lack of top management support	6.10	5.44	5.15
6	Requirements misunderstanding	5.80	3.89	4.15
7	Poor change management	5.95	2.44	3.80
8	Poor vendor selection criteria and process by the client	6.00	2.00	3.15
9	Inadequate planning	5.80	3.17	3.15
10	Lack of vendor commitment	5.95	3.50	1.95
11	Lack of effective development methodology	5.50	1.28	0.75
12	Lack of active management of the vendor	5.65	2.50	0.65
13	Client readiness	5.90	1.22	0.65
14	Improper definitions of roles and responsibilities	5.35	0.83	0.40
15	Lack of team morale	5.70	0.94	0.40
16	Lack of project management know-how	5.60	1.28	0.40
17	Inadequate staffing	5.65	1.28	0.40
18	Conflict between the client and vendor	5.60	0.22	0.40
19	Failure to consider all costs	5.85	1.06	0.30
20	Lack of documentation management	5.65	0.17	0.15
Kendall's W		0.113	0.379	0.572

Table A3: Ranking results for the vendor panel.

Risk Factors	Vendor		Client		t-test		
	Mean	SD	Mean	SD	t	p	sig
A	6.61	0.61	7.00	0.00	−2.715	0.015	*
B	7.00	0.00	6.58	0.64	3.353	0.003	*
C	3.00	0.91	7.00	0.00	−18.701	0.000	*
D	5.44	1.69	5.04	1.34	0.888	0.380	
E	5.67	1.09	3.88	1.68	4.271	0.000	*
F	3.17	1.43	3.69	1.32	−1.258	0.215	
H	2.00	1.09	3.19	1.23	−3.308	0.002	*
I	3.89	1.41	2.92	1.06	2.600	0.013	*
J	3.78	1.22	2.15	0.97	4.929	0.000	*

Note. *denoted the difference is significant at $p < 0.05$.

Table A4: *T*-test of mean risk importance levels.