

## RESEARCH NOTE

# Bringing IT Back: An Analysis of the Decision to Backsource or Switch Vendors

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## ABSTRACT

Whereas the decision to outsource information systems (IS) has been an important focus in IS research and practice, the decision to switch vendors or to backsource has received little attention. Evidence suggests that in practice, however, the decision to backsource or to switch vendors is becoming increasingly common as firms vie for ways to continue to cut information technology (IT) costs and improve IT service levels. This research specifically examines the factors associated with the decision to backsource or to switch vendors. Based on a sample of 160 IT managers involved with application development, we compare and contrast the perceptions of those who switched vendors, backsourced, or continued in an outsourcing relationship for application development. Our findings suggest that product quality, service quality, relationship quality, and switching costs are related to the decision to backsource application outsourcing. However, service and product quality did not influence the decision to switch vendors. Rather, firms that made the decision to switch vendors reported high levels of service and product quality but low levels of relationship quality and switching costs.

***Subject Areas: Backsourcing, Outsourcing, Product Quality, Relationship Quality, Service Quality, and Switching Costs.***

## INTRODUCTION

Although the popularity of information technology (IT) outsourcing has grown over the last two decades and was expected to be a larger than \$206 billion industry in the United States alone in 2005 (Scardino, Brown, Caldwell, Cournoyer, Dreyfus, Marriot, Maurer, & Young, 2004), many outsourcing arrangements do not last. One study found that approximately a third of companies studied had canceled outsourcing contracts (Lacity & Willcocks, 2001). Recently, some large outsourcing failures have received wide attention. For example, JP Morgan Chase & Co. ended its outsourcing relationship with IBM Corporation after only two years of what was projected to be a seven-year, \$5-billion arrangement. JP Morgan

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Chase & Co. returned all IT functions back in house (Cowley, 2004). This practice of bringing IT back in house following an outsourcing arrangement is referred to as back sourcing. Lacity and Willcocks (2000) indicate that, of discontinued contracts, 34% are back sourced. The technology research and consulting firm, Gartner (Brown, 2004), reports that 56% of small-business and 42% of mid-sized-business contracts are back sourced once the contract has been discontinued.

A major reason for bringing IT back in house is that top executives in highly competitive IT-intensive industries are discovering that IT infrastructure is, in fact, a competitive asset. Such was the case at JP Morgan Chase & Co. (Forelle, 2004). Other reasons for back sourcing include poor service and price (Chalos & Sung, 1998; Ambrose, 2002) and a poor relationship between the vendor and the outsourcer (Dibbern, Goles, Hirschheim, & Jayatilaka, 2004). In spite of the many reasons a firm might choose to back source, transferring IT back in house is not without cost and risk. Due to the return of employees, assets, and knowledge into the firm, switching costs can be significant. Gartner estimates that the cost of back-sourcing is usually between 2% and 15% of the annual cost of a contract. Rather than back sourcing, some firms might choose to switch vendors. However, the task of switching vendors may also prove risky and expensive.

Outsourcing contracts run a gamut from total outsourcing, meaning outsourcing of greater than 80% of the IT budget, to total insourcing, meaning outsourcing of less than 20% of the IT budget, with the most common approach being selective sourcing, meaning that an organization outsources anywhere between 20% and 80% of its IT budget (Lacity, Willcocks, & Feeny, 1996). Selective outsourcing of IT has been shown to result in the highest and most successful outsourcing arrangements (Lacity et al., 1996). Specifically, an organization might choose to selectively outsource and subsequently to back source desktop operations, network operations, data center operations, and/or application development. We focus on application development. Application development as an area of selective sourcing has gained increasing attention as the phenomenon of offshore development has increased (Kaiser & Hawk, 2004; Rottman & Lacity, 2004). The objective of this research is to empirically examine the factors associated with switching vendors, back sourcing, or continuing in an outsourcing relationship for application development.

## **THEORETICAL FOUNDATIONS**

Transaction cost theory (TCT) and social exchange theory (SET) in combination provide a theoretical lens through which to view the interaction of switching costs, relationship quality, service quality, and product quality as they relate to the decision an outsourcing client makes to either continue, back source, or switch vendors. TCT has been the theoretical basis for a number of outsourcing studies in IT (Aubert, Rivard, & Patry, 2004; Lacity & Hirschheim, 1993) as well as in other areas such as manufacturing (Balakrishnan, 1994; David & Han, 2004) and supply chain management (Grover & Malhotra, 2003). This is largely because TCT focuses on the economic motivation for entering and exiting interorganizational relationships. In addition, TCT is applicable to a broad spectrum of research questions, because

any problem that can be thought of in terms of a contract can be investigated with a transaction cost approach (Williamson, 1985).

While TCT is a prominent and useful theory to explain why firms initiate an IT outsourcing arrangement (e.g., a presumably lower transaction cost to achieve a given product/service quality level than if they retain control of the IT), TCT alone cannot fully explain the subsequent decisions to continue or discontinue an outsourcing relationship. TCT focuses primarily on the economic aspects of relationships, but outsourcing decisions often involve fairly long-term relationships during which time the perception of the relationship takes on increasing weight in influencing satisfaction with the outsourcing arrangement. It is here that SET can help offer supplemental explanations for why a client firm might backsource or switch vendors, all else being equal. SET assumes that relationships are reviewed and weighted in terms of costs and rewards, but not exclusively financial aspects (Thibaut & Kelley, 1959). The basis of SET is that parties involved in a relationship recognize the value provided by each other and continue in the relationship because the value created by the relationship is more attractive than alternatives (Blau, 1964). Over time, firms in a good relationship are likely to consider not only the economic factors but also the social factors as important in the decision to continue in the same relationship or not. Moreover, the quality of the relationship a firm has with a vendor might be of considerable importance in cases where the firm is considering switching vendors or back sourcing.

In summary, from TCT and SET, we posit that service quality and product quality, as the objects of an outsourcing agreement, are important predictors of a sustained outsourcing relationship. Moreover, relationship quality and the switching costs will also influence the decision to continue with an outsourcing agreement.

## Hypotheses

Service quality is the conformance to customer requirements in the delivery of a service (Parasuraman, Zeithaml, & Berry, 1988). It is a perceived judgment resulting from a comparison of client expectations with the level of service customers perceive to have received from the outsourcing vendor. Service quality results in significant benefits, such as profit-level increases, cost savings, and increased market share, to both entities involved in a transaction (Zeithaml, Berry, & Parasuraman, 1988) such as outsourcing. Outsourcing vendors assign considerable significance to service quality, as evidenced by some firms' use of service quality to strategically position themselves in the market (Parasuraman, Zeithaml, & Berry, 1988; Brown & Swartz, 1989). Although the analysis of the correlation between service quality and post hoc decisions is limited, service quality has been shown to affect purchase intentions (Cronin & Taylor, 1992). The results of research conducted by Zeithaml, Berry, and Parasuraman (1996) indicate a strong influence of service quality on customers' behavioral intentions, which was measured as the willingness of a client to remain with the current vendor. In the context of outsourcing, service quality has been shown to increase the success of the outsourcing relationship (McFarlan & Nolan, 1995; Grover, Cheon, & Teng, 1996).

Service quality is of particular importance from a transaction cost perspective, because as the costs associated with monitoring the service level increase for the client, the client is more likely to perceive the overall transaction cost as too high, leading to a consideration of whether or not to continue the relationship. Moreover, if the service provider acts opportunistically, as predicted by TCT, service quality might decrease. For example, if the service provider diverts key people to other projects or fails to adequately update related technology, then the service quality might decrease for the client. As service quality decreases, the costs associated with monitoring the service increase. Thus, the overall transaction costs increase and, consequently, one would expect the client to consider alternatives. We therefore propose:

*H1a:* Service quality will be negatively associated with back sourcing.

*H1b:* Service quality will be negatively associated with vendor switching.

Similarly, product quality is expected to influence the decision to backsource or switch vendors. Opportunism on the part of the service provider can cause product quality to decrease. If the service provider transfers experienced employees to other projects (or devotes fewer employees), the service provider might fail to make the types of continuous improvements expected by clients and, as a result, the product quality might decrease relative to alternatives.

The product quality research has shown that performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality contribute to the perception of product quality in general (Garvin, 1984). Specifically related to software product quality, research has traditionally emphasized reliability as a primary indicator of quality (Shen, Yu, Thebaut, & Paulsen, 1985; Basili & Perricone, 1984). Once software reliability has been achieved, however, the focus then switches to other software product dimensions. Kekre, Krishnan, and Srinivasan (1995) have used capability, usability, performance, installability, maintainability, and documentation, in addition to reliability, as measures of software product quality. Each of these factors was found to impact customer satisfaction with the software product. Hence, we would expect product quality to be negatively associated with the decision to end an outsourcing arrangement. We therefore propose:

*H2a:* Product quality will be negatively associated with back sourcing.

*H2b:* Product quality will be negatively associated with vendor switching.

A third measure of quality, relationship quality, is also expected to influence the decision to backsource or switch vendors. Trust, commitment, communication quality, cultural similarity, and balanced interdependence all positively impact the quality of a relationship (Dwyer, Schurr, & Oh, 1987; Anderson & Narus, 1990; Mohr & Spekman, 1994; Morgan & Hunt, 1994; Kern, 1997). Moreover, relationship quality and relationship success have been shown to be strongly connected (Anderson et al., 1990; Mohr et al., 1994). Specifically related to IT outsourcing, success has been shown to depend not only on a high level of service quality, but also on other factors such as the relationship between the client and the vendor (Grover, Cheon, & Teng, 1996; Kern, 1997; Lee & Kim, 1999; Lacity & Willcocks, 2000; Koh, Ang, & Straub, 2004). From the perspective of SET, so long as the benefits

of a relationship outweigh the costs (financial and nonfinancial), there is no compelling motivation to terminate the relationship. If, however, a client perceives that the benefits of the vendor come at too high a cost, then we would expect the client to consider switching vendors or back sourcing. Conversely, if the quality of the relationship is high, SET proposes the firms are less likely to terminate the relationship; rather, they will continue with the relationship due to the benefits derived from it. We therefore propose:

*H3a:* Relationship quality will be negatively associated with back sourcing.

*H3b:* Relationship quality will be negatively associated with vendor switching.

Finally, switching costs (those associated with either moving service to another vendor or bringing the outsourcing activities back in house) may play an important role in terminating an outsourcing relationship. Research shows that customers may be willing to stay in relationships in which they are dissatisfied because of the presence of high switching costs (Morgan & Hunt, 1994; Willcocks & Lacity, 1995). Dependency upon a service provider, caused by the lack of experience within a company or many other factors, can lead to relatively high switching costs. Company decision makers can then believe they are locked into an outsourcing relationship and feel unable to terminate the relationship without incurring large switching costs. As further support of the significance of switching costs, it has been shown that, in environments where switching costs were not present, customers reacted by switching vendors (Heide & Weiss, 1995). Both TCT and SET shed light on the importance of switching costs. From the perspective of TCT, there is a straightforward relationship between the transaction cost of outsourcing to one firm versus outsourcing to another or back sourcing. If the total switching cost combined with the anticipated transaction cost of a new arrangement (due to switching or back sourcing) is relatively low, then the client firm would be expected to act rationally and terminate the existing outsourcing relationship. From a SET perspective, one might also consider the real as well as the perceived switching costs. The perceived costs of switching would be influenced by factors such as whether or not the client firm believes that the client can recreate as good as, or better, a relationship with another firm; whether or not the client firm feels that it is an important partner for the service provider; and whether or not the client believes that the resources provided by the service provider are unique and difficult to replicate in the marketplace or in house. In short, one expects that switching costs, actual or perceived, are negatively associated with the decision to end an outsourcing arrangement. We thus propose:

*H4a:* Switching costs will be negatively associated with back sourcing.

*H4b:* Switching costs will be negatively associated with vendor switching.

## METHODOLOGY

A survey methodology was employed using existing scales to measure service quality, product quality, relationship quality, and switching costs, all on seven-point scales. The measurement of service quality is based on the SERVQUAL

instrument developed by Parasuraman, Zeithaml, and Berry (1988) and introduced in an information systems (IS) setting by Kettinger and Lee (1994). The items chosen to measure relationship quality were taken from a general IT outsourcing environment (Lee & Kim, 1999) and included items measuring five relationship quality factors including trust, commitment, communication quality, cultural similarity, and degree of interdependence. To measure product quality, we relied upon a scale derived from previous research on the level of satisfaction with software products (Kekre, Krishnan, & Srinivasan, 1995). The switching-cost scale developed for the current research was assembled with items from Weiss and Anderson (1992) and from Jones, Mothersbaugh, and Beatty (2002). For the exact items used to measure each construct or for a copy of the survey instrument, see Whitten (2004).

Once the scale selection was complete, three versions of the instrument were created to specifically collect data from firms that had experience with continuing, back sourcing, or switching. The wording varied slightly to reflect the proper environment. For example, one of the items for the back sourcers read (emphasis added) “*back sourcing required* radical changes in the way we managed.” The same item for switchers read, “*switching vendors required* radical changes in the way we managed,” while the same item for the continuers read “*switching to another vendor or back sourcing would require* radical changes in the way we manage.”

## Sample

The sampling process began with the gathering of contact data from the Directory of Top Computer Executives (Grover et al., 1996). The members were asked in the cover letter to respond to each survey item in regard to an outsourcing relationship in which they were involved in the past three years. A total of 160 responses were received for a response rate of 26%. The respondents represented a range of industries, including manufacturing, education, healthcare, and public administration. Roughly one third of the respondents had previously outsourced application development before subsequently choosing to back source roughly a quarter had switched vendors during the course of an outsourcing contract, and the remaining firms had continued with their application development outsourcing arrangements. Table 1 summarizes the sample of respondents.

## ANALYSIS AND RESULTS

### Nonresponse Bias

Respondents were categorized by response time. Early responders were considered those whose instruments were received in the first 25% of responses, while late responders were those whose instruments were received in the last 25% of responses. A comparison of the means of sample classification variables and summary variables for the two groups was conducted using one-way analysis of variance (ANOVA). Variables used in the analysis included the numbers of employees and IT employees in the organization, the number of years the organization has practiced outsourcing, the number of previous outsourcing contracts the organization has signed in the last five years, and the total dollar amount of the contracts. All

**Table 1:** Responses by outsourcing outcome.

	Backsource	Switch	Continue
Total number of survey responses	54	36	70
Average dollar amount of money spent per year on IT organizationwide	\$16,929,000	\$16,464,000	\$16,868,000
Number of years the organization has practiced outsourcing	11.88	12.00	10.14
Number of years the vendor has developed applications for the responding company	2.76	2.00	5.61
Number of application development outsourcing contracts signed within the last five years	5.53	8.53	6.66
Percentage of the IT budget allocated for application development and maintenance that is currently outsourced	14.55	34.51	27.69
Total dollar amount of the contract	\$3,994,000	\$7,569,000	\$4,911,000

comparisons among groups returned insignificant differences. The insignificance indicates that nonresponse bias has not impacted the data set.

### Internal and External Validity

AMOS 4.0 was used to perform the factor analysis. Items for which factor scores were less than .40 (Hair, Anderson, Tatham, & Black, 1998) or possessed correlated error terms in the factor analysis were removed from further analysis following an iterative process to refine the scale (Joreskog, 1993). Altogether, 13 of 77 items were removed. After these removals, the scales were assessed once again. The individual item loadings indicated a strong correspondence between the observed variables and their factors with all loadings at or above the .40 minimum (Hair et al., 1998).

Three goodness-of-fit indices (IFI, TLI, CFI) were used to determine the fit of the factor structure to the data. Goodness-of-fit scores above the generally accepted .90 threshold (Bentler, 1992) indicate an acceptable fit of the model to the data. Goodness-of-fit measures are provided in Table 2. All of the indices, with the exception of TLI (.89) for the switching costs scale, were above the .90 threshold. Table 2 also shows the Cronbach's alpha measure of reliability for each scale. Consistent with traditional guidelines of scores greater than .7 being significant (Hair et al., 1998), all scales were determined to be reliable.

Both convergent and discriminant validity are considered subcategories of construct validity. Convergent validity is supported by all of the highly significant loadings ( $p < .01$ ) (Bagozzi, Yi, & Phillips, 1991) and the factor regression coefficients ( $R^2$ ) being larger than .50 (Hildebrandt, 1987). Discriminant validity is established when measures that should not be related actually do not relate. Discriminant validity can be assessed by calculating the Average Variance Extracted (AVE), which represents the amount of construct-related variance captured in

**Table 2:** Scale assessment.

Factors/dimensions	Cronbach's alpha	AVE	IFI	TLI	CFI
PRODUCT QUALITY	.95	.91	.97	.95	.96
SERVICE QUALITY			.94	.93	.94
Reliability	.85	.84			
Responsiveness	.88	.92			
Assurance	.87	.92			
Empathy	.91	.89			
RELATIONSHIP QUALITY			.95	.93	.95
Trust	.88	.89			
Commitment	.72	.83			
Culture	.82	.73			
Communication	.90	.90			
SWITCHING COSTS			.91	.89	.91
Management system upgrade costs	.79	.068			
Hiring and retraining costs	.82	.83			
Uncertainty costs	.79	.53			
Postswitching behavioral and cognitive costs	.86	.64			
Lost performance costs	.87	.77			
Setup costs	.83	.74			
Search and evaluation costs	.95	.86			
Sunk costs	.88	.85			

**Table 3:** Mean responses from Scheffé results (subset for alpha = .05).

Decision	Product quality	Relationship quality	Service quality	Switching costs
Backsource	3.92	4.42	4.21	3.15
Switch	4.86	4.12	5.01	3.46
Continue	5.45	5.32	5.26	4.45

relation to error variance. The average percentage of variance extracted for each construct should be higher than .50 (Hair et al., 1998). This implies that the variance accounted for by each construct is greater than the variance accounted for by measurement error (Hair et al., 1998). The AVE for all measures exceed .50 (Table 2), providing evidence of discriminative validity of the measures.

**ANOVA and Scheffé's Test**

An ANOVA, significant at the .01 level, verified that differences exist among responses between the three groups (those who backsource, switched, and continued). Scheffé's post hoc test was then used to investigate all specific mean differences between groups (Hair et al., 1998). Table 3 displays the results from multiple comparisons between groups.



**Table 4:** A comparison of backsourcers, switchers, and continuers.

	Product quality	Relationship quality	Service quality	Switching costs
Continuers	High	High	High	High
Backsourcers	Low	Low	Low	Low
Switchers	High	Low	High	Low

Table 4 summarizes the results from the various Scheffé's tests. Product-quality levels for the continuers and switchers are high relative to the low levels of backsourcers. This indicates that the mean response to product-quality questions for those who continued and those who switched were not significantly different from each other, while at the same time both responses were significantly different than the responses from those who backsource. In this case, the high and low designations were derived from the relative mean scores of the groups (Table 3).

### Testing of Hypotheses 1a, 2a, 3a, 4a

To test our hypotheses concerning backsourcing, we compared the backsourcers to the continuers across the four dimensions. According to our data, firms that continued with their applications-development outsourcing relationships experienced what they perceived as high levels of product quality, relationship quality, and service quality and also perceived a high cost of switching vendors. The contrast in perceptions between backsourcers and continuers is stark. Firms that chose to backsource their application development experienced lower levels of all three quality metrics as well as switching costs. These differences on all four dimensions between continuers and backsourcers were highly significant. In terms of service quality, the mean for backsourcers was 4.21, whereas the mean for continuers was 5.26. The difference (1.05) is significant at the .05 level, lending support to Hypothesis 1a. In terms of product quality, the mean for backsourcers was 3.92, whereas the mean for continuers was 5.45. The difference (1.53) is significant at the .05 level, lending support to Hypothesis 2a. With regard to relationship quality, the mean response for backsourcers was 4.42, while the mean response for continuers was 5.32. Hypothesis 3a is thus supported by the difference of .90 between the two groups being significant ( $\alpha = .05$ ). With regard to switching costs, the mean response for backsourcers was 3.15, while the mean response for continuers was 4.45. Hypothesis 4a is therefore supported by the difference of 1.30 between the two groups being significant ( $\alpha = .05$ ). Mean values for these comparisons are shown in Table 3.

Perhaps the least obvious of the results is that of switching costs. Should not the switching costs be the same regardless of whether or not the client is satisfied with the quality of the product, service, and relationship? Evidently it is not; rather, it appears that the softer elements associated with switching costs weigh in as important as the financial elements such that firms satisfied with the quality of their outsourcing arrangements perceive greater switching costs than firms that are not satisfied.

### **Testing of Hypotheses 1b, 2b, 3b, and 4b**

When looking at the firms that chose to switch vendors, it is interesting to note that they rated the product and service quality as high, like the firms that continued in an outsourcing arrangement, but the relationship quality as low. Mean responses for product quality were 4.86 and 5.45 for switchers and continuers, respectively, while service-quality responses were 5.01 and 5.26, respectively. These scores were not significantly different. Relationship-quality responses were 4.12 for the switchers and 5.32 for the continuers. The difference of 1.20 is significant at the .001 level. We thus have support for Hypothesis 3b, but not for Hypotheses 1b or 2b. One might assume that, if a firm is satisfied with the product and service, that one is satisfied with the relationship, but this does not appear to be the case. Companies that switched vendors did so in spite of rating the product and service-quality levels as high as the continuers.

Moreover, given that, of the three groups, the switchers had the highest average dollar-value contract and the highest percentage of the IT budget outsourced (see Table 1), one might expect them to perceive the highest switching costs. Such is also not the case. Switchers perceived a significantly lower switching cost than continuers, as shown by their mean responses of 3.46 and 4.45, respectively. The difference of .99 indicates a significance difference at the .001 level, thus supporting Hypothesis 4b and suggesting that it is the relationship quality more than the product or service quality that influences perceptions of switching costs.

## **DISCUSSION**

Past research has indicated that economic and social contributions help to sustain exchange relationships (Gassenheimer, Houston, & Davis, 1998). When parties in a relationship are satisfied with the amount of economic and social investments and returns, they generally maintain these relationships (Mohr et al., 1994). Although TCT supposes that the primary motivations behind sustaining or terminating an exchange relationship are economic factors (Williamson, 1991), SET concedes that emotional costs and benefits are intrinsic to economically motivated relationships (Kumar, Scheer, & Steenkamp, 1995). This article helps to demonstrate why it is important to consider both theories in tandem rather than separately. While both theories can help elucidate why a firm might consider discontinuing an outsourcing relationship, neither theory itself can explain why a firm decides to backsource as opposed to switch vendors. This study helps explain the differences in the backsourcing and vendor-switching decisions.

It is clear that service and product quality had little influence on the survey respondents' decision to switch vendors. To the contrary, firms that chose to switch vendors reported almost as high levels of service quality on all four dimensions—reliability, responsiveness, assurance, and empathy—as the firms that continued to outsource with their existing vendor, and they reported almost as high a level of product quality. However, relationship quality plays an important role in the decision to switch vendors. Of our three groups, those that switched vendors had the lowest perceptions of trust, commitment, culture, and communication in relation

to their vendors. It is particularly worth noting that, in spite of having a high rating on product quality and a high rating on service quality, firms that switched vendors maintained a relatively low level of trust in their existing vendors, even lower than the backsourcers for whom the service and product quality perceptions were low. Hence, the building of trust between an outsourcer and a firm is far more a socio-emotional condition than it is a matter of providing an excellent product and/or service.

Contrarily, the decision to backsource is heavily influenced by service and product quality in addition to relationship quality. For firms that made the decision to backsource, the product quality and the service quality on all four dimensions was significantly lower than reported by firms that switched or continued to outsource with a given vendor. As a result, it appears that the significance in perceived product and service quality lies in helping firms maintain trust in the suitability of outsourcing rather than trust in a particular vendor. Firms experiencing poor service and poor product quality are more likely to backsource than to switch vendors. Where service and product quality are high but other dimensions unacceptable, a firm is more likely to switch vendors than to backsource, in part because it has experienced strong vendor service even when dissatisfied with the outsourcing relationship as a whole.

Switching costs exert similar influences on the backsourcing and vendor switching decision. In general, both switchers and backsourcers perceive switching costs to be significantly lower than do continuers, despite the fact that we did not ask questions concerning the soft costs associated with developing a trusting relationship with a new vendor. Moreover, switchers and backsourcers perceived roughly equivalent switching costs, implying that the switching costs are the same whether one chooses to outsource with another vendor or whether one chooses to backsource. However, there is an interesting difference between the two groups in terms of switching costs related to the specific variable, setup costs. In this case, the setup costs perceived by backsourcers were significantly lower than the setup costs perceived by switchers. One might conjecture that, because switchers were satisfied with the product and service qualities of their existing relationships, for them to set up equivalent products and service levels is perceived to be more costly than for backsourcers who did not have to live up to a high level of product and service quality expectations on the part of users.

From a vendor perspective, it appears that investments made to improve service, relationship, and product quality could help to sustain the outsourcing relationship. As the quality in these areas increases, customers are more likely to continue in the relationship. Also, assuming vendor investments increase service, relationship, and product quality, the switching costs should rise in parallel as the client realizes it will cost them more to obtain similar service from another vendor or in-house staff. Conversely, if the service, relationship, and product quality decrease, the switching costs should decrease, resulting in a situation in which the client is likely to backsource or switch vendors. Thus, there is a relationship among service, relationship, and product quality, and the switching costs, and vendors should be aware of the direct effect these quality measures could have on contract continuation.

## **Future Research**

This article has sought to uncover the differences in experiences of backsourcers, compared to vendor switchers and to firms that continue in outsourcing relationships, across four constructs that have been proven important in previous outsourcing research: service quality, relationship quality, product quality, and switching costs. Whereas prior empirical research into outsourcing has predominantly relied upon satisfaction as a measure of outsourcing success (Dibbern, Goles, Hirschheim, & Jayatilaka, 2004), our research explores the actual decision to continue (or not) the outsourcing relationship as the success measure. This has helped us uncover some novel findings related to backsourcing and vendor switching. Of note is the significance of relationship quality to the decision to discontinue an outsourcing arrangement. Future research could employ relationship theory, or theories of social exchange, to learn how vendors and outsourcing clients can better manage their relationship, particularly given that service quality and product quality alone are insufficient to motivate an outsourcing firm to continue its relationship with a vendor.

Another fruitful avenue of future research would be to investigate the factors that influence switching costs. Given that our vendor switchers had higher real costs than our backsourcers and continuers, it is unexpected that their perceived switching costs would actually be lower than those of firms that continued in their outsourcing arrangement. This suggests that there are psychological elements at play in the assessment of switching costs. Helping firms understand their real, versus perceived, switching costs, would be a valuable research objective.

The findings in this research are based on empirical results obtained from executives with actual experience with not only successful outsourcing, but also with backsourcing and switching. Further work in this area is needed to investigate more completely the backsourcing and switching phenomena. Other factors such as level of application complexity, goal conflict, and risk could be helpful in explaining the phenomena more completely and should be considered for inclusion in follow-up studies.

Further research is also recommended to extend this research model into the broader IT outsourcing market, IT in general, and even outside of IT. For example, research could apply this model not only to other outsourcing settings, but also to IT services, such as procurement, or to areas outside of IT, such as manufacturing. Product manufacturing is likely to be impacted by the same types of issues as application development, as evidenced by the quantity of research in operations and manufacturing utilizing TCT (Grover & Malhotra, 2003; McNally & Griffin, 2004).

## **Limitations**

This study was solely limited to application outsourcing. Factors impacting the decision to backsource or switch vendors in desktop operations, network operations, and data center operations could be different than in application backsourcing. Therefore, an extension of this research might examine the influence these factors have in various types of outsourcing. Another limitation concerns the categorical nature of the dependent variable of interest. This limited the data analysis options

available. Although we believed, similar to Teng, Cheon, and Grover (1995), that this ex-post-facto method has its own merits, future research in this area should consider utilizing a Likert-type scale, as opposed to a three-category classification. This would allow an expanded number of quantitative analysis methods that could offer a richer investigation. However, with a Likert scale, one would be limited to questioning firms concerning their intention (on a scale) to backsource or switch vendors, rather than whether or not they actually did backsource or switch vendors. This would pose a different set of limitations.

## CONCLUSIONS

The IT outsourcing phenomenon is considered to be about 15 years old, dating back to the first major contract announcement between Eastman Kodak and IBM in 1989 (Dibbern et al., 2004). Recent research into outsourcing has suggested that many organizations have begun to renegotiate or terminate contracts with outsourcing partners, choosing instead to backsource or switch vendors (Overby, 2003). Dibbern et al. (2004) suggest that backsourcing might become a key area in the outsourcing arena in coming years. In spite of these indications that backsourcing may be on the rise, little empirical research exists that helps elucidate and understand the backsourcing decision, and at the same time a lack of research related to vendor switching is also evident. This article is among the first that provides empirical data concerning the backsourcing and switching phenomena. We have presented data comparing firms that backsource or switched vendors to firms that continued in an outsourcing relationship for application development. The results indicate that product quality, service quality, relationship quality, and switching costs are related to the decision to backsource application outsourcing, with product quality and service quality being the differentiators in deciding whether a client will backsource or switch. Understanding these factors is the critical first step to understanding application backsourcing and vendor switching. [Received: May 2006. Accepted: September 2006.]

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