The impact of knowledge sharing, organizational capability and partnership quality on IS outsourcing success

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Abstract

In recent studies, there has been much interest in knowledge sharing between the service receiver and provider through an outsourcing partnership and its effect on Information Systems (IS) outsourcing success. This study examines the relationship between knowledge sharing and outsourcing success. The effect of the ability of the service receiver to absorb the needed knowledge and of companies to build a partnership on these relationships are modeled and hypotheses defined. These were tested using a sample of 195 public sector organizations in Korea. Findings indicate that all hypothesized paths in the model are significant.

Keywords: IS outsourcing; Knowledge sharing; Organizational capability; Partnership quality; Outsourcing success

1. Introduction

IS outsourcing is one of the major issues facing organizations in today’s rapidly changing business environment. IS outsourcing, which is defined as the process of turning over part or all of an organization’s IS functions to external service provider(s), is done to acquire economic, technological, and strategic advantages [33]. According to the Gartner Group, the worldwide outsourcing market size is estimated to rise from US$ 21.3 billion in 1997 to US$ 59.6 billion by 2005, with an annual growth rate of 14% [45].

While a major driver for outsourcing until 1990 was cost-effective access to specialized computing power or system development skill, the growth of IS outsourcing in the 1990s results from the acceptance of strategic alliance [17,34]. Accordingly, increasing attention has been paid to building a successful partnership between the customer and the provider of IS outsourcing services. Several firms have established intimate relationships with their service providers as in the Kodak–IBM–DEC partnership [3], USAA–IBM partnership [30] and Xerox–EDS partnership [2]. Organizations seek this type of flexible relationship, usually in the form of a partnership with their service providers after identifying any limitations and stating them in a legal contract.

In recent studies, there has been much interest in knowledge sharing through outsourcing partnership and its effect on outsourcing success [14,46]. The knowledge sharing between the service receiver and provider is considered as one of the major motives of the outsourcing partnership based on mutual trust [36]. However, knowledge sharing among different organizations is not an easy task. Nonaka and Takeuchi [38] said that knowledge sharing is based on organizational
context, and thus that knowledge cannot easily be transferred among organizations with different cultures, structures, and goals. Therefore, for successful knowledge sharing in an outsourcing partnership, both the service receiver and provider should have a clear common vision and goals for partnership as well as a belief that their partners will not act opportunistically; this may be termed partnership quality [31].

Another key source of successful knowledge sharing is an organizational ability to learn or acquire the needed knowledge from other organizations. Cohen and Levinthal [9] described an absorptive capability as an organization’s ability to recognize the value of new, internal information, assimilate it, and apply it to commercial ends for an organization’s innovative capability. To evaluate and utilize outside knowledge, an organization should have the ability to exploit external knowledge that is largely a function of the level of prior related knowledge [4,15].

As the nature of the outsourcing relationship shifts from a contractual to a partnership-based relationship and the importance of knowledge sharing through the outsourcing partnership is emphasized, the degree of both partnership quality and organizational capability in IS outsourcing are of fundamental importance. This paper presents an empirical study that examines outsourcing. More specifically, the effect of knowledge sharing, partnership quality and organizational capability on outsourcing success was studied. My objective was to identify and understand the role of knowledge sharing for a successful outsourcing project.

2. Research background

2.1. Knowledge sharing

Knowledge, which is information whose validity has been established through tests of proof [32], has emerged as a strategically significant resource of the firm. Accordingly, knowledge management becomes a key factor to gain and sustain a competitive advantage [11,43]. Knowledge management is the process of capturing, storing, sharing, and using knowledge. In this, a major management issue is how to change individual into organizational knowledge, since organizational knowledge is inherently created and resides with individuals [37]. Another issue is how to integrate and manage organizational knowledge so that it results in successful performance. Since organizational knowledge is usually distributed within an organization and organizational products or services generally require multiple knowledge, organizations need to integrate this knowledge to produce new products or services, or to improve business performances [8].

Organizational knowledge is not only created within an organization but can also be acquired externally. Therefore, recently, increasing attention has been paid to how organizations learn from their partners and develop new competencies through strategic alliances [42]. Many scholars have discussed the introduction of alliances to acquire new capabilities from partners through organizational learning [21]. Here, we define knowledge sharing as activities of transferring or disseminating knowledge from one person, group or organization to another. This definition broadly includes both tacit and explicit knowledge. However, according to the definition of Nonaka and Takeuchi, tacit knowledge is personal, context-specific, and therefore hard to formalize and communicate and explicit knowledge can be described as knowledge that is transmittable in formal, systematic language. Polanyi [39] also said that the only way to learn tacit knowledge was through apprenticeship and experience. Thus, we made more concrete and new definitions of tacit and explicit knowledge by using Polanyi’s concept. To do so, we introduce the concept of knowledge representativeness: the degree to which knowledge can be expressed in verbal, symbolic or written form. That is, we consider the representativeness of knowledge to be a continuum.

According to this rationale, tacit knowledge is defined as knowledge that cannot be expressed in verbal, symbolic and written form while explicit knowledge is knowledge that exists in symbolic or written form. Then, implicit knowledge is knowledge that can be expressed in verbal, symbolic or written form, but not yet expressed.

2.2. Organizational capability

The fundamental question in the field of strategic management has been how organizations gain and sustain competitive advantages. In the traditional approach, the attractiveness of an organization and its ability to establish competitive advantage over
rivals are major factors of organizational capability. However, with increasing uncertainty and the dynamics of business environments, the internal analysis of the firm rather than the external factors of the industry and its environment become a frequent question in strategic management [10]. This interest reflects dissatisfaction with the static, equilibrium framework of traditional approaches and leads to the resource-based theory of the firm.

This view of firm has led to the suggestion that organizational resources and capabilities are key success factors for competitive advantage and its sustainability [5]. Accordingly, the organizational capability depends on valuable resources that are inimitable, unsubstitutable, and durable; it depends on an organization’s ability to acquire and use them for competitive advantage. Later, this allows development of a dynamic capability approach. While the term ‘dynamic’ refers to the capacity to renew organizational resources and capabilities to achieve congruence with the changing business environment, the term ‘capability’ emphasizes the role of strategic management in appropriately adapting, integrating, and reconfiguring internal and external organizational resources and competencies to match the requirements of the changing environment [44]. Mowery, Oxlen and Silverman say that a key factor in the ‘dynamic capabilities’ view of firm strategy is the acquisition of new capabilities through organizational learning.

The research interest in organizational capabilities has been recently revitalized by knowledge-based theories [16, 26, 41]. These argue that organizational knowledge, such as operational routines, skills, or know-how, are the most valuable resources and its strategic management capability is a key factor under a more dynamic and rapidly changing environment; i.e. from the knowledge-based perspective, organizational capability is considered as a key source of competitive advantage. For example, Badaracco introduced the concept of ‘knowledge link’ as one of the major organizational management capabilities for learning or acquiring needed knowledge from other organizations.

2.3. Outsourcing partnership

While application packages, contract programming, and specific processing services comprised the major portion of IS outsourcing in the 1970 and 1980s, organizations in the 1990s outsourced their IS functions through enterprise-wide system integration, application development, and systems operation. In the 1990s, many organizations experienced difficulties in forming and managing a successful outsourcing relationship with service providers as the nature of outsourcing evolved from a contract relationship between the service receiver and provider to a partnership relationship. To overcome this problem, several firms established intimate relationships with their service providers. On the research side, many studies also emphasized the importance of partnership in IS outsourcing (e.g. [13]).

In this study, partnership is defined as an interorganizational relationship to achieve shared goals of the participants. Partnership is not a new concept. Marketing and interorganization systems research has long explored relationships between customer and vendor, buyer and seller, manufacturer and distributor, or auditor and client, etc. and a number of different views emerged. Previous research classified the relationship between organizations into two types: transactional style relationship and partnership style relationship (e.g. [22]). The first develops through a formal contract in which the rules are well specified and the failure to deliver on commitments by either party is resolved through either litigation or penalty clauses in the contract. In contrast, the second involves risk and benefit sharing, the need to view the relationship as a series of exchanges without a definite endpoint, and the need to establish a range of mechanisms to monitor and execute its operations.

In the marketing area, the partnership style relationship is based on social exchange theory rather than an economic perspective, such as transaction-cost theory or agent-cost theory [1, 12, 20]. The social exchange theory is used to explain why organizations enter into a closer relationship. This theory sees the relationship as a dynamic process through specific sequential interactions in which two participants carry out activities with one another and exchange valuable resources. This assumes that processes evolve over time as the actors mutually and sequentially demonstrate their trustworthiness while the exchange activities among organizations are enforceable from the economic perspective [25, 28].
According to Blau [7], social exchange theory is based on the concept of “trust” to explain the exchange relationships among participants. It has been conceptualized as the firm’s belief that the other company will perform actions that will result in positive outcomes, and will not take unexpected actions that would result in negative outcomes [18]. Trust plays a critical role in the development of a long-term relationship and in facilitating an exchange relationship. Therefore, trust is a basic concept in separating the relationship type into a transactional-style or a partnership-style relationship and it evolves through mutually satisfying interactions and increasing confidence in the relationship.

3. Research model

The objective of this study was to examine organizations that outsource IS functions, their success, and understand how some variables affect this success. The basic model studied the relationship between knowledge sharing and outsourcing success. The effects of organizational capability and partnership quality on this relationship were explored. The research model is shown in Fig. 1.

As described by Konsynski and McFarlan [27], partnerships can create a competitive advantage through the strategic sharing of organizations’ key information and knowledge. Closer relationships result from more frequent and more relevant information and knowledge exchanges among high performance partners [29]. By sharing knowledge between the service receiver and provider, they are able to sustain a more effective outsourcing relationship over time. Since tacit knowledge is hard to formalize and communicate, this study focuses on explicit and implicit knowledge sharing between the service receiver and provider. The extent of implicit and explicit knowledge sharing is represented by the left box in the figure.

The dependent variable, outsourcing success, can be viewed as the level of fitness between the customer’s requirements and the outsourcing outcome. The first set of hypotheses explores the base relationship between the degree of knowledge sharing and outsourcing success.

Hypothesis 1. The degree of knowledge sharing will have a positive effect on outsourcing success.

Hypothesis 1a. The degree of implicit knowledge sharing will have a positive effect on outsourcing success.
Hypothesis 1b. The degree of explicit knowledge sharing will have a positive effect on outsourcing success.

There have been many studies on knowledge sharing among organizations (e.g. [40]). Knowledge sharing refers to the extent to which critical or proprietary information is communicated to one’s partners. It is widely accepted that one of the key sources of successful knowledge sharing is an organizational capability to learn or acquire the needed knowledge from other organizations: the higher the degree of organizational capability, the greater the outsourcing outcome.

However, organizational capability in knowledge sharing is dependent on the ability of an organization to acquire or create, integrate, and leverage knowledge. The service receiver’s absorptive ability to recognize and assimilate the service provider’s knowledge may lead to a successful outsourcing outcome, regardless of the degree of knowledge sharing between the service receiver and provider. Therefore, I expected organizational capability to influence the base relationship between the degree of knowledge sharing and outsourcing success. While the degree of implicit and explicit knowledge sharing may or may not have a significant relationship with outsourcing success, the relationship would be stronger under a higher level of organizational capability. This leads to Hypothesis 2:

Hypothesis 2. The association between the degree of knowledge sharing and outsourcing success is moderated by the level of organizational capability.

Hypothesis 2a. The association between the degree of implicit knowledge sharing and outsourcing success is moderated by the level of organizational capability.

Hypothesis 2b. The association between the degree of explicit knowledge sharing and outsourcing success is moderated by the level of organizational capability.

Anderson and Narus define partnership as “the extent to which there is mutual recognition and understanding that success of each firm is in part dependent upon the other firm”. Mohr and Spekman [35] define it as “purposive strategic relationships between independent firms who share compatible goals, strive for mutual benefit, and acknowledge a high level of mutual interdependency”. As the nature of the outsourcing relationship shifts from relatively independent to tightly coupled, organizations consider the outsourcing partnership as a strategic alternative, allowing them to obtain outsourcing benefits more effectively.

Lee and Kim considered partnership quality (how well the outcome of a delivered partnership matches the participants’ expectations) to be a critical success factor of IS outsourcing. Therefore, the base relationship between the degree of knowledge sharing and outsourcing success should be affected by the degree of partnership quality. However, since the quality of the partnership is a process-oriented variable and not an outcome-oriented variable, they consider it as a mediating one; in other words, the partnership quality is an intervening variable between the degree of implicit and explicit knowledge and outsourcing success. This leads to Hypothesis 3:

Hypothesis 3. The association between the degree of knowledge sharing and outsourcing success is mediated by the quality of the partnership.

Hypothesis 3a. The association between the degree of implicit knowledge sharing and outsourcing success is mediated by the quality of the partnership.

Hypothesis 3b. The association between the degree of explicit knowledge sharing and outsourcing success is mediated by the quality of the partnership.

4. Research method

The unit of analysis for this study is the outsourcing relationship between a service receiver and one of its service providers. This study focuses on the service receiver’s perceptions of the outsourcing relationship.

4.1. Measure development

After developing the research framework, I conducted a series of personal interviews with five IS outsourcing professionals to assess the external
validity of the model. I then developed a questionnaire based on the previous literature and the comments gathered from the interviews. When developing the measurement, the multiple-item method was used and each item was measured on a five-point Likert scale from ‘strongly disagree’ to ‘strongly agree’.

Knowledge sharing, the independent variable in the research model, refers to the activities of transferring or disseminating knowledge between the service receiver and provider. As I intended to examine the effect of implicit and explicit knowledge sharing on the success of outsourcing, I introduced the concept of knowledge representativeness to classify knowledge into either implicit or explicit. By reviewing the previous literature on knowledge sharing, I decided that the knowledge that exists in symbolic or written form as explicit knowledge (business proposals, reports, manuals, and models). Implicit knowledge, on the other hand, was defined as that material expressed verbally, symbolically, or in written form but not yet expressed as know-how, know-where, and know-whom from work experience.

Outsourcing success, the dependent measure of this research, refers to the overall organizational advantage obtained from IS outsourcing. Outsourcing is motivated by the strategic, economic, and technological benefits. Thus, the success of outsourcing can be assessed in terms of attainment of these benefits. To capture these advantages of outsourcing, I adopted Grover, Cheon and Teng’s instrument to assess the degree of achieving the strategic, economic, and technological benefits of outsourcing. This instrument has been used to measure outsourcing business performance and has been validated by other researchers.

There is little empirical research on organizational capability in knowledge management, and most such work emphasizes case studies or small scale surveys. These gaps reflect the lack of reliable measures of the organizational capability between organizations. Thus, I developed the measure based on the definition of an absorptive capability proposed by Cohen and Levinthal. It refers to an organization’s ability to scan for valuable knowledge, acquire the needed knowledge, assimilate the found knowledge, and exploit the gathered knowledge for the organizational objectives. These four dimensions were adopted as my measure of organizational capability.

For the quality of partnership, I adopted the measure developed by Lee and Kim. They considered partnership quality as a key predictor of outsourcing success, and identified five factors from the literature on inter-organizational relationship and partnership that make up partnership quality: trust, business understanding, benefit and risk sharing, conflict, and commitment. These five factors represent process-oriented outsourcing success: fostering a cooperative relationship based on these five factors is critical to reap the greatest benefits from outsourcing. Items used for individual constructs are shown in Appendix A.

4.2. Sample and data collection

I used cross-sectional survey data on knowledge sharing, organizational capability, and partnership quality obtained from the Korean public sector organizations examine the proposed model. According to the Outsourcing Analysis Report by the National Computerization Agency (1999) in Korea, IS outsourcing portion of the public sector organizations (54.3%) is higher than that of private sector organizations (23.6%). Also, because this study was funded by one of the government offices, I decided to gather data from public sector organizations.

The sampling frame of this study was all 235 government offices in Korea, such as city, provincial, district, and county offices. The survey questionnaire was mailed to all 235 IS managers of these offices. Finally, 223 responses were received, representing a response rate of about 95%. This was extremely high, since the government actively requested participation in this study. Among them, 11 responses that did not have an IS outsourcing arrangement were discarded, while 17 responses were removed from the analysis due to insufficient data, thus 195 responses were used in the final analysis.

The descriptive statistics of the responding organizations are shown in Table 1. Variance in the number of employees can be seen in Part (a). Among the 195 organizations, only 18 organizations (9.2%) had IS budgets that were 3% or more of their total budgets. Of the 195 organizations, 90 performed IS outsourcing for application development and maintenance while 34 organizations outsourced their networks and data centers. For the portion of outsourcing, 68
organizations outsourced below 30% of their IS functions and 55 organizations had 75% or more outsourced IS functions.

4.3. Reliability and validity of the constructs

Content validity of the survey instrument was established through the adoption of validated instruments by other researchers in the literature and the pretest using five IS outsourcing professionals in the IS field [24]. Since each factor was measured by the multi-item constructs, item analysis and factor analysis were performed to validate the scales. Table 2 summarizes the number of items and the results of the reliability and validity tests.

Internal consistency (Cronbach’s alpha) was calculated in order to assess the reliability of all constructs. The Cronbach’s alpha values ranged from 0.758 (for implicit knowledge) to 0.903 (for outsourcing success). Convergent validity, the degree to which multiple attempts to measure the same concept are in agreement, was evaluated by item-to-total correlation (the correlation of each item to the sum of the remaining items). All of the correlation is positive and significant at the 0.001 level. Discriminant validity is the degree to which measures of different concepts are distinct. To test this, a principal component factor analysis with varimax rotation was performed for each domain of the proposed model. It was determined when items for each construct load onto single factors with a factor loading greater than 0.5 [19].

5. Analysis and results

5.1. Testing the base model

Table 3 shows the correlation matrix for all research variables. The base relationship between the degree of knowledge sharing and outsourcing success is illustrated in the first row. As proposed in Hypotheses 1a and 1b, the implicit and explicit knowledge sharing between the service receiver and provider was significantly related to outsourcing success. In addition, overall knowledge sharing shows a significant positive relationship with outsourcing success, which supports Hypothesis 1. This means that the higher the degree of knowledge sharing, the greater the accomplishment of the strategic, economic, and technological benefits of IS outsourcing. By sharing knowledge about each other’s organization, the service receiver and provider are expected to reap the greatest benefit of outsourcing.
5.2. Testing the moderating effects of organizational capability

In general, to be a moderating variable, the variable is not correlated with the independent variable [6]. As in the second row, organizational capability has no significant relationship with the degree of implicit and explicit knowledge sharing as well as the degree of overall knowledge sharing. Accordingly, the condition that organizational capability should not vary systematically with the degree of knowledge sharing is supported.

Table 2
Reliability and validity statistics for all items

<table>
<thead>
<tr>
<th>Measure</th>
<th>Reliability (Cronbach’s alpha)</th>
<th>Convergent validity</th>
<th>Discriminant validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge sharing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explicit knowledge</td>
<td>0.901</td>
<td>0.753</td>
<td>0.863</td>
</tr>
<tr>
<td>Business proposals and reports</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business manuals and models</td>
<td>0.758</td>
<td>0.863</td>
<td></td>
</tr>
<tr>
<td>Success and failure stories</td>
<td>0.773</td>
<td>0.872</td>
<td></td>
</tr>
<tr>
<td>Newspaper, magazines and journals</td>
<td>0.837</td>
<td></td>
<td>0.918</td>
</tr>
<tr>
<td>Implicit knowledge</td>
<td>0.758</td>
<td>0.590</td>
<td>0.747</td>
</tr>
<tr>
<td>Know-how from work experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Know-where and know-whom</td>
<td>0.687</td>
<td>0.879</td>
<td></td>
</tr>
<tr>
<td>Education and training</td>
<td>0.610</td>
<td></td>
<td>0.839</td>
</tr>
<tr>
<td>Organizational capability</td>
<td>0.898</td>
<td>0.898</td>
<td>0.947</td>
</tr>
<tr>
<td>Scanning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acquisition</td>
<td>0.672</td>
<td>0.803</td>
<td></td>
</tr>
<tr>
<td>Assimilation</td>
<td>0.659</td>
<td>0.794</td>
<td></td>
</tr>
<tr>
<td>Exploitation</td>
<td>0.897</td>
<td></td>
<td>0.946</td>
</tr>
<tr>
<td>Partnership quality</td>
<td>0.819</td>
<td>0.663</td>
<td>0.810</td>
</tr>
<tr>
<td>Trust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business understanding</td>
<td>0.672</td>
<td>0.807</td>
<td></td>
</tr>
<tr>
<td>Benefit and risk sharing</td>
<td>0.603</td>
<td>0.762</td>
<td></td>
</tr>
<tr>
<td>Conflict</td>
<td>0.701</td>
<td>0.772</td>
<td></td>
</tr>
<tr>
<td>Commitment</td>
<td>0.742</td>
<td></td>
<td>0.830</td>
</tr>
<tr>
<td>Outsourcing success</td>
<td>0.903</td>
<td>0.582</td>
<td>0.669</td>
</tr>
<tr>
<td>Focus on core business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT competence</td>
<td>0.663</td>
<td>0.743</td>
<td></td>
</tr>
<tr>
<td>Skilled personnel</td>
<td>0.644</td>
<td>0.728</td>
<td></td>
</tr>
<tr>
<td>Economies of scale in human resources</td>
<td>0.609</td>
<td></td>
<td>0.691</td>
</tr>
<tr>
<td>Economies of scale in technical resources</td>
<td>0.720</td>
<td></td>
<td>0.782</td>
</tr>
<tr>
<td>Control of IS expenses</td>
<td>0.714</td>
<td>0.784</td>
<td></td>
</tr>
<tr>
<td>Avoidance of obsolescence risk</td>
<td></td>
<td></td>
<td>0.819</td>
</tr>
<tr>
<td>Access to key IT</td>
<td>0.756</td>
<td></td>
<td>0.819</td>
</tr>
<tr>
<td>Overall satisfaction</td>
<td>0.715</td>
<td></td>
<td>0.789</td>
</tr>
</tbody>
</table>

Table 3
Correlation matrix for all constructs

<table>
<thead>
<tr>
<th></th>
<th>Implicit knowledge sharing</th>
<th>Explicit knowledge sharing</th>
<th>Overall knowledge sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outsourcing success</td>
<td>0.408***</td>
<td>0.444***</td>
<td>0.478***</td>
</tr>
<tr>
<td>Organizational capability</td>
<td>0.128</td>
<td>0.171</td>
<td>0.183</td>
</tr>
<tr>
<td>Partnership quality</td>
<td>0.578***</td>
<td>0.515***</td>
<td>0.602***</td>
</tr>
</tbody>
</table>

*** P < 0.01.
When the interaction between the independent variable (degree of knowledge sharing) and the moderating variable (degree of organizational capability) is significant in the relationship of the independent variables on the dependent variable (outsourcing success), a moderating effect exists. This effect of organizational capability on the base relationship was assessed using the degree of the difference in $R^2$ between the restricted model and full model.

The test results of moderating effects are illustrated in Table 4. While the first line in each row of the table shows the results of the regression run without interaction, the results of the full model with the interaction term are in the second row. The results show that, as proposed in Hypotheses 2, 2a and 2b, organizational capability plays a significant role to increase the amount of variance explained in the relationship between explicit knowledge sharing, implicit knowledge sharing, overall knowledge sharing and outsourcing success.

5.3. Testing the mediating effects of partnership quality

There are four criteria to assess if a meditational model is or is not valid [6]:

1. The independent variable should be significantly correlated to the intervening variable;
2. The independent variable should influence the dependent variables in a regression of the independent variables on the dependent variable;
3. The intervening variable should affect the dependent variable in a regression of both the independent variable and the intervening variable on the dependent variable; and
4. The effect of the intervening variable on the dependent variable in a regression of both the independent variable and the intervening variable on the dependent variable should be higher than the effect of the independent variable.

Table 4
Testing the moderating effects of organizational capability

<table>
<thead>
<tr>
<th>Coefficient (interaction)</th>
<th>Significance (interaction)</th>
<th>$R^2$ (model)</th>
<th>$R^2$ difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implicit knowledge sharing</td>
<td>–</td>
<td>–</td>
<td>0.193</td>
</tr>
<tr>
<td>Implicit knowledge sharing + organizational capability + interaction</td>
<td>3.610</td>
<td>0.014</td>
<td>0.256</td>
</tr>
<tr>
<td>Explicit knowledge sharing</td>
<td>–</td>
<td>–</td>
<td>0.215</td>
</tr>
<tr>
<td>Explicit knowledge sharing + organizational capability + interaction</td>
<td>7.100</td>
<td>0.000</td>
<td>0.343</td>
</tr>
<tr>
<td>Overall knowledge sharing</td>
<td>–</td>
<td>–</td>
<td>0.244</td>
</tr>
<tr>
<td>Overall knowledge sharing + organizational capability + interaction</td>
<td>5.290</td>
<td>0.000</td>
<td>0.338</td>
</tr>
</tbody>
</table>

Table 5
Testing the mediating effects of partnership quality

<table>
<thead>
<tr>
<th>Without partnership quality</th>
<th>With partnership quality</th>
<th>$R^2$ difference</th>
<th>Beta difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implicit knowledge sharing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.167</td>
<td>0.340</td>
<td>0.173</td>
</tr>
<tr>
<td>Beta for implicit knowledge (P value)</td>
<td>0.408 (0.000)</td>
<td>0.117 (0.005)</td>
<td>–0.291</td>
</tr>
<tr>
<td>Beta for partnership quality (P value)</td>
<td>–</td>
<td>0.532 (0.000)</td>
<td></td>
</tr>
<tr>
<td>Explicit knowledge sharing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.197</td>
<td>0.368</td>
<td>0.171</td>
</tr>
<tr>
<td>Beta for explicit knowledge (P value)</td>
<td>0.444 (0.000)</td>
<td>0.184 (0.000)</td>
<td>–0.260</td>
</tr>
<tr>
<td>Beta for partnership quality (P value)</td>
<td>–</td>
<td>0.610 (0.000)</td>
<td></td>
</tr>
<tr>
<td>Overall knowledge sharing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.230</td>
<td>0.374</td>
<td>0.144</td>
</tr>
<tr>
<td>Beta for overall knowledge (P value)</td>
<td>0.479 (0.000)</td>
<td>0.220 (0.001)</td>
<td>–0.259</td>
</tr>
<tr>
<td>Beta for partnership quality (P value)</td>
<td>–</td>
<td>0.364 (0.000)</td>
<td></td>
</tr>
</tbody>
</table>
The first condition to be a mediational model is upheld; i.e. all correlations between implicit knowledge sharing, explicit knowledge sharing, overall knowledge sharing and partnership quality are significant. The rest of the conditions — (2), (3), and (4) — are tested in Table 5. The results show that all three conditions are satisfied and all models have strong mediating effects of partnership quality, indicating support for Hypotheses 3, 3a and 3b. In detail, all models provide the strong evidence of the mediating effect of partnership quality as it significantly reduces the degree of relationship strength between knowledge sharing and outsourcing success. The noticeable thing in the result is the fact that the correlation between partnership quality and outsourcing success is high, 0.607, at 0.001 significant level. In other words, we may consider partnership quality as a critical factor to directly influence the success of outsourcing.

6. Discussion

The results of this study indicate that knowledge sharing is significantly associated with the degree of attainment of outsourcing benefits, the ability of the service receiver to absorb the needed knowledge has a significant direct effect on the benefit attainment, as evidenced by the significant variance explained by organizational capability in each regression, and partnership quality plays a critical role as a mediator between knowledge sharing and outsourcing success.

More specifically, my empirical results strongly support three hypotheses (Hypotheses 1, 1a and 1b) from a knowledge-based perspective on knowledge sharing between the service receiver and provider. Furthermore, I also found that explicit knowledge sharing appears to be a more effective way for outsourcing success than implicit knowledge sharing, although both are significant predictors. Explicit knowledge is easier to understand and share with other organizations than implicit knowledge that is yet not expressed. Therefore, organizations should try to transfer implicit knowledge into explicit knowledge for successful knowledge sharing.

The result also supports the importance of organizational capability in the knowledge sharing through the outsourcing relationship (Hypotheses 2, 2a and 2b). A service receiver’s ability to acquire, integrate, and leverage knowledge is essential for effective knowledge sharing. Many theorists view an organization as a knowledge system where knowledge is created, shared, and used for organizational objectives. They argue that knowledge management should be considered as a continuous managerial activity. Therefore, organizations should manage not only knowledge itself, but also the knowledge worker, organizational structure, and information technologies continuously to get and sustain the higher organizational capability [23].

Finally, with respect to partnership quality, the result shows that it is an important variable for outsourcing success. The strong relationship between partnership quality and outsourcing success indicates that fostering a cooperative relationship based on trust, business understanding, benefit and risk sharing, conflict, and commitment is critical to maximize the strategic, economic, and technological benefits for outsourcing. This is significant to both the study and management of the outsourcing partnership. To the researcher, this study confirms that the notion of partnership quality should be treated as distinct from outsourcing success, while the establishment of the elements of partnership quality is important to enhance the outsourcing outcome for practitioners.

7. Conclusion

The objective of this study was to assess the impact of knowledge sharing, organizational capability, and partnership quality on IS outsourcing success. This study confirms the widely held belief that knowledge sharing is one of the major predictors for outsourcing success, organizational capability to learn or acquire the needed knowledge from other organizations is a key source of successful knowledge sharing, and partnership quality is a significant intervening factor between knowledge sharing and outsourcing success. Although the research findings provide meaningful implications, this study has some limitations. First, the results are only one side of the story, from the service receiver’s perspective. The success of outsourcing through knowledge sharing is also enjoyed to a significant extent by the service provider. Second, I
surveyed one individual in each organization who was the IS manager in charge of the firm’s operations. While effort was made to minimize it, selection bias could still exist. Finally, the results may include some bias since the sample was selected only in Korea’s public sector. Therefore, the results of our study may have to be carefully interpreted.

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Appendix A. Questionnaire items

1 = Strongly disagree; 2 = Somewhat disagree; 3 = Neutral; 4 = Somewhat agree; 5 = Strongly agree

Items measuring knowledge sharing

Explicit knowledge sharing
1. We and our service provider share business proposals and reports with each other.
2. We and our service provider share business manuals, models, and methodologies with each other.
3. We and our service provider share each other’s success and failure stories.
4. We and our service provider share business knowledge obtained from newspapers, magazines, journals, and television.

Implicit knowledge sharing
1. We and our service provider share know-how from work experience with each other.
2. We and our service provider share each other’s know-where and know-whom.
3. We and our service provider share expertise obtained from education and training.

Items measuring organizational capability
1. We have the ability to scan for the valuable knowledge in external organizations.
2. We have the ability to acquire the needed knowledge from other organizations.
3. We have the ability to assimilate the found knowledge in our organization.
4. We have the ability to exploit the gathered knowledge for our organization.

Items measuring partnership quality
1. We and our service provider make beneficial decisions under any circumstances.
2. We and our service provider understand each other’s business objective and process each other.
3. We and our service provider share the benefits and risks that can be occurred in the process of business.
4. We and our service provider have compatible culture and policies in the process of business.
5. We and our service provider perform prespecified agreements and promises very well.

Items measuring success of outsourcing
1. We have been able to refocus on core business.
2. We have enhanced our IT competency.
3. We have increased access to skilled personnel.
4. We have enhanced economies of scale in human resources.
5. We have enhanced economies of scale in technological resources.
6. We have increased control of IS expenses.
7. We have reduced the risk of technological obsolescence.
8. We have increased access to key information technologies.
9. We are satisfied with our overall benefits from outsourcing.

References


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