

The Effects of Trust on the Intention of Adopting Business Process Outsourcing: An Empirical Study

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Summary

With the increase of the global competition and the reduced life cycle of business process, most companies are facing a crucial and strategic decision making whether to adopt BPO and how to diffuse it in order to concentrate on their core capabilities by outsourcing the whole or part of their business processes to external service providers. In spite of its strategic importance, there have been few empirical studies on the intention of adopting BPO. This study is to examine the effects of perceived benefit and perceived risk, mediated by trust, on the intention of adopting BPO. A thorough examination of mediating effect of trust on the intention of adopting BPO is highlighted in this study. A survey was conducted with the business process outsourcing companies to empirically test the variables described herein. The results show that adopting BPO is affected by trust which in turn is influenced by perceived risk and perceived benefit. Implications of these findings are discussed for researchers and practitioners.

Key words:

Business Process Outsourcing, Trust, Perceived Benefit, Perceived Risk, Structural Equation Modeling.

1. Introduction

Many firms recognize outsourcing as a good method to achieve firm's high value through increasing its interior core capability and at the same time saving costs. With the increase of global competition and the reduction of the life cycle of business process, most leading companies begin to adopt business process outsourcing (BPO), by outsourcing the whole or part of their business process to external service providers and focusing on their essential business, in order to enhance their core competency. According to IDC, in the year 2005, the market size of BPO was \$ 384 billion and will increase to \$ 618 billion in the year 2010 with 10% CAGR. BPO includes logistics, procurement, human resources, finance/accounting, customer relationship management and other administrative or customer-facing business functions. Although BPO continues to develop, there are only few researches conducted theoretically that focus only on the

small area (Gilley and Rasheed, 2000). Quinn and Hilmer (1994) suggest that outsourcing is an efficient tool for using the technology and the capital resources of the firm in order to cope with the fast changing market environment that involves strict competition. Belcourt's research (2006) suggests that business processing leads to costs savings and enhances the quality of services. However, Barthelemy (2003) states the disadvantages of outsourcing such as opportunistic behavior of service provider and weaken the internal control abilities. In addition, Bettis et al. (1992) emphasize that the outsourcing service provider can discharge the organizational knowledge into other firm, and through this, it decreases the innovation and weakens the competitive power of the firm in the long run.

In BPO includes benefits and risks, the decision to adopt BPO is very crucial in a strategic viewpoint. In spite of this fact, we can find few empirical researches about BPO adoption and diffusion. Therefore, we conduct this study to determine which factors are associated with the intention of adopting BPO. First and foremost, we consider trust as a primary factor for explaining and predicting the intention of adopting BPO. We then identify the benefit factors and the risk factors of adopting BPO, in which, these factors are mediated by trust. Finally, we hypothesize the causal relationships between perceived benefit, perceived risk, trust and the intention of adopting BPO, and empirically test the hypotheses using survey data.

2. Literature Reviews and Research Hypotheses

2.1 Business Process Outsourcing

Gartner Dataquest defines BPO as the delegation of one or more IT-intensive business processes to an external provider that, in turn, owns, administrates and manages the selected processes based on defined and measurable

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performance metrics. The BPO market is the single fastest growing area of the IT services sector. Business Insights (2006) estimated that BPO will account for 22 percent of all IT services revenues by 2008. Despite the growth of BPO, there are still very few academic publications on the topic.

Based on theoretical research about adopting BPO, Hemmington and King (2000) find out that brand value improvement, organizational culture and services are the important variables for outsourcing decision. Lam and Han (2005) argue that the influencing factors of IT/IS outsourcing acceptance are understanding the capability and considering some factors when executing BPO. Quinn and Hilmer (1994) assert that through outsourcing, firms distribute or transmit the different type of risks and error of management to the service providers. Also, they state that the expected benefits of the customers are saving the time for project execution, distribution and improvement of quality. Lau and Zhang explored the key factors that motivate organizations to outsource and the obstacles they are facing, and then presented a framework for making outsourcing decisions.

2.2 Perceived Risk

The initial conception of perceived risk was put forward by Bauer in 1960. Bauer thinks that any purchasing behavior of consumer is uncertain. On the one hand, a consumer cannot assure whether or not certain purchasing is right before buying a product. For instance, the buying result perhaps is unpleasant. So the consumer's purchasing behavior contains uncertainty. This uncertainty is the initial conception of perceived risk. In uncertain conditions, customers recognize the risk when customers' behavior possibly brings about negative results (Bauer, 1960; Kogan and Wallach, 1964; Cox, 1967).

Outsourcing has acquired the reputation of being a risky business (Aubert, et al., 2002). Some organizations have even decided to re-integrate the outsource services into the internal organization because their expectations were not met (Lacity and Willcocks, 2001). Moreover, recent literature on application service providing (ASP) and BPO has already recognized the importance of risks (e.g. Clark, 1995; Currie, et al., 2003; Gewald and Franke, 2005). When perceived risk is high, consumers become more wary and risk averse (Campbell and Goodstein, 2001).

Recently the management department has started to study the relationship between trust and risk (Ring and Van de Ven, 1992). However, the relation of trust and risk is reciprocal and complex. In this study, we agree that perceived risk is a prerequisite for trust existence. The literature review of trust states that, risk is precondition for trust occurrence (Coleman, 1990; Rotter, 1967; Williamson, 1993). Perceived risk is an important factor

for building trust. In BPO environment, when a customer recognizes the lower perceived risk, the higher the tendency to build trust.

2.3 Perceived Benefit

The perceived benefit of search is derived from the economic paradigm of price search. The benefits of search is defined as outcomes that increase one's utility or provide value by facilitating achievement of higher level of goals or value (Gutman, 1982; Olshavsky and Wymer, 1995). The benefits of BPO result from productivity enhancement, quality improvement, cost reduction, gain in market share, new market development (Calantone et al., 1988; Lefebvre et al., 1995; Nabseth and Ray, 1974; Naik and Chakravarty, 1992; Rogers, 1983), improvement in task performance and the associated intrinsic and extrinsic rewards (Davis et al., 1989). When a consumer recognizes the perceived benefit, they begin to build trust. In addition, Wilkie and Pessemier (1973) state that customer's decision to purchase is higher when perceived benefit is higher.

2.4 Trust

Many researches about trust, which exist with uncertainty and dependency, are studied. Trust is important prior to adoption and during the management of the outsourcing relationship. It has been suggested that trust is crucial for all business relationships as it enables more open communication, increased performance, higher quality deliverables and greater satisfaction in the decision-making process (Kanawattanachai and Yoo, 2002; Morgan and Hunt, 1994; Rousseau et al., 1998). Sabherwal (1999) suggests the role of trust in outsourced development projects is critical and can increase the likelihood of project success. Trust can reduce complexity especially when important decisions and new technologies are being considered (Gefen, 2002; Pavlou and gefen, 2004).

2.5 Research Hypotheses

Based on the theoretical background discussed above, the research hypotheses are formulated as follows:

- Hypothesis 1: Perceived risk of BPO will negatively affect trust towards BPO.
- Hypothesis 2: Perceived benefit of BPO is positively affect trust towards BPO.
- Hypothesis 3: Trust in BPO will positively affect the intention of adopting BPO.
- Hypothesis 4: Perceived risk of BPO will negatively affect the intention of adopting BPO.

- Hypothesis 5: Perceived benefit of BPO will positively affect the intention of adopting BPO.

Taken together, these hypotheses imply that the effects of perceived risk and perceived benefit on the intention of adopting BPO are mediated by trust.

3. Empirical Analysis and Results

3.1 Samples and Data Collection

The survey instrument was developed on the basis of a literature review of the existing measures. Content validity of the instrument is assessed by conducting several interviews with experts in the field. The questionnaires were pretested, modified accordingly, and then distributed in August 2007 to 603 companies from the 2006 Korea Outsourcing Companies Yearbook. The survey was taken one month to finish through mainly traditional mail and followed up with email, telephone calls, and personal contact and visits. A total of 122 responses were received, of which 8 were discarded due to poor response. The remaining 114 responses were analyzed in the study, for a response rate of 18.9 percent.

The responses were classified into two groups to ascertain whether there was any response bias. To assess the possibility of non-response bias, we compared early respondents (1st half) with late respondents (2nd half) to all model variables using T-tests. No significant differences were detected at the 5% significance level, assuming that non-response bias was not appeared to be a problem (Armstrong and Overton, 1977).

The demographic data of the respondents is presented in Table 1.

Table 1. Profile of responding companies

Industry	N	%	Position	N	%
Info. & Comm.	27	23.7	Staff	36	31.6
Manufacturing	14	12.3	Assistant- Manager	23	20.2
Banking	3	2.6	Manager	24	21.1
Insurance	4	3.5	Deputy- Manager	12	10.5
Credit card	3	2.6	General- Manager	14	12.3
Stock	2	1.8	Director	5	4.4
Logistics	5	4.4			
Public sector	24	21.1			
Other	32	8.1			
No. of Employees	N	%	Sales Volume	N	%
Below 50	33	28.9	Below \$1 million	19	16.7
50-100	11	9.6	\$1-5 million	18	15.8
101-200	15	13.2	\$5-10 million	12	10.5
201-500	14	12.3	\$10-50 million	21	18.4
Above 500	41	36.0	Above \$50 million	44	8.6

3.2 Measurement Model Assessment

In order to assess the adequacy of the measurement model with four constructs, a confirmatory factor analysis (CFA) using LISREL 8.54 was conducted. The goodness-of-fit statistics produced suggest that our four-factor measurement model fits the observed data well. Specifically, the chi-square statistic was non-significant ($\chi^2=88.76$, $df=84$, $p\text{-value}=0.340$) and absolute fit indices ($GFI=0.91$, $AGFI=0.86$, $RMSEA=0.02$) and incremental fit indices ($CFI=0.99$, $IFI=0.99$, $NNFI=0.98$) met the recommended threshold levels (Hair et al., 2006; Hu and Bentler, 1999).

Table 2: Reliability and validity summary

	α	CR	AVE	η_1	η_2	ξ_1	ξ_2
Trust(η_1)	.90	.90	.87	(.94)			
BPO Adoption(η_2)	.90	.91	.89	.66	(.94)		
Perceived Risk(ξ_1)	.71	.72	.48	-.48	-.47	(.69)	
Perceived Benefit(ξ_2)	.83	.83	.73	.77	.55	-.41	(.85)

Note: All correlations in the table are significant at the .01 level (2-tailed). CR = Composite Reliability; AVE = Average Variance Extracted; α = Cronbach's Alpha

Table 3: Measurement model results

Construct and item	Mean	SD	Item-construct loading	
			Std.	t-value
Trust				
Party trust	4.89	1.14	0.81	11.62
Technology trust	5.03	1.14	0.92	-
Overall trust	5.08	1.11	0.87	13.32
BPO Adoption				
Attitude	5.37	1.08	0.92	15.91
Intention to use actual behavior	5.28	1.08	0.94	-
	5.06	1.17	0.76	10.79
Perceived Risk				
Financial risk	3.71	1.18	0.66	-
Strategic risk	3.24	1.52	0.65	5.08
Performance risk	2.79	1.16	0.50	4.18
Psychosocial risk	2.86	1.37	0.50	3.90
Security risk	3.19	1.29	0.61	4.90
Perceived Benefit				
Cost advantages	4.61	1.29	0.69	7.04
Focus on core competencies	4.60	1.25	0.77	-
Access to specialized resources	4.56	1.28	0.74	7.63
Quality improvements	4.42	1.27	0.76	7.87

Note: SD = Standard deviation; Std. = Standardized factor loading

For the reliability assessment of the constructs in our measurement model, both Cronbach's alpha and

composite reliability were calculated for each construct. As shown in Table 2, the Cronbach's alpha and composite reliability values for all constructs are above the 0.70 cutoff, indicating that the scale items measuring a construct are reliable (Nunnally, 1978; Segars, 1997). Convergent validity was evaluated through an examination of both the individual item loadings and the average variance extracted for the constructs. All individual items loaded strongly (above 0.5) and significantly (t -value > 2.0) on their hypothesized constructs as shown in Table 3. In addition, as shown in Table 2, the values of average variance extracted all met or exceeded the 0.5 threshold, suggesting that the amount of variance explained by the constructs was larger than the variance explained by measurement error (Fornell and Larcker, 1981). To evaluate discriminant validity, the square root of the average variance extracted and the inter-construct correlations were compared. As shown in Table 2, all the square roots of the average variance extracted (on-diagonals) were larger than the inter-construct correlations (off-diagonals), which indicated that each construct sufficiently differed from other constructs (Chin, 1998). In summary, all the constructs demonstrated adequate reliability and validity, indicating that the measurement model was acceptable.

3.3 Structural Model Assessment

The empirical results of the hypothesized structural model are shown in Figure 1.

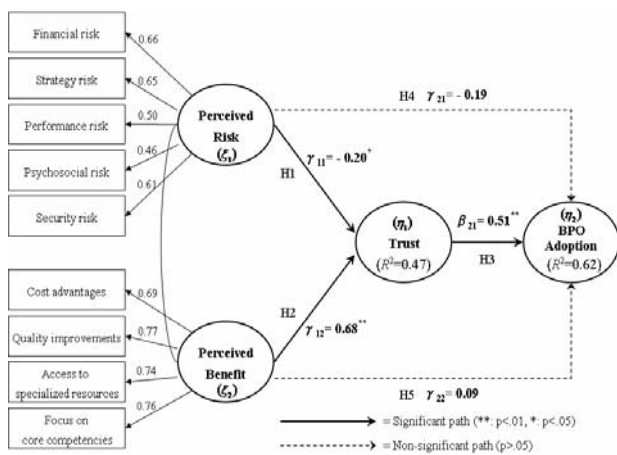


Fig. 1 Path diagram of structural model

All hypotheses in the research model were tested collectively using structural equation modeling (SEM). The overall fit indices for the structural model appeared satisfactory: $\chi^2=88.76$, $df=84$, p -value=0.340; GFI=0.91; AGFI=0.86; CFI=0.99; IFI=0.99; NNFI=0.99; RMSEA=0.02. Furthermore, as shown in Figure 1, our

model exhibited satisfactory explanatory power, accounting for 47% of the variances in BPO adoption and 62% of the variances in trust.

In our structural model, trust was hypothesized to be influenced by two latent factors, perceived risk and perceived benefit. Perceived risk was negatively and significantly associated with trust (H1 supported). Perceived benefit was positively and significantly related to trust (H2 supported). Also as expected, BPO adoption was strongly and positively associated with the level of client's trust for BPO (H3 supported). However, contrary to expectations, perceived risk and perceived benefit were not found to be statistically and significantly associated with BPO adoption (H4 and H5 not supported). To sum up, BPO adoption was affected by trust which, in turn, was influenced by perceived risk and perceived benefit.

4. Conclusions

The results of this study indicate that trust is key significant driver affecting the intention of adopting BPO. This is further supported by our results showing that the impact of perceived risk and perceived benefit on the intention of adopting BPO is mediated by trust. According to the results of the hypothesis tests, perceived risk is negatively related to trust and perceived benefit is positively related to trust. Also, perceived benefit appears to be more influential on trust than perceived risk.

The positive and significant effect of trust on the intention of adopting BPO revealed in this study is consistent with other studies that found trust to be an important determinant of technology adoption and usage (Lee et al., 1999; Sabherwal, 1999). Accordingly, the current study makes a valuable contribution by confirming the importance of trust in the context of BPO.

Another interesting implication from this study is the directionality of the causal relationship between trust and perceived risk. Although it is not clear yet whether risk is an antecedent of trust or is a consequence of trust (Gefen et al., 2003; Cheung and Lee, 2006), based on our empirical findings we suggest that perceived risk may be a causal predictor of trust.

As a practical matter, BPO service providers must give prominence to perceived benefit. By informing the customers about the perceived benefit that they may acquire as well as the perceived risk that may possibly exist, BPO service providers can help their customers make the right decision on whether or not to adopt BPO. Even though adopting BPO includes perceived risk, customers think perceived benefit has a greater value.

Although this study was conducted with call center outsourcing companies, future researches need to examine the model constructs across a variety of BPO services, including finance/accounting and logistics, procurement,

and human resources. We also plan to apply theories and models such as TAM and TPB to our research model, and to extend it by incorporating other factors influencing perceived benefit and perceived risk.

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