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December 2006

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ABSTRACT

The literature on IT outsourcing is well-developed with distinct explanations of what may determine success. The context of IT outsourcing studies has primarily focused upon North American and European companies, seeking low-cost economies from links with developing nations to gain competitive advantage. These studies may not be generalisable to companies based in developing economies, who may be trying to replicate successful outsourcing approaches. If the focus of outsourcing is primarily one of cost cutting, IT policy makers and managers in Malaysia cannot assume that successful outsourcing determinants are of any significance to them. This article thus addresses the question of how generalisable the determinants of successful IT outsourcing are to a Malaysian context. The study is based upon a sample survey of companies in Malaysia. It presents and tests hypotheses on the nature of outsourcing relationships. In short, Malaysian managers can take some comfort in that the lessons of outsourcing can be generalised to their context. Of particular note are the value of selective outsourcing in comparison to full outsourcing and the impacts of communication and management commitment.

Keywords

Outsourcing; IT outsourcing; IT outsourcing success; IT outsourcing in Malaysia; Malaysia.

INTRODUCTION

Many organisations view outsourcing as a way to achieve competitive advantage through reducing costs, enhancing levels of efficiency and ultimately improving customer satisfaction (Grover, Cheon and Teng, 1996; Dibbern, Goles, Hirschheim and Jayatilaka, 2004). IT outsourcing is growing at a rapid rate throughout North America, Europe and increasingly across Asian economies. As outsourcing "re-engineers" a traditional working approach of managing relationships within an organisation to managing relationships with a number of organisations and individuals, its success depends upon a uninterrupted commitment from all parties (Fill and Visser, 2000; Lee, 2000). For the IT policy makers and managers, the process of outsourcing becomes an issue that requires thoughtful planning. This planning should be based upon a full understanding of the lessons of what must be done to achieve success and avoid failure.

The literature that presents the lessons of IT outsourcing is clear (Willcocks and Kern, 1998). Nevertheless, the contextual contexts of the studies upon which these lessons are based are North American and European. The question is, are these lessons generalisable to practitioners responsible for the same initiative in a developing country such as Malaysia? IT policy makers and managers in Malaysia cannot assume that these essential determinants are equally significant to them. Even if

they believe that to be so, this assumption must be confirmed empirically to ensure that they are making the optimum decision to significantly improve the competitiveness of their organisations.

By examining the determinants leading to successful IT outsourcing engagement, this article will answer some basic IT outsourcing questions, faced by IT policy makers and managers in Malaysia. To fulfill this we review the literature concerning the determinants influencing successful (or failed) IT outsourcing engagement. We then go onto develop a research framework that brings together all the variables seen to influence outsourcing engagement. From this framework we develop six hypotheses. The hypotheses are tested using the findings from a mail survey to IT managers in the Penang region of Malaysia. The findings are presented to illustrate what is seen as successful IT outsourcing engagement in Malaysia

LITERATURE REVIEW

IT outsourcing can be defined as using external agencies to process, manage or maintain internal data and provide information related services in order to meet the in-house needs (Gupta and Gupta, 1992). It includes a variety of services such as application development, global networking, help desk, system integration, etc. The desired outcomes or benefits that were expected from IT outsourcing can be viewed from several aspects such as business, financial, political and technical expectations (Lacity, Hirschheim, and Willcocks, 1994).

Rubin (1997) further argued that it was difficult to measure the amount of work done to gauge the performance of outsourcing. He highlighted nine areas of emphasis when measuring IT outsourcing success (or failure): business value, customer satisfaction, finance/budget, human resources, operational service level, productivity, quality, time/schedule and work product delivered. These indicators of success depend upon the manager' perceptions of whether the outcome of their IT outsourcing have met their expectation.

In addition, Yesulatitis (1997) argued that there are two reasons influencing IT outsourcing. First, companies would need to select the appropriate method of outsourcing. This involves consulting firms to perform and manage some specific tasks on a temporary basis. Second, companies should treat outsourcing firms as supplementary sources and not to assume full responsibility from the vendors when implementing and maintaining IT activities that are strategic to them. On the other hand, DiRomualdo and Gurbaxani (1998) suggested that the three most noticeable reasons for IT outsourcing are IS improvement, commercial exploitation and business impact.

Furthermore, Klepper and Jones (1998) have argued that there are fifteen key determinants influencing successful outsourcing engagement, amongst them are: using performance incentives and penalties; using objective performance criteria; using a methodological approach; understanding the vendors; realising that outsourcing is not all or nothing; outsourcing for the right reasons; negotiating a good contract; managing the people issue; getting the right people involved; establishing a relationship management structure and processes as part of the contract; emphasising the development of the people who is responsible for relationship management; defining the outsourcing objectives; considering all stakeholders; choosing the right vendor relationship; and answer key questions.

Type of outsourcing

There are several engagement approaches that have been used by organisations when dealing with IT outsourcing. Full outsourcing is the decision to transfer the equivalent of more than 80% of the IT budget for IT assets, leases, staff and management responsibilities to external IT providers, whereas selective outsourcing involves the decision to source out only selected IT functions to external IT providers while still providing between 20% to 80% of the IT budget internally (Lacity and Willcocks, 1995). Selective outsourcing approach may include single or multiple vendors. Lacity, Willcocks and Feeny (1996) have argued that full outsourcing can bring several problems to organisations such as loss of alignment between business and IT strategies; losing out to new technologies; increasing of hidden cost and incurring higher cost to switch vendor.

Nonetheless, IT managers often opted to choose selective outsourcing because it allows organisations to choose best-of-breed practices and services from a variety of vendors and eliminating the risk of losing control over the entire IT function. On the other hand, with full outsourcing, some IT staffs might end up losing their jobs or were arbitrarily transferred to outsourcers. Selective outsourcing also increases moral boost for the employees. This is because it has allowed a small portion of the organisation's IT functions to save money.

Elements of contract

When a decision is made to outsource, both parties (i.e., buyer and vendor) are usually eager to quickly get the relationship underway. Nonetheless, some circumstances like changes in business direction, changes in economic situation and the

introduction of new technologies throughout the outsourcing period might cause difficulties in managing the contractual relationships. Consequently, outsourcing contracts would need to be properly outlined to address any disputes which may arise.

As both parties would usually strive to document a complete listing of services, service level and deliverables, detailed agreements can be written to track performance and accountability. In support of this belief, Bendor-Samuel (2002) has argued that detailed contracts have high rates of success. He further argued that there was a need to anticipate future needs into the contract (i.e., incorporating flexibility).

On the other hand, Lacity (2002) argued that short-term contracts achieved higher success rates than long-term contracts. If a contract was too rigid in specifying the performance targets, changing circumstances due to new technologies and business directions are bound to make these targets obsolete. Many organisations fall into the common trap of delaying the engagement. As a consequence, the vendors may take control over the contract, and thus unable to establish meaningful service level agreements.

Vendor relationship

The idea of establishing a good relationship with vendors is to have a good support (Sabherwal, 1999). Various levels of training could be set-out by working together with the vendors, i.e., in organising the introductory training sessions. Nevertheless, differences in buyer and vendor cultures often result in misunderstanding and distrust. Even if the cultures are compatible, the two parties may still have fundamentally contrasting goals that are frequently difficult to harmonise. A large body of IT outsourcing studies has investigated the relationship between buyer-vendor variables and outsourcing success (Dibber, *et al,* 2004). The relationships between these variables are believed to be influenced by a number of contextual determinants.

Communication and management commitment

Communication is essential in all IT outsourcing relationships (Newman and Robey, 1992). Nevertheless, effective communication is extremely difficult to sustain. Much of these problems often lie within the buyers as they wanted to focus their energy and time on managing other parts of their business. On the other hand, securing management support is crucial for an IT outsourcing engagement to be prosperous. Strong management support or weak thereof can affect the decision-making effectiveness. Lacity (2002) finds continuity as a significant aspect of management support, i.e., perhaps by indirectly inspiring financial and moral commitment to the outsourcing initiative.

It can be concluded that there are enormous amounts of successful IT outsourcing determinant available from the literature. These determinants are subject to where and how the outsourcing engagement has been implemented and it varies according to what organisation or sector it belongs to. Brandes, Lilliecreutz and Brege (1997) have noted that much more research is needed to synthesise previous findings, such as empirically testing hypotheses regarding the likely determinants of successful IT outsourcing in Malaysia.

RESEARCH METHODOLOGY

The chosen research design was lead by the confirmatory nature of this study. Figure 1 illustrates the proposed research framework for this study. The framework was developed based upon the review of the literature which illustrates the relationship between both the independent and dependent variables that have a direct impact on the success of IT outsourcing. Two additional variables have been included, i) communication and ii) management commitment that will provide the moderating effects to the relationship established between both the independent and dependent variables.
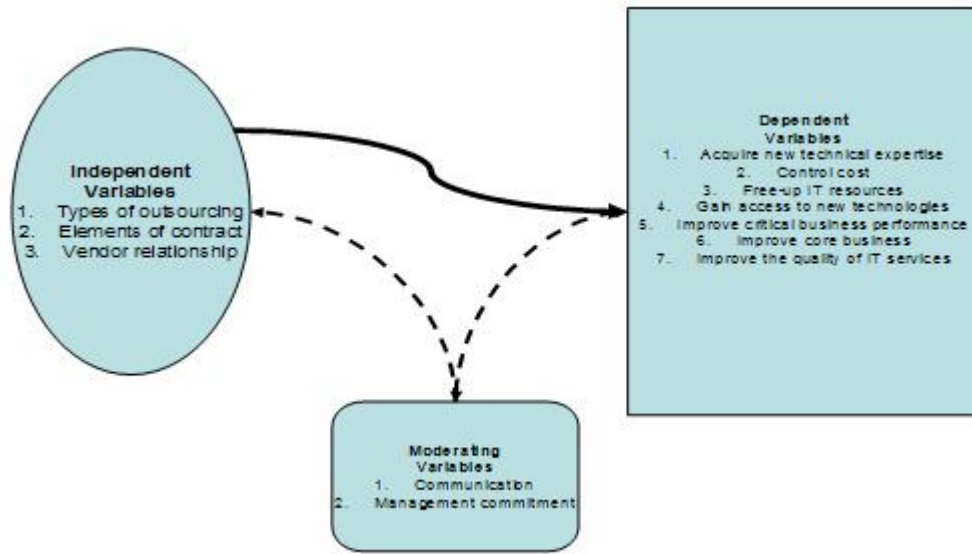
Figure 1: Proposed research framework

Brief definition of key variables

Every submission should begin with an abstract of no more than 150 words, followed by a set of keywords. The abstract should be a concise statement of the problem, approach, and conclusions of the work described. It should clearly state the paper's contribution to the field.

Independent variables

Full outsourcing: The decision to transfer the equivalent of more than 80% of the IT budget for IT assets, leases, staff and management responsibility to external IT providers.

Selective outsourcing: The decision to outsource selected IT functions to the external providers while still providing 20% to 80% IT support internally. This strategy may engage single or multiple vendors.

Elements of contract: In general, elements of contract could be used to govern IT outsourcing relationship. It measures the details of the contracts, which include special contractual clauses for service scopes and levels, measures of performance and penalties for non-performance. Other details include the degree of standardisation and flexibility incorporated into the contract.

Vendor relationship: Vendor relationship describes the relationship between the respondents and vendors in terms of duration. In a short-term vendor relationship, the organisations may have many vendors, which are capable of performing the work in a relatively short duration, and the ability to switch to another vendor with little or no cost.

Moderating variables

Communication: Communication refers to the internal communication related to the IT outsourcing activities and processes. It includes the training given to the individuals who are directly (or indirectly) involved in the outsourcing relationship, ability to work and communicate well with the vendors, to discuss the status of the outsourcing process.

Management commitment: This variable measures the commitment and support provided by senior management when the IT activity was outsourced to the vendor. It includes resource allocation initiative used to improve the outsourcing engagement.

Dependent variables

Success of IT outsourcing: The success was based upon the respondent's perceptions of whether the outcome of the IT outsourcing decision has been met. It measures the differences of benefits gained and the objectives of outsourcing the activities. The dimension of success were access to new technology, core business competency and performance, cost control, cost reduction, quality of service and gaining of technical expertise.

HYPOTHESES DEVELOPMENT

Six hypotheses have been developed to help answering answer the key questions pertaining to the determinants influencing successful IT outsourcing engagement.

Hypothesis 1: It can be concluded from the literature that buyers have outsourced their IT activities for some reasons such as access to technical talents and new technologies, costs reductions, improved core competencies, and improved of quality services. By comparing the objectives of outsourcing and the results of outsourcing, it can thus be hypothesised that,

H1: IT outsourcing has brought the expected benefits to the organisations

Hypothesis 2: On the other hand, in selective outsourcing, organisations could select the most capable and efficient resources to perform their IT functions. In full outsourcing, vendors perform all the IT activities and may take control over the IT functions. Selective outsourcing has allowed the organisations to attain some control and flexibility over their IT functions. Therefore,

H2: Selective outsourcing brings more success than full outsourcing.

Hypothesis 3: The cost of IT outsourcing may have been increased due to some hidden costs. Hidden costs can be defined as unanticipated costs or an extra cost, which are not stated in the contract, and is demanded by the vendor as a payment for extra outsourcing services. It is a consequence of loose contracts (i.e., assumed to be in the contract). Nevertheless, contracts that have incorporated flexibility would be able to adapt to the future changes in business direction. Elements of contract have resulted in different outcomes of the IT outsourcing. Therefore

H3: Elements of contract affect the success of IT outsourcing (i.e., cost reduction).

Hypothesis 4: It can be argued that short-term relationships incur less set-up and administration costs, and are applicable for work that is simple. On the other hand, intermediate-term relationships cost more and are relevant for work that is more complex with substantial benefits. Partnership relationships are much more complex to maintain but are able to produce a win-win situation for both the parties. Stronger and longer-term vendor relationships have led to a higher degree of success in IT outsourcing. Therefore,

H4: Longer vendor relationships lead to higher level of success of IT outsourcing.

Hypothesis 5: Elements of contract, type of outsourcing and vendor relationship were argued to affect the success of IT outsourcing. Nevertheless, the present of communication as a factor might have given a moderating effect to the relationship. Higher involvement of the parties involved in the relationship will increase the likelihood of success of IT outsourcing arrangement. Therefore,

H5: The impact of elements of contract, type of outsourcing and vendor relationships on the success of IT outsourcing is moderated by the communication in the organisation.

Hypothesis 6: Management commitment has been argued to be one of the significant contributors towards the explanation of the determinants influencing successful IT outsourcing. This is because management commitment sets directions and prioritises IT strategy for the engagements. The present of management commitment as a factor might have given a moderating effect to the relationship. Strong commitment could increase the likelihood of success of the IT outsourcing arrangement. Therefore,

H6: The impact of elements of contract, type of outsourcing and vendor relationships on the success of IT outsourcing is moderated by the management commitment of the organisation.

Sampling approach

The sampling frame was provided by the Penang Development Corporation in which about 300 national and international companies operating in Penang were drawn. The judgmental sampling approach was used to accomplish a satisfactory level of responses (i.e., qualified respondents who have been dealing with IT outsourcing). Pilot and primary data collection were

done by mailing out the questionnaire. The unit of analysis was the IT activities that were outsourced to the vendors. A few IT/IS managers were consulted during the pilot testing stage of the questionnaire (i.e., to ensure that all the items were rightly measured and the respondents have understood the questions. The suggestions received were then incorporated back into the questionnaire to enrich the clarity and validity of the items as well as the issues of concerns pertaining to the study were properly address.

Goodness of data, reliability and validity

The scales were checked by central tendency and dispersion, the mean, and standard deviation for a preliminary idea of how good they are, and variance of all the variables was computed to provide a general pattern of how the respondents have reacted to the questionnaire. The content validity of the questionnaire was established through the literature review while the face validity was established by pilot testing the questionnaire. In addition, reliability testing was conducted to ensure the reliability of the measurement, i.e., items with low reliability were omitted (alpha < 0.5).

FINDINGS

108 responses were received (out of 300 that were mailed out), yielding a return rate of 36%. 18 more responses were unusable because 1) they were not working in the IT department, 2) they did not have any of their IT activities outsourced, and 3) they did not complete the questionnaires. Thus, only 90 (30%) responses were used for this study. The profile of the respondents was depicted in Table 1. It shows that most of the respondents were middle level managers (32.2%) or professionals (43.7%).

Demographic	Description	Percentage (%)
Sex	Male	*60.9*
	Female	39.1
Position	Low level management	4.6
	Middle level management	32.2
	Senior management	14.9
	Professional	43.7
	Others	4.6

Table 1: Background of the respondents

Reliability of measures

Reliability test was carried out to assure the reliability of multiple statements regarding communication and management commitment, elements of contract, and vendor relationships. The Cronbach's alpha values range from 0.599 to 0.910. Since all the values were greater than 0.5, no item from the questionnaire was dropped. Table 2 further illustrates the Cronbach's alpha values for all the variables.

Variables	Items	Cronbach's α
Communication	15 (I-VIII)	0.9070
Management commitment	16 (I-IV)	0.8212
Elements of contract	13 (I-X)	0.7111
Vendor relationships	14 (I-VI)	0.5995
Objectives of outsourcing	17 - 24	0.6998
Benefits of outsourcing	25 - 32	0.8339

Table 2: Cronbach's alpha values for composite variables

In addition, the means and standard deviation of all the variables are also depicted in Table 3.

Variables	Mean	Std. Dev.
Communication	4.607	0.766
Management commitment	4.552	0.779
Elements of contract	4.268	0.547
Vendor relationships	4.224	0.608
Objectives of outsourcing	4.558	0.573
Benefits of outsourcing	4.491	0.592

Table 3: Descriptions of composite variables

Activities	Percentage
Application development	23.36
Programming	10.28
Data processing	6.54
Facilities management	4.67
Help desk	6.07
System integration	13.55
WAN/LAN	13.55
Web-based application	8.81
Y2K solution	7.94
Others	4.20
Total	100

Table 4: IT activities which have been outsourced

The composite variables, elements of contract have a mean value of 4.27, which indicates that the contracts have been developed in moderate details with some level of flexibility. On the other hand, the vendor relationships mean value of 4.22, indicates that the organisation was having a longer relationship when the outsource activities were taking place. The communication mean value of 4.61 shows that a high degree of communication have taken place between both the buyer and its vendor. On average, the manufacturing sector has 4.63 years of experience in IT outsourcing (45.5% of the organisations have been involved with the activities for less than 5 years while 50.6% of them have been involved with the IT outsourcing activities between 5 to 10 years. Most of the buyers have selectively outsourced their IT activities. About 60% of them have only outsourced one or two IT activities to the third parties. Various IT activities were outsourced by the respondents. Table 4 further illustrates the most widely outsourced IT activity was application development (23.36%). This is followed by system integration (13.5%) and WAN/LAN (13.55). Other IT activities include programming, web-based application, and data processing.

The results of the hypotheses testing

Paired samples t-Test was used to test Hypothesis 1 as the data was gathered from related match pair samples. Independent sample t-Test was used to test Hypothesis 2 while correlation and regression analyses were used to test hypotheses 3, 4, 5 and 6.

Hypothesis 1: The paired t-Test shows a negative mean value of the difference. This indicates that IT outsourcing did not bring any expected benefits to the respondents. Nevertheless, at 5% significant level, there is no evidence of accepting the null hypothesis.

Variables	Mean	Std. Dev.	Pair differences	
			Mean	**Sig. (1-tailed)**
Importance of objectives	4.491	0.592	-0.007	0.061
Benefits of outsourcing	4.558	0.573		
Table 5: Paired t-Test between Objectives and Benefits				

Objectives/ Benefits	Importance of objectives		Benefits of outsourcing		Mean of success	Sig. (1-tailed)
	Mean	**Std. Dev.**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**
To acquire new technical expertise	4.6207	0.9430	4.5747	0.831	-.0.0046	0.295
To control cost	4.2529	1.1020	4.2414	0.9519	-0.0012	0.456
To free-up IT resources	4.5747	1.0958	4.7586	0.9017	0.1839	0.0655
To gain access to new technologies	4.4828	0.8742	4.6782	0.8693	0.1954	.00035
To improve critical business performance	4.8506	0.9466	4.3563	0.8488	-0.4943	0.000
To improve core business	4.6092	1.0714	4.6667	0.7419	0.0057	0.304
To improve the quality of IT services	4.4943	0.8335	4.5057	0.8301	0.0015	0.448
Table 6: Paired t-Test between Objectives (Individual) and Benefits (Individual)						

More paired t-Tests were done on the individual items between the benefits and objectives of outsourcing. Some of these items show significance outcomes at 95% confidence level. At 5% significant level, the test shows that the respondents were neither achieve cost reduction nor improve the business performance through IT outsourcing activities. Nevertheless, it can be argued that IT outsourcing has allowed the respondents to gain access to new technologies.

Hypothesis 2: This hypothesis is tested through the t-Test for 2 independent samples. The mean of success for IT activities that were selectively outsourced was 0.0034. On the other hand, the mean of success for full outsourcing was -0.2407. Table 7 shows that 67.47% of the activities were outsourced selectively while approximately 32.53% were outsourced fully to the vendors. Thus, selective IT outsourcing brings more expected benefits than full IT outsourcing.

Types of outsourcing	Percent	Mean of success	Std. Dev.
Selective outsourcing	67.47	0.0035	0.3780
Total outsourcing	32.53	-0.2407	0.3214
Table 7: t-Test for types of IT outsourcing			

Hypothesis 3: The clearness of the description were measured by items 13 (I – VI) of the questionnaire. The Pearson correlation value of 0.366 indicates that there is a positive relationship between the variables. Thus, if the elements of contract were clearly specified, the tendency for the cost to be reduced will be higher. In terms of contract flexibility, which were measured by items 13 (VII – VIII and IX – X) respectively, the Pearson correlation value was positive. Nevertheless, there was not enough evidence to conclude that those flexible contracts (non-standardised) have led to higher cost reduction (p value = 0.542 for flexibility, and 0.552 for customisation).

Elements of contract	Cost reduction (Pearson correlation)	Sig. (2-tailed)
Detail	0.363	0.001
Flexibility	0.066	0 542
Non-standardisation	0.65	0.552
Table 8: Pearson correlation values for element of contract and cost reduction		

Hypothesis 4: The positive value of the Pearson correlation (0.460) indicates that there is sufficient evidence to conclude that longer vendor relationships have led to successful IT outsourcing. In addition, multiple regression analysis was used to determine the presence of a relationship between the dependent variable and independent variables. The positive coefficient value of 0.198 (p = value = 0.003) from the analysis indicates that longer vendor relationship have led to a higher level of success of IT outsourcing. The relationship is summarised below as a model:

$$\text{Success} = -0.718 + 0.167_{x1} + 0.198_{x2} + 0.167_{x3}$$

There is a low model fit of this equation as only 32.6% of the variance could be explained by the independent variables.

Variables	β coefficient	Sig. T	r^2
Elements of contract	0.167	0.032	0.326
Vendor relationship	0.198	0.003	
Type of outsourcing	0.167	0.042	
Table 9: Summary of the regression analysis			

For both hypotheses 5 and 6, the presence of the interaction effect was tested by examining the F values of the formula. The difference between R squared represents the degree of the moderating effects.

Hypothesis 5: The r^2 of the first equation (Table 11) indicates that only 32.8% of the variance of success was explained by the first equation. Nevertheless, the communication variable was not significant at all in the first equation. When compared to the r^2 (0.418) of the second equation, the difference of 0.09 indicates that communication accounted for only 9% of the variance

of successful in IT outsourcing. The F value was significant at 5% level (*p* value = 0.013). Thus, there is enough evidence to argue that successful IT outsourcing is moderated by the communication factor.

Variables	β	Sig. T	r_1^2	F
Elements of contract	0.187	0.033	0.328	9.538
Vendor relationship	0.215	0.004		
Type of outsourcing	0.166	0.044		
Communication	-0.002	0.606		
Variables	β	Sig. T	r_2^2	F
Elements of contract	0.706	0.000	0.418	7.706
Vendor relationship	-0.118	0.730		
Type of outsourcing	0.001	0.978		
Communication	0.133	0.629		
*Elements of contract * Communication*	-0.123	0.001		
Vendor relationship * Communication	0.008	0.298		
Type of outsourcing * Communication	0.003	0.806		
Table 10: Multiple regression analysis (i.e., communication as a moderating variable)				

Hypothesis 6: The r_1^2 is 0.33 while the r_2^2 is 0.403. A difference of 0.073 indicates that management commitment accounted for only 7.3% of the variance of success in IT outsourcing. The F value of 3.056 indicates that the interaction effect of the model is significant at 5% level (*p* value = 0.034).

Variables	β	Sig. T	r_1^2	F
Elements of contract	0.179	0.026	0.330	9.590
Vendor relationship	0.208	0.003		
Type of outsourcing	0.172	0.038		
Management commitment	-0.004	0.525		
Variables	β	Sig. T	r_2^2	F
Elements of contract	1.687	0.003	0.403	7.219
Vendor relationship	-0.524	0.290		
Type of outsourcing	-0.816	0.086		
Management commitment	0.578	0.224		
*Elements of contract * Management commitment*	-0.332	0.007		
Vendor relationship * Management commitment	0.157	0.135		
Type of outsourcing * Management commitment	0.226	0.035		
Table 11: Multiple regression analysis (i.e., management commitment as a moderating variable)				

DISCUSSIONS

The first finding argues that IT outsourcing has not brought the benefits to the organisation (i.e., in contrast to its purpose). In other words, one could argue that there is a need to properly manage the determinants influencing successful IT outsourcing engagement. The second finding shows that selective outsourcing brings more success tha*n* full outsourcing. A possible

explanation would be that an organisation should keep some parts of the outsourcing activities in-house and allows flexibility on other activities. The third finding argues that elements of contract do not necessarily affect the success of IT outsourcing. Although, contracts which were well-designed (i.e., with detailed descriptions) tend to increase the likelihood of successful outsourcing engagement (i.e., mechanisms that will allow changes to be made overtime should also be incorporated). The forth finding is that longer vendor relationships can be considered and have led to higher level of IT outsourcing success. Finally, it is also found that both the communication and management commitment have played significant roles in determining how successful any IT outsourcing engagements can be. These findings are in tandem with the research framework proposed earlier (see Table 12).

Hypothesis	Accepted/Rejected
H1: IT outsourcing has brought the expected benefits to the organisations	Rejected
H2: Selective outsourcing brings more success than full outsourcing.	Accepted
H3: Elements of contract affect the success of IT outsourcing	Rejected
H4: Longer vendor relationships lead to higher level of success of IT outsourcing.	Accepted
H5: The impact of elements of contract, type of outsourcing and vendor relationships on the success of IT outsourcing is moderated by the communication in the organisation.	Accepted
H6: The impact of elements of contract, type of outsourcing and vendor relationships on the success of IT outsourcing is moderated by the management commitment of the organisation.	Accepted
Table 12: Summary of the hypotheses testing	

CONCLUSIONS AND FUTURE RESEARCH

 IT outsourcing has evolved over the past few decades from a purely cost-cutting move to a strategic business tool. It is employed to enhance organisation's core competency. By leveraging these competencies, organisations can enter new market and gain access to state-of-the-art technologies without having to expose themselves directly to the risks than necessary.

The literature on IT outsourcing is well developed with clear explanations of what may determine success. However, the context of IT outsourcing studies has primarily focused upon North American and European companies, seeking low-cost economies from links with developing nations to gain competitive advantage. These studies may therefore not be generalisable to companies based in developing economies such as Malaysia, who may be trying to replicate successful IT outsourcing approaches. If the focus of outsourcing is primarily one of cost cutting, IT policy makers and managers in Malaysia cannot assume that successful outsourcing determinants are of any significance to them.

This article thus addresses the question of how generalisable the determinants of successful IT outsourcing are to a Malaysian context. The study was based upon a survey of companies in the Penang region of Malaysia. It presents and tests hypotheses on the nature of outsourcing relationships. In conclusion, Malaysian managers can take some comfort in that the lessons of outsourcing can be generalised to their context. Of particular note are the value of selective outsourcing in comparison to full outsourcing and the impacts of communication and management commitment. The study also complements previous research that explained the determinants influencing IT outsourcing engagement decisions.

The outcomes also suggested that the interaction effects among these key determinants such as communication and management commitment seem to influence the success of the outsourcing initiative. Thus, future research efforts should be directed toward developing causal models that weave these key determinants together in a form that makes their interrelationships explicit. A model consisting of an interacting process of relationships among these determinants and other variables will be a realistic means of representing IT outsourcing phenomena. Finally, it is hoped that this study will motivate more work in the suggested areas resulting in the most "significant" outsourcing engagement being included in future research, thereby minimising the consequences of failure.

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