IT Outsourcing: An Exploratory Study Based on Transaction Cost Theory, Relational Exchange Theory and Agent Theory

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Abstract: - The bandwagon effect of Kodak and IBM agreement has lead to more organizations to involve in IT outsourcing. Even though that is the case, IT outsourcing is not a panacea. Many researchers have been trying to come out with ways to effectively manage IT outsourcing. Some of them are anecdote, some with theoretical foundations and some are supported with experimental results. Still, there is a need to explore what is currently being a practice so as to identify the weaknesses and vulnerabilities. As a developing country, the acceptance towards the effectives of theory to support IT outsourcing remains a questions. Therefore, besides assessing best practices, this paper also reviews the practices of three theories namely Transaction Cost Theory, Relational Exchange Theory and Agent Theory. In order to achieve the objective, exploratory, qualitative research method was used in this study. Nine organizations were selected as a sample. The result of the research shows that even though there are proper guidelines available, some of the organizations omit some important steps. More shocking, some organizations deny the importance of adapting theories in current IT outsourcing practices. As a consequence, some organizations encountered difficulty in managing their projects. For future works, the weaknesses and vulnerability of current practices will then be enhanced and a framework for managing IT Outsourcing will then be proposed.

Key-Words: - IT outsourcing, Transaction Cost Theory, Relational Exchange Theory, Agent Theory, Initial Review, Tender Evaluation, Contract Management, Project Roll-on.

1 Introduction

IT outsourcing is becoming a trend in today's marketplace. After Kodak outsourced major components of its IS functions to IBM [1], more and more organizations follow their step. In Malaysia, the pioneer of IT outsourcing is Bumiputra-Commerce Bank (BCB) (recently known as CIMB) that took its step to outsource its IT function to Electronic Data System (EDS) after Central Bank of Malaysia (Bank Negara) has been pushing local banks to seek out outsourcing partners to handle non-critical functions of the business [9]. Malaysian's government has actively involved and support the idea of IT outsourcing as it is one of the way for the government to operate more effectively [20] thus encouraging organizations to involve in IT outsourcing.

Despite the growing trend in IT outsourcing, it cannot be denied that IT outsourcing comes together with risk. Many organizations failed to succeed in their IT outsourcing arrangements and been trying to hide their failure [2]. In Malaysia for example, only 9.2% projects that engaged in IT development succeeded [17]. Nevertheless, the trends of IT outsourcing would continue [4]. Therefore, it is important to explore how organizations manage their IT outsourcing activities to determine what actions leads to success and failure. Besides reviewing best practices, this paper also intended to assess how organizations perceived theory in IT outsourcing. This paper will contributes to better insight of how organizations should do and should not do while involving in IT outsourcing activities as well as how organizations include Transaction Cost Theory, Relational Exchange Theory and Agent Theory in their practices.

In IT outsourcing, the most common questions arise include what functions being outsourced and why outsource that function. Exceeding these boundaries, this paper will explores what organizations did to ensure their IT outsourcing process run smoothly, how do they did it and who are responsible. Since the most appropriate method to explore the questions is in-depth analysis,

exploratory method is applied. As a mean to achieve the objective, 9 organizations were then selected to be interviewed.

This paper first presents introduction to IT outsourcing, the reference theory and methodology used. The findings are then discussed and presented.

2 IT Outsourcing

IT outsourcing can be defined as the practice of commissioning part or all of an organization's IT assets, people, and/or activities to one or more external providers. Some of the activities being outsourced include system planning, application development, operation and maintenance, facilities management and so on [23].

In Malaysia, the functions most commonly outsourced are application system development, followed by ICT infrastructure, ICT application maintenance and support, website hosting, ICT strategic planning and security policy and standards development [28].

It is important to start IT outsourcing with research, choosing the right service provider, manages the contract and performs on-going monitoring [26,27,28,29]. Through the research, organizations are able to prepare themselves before entering the outsourcing environment. Choosing the right service provider will improve the quality of services. The process of managing the contract will ensure both parties benefited from the agreement and performing on-going monitoring will ensure organizations achieve their goals and objective.

There is a lot of research done to identify what and why questions in IT outsourcing. Yet, practices that lead to success or failure cannot simply derive from those questions. Therefore, this paper used exploratory method to gain the insight of how organizations perform their IT outsourcing activities and determine what actions that leads to success or failure. In addition, this paper used three theories in IT outsourcing to assess the organizations perception towards it.

The theories used are Transaction Cost Theory, Agency Theory and Relational Exchange Theory. Transaction Cost Theory tackles the problem of deciding whether to outsource or not. Relational Exchange Theory tackles the problem of relationship development process in order to select service provider. Agency Theory tackles the problem of managing the contract and at the same time ensuring the goal of IT outsourcing are met. The details of each theory will be discussed in the next section.

2.1 Reference Theory

Many researchers have come up with the process of managing IT outsourcing [5,7,21,22,25]. However, some questions arose [15]. The questions are as follows.

1. How to determine the decision to outsource and the function to be outsourced?
2. How to choose appropriate service provider for outsourcing?
3. How to design and manage the contract that will govern the outsourcing agreement and how to best maintain the relationship and at the same time ensuring the goal of outsourcing is met?

Nevertheless, the questions can be answered by adopting theories as discussed below.

1.   Transactional Cost Theory

Transaction cost theory (TCT) is the economic theory used in order to decide whether to outsource a function or not. TCT implies total cost which consists of production cost and transaction cost. Production cost is the cost to produce the transaction meanwhile transaction cost is the cost to control and monitor worker. Transaction cost or also known as coordination cost consists of cost of monitoring, controlling and managing transaction.

Williamsons [18] assumes that markets provide cheaper production cost than hierarchies through economic of scale. However, it causes higher coordination cost. Therefore, transaction cost theory uses four constructs to determine which governance structure is more appropriate for cost reduction. The four constructs include cost, transaction type, threat of opportunism and uncertainty.

The cost constructs indicates that for market governance structure, the production cost is low but the coordination cost is high. On the other hand, the hierarchy governance structures, indicates high production cost and low coordination cost. The transaction type construct includes asset specificity (degree of customization of the transaction).

The third construct, threat of opportunism indicates that people act in their own self-interest, where they may not always be trustworthy, honest or purport fair representation. However, this construct is only a threat when there is a small number of service provider due to limited choice. Even so, this threat can be reduced by signing a complete contract. Performing a transaction under high uncertainty is very costly perhaps even impossible. However, the organization can sacrifice design features to make the transaction more standardized, or surround the transaction with elaborate contract or

even produce the transaction internally.

2. Agency Theory

Specifically, AT is directed at the ubiquitous agency relationship, in which one party (the principle) delegates works to another (the agent), who performs that work [11].

Problem occurs in this relationship before the contract is signed (ex-ante) referred to adverse selection and after the contract is signed (post-ante) referred as moral hazard [10,11,16]. Adverse selection refers to misrepresentation of the ability of the agent. In this case, the agent hides the real information about the quality of the service and the principal is unable to find out that information [10,11]. Moral hazard can be described as the inability of the principle to observe and verify the actions of the agent and not acting in the principal's interest because of goal conflict [10,11].

The attempt of the theory is to describe the principle agent relationship using metaphor of a contract. The focus is to determine the most efficient contract governing the principle agent relationship [6].

Agency Theory must help to answer the following questions; what can the principle do to encourage quality services and fair treatment by the provider and what can the provider do to keep the user satisfied and at the same time to reach its own outcome goals [15]. However, it is not easy to design contract due to this factors:

- Different goal - AT assumes principal's goal is to maximize profit while the agent's goal is to derive maximum payment with least effort [6,16].
- Risk Aversion
- Information asymmetry – Principal has more information or knowledge about the particular project or the agent and vice versa.
- Outcome uncertainty
- Expensive to monitor the work of service provider

AT postulate two types of contract, namely behavior based contract and outcome based contract. The usage of each type of contract will depends on the environmental uncertainty, risk aversion, information asymmetry and goal conflict [6,11,13,16]. Table 1 summarized their findings. From Table 1, the researchers suggested the usage of outcome based contract when the outcome can be measure easily, principal being more risk averse, principle has more information and knowledge and higher goal conflict. In the other hand, the researchers suggested the usage of behavior based contract when outcome uncertainty is higher, agent

being more risk averse, agent has more information and lower goal conflict.

Table 1 : Type of contract based on construct from AT

Construct	Type of contract	
	Outcome Based Contract	Behavior Based Contract
Environmental uncertainty	Outcome can be measured easily	Higher outcome uncertainty
Risk aversion	Principal being more risk averse	Agent being more risk averse
Information Asymmetry	Principal has more information and knowledge	Agent has more information and knowledge
Goal Conflict	Higher goal conflict	Lower goal conflict

3. Relational Exchange Theory

Relational Exchange Theory (RET) is based on relational norms. Dwyer et al. [8] proposed a relationship life cycle model that includes relational norm into consideration. The relationship life cycle consists of five phases namely awareness, exploration, expansion, commitment and dissolution. Awareness phase is the phase where one party recognizes that another party is a feasible exchange partner. Then, the relationship evolves to the second phase; exploration phase. This phase refers to the search and trial phase in relational exchange. The third phase, expansion, refers to the continual increase in benefits obtained by exchange partners and to their increasing interdependence. The fourth phase, commitment, refers to an implicit or explicit pledge of relational continuity between exchange partners. The last phase; dissolution refers to the withdrawal or disengagement of the relationship. According to them, norm starts to develop in the exploration phase. This study adapts this relationship life cycle model so that organization can establish relationship based on the norm development, which is the main concern in RET to ensure on-going relationship.

Table 2 shows how theories mentioned above help in resolving the questions and concerns in IT outsourcing. Table 2 shows how questions arose by some researchers which can be answered by adopting a particular theory and the rational behind it. Logan [15] has issued some questions concerning IT outsourcing life cycle. The questions include how to determine the decision to outsource and the

function to be outsourced. Those questions can be answered by adopting TCT where it helps in terms of deciding whether to outsource a function or not and the function that should be outsourced [3,14,18,19,24,30].

Table 2: Questions arise and the supporting theories.

Question arise	Supporting theories and the rationale	Outcome
How to determine the decision to outsource and the function to be outsource [15]	TCT resolve the conflict of whether to outsource or remain the function in house as well as determining which function to be outsourced [3,14,18,19,24,30]	Decision to outsource and the function to outsource
How to choose for appropriate provider for outsourcing [15]	RET helps to resolve the conflict by suggesting relationship development process which will help the process of knowing future provider [3,7,8,19]	Selection of appropriate service provider
How to design and manage the contract that will govern the outsourcing	Agency theory help by designing the types of contract and relationship that is necessary to provide and support an environment of trust [11,14,15,19]	Contract management
How to best maintained the relationship and at the same time ensuring the goal of outsourcing is met [15]	Agency Theory answer the following questions; what can the principle do to encourage quality services and fair treatment by the provider and what can the provider do to keep the user satisfies and at the same time reach its own outcome goals [11,14,15,19].	Monitoring the relationship

Another concern by Logan [15] was how to choose for appropriate service provider for outsourcing arrangement. In this particular question, RET helps by suggesting relationship development process to understand future service provider [3,7,19]. Another question arose includes how to design and manage the contract that will govern the outsourcing. AT helps this issue through designing the type of contract and relationships that is necessary to provide and support the environment of

trust [3,7,8,19].

Next concern includes how to best maintain the relationship and at the same time ensuring the goal of outsourcing is met [15]. Agency Theory is used because it answers this questions; what can the principle do to encourage quality services and fair treatment by the provider and what can the provider do to keep the user satisfy and at the same time reach its own outcome goals [11,14,15,19].

3 Methodology
The objective of the interviews is to explore how organizations in Malaysia conduct their IT outsourcing activities. Such explorations can help others to understand the do' and don'ts while managing their IT outsourcing activities.

The interviews were conducted with 9 organizations. To accomplish the objective, the organizations were asked questions regarding how they performed their initial analysis, how the tender was evaluated, the process of managing the contract and what were done to ensure their service providers deliver what has been promised. The construct from the theories proposed above were also asked to measure their awareness on the existence theories to manage IT outsourcing.

4 Findings and Discussions
From the study, the following findings are presented and discussed. Section one presents the organizational background and section two discussed the IT outsourcing practice.

4.1 Organizational Background
To further identify and to get better insights regarding IT outsourcing practices, 9 organizations were interviewed. The organizations involved in the survey include private and public sector with one multinational company. The managers are in range of 26 -55 years old and have experience in handling IT outsourcing projects. From 9 of the managers, 3 are women. To avoid bias and to protect anonymity, from here onwards, these organizations will be referred to Organization A – Organization H and the managers interviewed will be referred to as manager.

4.2 IT Outsourcing Practices
Based on interview sessions that have been conducted with 9 organizations, analysis as below is reported.

4.2.1 Initial Review.

In current environment, the ideas to develop, upgrade or enhance certain functions come from two approaches; top bottom and bottom up approach. For bottom up approach, the requirements come from end user and IT department itself. The idea will be proposed to top management for approval. If the top management approves the project, the project will proceed. For top bottom approach, the requirement comes from the ministry and top management.

For both approaches, a technical committee will be created that involves IT officer, stakeholder, 2 expertises from subject matter expert and financial officer. The IT officer will discuss detail requirement and advises technical terms to ensure the objective and goals of the project can be achieved.

It is important to set up realistic objectives and goals. In order to ensure the goals and objectives are achievable and realistic, the IT team will conduct a detailed study and compare the project with the previous benchmark projects. Organization A uses the SMART criteria (Specific, Measurable, Attainable, Relevant and Timely) to ensure the goals and objectives are achievable and realistic.

Based on the goals and objective, they will determine whether they should outsource the function or develop it using in-house expertise. The organizations also being asked about the four constructs in TCT in order to assess whether they used it evaluate whether they should involved in outsourcing or not. Based on the practices, many organizations did not perform detailed Cost and Benefit (CBA) analysis. Their reasons of not doing so are because it is time consuming and they have no expertise to do so. CBA are only conducted in brief to estimate the cost that will be involved in certain projects. Based from the objectives and the CBA, the organizations will decide whether to outsource the function or to develop it in-house. Most of the organizations claimed that the cost of performing the function by outsourcing it to other party is higher than performing the function in-house. However, due to some reasons and the benefit outweigh the cost, the project is continued. Organization A however, performed detail CBA. For them, CBA is a standard procedure in order to ensure viability and accountability. The projects will not be continued if the cost outweighs the benefit. Therefore, the team that suggested the project must come up with other alternatives.

The second construct of TCT requires the organizations to determine the asset specificity of the project. According to the theory, the asset specificity must be low in order to achieve efficiency in IT outsourcing. Most of the projects involved low asset specificity because they are standardized project. According to the third construct in TCT, threat of opportunism might exist especially if there are only a small number of service provider exist. However, in current situation, many and many service providers exist and ready to serve organizations with their expertise. Moreover, the projects were standardized. Therefore, the threat of opportunism rarely exists in current situation.

The last construct in TCT explain about uncertainty that involves the usage of high technology in projects. The organizations admitted that they need service providers that are able to provide them with latest technology. Organization C addedd, the usage of technology will allow them to be ahead of time. This situation however leads to high uncertainty. However, this situation is overcome with the usage of contract to reduce the uncertainty.

During the interview, some of them admitted never heard of the theory before. Some admitted the usage of the theory is too book oriented and not suitable in current practices. From the analysis, even though the cost of outsourcing, asset specificity, threat of opportunism and level of uncertainty is low (due to the usage of contract), that is not the main reasons why they involved in IT outsourcing. All the organizations mentioned that the reasons to outsource particular functions are because there is no capability and expertise to do it in-house besides time constraint especially for the projects that come from top bottom approach that requires the projects to be finished as soon as possible. Organization E also claims that their infrastructure is not up-to-date. Therefore, it might cost more to buy new equipment and hire new staff as compared to outsource it to third party. Organization I explains that they only outsourced a particular function if they have high budget allocation. With low budget allocation, they will only consider developing it in house.

Before outsourcing certain functions, another committee will be created. The committee involving IT officer and the user will discuss upon terms of reference. All the specifications and requirements come from the user. The IT officer will be in charge of suggesting and controlling the technical parts. All the organizations claimed that the function has been fully understood before it is delivered to the third party.

All organizations agree that the usage of multi-vendor depends on the complexity of the projects. For Organization A, it only uses single vendor for

their projects to avoid the issues of incompatibility and compromise on confidentiality of data. For other organizations, the usage of multi-vendor will reduce the dependency on one party thus reduce risk in IT outsourcing. Organization C added that the usage of multi-vendor will allow other service provider to serve as a back up. However, they agree that it is harder to manage multi-vendor as more works are required to ensure coordination and integration of the project. To reduce the risks that might derive by the usage of multi-vendor, the organizations agreed it should be decided early so that early planning can be done thus they can meet and plan their work together.

All of the organizations agree that it is important to establish a good relationship with the service provider. For them, good relationship will allow flexible communication and ease the process of information and technology transfer. Good relationship helps to provide effective and efficient technical support to ensure daily operations are running smoothly even when there is IT service breakdown. Based on personal experience, organization E believes that organizations and service provider must work very closely so that any problems can be solved early. Bad relationship will always lead to dispute. However, organization B has a different perception. For them, the relationship should be at par. The organization must establish good relationship with the service provider but at the same time cannot be so close to ensure any confidential and secret information are not released to the service provider.

From the findings, it can be concluded that organizations performed initial research before they engaged in IT outsourcing activities. The initial research includes the process of determining the goals and objectives, the cost involved, terms and conditions, the usage of multivendor and the type of relationship they would established with their service providers. None of the construct from TCT has been used to aid in the decision to outsource. The organizations however stress their decision to outsource are mainly because they have no capability, no expertise and time constraint. The organizations will then used the information captured from the initial review phase and used it to prepare the tender. Once the proposal is received, it will be evaluated against the organizations needs and requirements.

4.2.2 Tender Evaluation.
Once the proposals are received, a team from administration department will be responsible to open the proposals and prepare it for blind review.

The technical committee created earlier will be responsible in conducting the technical review. Organizations also create financial committee team that will be responsible in conducting the financial review.

From the observation, two methods have been applied by the organizations in order to come up with short-listed candidates. The first method is to perform three phases review. The first phase is to review the completeness of the mandatory documents and failure to do so will lead to rejection. The second phase is to review technical compliant. Organizations that did not meet the technical terms will be eliminated. The remaining of the service provider will be evaluated based on weighting method.

The second method is the financial committee prepare for acceptable price range. Any service provider that suggests lower or higher cost than the calculated price range will be eliminated.

From both methods, the remaining of the service provider will go through a thorough selection process. Among the things considered during the selection process include:

i. *Service provider's experience with the function to be outsourced.* Lack of experience may lead to late recovery and delay is something that cannot be tolerated especially for international organizations. However, organization B mentioned that a service provider's experience depends on the project. A service provider with experience is only considered important for critical projects that involve costly and sensitive issue.

ii. *Service provider' reputation and performance.* All organizations will select a service provider with good reputation and performance. Based on previous records, any former service provider that failed to perform in previous projects will also be eliminated. Organization B added that this factor will become more important if the requirements come from the ministry.

iii. *The personnel assigned.* Some organizations pay attention on the personnel assigned for the job. They have the right to request personnel with experience as inexperience personnel might cause delay. However, according to Organization B, they normally do not pay much attention to the personnel as it is time consuming.

iv. *Service provider's access and ability to adopt to latest technology.* All the organizations agree that it is important for the service provider to have access and ability to adapt to latest technology. This is to ensure the product is compatible with the ever evolving technology. Again, quoting Organization C stressed that a service provider's initiative to

adopt to latest technology will allow the organizations to be ahead of time.

v. Service provider's practices of standards, policies and procedures. Almost all organizations will select a service provider that practices good standards, policies and procedures. According to organization A, any certification would provide comfort of an organized approach towards work. Organization E added that the lack of certification among service providers is one of the factors that lead to project failure. Organization I however did not prioritize this factor because they feel that their projects are not complex and does not require expert to help them.

vi. Service provider's practices of security. All organizations ensure their future provider practices good security standard to protect the confidentiality of the data. The service provider will be asked to sign an agreement as a part of security measure.

vii. Business Continuity plan. Half of the organizations required the service provider to be responsible for Business Resumption Plan. These organizations mentioned that this element should be stated in the contract. Organization A added that this element is important because it has a significant impact on the organization's daily operations especially when IT services are interrupted and need to recover fast. For Organization E, this element has not yet been practiced but in the planning to be implemented and included in the contract.

viii. Financial stability. Organizations consider the service provider's financial stability. Organization E added that financial stability is the biggest risk in dealing with service providers. It is important to check their financial stability to prevent future problems such as not having sufficient financial capabilities and the possibility of the service provider to run out of business.

ix. Service provider usage of subcontractors. From the findings, a service provider's usage of subcontractors was not considered as important matter. This is because the organizations claimed that they should not interfere with that matter. Organization I added that it does not matter how they do it or with whom they do it; the most important thing is they get the expected results. Contradict from the literature, the involvement of subcontractors will increase risks especially when organizations were not informed [12]. The organizations were then asked about the security concerns with subcontractors and the probability of them revealing classified information because no security measure were undertook between organizations and subcontractors. Realizing the

fact, some of the organizations agreed that they should at least know with whom they are dealing with. Organization I continued that this matter will be taken seriously in the future. Sadly, some organizations still with their decision.

x. Site visit. For organizations A and C, site visit is a basic verification exercise to know their service providers' working environment. Organization E mentioned site visit as best practices and through it, the organizations can bring the useful knowledge into their organizations. For other organizations, site visit practices depend on the projects and will only be performed if the project is large and the organizations have never worked with that particular service provider before. For most of them, performing site visit will increase their trustworthiness towards their prospect service provider.

Other criteria being considered in selecting service provider includes response time towards any queries and the need to do proof of concept especially for new technology. Some organizations requested the prospect service providers to come up with the prototype which will then be evaluated.

After the review is done, the list of short-listed candidates from technical evaluation committee will be compared with the list of short-listed candidates from financial committee. From the analysis, the list of the short-listed candidate will be forwarded to the top management or the ministry. From the observation, most of the time, service provider that proposed the lowest cost will be selected due to monetary constraint. According to most of the organizations, funds is their biggest constraint to get the best service provider as some of the providers that propose lower cost cannot deliver the job accordingly. As the consequences, many projects did not complete successfully. However, according to Organization F, they cannot blame the top management or the ministry. Organizations themselves should be responsible to review and only forward the best candidates for thorough review.

Mapping the current practices with the relationship life cycle model by Dwyer et al. [8] has yielded interesting result. Some organizations did follow the relationship life cycle even without them realizing it. From the model, the awareness phase is when one party recognizes another party as a feasible exchange partner. From the mapping, this happens when the organizations have selected the short listed candidate for their service provider and recognized those lists as their future service provider.

The second phase; exploration, can be refers to

the phase where organizations started to evaluate their short listed candidate. This is supported when Dwyer et al. [8] mentioned that this phase include the evaluation of the other agent. Dwyer et al. [8] refers the third phase; expansion, as the continual increase in benefits obtained by exchange partners and to their increasing interdependence. From the mapping, in current situation, once the service providers have been selected, a contract negotiation will take place. This explains the increasing interdependence between organizations and service provider. From the analysis, this is the phase where organizations bargain for best technology and service and at the same time trying to reduce price. This mapped with the continual increase in benefits obtained by exchange partners.

According to Dwyer et al. [8], the commitment phase refers to implicit or explicit pledge relational continuity between exchange partners. Pledge in current situation refers to a contract rewarding that tied organizations and service providers into a commitment. The last phase, dissolution is the phase of the withdrawal or disengagement of the relationship. However, according to Dwyer et al. [8], there is not much known about the disengagement. However, the findings of disengagement in current situation (explain in termination process, Section 4.2.4) might lead to useful outcome.

From the tender evaluation process, it can be concluded that only short-listed service providers will be reviewed thoroughly. The short-listed candidates' experience, reputation and performance, access and ability to adopt to latest technology, practices of security, standards procedure, financial stability, business continuity plan, personnel assigned and the usage of subcontractors were then be evaluated. After the evaluation process, service providers were selected. A letter will then be issued to inform the providers that they have won the tender. Before the contract is signed, contract management process will take place.

4.2.3 Contract Management.

According to Agency Theory (AT), the principal agent relationship can be described using metaphor of a contract. The focus is to determine the most efficient contract governing the principal agent relationship [6]. Principal is this study refers to organizations and agent refers to service providers. Looking at the environmental uncertainty, AT suggests the usage of outcome based contract if the outcome can be measured easily. Based on the finding, some of the project can be easily measured

than the others. Therefore, outcome based contract should be chosen to govern the relationship. In the case where organizations being more risk averse than service provider, organizations should select outcome based contract and vice versa. In current situation, most of the organizations being risk averse by transferring the risk to service provider. Therefore, they should select outcome based contract to govern the relationship. However, from the findings, this is not the case whereby organizations select and signed for behavior based contracts.

In some cases, organizations have more knowledge and information regarding the project to be outsourced from experienced and by sharing knowledge from other organizations that have performed the functions before. In some cases, organizations also have information regarding their prospect service provider based on experienced of previous project and information from other organizations. This situations lead to information asymmetry in favor of organizations. Therefore, based on AT, outcome based contract should be signed. In some cases, service providers have more knowledge based on their experienced developing the same project before. Therefore, organizations should select behavior based contract as information asymmetry is in the favor of the agent (service providers).

Goal conflict can be operationalize by type of relationship. According to AT, organizations that select partnership type of relationship will have higher level of partnership and lower conflicts in their goals. Therefore, they should sign for behavior based contract. From the analysis, some organizations choose buyer/seller type of relationship while some choose partnership type of relationship. However, all of them signed for behavior based contract.

Basically, all the organizations signed for fee-for-service contract (behavior based contract) even in the case where they should adopt outcome based contract. The findings suggested the organizations did not adapt AT into considerations while choosing the right type of contract to govern their relationships. Therefore, they face difficulties in managing their service providers. Opportunistic behavior, service debasement and dispute were among the problem faced by them. Without considering the type of contract based on construct suggested in AT, the organizations went to the other phase in contract management; the contract negotiation.

From the analysis, different organizations appointed different officer to perform the contract

negotiation. Therefore, it can be concluded that the personnel involved in contract management phase are from top management, Purchasing, Finance and Treasury, Internal Audit, Human Resources, IT officer, officer in charge, user and legal adviser.

The contract negotiation is conducted to discuss on the terms and conditions, the need to reduce pricing as much as possible as well as scope coverage. They also discussed the payment mechanism. From the findings, the payment mechanisms include the payment based on percentages of the total contract amount after service provider completes pre-defined milestones and single payment at the completion of the project.

Some organizations prepare their own contract. Organization B for example designed template contract to ease and minimize the process of amendment. For the others, they use contract prepared by service provider. They, on the other hand mentioned that they have no problem dealing with the contract prepared by the service provider except for the first timer service providers. All organizations use internal legal advisor to help review the contract to minimize legal/statutory risk and to avoid unfavorable terms and clauses.

Once both parties agree upon the matters, a letter of award will be sent to a service provider as a sign that it has been officially selected as their service provider. Contract will be signed and the service providers will start their job and organizations will monitor their work.

From the analysis, the organizations claimed that the hardest parts in contract management are as below:
1. to ensure the projects follow the scheduled progress timeline and scope,
2. to negotiate the price and how payment will be made,
3. to calculate penalty,
4. to define service level.
5. to meet the legal advisor requirements, and
6. to implement what is written in the contract.

Based on current practices, it is not a surprise to see the above findings. Without the right type of contract, it is easy for the service provider to behave opportunistically, thus causing problems to organizations.

In summary, during contract management phase, the organizations negotiate the terms and conditions, pricing mechanism and scope coverage. Omitting some important elements in contract management, it is not a surprise to see when organizations faced problems during the later stage of IT outsourcing. Claimed implementing what is written in the contract as the hardest part in the projects, organizations then monitor the work of their service provider to ensure that the requirements in the contract are met.

4.2.4   Project Roll-on.

After the contract is signed, the organizations will perform an on-going monitoring to the ensure service provider delivers and performs accordingly. All organizations have a steering committee that is responsible in monitoring and reporting the progress of the service provider to their top management. Meetings will be held at least twice a month. During the meeting, organizations and the service provider will communicate to solve any issues.

Before the end product is delivered to the organizations, it must go through User Acceptance Test and Performance and Stress Test to measure the capability of the products. According to the organizations, once those tests are successfully completed, the project can be considered a success.

For some projects, a maintenance phase will take place. The same action will be performed to ensure the service provider comply with the agreements in the contract. For service providers that failed to perform, they will be punished according to the penalty clause stated in the contract. If problem still persist, their contract will be terminated. However, not many organizations enforce the penalty clause. They will discuss upon any problems until they get the respective results.

Based on the analysis, the termination process takes place if one of the following events occurs:
1. *Contract comes to an end and project completed successfully.* The projects are completed and in-house personnel continues performing the job.
2. *Changes in requirement.* For some projects, termination does not occur because service providers trigger problems. Changes in requirement for example acquire organizations to find new solutions, new technology and sometimes new service provider. In this case, the project is terminated.
3. *Breach of contract.* For some projects, the service provider failed to perform accordingly and failed to deliver what has been promised. Even after penalty takes place, the service provider shows no improvement. Therefore, the project will be terminated.

As mentioned earlier, the findings of termination process can be a useful insight for dissolution phase in relationship lice cycle model by Dwyer et al. [8]

since only a little is known about disengagement. However, further investigation might be required.

During project roll-on, many organizations claimed that service providers that were selected based on lowest price failed to perform adequately. Therefore it is important to realize that the intention to save cost in the beginning of the projects might not be worth if the organizations have to bear the consequences at the end of the projects.

Organizations also bear other problems such as opportunistic behavior, dispute and service debasement believed to be the consequences of not adapting AT into practices. By adapting AT, it is supposed that organizations can focus on identifying situation in which the organizations and the service providers are likely to have conflicting goals and then describe the management mechanism that will limit the service provider from behaving in their own interest.

5 Conclusion

IT outsourcing is not a new phenomena. Yet, it is still not without risk. Using an exploratory method, this study is intended to review current practices to assess how organizations in Malaysia manage their IT outsourcing projects. Besides reviewing best practices, this study also focuses on the current practices based on theories in IT outsourcing, namely Transaction Cost Theory, Relational Exchange Theory and Agent Theory.

The findings reveal that constructs from theories mentioned above did not be taken into practices. Organization also claimed those theories to be book oriented and not suitable for current IT outsourcing practices. However, the findings have revealed that organizations that did not include the theories into practices have faced problems during the later stage of their IT outsourcing implementation.

Other interesting findings include the results show that some organizations did not conduct CBA thus limiting their ability to predict the cost of the projects as well as the pros and cons involving in IT outsourcing activities. During selection of service provider, many organizations decline their right to know their subcontractors. Claiming it should be the responsibility of their service provider, these organizations failed to realize the risk they are facing with.

Some organizations claimed that even though they have done thorough review of service provider's background, monetary constrains lead to the choices of unsuitable service provider. This finding should influence other organizations not to pick their service provider based on lowest prices.

This study reveals that when organizations made the selection based on lowest price, they encountered many problems.

This study has yielded many important findings. The adaptation of theories in IT outsourcing practices cannot be taken lightly as this study has revealed the importance of doing so. Some of the best practices also being omitted thus leading to many problems in IT outsourcing. Since, the IT outsourcing trends would continue, the framework that is theoretically and empirically validated should be developed so as to ensure better IT outsourcing management in the future.

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