

THE CHALLENGES FACED IN IT OUTSOURCING: A QUANTITATIVE STUDY OF MSC COMPANIES IN SELANGOR OF MALAYSIA

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ABSTRACT

Information Technology Outsourcing is embraced by Malaysian government and the world for the objectives of becoming information developed societies. Therefore, it is important to investigate the challenges faced by IT outsourcing companies (MDEC & MSC, 2011). The aim of this research is to investigate the challenges faced in IT outsourcing. This study is empirical, and it applied quantitative research method. Data were collected from 107 respondents using questionnaire. The IT managers or employees with good knowledge in IT outsourcing were the respondents. Data were analyzed using descriptive statistics. The findings show that lack of highly skilled IT employee, lack of experience in outsourcing relationship, security issue, unspecified cost in the outsourcing contract, low management capacity, inadequate resource for human and technological change and ethnic difference are the IT outsourcing challenges faced by MSC IT outsourcing companies in Selangor of Malaysia.

Keywords: Information Technology; IT outsourcing; MSC (Multimedia Super Corridor); IT outsourcing challenges

1. INTRODUCTION

Information technology (IT) outsourcing is seen as an important value in business success. Kearney (2011) said that the emergence of IT outsourcing (ITO) has added to the continued improvement of the information technology industry. What is IT outsourcing? IT outsourcing refers to contracting out of IT services which have been carried out in the past by certain organizations in a

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different geo political environment (Sheryn, 2011). What encourages IT outsourcing? IT outsourcing is encouraged by large distribution of the internet facilities, availability of software improvement techniques and IT management services (Affandi, 2006). IT organizations face the problem of fulfilling the demands of customers with small resources, therefore, many have directed to outsourcing as one of their important organizational strategies to transfer responsibility for IT services, including management, planning and operations, to an external service provider (Aziati, Hamid, & Salim, 2010; Anne, 2005). IT outsourcing will keep on growing since many organizations look out for a better quality and costs efficiency to increase productivity, competitiveness and economic development (Outsourcing Malaysia, 2012; Salmon, 2011). IT outsourcing spread over a limit of different services including application development and maintenance, network management, desktop management, computer data centre management and IT helpdesk services. It can as well be engaged on other scales, such as on a project basis (Rane, 2010; Affandi, 2006).

Malaysia is considered as an attractive location for outsourcing contracts because of its powerful infrastructure, good climatic environment, government support and multilingual skills (Outsourcing Malaysia, 2012; Mohamed et al., 2007). According to Cheong (2009), Malaysia attracts at least RM11.4 billion (USD3 billion) of the global outsourcing business which estimated to be worth RM1.9 trillion (USD500 billion) in 2008. This shows a powerful demand for IT outsourcing in recent years since an outsourcing agreement for 100 largest global outsourcing organizations worth USD40.5 billion in 2005 (OECD, 2008). Malaysia's private sector and government agencies are seeing a rising trend in attracting IT outsourcing relationships and require meaningful amount of deal. The Malaysian outsourcing industry is prefigured to be worth \$1.9 billion by 2013 (Outsourcing Malaysia & Hamzah, 2012). Malaysia is growing prominently as the world choice for IT outsourcing (ITO) due to great efforts made by government in engaging policy and offering a first class attractive environment through the Multimedia Super Corridor (MSC) (Affandi, 2006). Multimedia Super Corridor (MSC) is a Malaysia national ICT initiative founded by former Prime Minister Tun Dr Mahathir Mohamad in the year 1996 to attract the world class information technology organizations while training the local ICT organizations (MSC, 2012).

Malaysia has ranked 3rd in the list of outsourcing destinations in the world (Kearney, 2011). India has ranked 1st and China 2nd in the list (Reuters, 2013; Kearney, 2011). These rankings are given as a result of the level of talent pools, qualified labor, good business environment and low cost advantages showed by these countries (Reuters & Tholons, 2013). The top ten countries in the list of outsourcing destinations in the world are mostly in Asia. Therefore, Asia produces deep talent pools, qualified labour, good business environment and low

cost advantages better than other continents in the world (Kearney, 2011). Table 1 shows the list of top ten outsourcing destinations in the world

Table 1: The list of top ten outsourcing destinations in the world

Country	Rank	Country	Rank
India	1	Mexico	6
China	2	Thailand	7
Malaysia	3	Vietnam	8
Egypt	4	Philippines	9
Indonesia	5	Chile	10

Source: (Kearney, 2011)

Malaysia has a well-developed system and infrastructure, good government support and well attractive environment given its global ranking and its role in national development (Outsourcing Malaysia & Hamzah, 2012; Aziati et al., 2010). Malaysia may become a major player in the world outsourcing environment through knowing all the challenges that come against the success of outsourcing IT services and overcome them (thestar & Hamzah, 2012: Aziati et al., 2010; Mohamed et al., 2007). Many IT organizations in Malaysia face challenges in outsourcing IT services. They avoid contracting IT services because of unknown challenges. If IT outsourcing challenges are well observed, the failure to deliver appropriate returns will be minimized (Aris et al., 2008; Mohamed et al., 2007).

However, there are no empirical studies that have investigated the entire IT outsourcing challenges on outsourced IT services in Malaysia. Previous studies are done on only one or two challenges which influence IT outsourcing. Study made by Lin, Zakariah and Mohamed (2012) shows an empirical description of data leakage in ICT outsourcing, its risks and countermeasures in Malaysia. But no other challenge is described. Study made by Ahtsham and Zaib (2010) develops an empirical insight in Inter cultural problems of IT services outsourcing from Sweden to India. Study made by Ranganathan and Balaji (2007) demonstrates little empirical insight in IT outsourcing challenges, models and solutions between United States and India. Therefore, challenges faced in IT outsourcing require to be researched. And that brings up the research question “What are the challenges faced in IT outsourcing?”

2. LITERATURE REVIEW

A review of the literature shows that IT outsourcing face various challenges listed in Table 2. These challenges are reviewed in details.

Table 2: Challenges faced by IT outsourcing organizations

No	Challenge
1	Government restriction
2	Lack of highly skilled IT employee
3	Lack of experience in outsourcing relationship
4	Security issue
5	Unspecified cost in the outsourcing contract
6	Low management capacity
7	Inadequate resource for human and technological change
8	Ethnic difference

(Source: Tholons& Farrell, 2010; Alterra, 2009; Ranganathan, Balaji, &Riungu, 2007)

One of the challenges faced in IT outsourcing is government restriction. Government restricts when taking precautions to maintain national interests, security and intellectual property rights (Aziati et al., 2010). The law and legal systems in the European countries have limited outsourcing abilities for the vendors in creating a greater impact in the society through IT outsourcing services (Ranganathan & Balaji, 2007). Turkish government has marked some elements inappropriate to be outsourced because of the danger in exposing its national capabilities (HKSAR, 2008; Mohamed et al., 2007). The political position and government laws in Europe are among the elements hindering the distribution of IT outsourcing services to many sub regions in the countries (Farrell, 2010; Riungu, 2007). Government laws and policies undertaken by American companies have prohibited the internal organization in embracing low cost and quality assurance posed by low wage countries such as India and China (Aziati et al., 2010; Yusof, 2008).

Another challenge faced in IT outsourcing is lack of highly skilled IT employee. High technology skills are hard to find in many IT outsourcing services (Alterra, 2009). Lack of highly skilled IT employee has persisted in implementing a Web based project management system for a client in an offshore destination and brought difficulties in developing a system that would allow the sharing of hundreds of thousands of documents among teams stationed around the world (Sifri, 2002). As a result, organization has posed unfitness in delivering superior product on time (Ratan, 2008). Lack of ability to integrate data collection system

for data services by Vodafone Company has pulled down trust in giving out related jobs on quality assurance in agreed time despite the encouragement by the internal outsourcing department of Vodafone Company (Atkins, 2011).

The poor experience in outsourcing relationship between service provider and the client has altered the quality of products (Hussin et al., 2006). European firms no longer share experiences in ongoing outsourcing activities (Farrell, 2010; Shawn, 2008). Accenture Company in Norway suffered from insufficient information to continue a given project because the employees did not know the right way of gathering information from offshore service providers (Hussin et al., 2006). The offshore service providers have ignored its responsibility on the client and on its outsourced services and the client did not intend to lay complaint the way outsourcing knowledge and experience are being shared. Therefore, it caused a tremendous effect on the outsourcing objective for the client lacked the ability to produce what the offshore service providers wanted (Hussin et al., 2006). There is risk in lacking IT outsourcing knowledge because of the distance separating the vendor and the client (Ranganathan & Balaji, 2007).

Information security is not carefully monitored in outsourcing, even though it involves decision and strategic plan made by the authority (Mohamed et al., 2007). The authority such as Turkish government agency has marked some elements inappropriate to be outsourced because of its inability to involve in controlling strategic IT outsourcing for security issues (HKSAR, 2008; Mohamed et al., 2007). The inappropriateness of outsourcing some certain IT services is true because as soon as the authority outsources its strategic IT service the system in use is duplicated and hence fail to exercise a strategic function (Mohamed et al., 2007). Many organizations are reluctant to outsource IT services for the danger in losing control over important resources (Kancheva, 2002). The leakage of sensitive IT outsourced resources is numerous and has enforced meaningful financial loss and damage of honor on the organizations involved (HKSAR, 2008; Hoecht & Trott, 2006).

An unspecified cost in the outsourcing agreement is another big challenge of IT outsourcing. It happens especially when there is a potential misinterpretation of the same contract clause among different divisions of the client as well as different divisions of the off-shore service provider (Frost & Sullivan, 2005), and people may say that the management is not specific in giving out contract. In Europe, a hidden cost structure declines the effectiveness and productivity of IT organization services (Farrell, 2010; Ratan, 2008). The hidden cost in outsourcing contract is inclusive of the cost of maintaining communication infrastructure for such is not usually specified in outsourcing contract (Riungu, 2007). Infosys technology in Germany listed the cost of hardware maintenance in a two years outsourcing contract to be worth 8000 Euro in the year 2001 but because of currency fluctuations in the year 2003 the cost of hardware

maintenance increased to 13000 Euro. Infosys relied on specific cost analysis in outsourcing decision without knowing that assessing all costs applicable to outsourcing is more like an inaccurate practice (Dhar & Balakrishnan, 2006).

Low management capacity in IT outsourcing refers to lack of ability that an organization possesses in creating service and knowledge, transferring service and knowledge, and integrating production across the firm and the offshore vendor (Ranganathan & Balaji, 2007). Most IT organizations in United States lack proper procedures in managing productivity and knowledge transfer (Ratan, 2008), and do not carefully measure the extent by which it shares its internal knowledge with the offshore service providers. It is difficult for an organization to transfer internal knowledge and meaningful business plan to project developers in the offshore destination (Ranganathan & Balaji, 2007). Many IT projects fail to produce the promised advantages in China because organizations concentrate more on applying the technology with less measurement and evaluation of IT outsourcing projects (Lin et al., 2007). The development of appropriate project methodology for IT outsourcing is slow, and most organizations have no official process to measure decision in IT outsourcing (Lin et al., 2007; Gonzalez et al., 2005).

Inadequate resources in IT outsourcing service comprises of lack of human resource capability and lack of global IT resource (Ranganathan & Balaji, 2007). Lack of human resource capability is found when an IT outsourcing organization lacks the capacity to recognize, possess, formulate and distribute the internal and offshore personnel for accomplishing the outsourcing aims (Ranganathan & Balaji, 2007). This inappropriateness in organization's human resource is seen in relation to insufficient manpower and insufficient in-house skills (Mohamed et al., 2007; Ramanujan & Jane, 2006). Managing globally distributed IT resources lack good adequacy which an organization requires in growth and maintenance. Most organizations cannot cope with the rapid technological change due to lack of internal resources (Simmonds & Gibson, 2008).

Ethnic difference is a big challenge for IT outsourcing since many offshore destinations are situated in a multinational environments. Such unusual environments have caused so many difficulties in collaboration due to lack of good association, unsuitable techniques for interaction and invisibility into project status as well as poor communication and behavioural style (CollabNet, 2011; Sathish, 2009). The ethnic difference and dimension in recognized business practices confuse outsourcing in China, and for that, the strength and productivity that are expected of Chinese IT outsourcing vendors failed (Ratan, 2008; Tao, 2000).

3. CONCEPTUAL FRAMEWORK

This study is based on a framework of risk cultural theory found in the literature. The risk cultural theory is able to predict and define what sort of people will perceive the possible problem and how serious the problem might be to them (Sinclair, 2007; March & Smith, 1995).

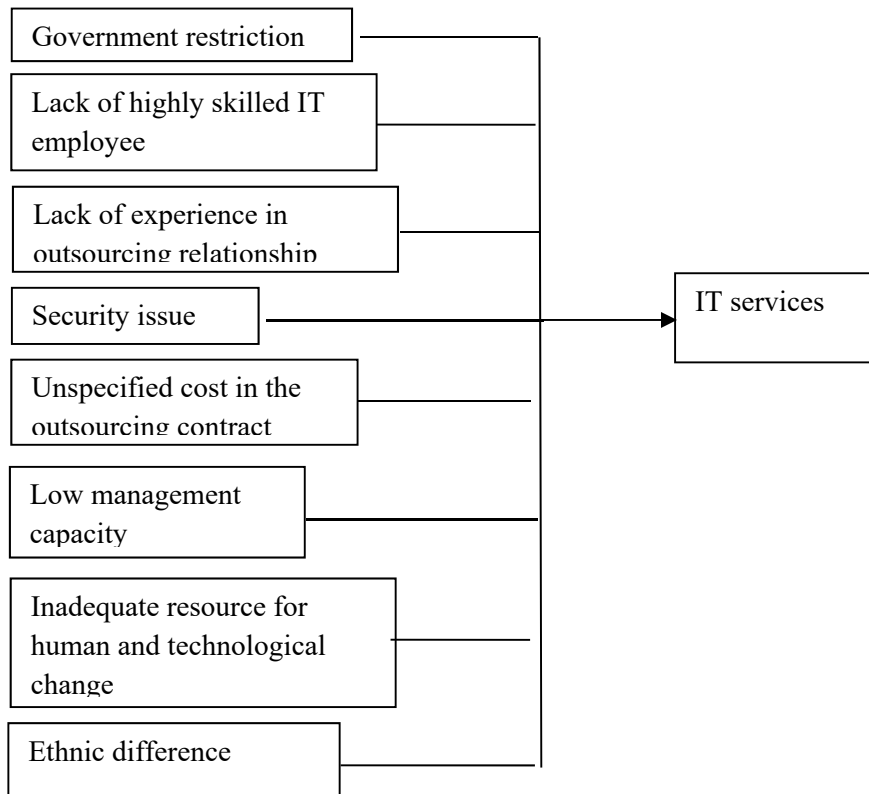


Figure 1: Conceptual framework of challenges influencing IT outsourcing organizations

4. METHODOLOGY

This study uses quantitative research method by means of a survey design. This study investigates whether IT outsourcing companies in Malaysia face the same challenges with IT outsourcing companies around the world. Population and sampling methods are employed in this study to choose organizations that are able to be surveyed in this research. The population used in this study is 148 IT organizations in Selangor. The sampling frame is extracted from website of Multimedia Super Corridor (MSC) organizations. This study applied simple random probability sampling method. A sample of 107 respondents is the sample size representing the population in this study. Data for this study were gathered using a questionnaire instrument. The respondents in the selected organizations must be managers or employees who have good knowledge in IT outsourcing. This is to ensure that all participants understand the survey. Self-administered questionnaire is used for data collection in this study. The variables identified from previous studies on IT outsourcing challenges are independent variables (government restriction, lack of highly skilled IT employee, lack of experience in outsourcing relationship, security issue, unspecified cost in the outsourcing contract, low management capacity, inadequate resource for human and technological change, ethnic difference) and dependent variable (IT services). The survey instrument is checked for validity and reliability before it is used in the study. A sample of 10 to 18 IT outsourcing organizations in Selangor is chosen for pilot test in this study in order to make sure that the respondents understand the questions in the survey and to calculate the time required for the respondents to complete the survey.

5. ANALYSIS AND RESULT

Data gathered were analysed using the statistical software known as SPSS (Statistical Package for Social Science) version 20.0. Descriptive statistics were applied to analyse the characteristics of the respondents including frequency, standard deviation and mean. Table 3 shows the results of analysis.

Table 3: Results of descriptive analysis

Statement	Mean	Total freq. of respondents who agreed	Total % of respondents who agreed	Total freq. of respondents who disagreed	Total % of respondents who disagreed
IT companies provide software, management, application and outsourcing services for customers and enterprises	4.27	102	95.4	4	3.7
Government restriction is an information technology outsourcing challenge faced by IT companies	2.58	36	33.9	67	62.7
Lack of highly skilled IT employee is an information technology outsourcing challenge faced by IT companies	3.97	86	80.4	15	14
Lack of experience in outsourcing relationship is an information technology outsourcing challenge faced by IT companies	3.76	82	76.6	18	16.8
Security issue is an information technology outsourcing challenge faced by IT companies	3.84	77	72	21	19.6
Unspecified cost in the outsourcing contract is an information technology outsourcing challenge faced by IT companies	3.45	68	63.6	31	29
Low management capacity is an information technology outsourcing challenge faced by IT companies	3.36	64	59.8	36	33.6

Inadequate resource for human and technological change is an information technology outsourcing challenge faced by IT companies	3.74	76	71	21	19.6
Ethnic difference is an information technology outsourcing challenge faced by IT companies	3.64	73	68.2	29	27.1

According to Nehring, Pivato and Puppe (2011), Muroga, Toda and Takasu (1961), when a proposition is supported by a majority, the proposition will be accepted. According to Mahmood and Rahman (2007), a mean value of 4.21 and above is categorized as very high, a mean value between 3.41 and 4.20 is categorized as high and a mean value of 3.41 or below is categorized as moderate or low.

From the research question, “What are the challenges faced in IT outsourcing?” Seven challenges were identified which are lack of highly skilled IT employee, lack of experience in outsourcing relationship, security issue, unspecified cost in the outsourcing contract, low management capacity, inadequate resource for human and technological change and ethnic difference.

6. CONCLUSION

Research objective (to conduct research in order to investigate the challenges in IT outsourcing) is achieved by analyzing questionnaire responses using descriptive analysis. This descriptive analysis used mean, standard deviation and frequency to interpret questionnaire responses into primary data. The conceptual framework derived from previous studies consists of eight challenges, but the findings of this study found only seven of those challenges in IT outsourcing in Malaysia. The challenges are lack of highly skilled IT employee, lack of experience in outsourcing relationship, security issue, unspecified cost in the outsourcing contract, low management capacity, inadequate resource for human and technological change and ethnic difference. Government restriction is not found to be a challenge in this study.

Researchers have attempted little empirical work on challenges in IT outsourcing. This is the first empirical study that revealed all the challenges in IT outsourcing companies and described them quantitatively. This study provides insights to several IT services and the challenges faced by IT outsourcing companies. This study applied quantitative research approach, and questionnaire was the only data collection method used. Thus, future research should apply qualitative approach which would include detailed interviews to create more insights on IT outsourcing challenges.

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