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PERSISTENCE INFLUENCE FOR IT OUTSOURCING: SMALL AND MEDIUM FIRMS PERSPECTIVES OF THEIR APPLICATION SERVICE PROVIDERS

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Abstract

Given today's fierce competition among application service providers (ASP), one key question for any ASP is how to retain their customers' loyalty through partnership establishment and provision of quality of service. However, prior studies focused on the ongoing relationships between the ASP and clients are sparse. This study investigates the perspectives of small and medium firms for their information technology (IT) outsourcing, especially when they are seeking facilitation from the ASP. The study applies the psychological concepts of satisfaction and trust to assess a firm's loyalty state which can predict the persistence for IT outsourcing. The research questions are: (i) Do the key factors of IT outsourcing enhancement - partnership and quality of service - influence a firm's IT outsourcing cognition? (ii) Does a small or medium firm's IT outsourcing cognition - satisfaction and trust - have a positive relationship to its IT outsourcing continuance with an ASP? This study uses the partial least squares approach to develop and test a model that encapsulates these questions. A field study of 158 small and medium firms was conducted. Results show that the key factors of IT outsourcing enhancement and cognition are able to predict a firm's persistence of IT outsourcing.

Keywords: IT Outsourcing, IT Outsourcing Cognition, Persistence of IT Outsourcing, Partnership, Quality of Service, Satisfaction, Trust, Loyalty

1 INTRODUCTION

Application service providers (ASP) have encountered fierce competition in retaining their customers for long-term profitability (e.g. loyalty). However, the characteristic of a firm's loyalty with its ASP is not a common dependent variable examined in the information systems (IS) or project management literature. Studies have emphasized the *partnership* and *quality of service* as the two most significant practices for enhancing the ASP competitive advantages. However, how these two factors impact the small and medium firms is ambiguous. The Harvard Business Review has indicated that "the idea of outsourcing processes and capabilities began to gain currency as a means to achieve more rapid benefits" (Davenport 2005, p.100). Numerous firms have become ASP customers and increased partnerships with ASPs. The ASP hosting services market is forecast to reach $69.8 billion by 2015 (Global Industry Analysts 2010). The Asia-Pacific region represents a fast growing market and might grow more than 18% over the period 2011-2015 (Global Industry Analysts 2010). With increasing reliance on information technology (IT) outsourcing to meet business needs, there is a high demand for understanding the theoretical and empirical characteristics of persistence of IT outsourcing and also of its leverage.

ASPs have realized that they should readjust and reconsider their service strategies in response to a client's demands (Rustagi et al. 2008). Researchers also have indicated that IT outsourcing success depends on designing services to match a firm's specific needs (Heskett et al. 1990). Literature has shown that a firm's satisfaction and trust has a positive impact on profitability and long-term collaboration (Sharma & Gupta 2002). However, there is still piecemeal understanding of the consequences by which "persistence for IT outsourcing" can be achieved.

This study has theoretical significance since the work treating *partnership* and *quality of service* as the key factors of IT outsourcing enhancement is sparse. The study extends prior concepts and considers *satisfaction* and *trust* as IT outsourcing cognition concepts based on the relevant work appearing in the literature of working partnerships, outsourcing relationships, and service quality (Anderson & Narus 1990; DeLone & McLean 2003; Grover et al. 1996; Lee & Kim 1999; Sharma & Gupta 2002). Moreover, a link between a firm's cognition for IT outsourcing to persistence with its ASP is established. This study also has practical significance as it examines IT outsourcing key factors through the views of small and medium firms. The study provides value to firms and also ASPs that are interested in establishing continuing partnerships to promote businesses in the digital era.

This study, therefore, seeks to answer the following two questions:
(1) *Do the key factors of IT outsourcing enhancement - partnership and quality of service - influence a firm's IT outsourcing cognition?*
(2) *Does a small or medium firm's IT outsourcing cognition - satisfaction and trust - have a positive relationship to its IT outsourcing continuance with an ASP?*

The paper proceeds as follows. First, the concepts of IT outsourcing enhancement, IT outsourcing cognition, and persistence are explored in some depth. The constructs related to an ASP and firms' IT relationship are then provided and the hypotheses for the study are advanced. The survey conducted and the results observed are then discussed.

2 THEORETICAL CONTEXT

IT outsourcing has been investigated with a focus on its business impact (e.g. performance, effectiveness, or achievement). Traditionally, studies on IT outsourcing sought to achieve cost and economic improvement (Lee et al. 2004), operation and capability improvement (McAulay et al. 2002), and strategic outcome improvement (Lee et al. 2003). However, there is a lack of knowledge regarding the motivational factors that enhance a firm's IT outsourcing willingness. Recent recommendations encourage researchers to focus investigations on motivational factors. These factors have potential to explain and predict how the enablement of IT outsourcing enhancement leads to higher levels of outsourcing outcomes (Lee et al. 2003).

From the aspect of a firm's IT outsourcing cognition, this study regards the cognitive experiences of *satisfaction* and *trust* as potential contributors to perceptions of both an ASP and small and medium firms. Given the complex condition of a firm's satisfaction with IT outsourcing, a firm recognizes increased profitability through relational exchanges (e.g. mutual satisfaction, shared trust) rather than discrete transactional exchange (Sharif et al. 2005; Weitz & Jap 1995). Furthermore, in the context of psychological behavior, a valid relationship between two parties leads to the continuance of affiliation (Klein et al. 1978) and *loyalty* can represent a certain degree of persistence (Fullerton 2005; Fullerton & Taylor 2002). While studies are exploring the IT outsourcing values between small and medium firms and their ASP, there is still a gap existing in the current research about the influence of continuance IT outsourcing relationships. Continuance is rooted in switching costs (Gilliland & Bello 2002), contractual arrangements (Anderson & Weitz 1992) and scarcity of alternatives (Allen & Meyer 1990). However, there are very few IS studies that consider the reasons for a firm's continuance of IT outsourcing.

Based on the discussions above, this study examines the research model in Figure 1. IT outsourcing enhancement represents the antecedent that can motivate a firm's IT outsourcing cognition, which is a vital element to a firm's continuance for IT outsourcing. Details of this model, research constructs, and hypotheses follow.
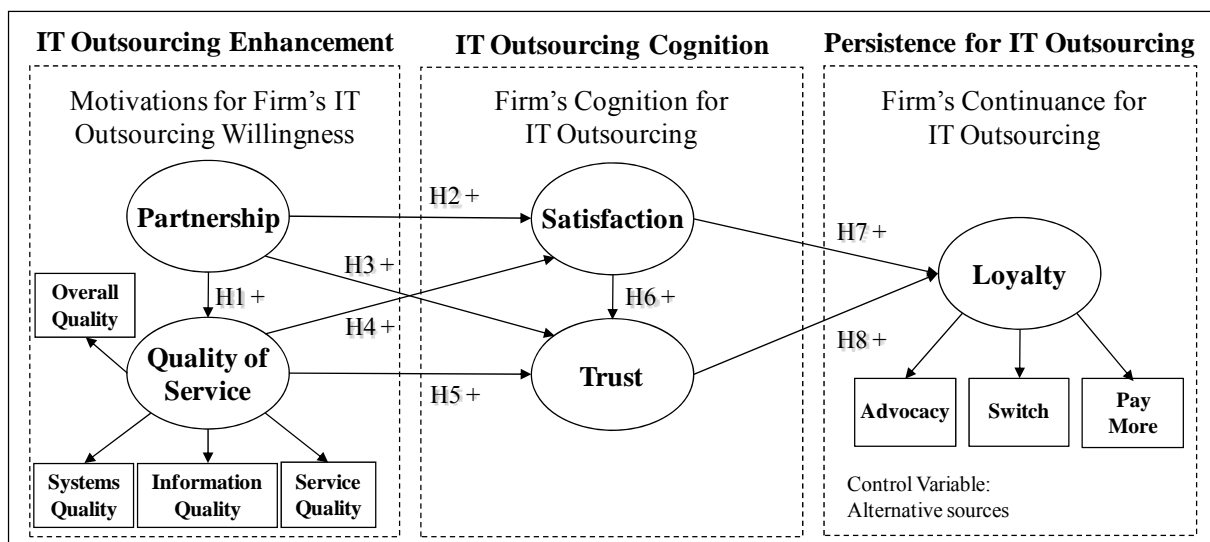

Figure 1.   The Research Model

2.1   Partnership and Quality of Service - IT Outsourcing Enhancement

As prior research encourages others to disclose the conceptual factors for motivating IT outsourcing (Lee et al. 2003), this study draws on the literature and proposed two key factors that influence a firm's IT outsourcing willingness, namely *Partnership* and *Quality of Service*.

(1) Partnership: IS studies have emphasized the importance of partnership in outsourcing (Lasher et al. 1991; Lee & Kim 1999). Recent research noted that healthy relationships can enhance significant benefits for both firms and their service providers (Lee et al. 2003). In the marketing realm, researchers have identified a number of factors that affect working partnerships between firms and their service providers, such as communication, cooperation, and functionality of conflict (Anderson & Narus 1990). However, the literature is still ambiguous about the partnership effects between ASPs and small and medium firms even though previous research indicated that the concept of partnership includes benefits and risk sharing (Goo et al. 2007). Thus, this study considers partnership as a key factor for IT outsourcing enhancement because ASPs should develop strategic partnerships that seek long-term relationships with small and medium firms.

(2) Quality of Service: IT outsourcing is provided by an external service provider and could involve various facets of a firm's IT development, operations, and management (Rustagi et al. 2008). For measuring the overall success of information system, the whole quality of service, which includes *information quality*, *systems quality*, and *service quality*, is a vital variable (DeLone & McLean 1992; 2003). While services are fundamentally different from physical goods, a client firm would always consider an ASP's trustworthiness and facilitation willingness as part of the quality of service (Lee & Kim 1999). Because of the imprecise nature of services and the difficulty in assuring consistent quality, firms often form ongoing relationships (e.g. partnerships) with their service providers (Grover et al. 1996). These ongoing relationships are formed to specific service requirements and desired quality. In a nutshell, and based on these arguments above, the first hypothesis for this study is:

> **Hypothesis 1:** *IT outsourcing partnership has a positive impact to the quality of service.*

2.2   The Influences from IT Outsourcing Enhancement to the Cognition of IT Outsourcing

This study argues that a firm's IT outsourcing cognition, namely *satisfaction* and *trust*, can be motivated by IT outsourcing enhancements - *partnership* and *quality of service*.

(1) Satisfaction in IT outsourcing: Satisfaction has been considered as a pleasurable level of fulfillment by a service (Oliver 1996) or a post-purchase evaluation of product quality given pre-purchase expectations (Anderson & Sullivan 1993). Prior research also has noted that satisfaction is influenced by a pre-experience comparison standard (Woodruff et al. 1983). IS researchers have posited that user satisfaction is one of the most important measures of information systems success (DeLone & McLean 1992, 2003). For a successful IT outsourcing, a firm has to cognize the satisfaction state with their ASP as satisfaction can be influenced by perceived performance of service and interaction (Cronin & Taylor 1992). Therefore, this study argues and looks at the influence of expected quality of service as well as the ongoing partnerships that would directly affect a small or medium firm's satisfaction states for IT outsourcing.

(2) Business Trust: Trust is indicated as a vital attribute in an IT outsourcing relationship (Sabherwal 1999). Empirical evidence has noted that trust increases commitment, enhances longevity, reduces conflict between business relationships, and offers moderation against uncertainty (Anderson & Narus 1990). Trust is regarded as a safety net for financially-constrained small and medium-sized enterprises when they seek for IT outsourcing because, normally, they cannot put in place tangible assurances in the form of mutual investments but can rely on inter-organizational trust (Sharif et al. 2005). However, there is still ambiguity about whether a higher degree of partnership between a small or medium firm and its ASP could help to create a higher trust state. Moreover, this study supposes that if the firm considers its ASP to be honest, capable, and providing high quality service, the firm more likely will trust and rely on its ASP. As partnership and quality of service represent the antecedents that can be a leverage to elicit a firm's IT outsourcing cognition, this study, therefore, hypothesizes their relationships as:

> **Hypothesis 2:** *The partnership between a small or medium firm and its ASP has a positive impact to the firm's satisfaction states for IT outsourcing.*

> **Hypothesis 3:** *The partnership between a small or medium firm and it ASP has a positive impact to the firm's trust states for IT outsourcing.*

> **Hypothesis 4:** *The overall quality of service provided by an ASP has a positive impact to the small or medium firm's satisfaction states for IT outsourcing.*

> **Hypothesis 5:** *The overall quality of service provided by an ASP has a positive impact to the small or medium firm's trust states for IT outsourcing.*

As proposed in Figure 1, a small or medium firm's satisfaction state is expected to be positively related to the firm's trust of its ASP. This relationship is anticipated for several reasons. First, satisfaction is likely to allow a small or medium firm to be pleasure and fulfilled with its ASP service. Prior studies have noted that ASPs may sometimes have difficulty explaining the rationale behind their behaviors (Sharma & Gupta 2002; Ekanayaka et al. 2002). As such, if a firm can be satisfied

wihtout fully understanding the true meaning of the recommendations provided by its ASP, some disadvantages may be occurred. When there is vast satisfaction, a firm may be more likely to fully believe in the ASP's expertise and, in turn, the firm's trust will grow (Lee et al. 2007). Based on these papers, this study proposes the sixth hypothesis as:

> **Hypothesis 6:** *There is a positive cognitive relationship between a small or medium firm's satisfaction and its trust while outsourcing IT to an ASP.*

2.3 The Impacts from Cognition for IT Outsourcing to Continuance of Outsourcing

The literature has pointed out a higher probability of disenchantment leading to discontinuance when processing an IT project (Rogers 1983). Very few studies link the concept of a small or medium firm's satisfaction to its loyalty, especially in the IT outsourcing aspects. Studies in business-to-business buyer behaviors identified that satisfaction with the product category and satisfaction with service have positive impacts to attitudinal brand loyalty (Bennett et al. 2005). From marketing and psychological viewpoints, a consumer's continuance intention can be determined by the influences of satisfaction (Anderson & Narus 1990; Grover et al. 1996). Researchers have found that satisfaction has a strong linkage to repurchase intentions (Anderson & Sullivan 1993), customer retention rate (Rust et al. 1995) and customer retention (Bolton 1998). Three major sub-dimensions have been proposed for the construct of loyalty: *advocacy intention*, *switch intention* and *willingness to pay more* (Fullerton 2005; Fullerton & Taylor 2002). Advocacy intention refers to informal communications between private parties concerning evaluation of goods and services (Anderson 1998). Switch intention refers to the attitudes of staying with a provider (Fullerton & Taylor 2002). Willingness to pay more denotes the outsourcing price sensitivity of a firm (Zeithaml et al. 1996).

Similarly, current studies have drawn attention to the leverage trust has in a firm's behavior with IT outsourcing (Lee et al. 2008; Sharif et al. 2005). Mutual trust has been positively linked to outsourcing success (Lee et al. 2008). The state of trust positively affects small and medium-sized enterprises' long term orientation (Sharif et al. 2005). However, there is still a lack of clarity in how trust affects a small or medium firm's persistence of IT outsourcing with its ASP.

Therefore, this studyassumes that when a small or medium firm is satisfied with the IT outsourcing service received, they likely continue remaining the outsourcing relationship with their current ASP. Furthermore, the more a small or medium firm trusts its ASP, the more likely continuance of the IT outsourcing relationship by the small or medium firm. Therefore, the last two hypotheses for this study are:

> **Hypothesis 7:** *There will be a positive relationship between a small or medium firm's satisfaction of IT outsourcing and its loyalty for the continuance of IT outsourcing with its current ASP.*

> **Hypothesis 8:** *There will be a positive relationship between a small or medium firm's trust for IT outsourcing and its loyalty for the continuance of IT outsourcing with its current ASP.*

3 METHOD

The method section describes a field study, including the survey constructs and items based on the prior studies, participants of this study, and the data collection processes.

3.1 Survey Constructs

Table 1 summarizes the definition of latent constructs, sub-constructs, and the number of measurement items for each construct. Each second-order latent construct is modeled as a reflective construct consisting of its sub-constructs as indicators. Literature has noted that constructs should be modeled as reflective if the following decision rules hold: measure expected to be correlated,

dropping an indicator does not alter the meaning of the construct, taking measurement error into account at the item level, construct processes surplus meaning, and scale score does not adequately represent the construct (Jarvis et al. 2003, p.201). For the two second-order constructs, namely *quality of service* and *loyalty*, and each of their sub-constructs in the research model, these decision rules suggest that the constructs should be modeled as reflective. This study used seven-point Likert scales. Participants can express their agreement with a given statement on a scale that ranged from "strongly disagree" to "strongly agree". "Alternative Sources" was specified as control variables.

Latent construct	Definition		Number of items	Type
Partnership	The degree to which the partners believe that the partnership will be sustained and the ability of the partners to influence policies and decisions that affect the operational performance of the partnership (Grover et al. 1996; Henderson 1990).		4	Reflective
Quality of Service	The concept of quality of service for ASP includes the following major dimensions: (DeLone & McLean 1992, 2003; Kettinger & Lee 1997; Lee et al. 2007)			
	Information quality	The quality of the information that the system produces	3	Reflective
	System quality	Firm's perception on performance of information system itself	3	Reflective
	Service quality	Firm's perceptions on the service provider's performance	4	Reflective
	Overall	The overall ASP quality of service.	2	Reflective
Satisfaction	Satisfaction is considered as a composite of overall customer attitudes towards the service provider (Levesque & McDougall 1996).		3	Reflective
Trust	A firm's perception that the service provider has attributes that are beneficial to the firm (Lee et al. 2007; McKnight et al. 2002).		3	Reflective
Loyalty	A multi-dimension construct that includes customer retention, positive communications and willingness to continue the service. Three major dimensions are: (Fullerton 2005; Fullerton & Taylor 2002; Zeithaml et al. 1996)			
	Advocacy	Saying positive things about the APS and recommending to other firms.	3	Reflective
	Switch	Doing less business with the ASP and take business to the ASP's competitor (reversed).	3	Reflective
	Pay more	Continuing to do business with the ASP and willing to pay a higher price.	3	Reflective

Table 1.   Construct Definitions

3.2   Target Participant and Data Collection

The questionnaire has both paper and online formats. The address of the online questionnaire was made available only to the small or medium firms which were first contacted directly. This study recruited the participants two ways: first, asking the ASP to deliver the questionnaire to their customers; second, directly contacting the small or medium firms which have IT outsourcing experience and continue doing business with their ASP. After the first contact, the researchers sent e-mail reminders, providing respondents the option of receiving another copy of the survey by regular mail or completing the survey online. This study received a total of 158 responses via return mail, online submission, and e-mail. Most of these small or medium firms were coming from IT/IS industries (40.5%), manufacturers (16.5%), and real estates (13.9%).

4   DATA ANALYSIS

Preliminary analyses were conducted to screen the data set and test for response bias. Subsequently, Partial Least Squares (PLS) was employed to explore the relationship between latent constructs. The analysis was done using SmartPLS version 2.0 M3 (Ringle et al. 2005). Further details follow.

4.1 Preliminary Testing

Three stages of data screening were performed to screen the 158 observations: removing incomplete and missing data, identifying and removing the outliers as extreme data points. 147 valid data points remained in the study. The correlations and reliability of the instrument is shown in Table 2. The internal validity of the research model is assessed by the composite reliability (CR) and average variance extracted (AVE) (Fornell & Larcker 1981). A composite reliability can indicate the internal consistency reliability. A value of .70 or higher is considered suitable (Fornell & Larcker 1981). The AVE signifies the amount of variance captured by the construct's measures relative to measurement error and the correlations among the unobserved (latent) factors. The AVE value is recommended to be $\geq$ .50. Furthermore, Fornell and Larcker (1981) expressed that AVE is a conservative test and the score may often be less than .50 when other reliability measures are sufficient, which is observed to be the case. The internal consistency of sub-constructs was also assessed using Cronbach's alpha. A score of .70 or above is an acceptable value of internal consistency (Nunnally 1978). The collective evidence in Table 2 suggests that the constructs demonstrate reasonable measurement properties. The item-construct collection matrix is provided in Appendix A.

(N=147)	Cronbachs Alpha	Composite Reliability (CR)	PA	QoS	IQ	SyQ	SeQ	OaQ	SA	TR	LO	AD	SW	PM
Partnership (PA)	.95	.96	.86*											
Quality of Service(QoS)	.94	.95	.54	.62*										
Information Quality (IQ)	.83	.90	.33	.81	.75*									
Systems Quality (SyQ)	.82	.89	.41	.87	.77	.74*								
Service Quality (SeQ)	.95	.96	.53	.93	.59	.68	.87*							
Overall Quality (OaQ)	.87	.94	.61	.88	.57	.66	.84	.89*						
Satisfaction (SA)	.94	.96	.82	.67	.44	.52	.64	.71	.89*					
Trust (TR)	.92	.95	.76	.53	.31	.40	.54	.54	.65	.86*				
Loyalty (LO)	.84	.87	.71	.61	.43	.53	.56	.61	.76	.61	.45*			
Advocacy (AD)	.93	.96	.65	.54	.33	.43	.52	.60	.66	.58	.88	.88*		
Switch (SW)	.90	.94	.33	.49	.44	.48	.41	.41	.45	.22	.54	.31	.84*	
Pay More (PM)	.89	.93	.52	.31	.21	.29	.28	.30	.52	.47	.73	.47	.07	.82*
* The shaded diagonal values are the square root of the Average Variance Extracted (AVE) for each construct.														

Table 2.   Assessment of Discriminant Validity

4.2 Primary Analysis and Results

The PLS approach is recommended for predictive research models (Ringle et al. 2005). For estimating the significance of path coefficients, a bootstrap analysis was conducted with 250 subsamples. The vector of parameter estimates was used to compute parameter means, standard errors, significance of path coefficients, indicator loadings, and indicator weights. This approach is consistent with recommended practices for estimating significance of path coefficients and indicator loadings (Compeau & Higgins 1995; Rai et al. 2006).

The results provide the majority of support for the research model. The predictive power of a path model can be assessed by R^2 values, which indicate the amount of variance in the construct that is explained by the path model (Barclay et al. 1995). The results indicate that the model can explain 59.5% of the variance in firm's loyalty of continuance for IT outsourcing (see Figure 2). Similarly, 74.6% of the variance in satisfaction and 59.3% of the variance in trust are explained by partnership and quality of service. Furthermore, 29.4% of the variance in quality of service is also explained by partnership. The path coefficients from partnership to quality of service (.54), satisfaction (.66) and trust (.70) are all significant, as well as quality of service to satisfaction (.31) and satisfaction to loyalty (.62). The significance of these path coefficients provides additional evidence in support of the research model. However, three path coefficients related to the trust construct are insignificant. This is an interesting and unexpected finding, which is reported in the subsequent section.
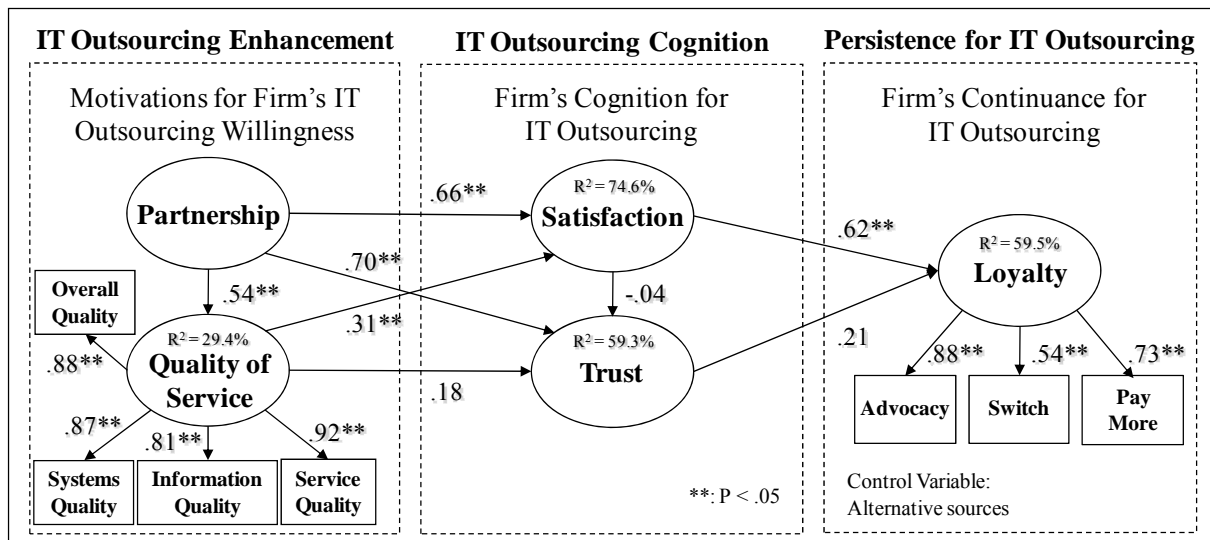
Figure 2.   The Results of Path Analysis

5   DISCUSSION

This study proposed that the key factors of IT outsourcing enhancement - *partnership* and *quality of service* - can positively influence a firm's IT outsourcing cognition. Moreover, a small or medium firm's IT outsourcing cognition - *satisfaction* and *trust* - has a positive relationship to its continuance for IT outsourcing (*loyalty*) with the ASP. Table 3 shows the research hypotheses and their results.

Research Hypotheses		Results
Hypothesis 1	H1. *IT outsourcing partnership has a positive impact to the quality of service.*	Support
Hypothesis 2	H2. *The partnership between a small or medium firm and its ASP has a positive impact to the firm's satisfaction states for IT outsourcing.*	Support
Hypothesis 3	H3. *The partnership between a small or medium firm and it ASP has a positive impact to the firm's trust states for IT outsourcing.*	Support
Hypothesis 4	H4. *The overall quality of service provided by an ASP has a positive impact to the small or medium firm's satisfaction states for IT outsourcing.*	Support
Hypothesis 5	H5. *The overall quality of service provided by an ASP has a positive impact to the small or medium firm's trust states for IT outsourcing.*	No support
Hypothesis 6	H6. *There is a positive cognitive relationship between a small or medium firm's satisfaction and its trust while outsourcing IT to an ASP.*	No support
Hypothesis 7	H7. *There will be a positive relationship between a small or medium firm's satisfaction of IT outsourcing and its loyalty for the continuance of IT outsourcing with its current ASP.*	Support
Hypothesis 8	H8. *There will be a positive relationship between a small or medium firm's trust for IT outsourcing and its loyalty for the continuance of IT outsourcing with its current ASP.*	No support

Table 3.   Research Hypotheses and the Results of this Study

According to the R^2s in the path analysis (see Figure 2), this study shows that IT outsourcing enhancement, namely partnership and quality of service, represents the antecedent which can motivate a firm's IT outsourcing cognition - satisfaction and trust. Moreover, based on a firm's positive IT outsourcing cognition, a firm would express a certain degree of loyalty and make decisions for continually outsourcing their IT with the current ASP.

For Hypothesis 1, this study obtains the support that partnership is positively linked to quality of service. Prior studies noted that firms would like to form partnerships with their service providers for eliminating the imprecise nature of services (Grover et al. 1996). Those ongoing relationships

normally are formed to specific service requirements and desired quality. The result of this study confirms the argument.

For Hypotheses 2, 3, 4, 5, and 6, this study only obtains partial support. The evidence indicates that a higher degree of partnership between a small or medium firm and its ASP could help to heighten both satisfaction and trust states. This study also obtains the significant result that if an ASP can provide high quality service, the firm would more likely feel satisfied with the ASP. These findings are consistent with prior studies (DeLone & McLean 1992, 2003; Cronin & Taylor 1992). When comparing the results of Hypotheses 1, 2, and 3 to the literature, this study found that "Partnership" does play a very important factor for a small or medium firm to consider outsourcing with ASP.

Surprisingly, "trust" is not a significant factor in this research model since prior studies have indicated that satisfaction state can positively affect trust state (Lee et al. 2007) as well as trust state can impact the long term orientation (Sharif et al. 2005) and also can positively influence individual and organization benefits (Lee et al. 2007). This unexpected result is interesting and indicates that the relationships between trust, quality of service, satisfaction, and loyalty may be more complex than anticipated. There are several possible explanations for the results. First, the survey instrument is too brief (only 3 items) to measure a firm's trust state with its ASP. Researchers have noted that "Mutual Trust" is affected by "Initial Trust" and "Initial Distrust" (Lee et al. 2008). Second, there might be the reverse relationship between "Trust" and "Satisfaction". Third, the sample size might not be saturated enough. The results overall are interesting because "partnership" does positively affect "trust" (H3) and the composite reliability (CR) of the "trust" construct is also high (.95, see Table 2) as well as the average variance extracted (AVE) - .86. The anomaly of the "trust" variable in this research context was unexpected and is worthy for future research.

For Hypotheses 7 and 8, this study found that when a small or medium firm recognizes that the IT outsourcing service received is good and the firm is satisfied, they would like to continue the outsourcing relationship with their current ASP. However, there is no significant evidence to support that the more a small or medium firm trusts its ASP, the higher continuance potential. The major reason might be caused by the potential measurement problem of "trust", similar with the reasons provided for Hypotheses 5 and 6 above.

6 CONCLUSION

This study adds evidence to the body of knowledge concerning how to retain a firm's IT outsourcing relationship. The study also found a number of factors that small or medium firms see as central to the mission of IT outsourcing with an ASP. Additionally, this study takes an in-depth look at the concepts of IT outsourcing cognition and shows the conceptual linkage with IT outsourcing continuance. Four aspects are addressed to conclude this study, including implications for research, implications for practice, limitations, and directions for future study.

From the aspect of implications to research, the prior studies which treated partnership and quality of service as key factors of IT outsourcing enhancement are sparse. Through this study, the effects and knowledge of *partnership* and *quality of service* between ASP and the small and medium firms have been validated to some degree. This study found significant support for these two factors based on the relevant literature of working partnerships, outsourcing relationships, and service quality (Anderson & Narus 1990; DeLone & McLean 1992, 2003; Grover et al. 1996; Lee et al. 2007). This study also extended prior concepts and considered *satisfaction* and *trust* as IT outsourcing cognition constructs (Sharif et al. 2005; Weitz & Jap 1995), although the trust construct is not significantly supported by this study. Moreover, the study establishes a link between a firm's cognition of IT outsourcing to the persistence for IT outsourcing. As some of marketing and psychology literature has theorized customers' continuance intention as a consequence of their satisfaction and trust with the service (Fullerton 2003; Klein et al. 1978), this study provides evidence to support that satisfaction can enhance loyalty toward an IT outsourcing ASP.

From the aspect of implications to practice, as firms increase their IT outsourcing investment (Global Industry Analysts 2010), it is necessary to establish an efficient model for appraising their IT

outsourcing outcomes and also their ASP. This study helps firms to reconsider those key IT outsourcing factors when recruiting an ASP. On the other hand, the model also provides insights for the current ASP. Through the novel research model provided by this study, an ASP recognizes what are the key factors that small to medium firms consider and how to converge to a firm's IT outsourcing goals.

There are some limitations associated with this study. First, the research model is only partially supported by the research results. The nature of the instrument design limits the ability of the research investigation, especially the potential measurement problem for "trust". Second the sample size is not saturated enough. The small sample size may lead to self-selection bias and also cause the instability of the parameter estimates (Meyers et al. 2006). Finally, the results of this study may include some bias since the sample was restricted to one geographic area.

Finally, from the aspect of directions for further research, this study suggests that there may be further factors in IT outsourcing enhancement, IT outsourcing cognition, and persistence for IT outsourcing. This study only focused on analyzing the perspectives collected from small and medium firms. Future studies are encouraged to compare and contrast the viewpoints of ASP with firms' perspectives.

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Appendix A. Item-Construct Correlation

Items	Constructs											
	PA	QoS	IQ	SyQ	SeQ	OaQ	SA	TR	LO	AD	SW	PM
L1	0.608	0.554	0.354	0.433	0.529	0.612	0.612	0.565	0.806	0.913	0.308	0.419
L2	0.608	0.482	0.290	0.379	0.471	0.527	0.612	0.535	0.837	0.952	0.278	0.463
L3	0.608	0.492	0.292	0.390	0.475	0.548	0.628	0.521	0.827	0.945	0.300	0.431
L4	0.361	0.482	0.386	0.459	0.433	0.409	0.441	0.239	0.541	0.315	0.883	0.157
L5	0.304	0.458	0.442	0.448	0.362	0.390	0.450	0.200	0.503	0.295	0.941	0.051
L6	0.224	0.394	0.363	0.397	0.311	0.342	0.340	0.153	0.419	0.244	0.917	-0.053
L7	0.498	0.307	0.246	0.296	0.261	0.282	0.494	0.406	0.712	0.454	0.167	0.905
L8	0.386	0.200	0.100	0.153	0.212	0.210	0.401	0.395	0.559	0.364	-0.099	0.870
L9	0.520	0.319	0.220	0.310	0.285	0.303	0.515	0.478	0.697	0.445	0.079	0.946
PA1	0.903	0.487	0.318	0.374	0.466	0.535	0.718	0.638	0.583	0.526	0.279	0.433
PA2	0.932	0.538	0.313	0.412	0.549	0.569	0.789	0.757	0.662	0.618	0.297	0.482
PA3	0.925	0.457	0.286	0.328	0.438	0.540	0.741	0.695	0.658	0.602	0.295	0.495
PA4	0.946	0.522	0.313	0.410	0.494	0.601	0.800	0.709	0.717	0.655	0.352	0.518
Q1	0.237	0.664	0.856	0.676	0.449	0.459	0.330	0.228	0.352	0.291	0.365	0.150
Q2	0.317	0.743	0.886	0.692	0.576	0.519	0.398	0.326	0.447	0.354	0.421	0.240
Q3	0.302	0.679	0.848	0.622	0.493	0.504	0.416	0.256	0.304	0.210	0.342	0.161
Q4	0.307	0.761	0.715	0.879	0.574	0.574	0.421	0.307	0.446	0.339	0.453	0.232
Q5	0.378	0.734	0.701	0.863	0.545	0.533	0.492	0.350	0.479	0.367	0.469	0.262
Q6	0.377	0.744	0.562	0.833	0.641	0.579	0.416	0.368	0.435	0.395	0.310	0.244
Q7	0.526	0.864	0.581	0.641	0.923	0.770	0.628	0.537	0.560	0.524	0.411	0.286
Q8	0.503	0.855	0.544	0.640	0.933	0.750	0.611	0.534	0.533	0.499	0.380	0.279
Q9	0.458	0.840	0.524	0.592	0.907	0.815	0.549	0.457	0.478	0.447	0.366	0.232
Q10	0.476	0.890	0.545	0.672	0.963	0.819	0.595	0.499	0.508	0.484	0.369	0.250
Q11	0.533	0.837	0.534	0.616	0.815	0.942	0.645	0.522	0.553	0.547	0.407	0.242
Q12	0.608	0.824	0.544	0.618	0.777	0.940	0.700	0.497	0.596	0.581	0.382	0.315
SS1	0.745	0.632	0.426	0.500	0.590	0.691	0.948	0.586	0.727	0.640	0.469	0.471
SS2	0.740	0.590	0.410	0.460	0.558	0.628	0.943	0.542	0.688	0.576	0.429	0.494
SS3	0.839	0.658	0.416	0.497	0.655	0.700	0.940	0.697	0.722	0.644	0.393	0.511
T1	0.642	0.429	0.237	0.357	0.445	0.419	0.540	0.893	0.525	0.475	0.200	0.427
T2	0.729	0.492	0.322	0.364	0.492	0.514	0.620	0.954	0.555	0.531	0.206	0.418
T3	0.731	0.539	0.312	0.384	0.569	0.564	0.638	0.935	0.609	0.592	0.206	0.464