PRIVATE FINANCE INITIATIVE (PFI) / PUBLIC PRIVATE PARTNERSHIP (PPP) IN MALAYSIA CONTEXT

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ABSTRACT

Competitive global environment of today has led governments around the world to seek new ways to finance projects, build infrastructure and deliver services. The adoption of PPP/PFI is to bring together the strengths of both sectors, public and private, to facilitate the delivery of projects and services. However, each country uses different type of mechanism in procurement design of projects based on the needs and nature of the development project. PPP/PFI is still new in Malaysia especially in HLI development. From the lack of knowledge on the mechanism in PPP/PFI procurement, criticisms on the early stage of development are becoming more and more significant. Thus the objectives of this paper it to study the mechanisms of PPP/PFI in Malaysia by identifying the projects implementing PPP/PFI especially in the context of campus development in HLI. Further on to that the constraint and challenges of PPP/PFI implemented in Malaysia was studied as well. This study was carried out through the adoption of qualitative method and the review of past findings and citations from reading materials on the similar research. The elements and mechanism of PPP/PFI is being collected via interview session with personnel from Unit Kerjasama Awam Swasta (UKAS) which is responsible for public-private procurement in Malaysia. Personnel from private company involve in PPP/PFI is included as respondent for interview as well. Data was analyzed based on interview carried out together with example of case study. Research analysis used is interview analysis, content analysis and SWOT analysis. The outcome of research is Built-Lease-Maintain-Transfer (BLMT) mechanism being used in most of PPP/PFI campus development project while financial aspect of the campus development is the main constraints and challenges faced by both public and private sector for PPP/PFI procurement.

Keywords: Public Private Partnership (PPP), Private Finance Initiative (PFI), Mechanism, Higher Learning Institutions (HLI), Constraints and Challenges.

1.0 INTRODUCTION

The term ‘public-private partnership’ appears to have originated in the United States, initially relating to joint public and private sector funding for educational programs and then in the 1950s refer to similar funding utilities, but became into wider use in the 1960s to refer to public-private joint ventures for urban renewal (Yescombe, 2007).

In Malaysia context, PPP is an arrangement where public and private sectors work together in implementing economic projects. It focuses on value for money approach and timely implementation and efficient facilities management (Prime Minister Department, 2009). There has been growing pressure to increase the quality of development projects by the construction industry in Malaysia since the beginning of the 1980s.

Public-Private Partnerships (PPPs) are used in meeting a wide variety of public needs, to the great satisfaction of the vast majority of the users of this approach. The PFI programme was announced in the Ninth Malaysia Plan in March 2006, aimed at facilitating greater participation of the private sector to improve the delivery of infrastructure facilities and public service (Prime Minister Department, 2009).

2.0 THE ISSUES
For many, the governments laden with debt or even some who have little money to start with, PPPs are the only way to fulfill the national development agenda (Loh, 2011). It shows the necessities of cooperation between government and private sectors in coping with finance aspects in development.

Constraints and challenges faced by Malaysia in the implementation of PPP are much considerable. Local financing bodies are still relatively inexperienced and skeptical in providing project financing for PFI projects for various reasons. One of these might be the involvement of huge amount of capital invested for a long concession period (Takim et. al., 2008).

PFI projects are set to boost the development of public HLI in recent years.

The government of Malaysia has realized that public universities were consuming a large share of the public revenue without a corresponding return for investment. As a result, government is pressuring the public universities to be self-funding. A PFI deal was signed for the construction of additional six campuses of Universiti Teknologi Mara. The deal is expected to save the government RM 500 million (Nordin, 2010).

Nordin (2010) said that, under the PFI deal, the government would only spend up to RM 300 million per branch campus in contrast to the traditional one – of payment of RM 350 to RM 400 million to developers. The implementation of PPP/PFI to the development of HLI will save the cost of construction and also in the meanwhile enhance university access to students. “Our objective is to enhance university access to student and late completion of projects will hinder this”. Further on to that, he also states that, “Studies have shown that every RM 100 million spent on higher education will yield a four – fold return in economy activity” (Nordin, 2010).

In the case of the PFI implemented under the Ninth Malaysia Plan, criticisms include that the PFIs being implemented were not PFI in the true technical sense of what a PFI should be (Khairuddin 2009). Takim et. al., (2008) suggest that they were ‘rushed-through’ and detailed planning was lacking. PPP/PFI is still new in Malaysia especially in HLI development. From the lack of knowledge on the mechanism in PPP/PFI procurement, criticisms on the early stage of development are becoming more and more significant.

From the analysis, previous research and studies on PPP/PFI started at the year of 1995. However, research at the mid 1990’s are still scarce as the procurement of PPP/PFI are not widely recognize and used then. Research on PPP/PFI started to escalate at the year of 2003 and continued on till now. Various aspects of PPP/PFI are being discussed and studied at the period of 18 years starting from 1995 till 2013. However, PPP/PFI in education system especially in infrastructure of HLI is barely adequate. Thus, researcher is pursuing a research which may benefit the future generation by identifying the mechanism of PPP/PFI used in university campus development.

There two questions arise in this study, first: What are the mechanisms of PPP/PFI used in campus development in Malaysia? And second What are the constraints and challenges of implementing PPP/PFI in HLI of Malaysia? Therefore, the objectives of the study:

2.1 Research Objectives

1) To study the mechanisms of PPP/PFI in campus development in Malaysia.
2) To identify the constraints and the challenges of the implementation of PPP/PFI in HLI of Malaysia.

This study focuses on the application of the PPP/PFI approach in details especially in terms of higher education campus development. This study was undertaken to investigate and study all important elements in PPP/PFI thoroughly.

In addition, this study also evaluates the constraint and challenges of the use of PPP/PFI in its efforts to improve public property in the country. To understand well the mechanism of PPP/PFI, the study focused on the projects undertaken in higher education campus development.

3.0 METHODOLOGY

In general, this research consist a mixture of two approaches namely: the studies of PPP/PFI from previous studies and the study of PPP/PFI from real case study. The main aim of the first approach was to get an overview the elements in PPP/PFI as a whole together with some examples of projects undergone in the context of Malaysia which has been a research by previous researcher. As for second approach, the main purpose was to
understand the mechanism used for PPP/PFI in Malaysia especially in the context of HLI in Malaysia. Besides the mechanism, the constraints and challenges may also be obtained prior to the study of case study.

3.1 Research Design

In this research, qualitative approach is used in achieving the objectives. Qualitative research is good at answering 'How?' and ‘What?’ questions (in contrast to the ‘Whether’ or ‘If’ queries commonly addressed by quantitative research) (National Institute for Health Research, 2012). From the research question of this research, it focuses on “what” instead of ‘whether’ or ‘if’, thus, qualitative approach is suitable in gaining the correct answer to the research question and in conjunction with that, attaining the goal to this research.

The researcher has dwelled into the PPP/PFI framework by understanding and studying of these variable models. Further on, in-depth interviews on PPP/PFI practitioner are conducted in order to obtain further understanding in regards to PPP/PFI in Malaysia. Besides, case study on on-going campus development is also used in this research.

The areas of research have been targeted at new campus development that will use PPP/PFI as a procurement method. The main stress of research will be on the new campus development established in Malaysia. However, the specific name and location of campus will not be named throughout the research due to the privacy and sensitivity of the data obtained.

3.4 Research Population and Sampling

Generally, the research population involve was of those who have prior knowledge in regards to PPP/PFI. Personnel to PPP/PFI procurement, practitioners in the field of privatization such as facility managers, developers and project managers are the people that are being identified as interviewee for various details on PPP/PFI.

In this research, the sample includes campus developments that are being carried out in Malaysia currently. Sampling was taken on campus development that uses PPP/PFI as a procurement method in its development. This sample may include personnel from both private and public sectors. They may be directly or indirectly involved in the procurement of PPP/PFI in providing campus facilities to HLI.

Data collection via qualitative approach in this research was through semi-structured interview questions and also from the review of literary materials. Interview session by face-to face interviews for all respondents.

Semi-structured interview questions were used as the instrument in this approach. Then, by reviewing the literature, the researcher will have the ability to source the information out and hence study them thoroughly. Data collected in this section was of a mixture of primary and secondary data. The primary data in this study was the information collected by way of interviews while secondary data was collected from the review of literature.

Research instruments used in this section by researcher were of semi-structured interview questions. The semi structured interviewing form was designed to fit ten (10) open-ended questions to obtain professional opinions from the selected group of respondents in order to gauge an accurate conceptual understanding on the PPP/PFI in Malaysia especially in terms of campus development.

The method used in analyzing the data is content analysis. Besides, SWOT analysis is also carried out to carefully sort out the strength, weakness, opportunities and threat encountered in both PPP/PFI mechanism and constraints and challenges.

4.0 UNDERSTANDING THE PPP / PFI MECHANISM

Governments sought to encourage private investment in infrastructure, initially on the basis of accounting fallacies related to the fact that public accounts did not distinguish between current and capital expenditure. In particular, it has been argued that models involving an enhanced role for the private sector, with a single private sector organization taking responsibility for most aspects of service provision for a given project, could yield an improved allocation of risk, while maintaining public accountability for essential aspects of service provision. Such models of service provision are typically described as public-private partnerships (PPPs) (Quiggin, 2005).

4.1 An Overview of PPP/PFI in Global Context

It should be mentioned that there are a number of alternative names for PPPs which includes, Private
Participation in Infrastructure (PPI), a term which seems to have been coined by the World Bank. Besides, there is also Private-sector Participation (PSP), also used in the development – banking sector (however neither PPI nor PSP are limited to the definition of PPPs). As for North America, P3 is used. Australia uses the term Privately Finance Projects (PFP). In some cases where P-P Partnership is used, it is to avoid confusion with PPP meaning ‘purchasing power parity’, a method of comparing currency exchange rates to reflect the real costs of goods and services in different counties. And last but not least, Private Finance Initiative is used by Japan and Malaysia. This term originate from Britain (Yescombe, 2007).

4.2 PPP/PFI Concept

The overall aim of PPPs/PFIs is to structure the relationship between the parties, so that risks are borne by those best able to control them and increased value is achieved through the exploitation of private sector skills and competencies (Crauser, 2003)

PPP involves the transfer to the private sector the responsibility to finance and manage a package of capital investment and services including construction, management, maintenance, refurbishment and replacement of public sector assets such as buildings, infrastructure, equipment and other facilities, which creates a standalone business. In these PPP projects there is a contract for the private party to deliver public infrastructure-based services over a long period of time. The private party will raise its own funds to finance the whole or part of the assets that will deliver the services based on agreed performances. The public sector, in turn, will compensate the private party for these services. In some PPP projects, part of the payments may flow from the public users directly (Prime Minister Department, 2009)

4.3 Principles in Adopting PPP/PFI Approach

Based on the PPP/PFI guideline created by the Prime Minister Department Malaysia (2009), a PPP/PFI proposal will only be considered if there is a need on the part of the Government for the project after taking into account the benefits/probity as a whole in terms of, inter-alia:

1) Socio-economic impacts
2) VFM and cost savings to the Government
3) Quick delivery of the project and service enhancement
4) Increased level of accountability, efficiency and effectiveness

4.4 Key Features and Characteristic

The PPPs guideline implemented in Malaysia states a few key features and characteristic to determine the nature of financing procurement. Some of the key features/characteristics of PPP/PFI projects are as follows (Prime Minister Department, 2009):

1) Relationship between public and private sectors is based on partnership.
2) Public sector procures specified outputs or outcomes of a service for a concession period.
3) Private sector determines the required inputs to achieve the specified output and the private sector is given latitude to introduce innovation into their designs and development to reduce overall costs.
4) Payment for services is based on predetermined standards and performance.
5) Promotes ‘maintenance culture’ where the concessionaires will be responsible for the long term maintenance of the assets throughout the operational tenure agreed upon.
6) Integration of design, construction, finance, maintenance and operation – total package.
7) Transfer of assets at the end of the concession period becomes an option to the Government.
8) Optimal sharing of risks whereby risk is allocated to the party who is best able to manage it; and
9) Whole Life Cycle Costing (‘WLCC’) whereby PPP projects are usually awarded based on lowest total cost over the concession period compared to lowest construction costs under the traditional procurement method-a paradigm shift in the form of procurement objectives.

4.5 Structure of PPP/PFI Project

Based on the PPP guideline created by the Prime Minister Department Malaysia (2009), structuring a PPP/PFI project involves bringing together relevant private sector parties with clearly defined tasks and risks of the project. The main parties would include:

1) The Special Purpose Vehicle (SPV) created specifically for the project.
2) Financiers.
3) Construction contractor.
4) Facilities management operator.
5) The public sector (procuring authority).

4.6 PPP/PFI Models

A study by Ali Khan, Kamidi and Idrus (2011) states that during Malaysia 8th plan, Malaysia has adopted various form of PPP/PFI in Malaysia’s government from the distinct modes of privatization or PPP.

The PPP/PFI models can be classified into five broad categories in order of generally increased involvement and assumption of risks by the private sector. The five broad categories are:

1) Supply and Management Contracts
2) Turnkey contracts
3) Lease
4) Concessions
5) Private ownership.

Each PPP/PFI option implies varying levels of responsibility and risk to be assumed by the private operator. Increasingly, contracts are becoming hybrids, adopting features of several contracts to reflect the best local requirements. Different PPP forms are more readily adapted to particular sectors or project types and have been used more extensively in these contexts (Asian Development Bank, 2012).

4.7 Value for Money (VFM)

The concept of value for money (VFM) is the fundamental reason for most PPP/PFI projects to be attractive in many developed and developing countries. VFM is defined as the optimum combination of whole-life costs, benefit, risks, and quality (fitness for purpose) to meet user’s requirements at the lowest possible price’ (HM Treasury, 2003; Grimsey and Lewis, 2005; English, 2006 and Hong Kong PPP Guide, 2006).

4.8 Key Performance Indicator (KPI)

KPIs in a context of PFI and infrastructure delivery may be defined by Ismail (2009) as “the organized and characterized KPIs through careful and systematic discussion, weigh and examination, where these KPIs take advantage of public criticism about the partnership between the government and private concessionaires as well as attain the intention of enhancing economic and social structure from PFI.

In conjunction with PPP/PFI for public infrastructure projects, KPIs for PPP/PFI allow greater public participation in the formation of those KPIs where it is anticipated that these KPIs assist in making PPP/PFI more significant to public needs and requirement instead of beneficial mostly to profit-driven private concessionaries (Ismail, 2009).

5.0 PPP/PFI in MALAYSIA

Using PPP/PFI in pursuing national development must be seen in the context of the Government’s broader policy priorities of energizing the private sector as the engine of national economic growth and, at the same time, improving public delivery and services. Strong sustained growth is required to maintain the trajectory towards Vision 2020. In order to achieve this, the success of the 9th Malaysia plan rests mainly on maintaining double digit growth rates for private investment. (Yakcob, 2006).

5.1 PPP/PFI Projects in Malaysia

5.2 Medical City @ Enstek

The project is joint ventures effort which takes place between two parties that are TH Properties Sdn. Bhd. and Negeri Sembilan State Development Corporation. This effort allows both parties to share the burden and the resulting profits of the project. TSR Capital Bhd. together with TH Properties Sdn Bhd, is the Special Purpose Vehicle that finances the Medical City Development (Karim, 2011).

5.3 Funding in Education Sector

In 1960s and 1970s, most of the expansion of education was financed by increased public expenditure on education, which rose in relation to national income, and public expenditure as a whole. In order to relieve the government from high burden in funding, alternative procurement such as PPP/PFI came in handy in recent years (Bolaji, 2009).

5.4 Scenarios of PPP/PFI in HLI in Global Context

The most common use of public-private initiatives in higher learning is the private sector financing of public higher learning infrastructure (classrooms, labs, dormitories, etc.). Under this type of partnership, the public sector continues to manage and deliver the core academic activities (teaching, research), while the private sector builds and
operates the infrastructure under a long-term arrangement (Asian Institute of Technology, 2009).

A number of countries have implemented public-private partnership (sometime called private finance initiative - PFI) such as the Netherlands, UK, USA, France, Canada, Australia, Mexico, or South Africa. There is evidence that this setup can lead to more efficient management and a reduction of costs, as well as access to larger sources of funds to finance the expansion of higher learning (Asian Institute of Technology, 2009).

Based on Asian Institute of Technology (2009), India is currently strongly encouraging the private sector to get involved into higher learning through PPPs, as a way to significantly augment enrollment in the Indian higher learning sector.

5.5 Importance of PPP/PFI in HLI

Owing to constrained investment, the education sector in Malaysia is unable to cope with growing market demand and global competition (Digital Learning, 2009). Malaysia has been reported to be the preferred country for higher education by international students. Based on Lim (2009), Malaysia was ranked 11th most preferred study destination. The conclusion was based on the fact that 69,154 international students from more than 150 countries have chosen Malaysia as the country they wanted to study in. Thus, an increase of private investment is imperative to expand infrastructure and provide greater access to quality higher education (Digital Learning, 2009).

Besides that, one of the reasons governments have realized the need for involving the private sector is because of the escalating costs of developing higher education (Nagra, 2005).

Further on, if used correctly in HLI would help to introduce private sector capital and management expertise into development of other public services and also deliver better VFM than conventional procurement would achieve (KPMG, 2009).

With PPP/PFI procurement, facilities provided would be more innovative as expert from the private sectors are brought in building a better environment for the students.

6.0 RESEARCH ANALYSIS AND DISCUSSION

The analysis is divided into two (2) parts, that is to research analysis phase one (1) and research analysis phase two (2). The phase one of the research analysis consists of the interview analysis for PPP/PFI. The first phase will give an overall in-depth view of PPP/PFI procurement practiced in Malaysia. It is the summarized outcome of all interviews with 4 expert respondents. Then, the second phase will be the discussion based on research question. In discussion, SWOT analysis is also used to further analyse the elements of the research question in order to fully achieve the objective of the research.

Researchers has successfully identified 4 respondents that are from 3 different organizations. They are from representative from Unit Kerjasama Awam Swasta (UKAS), Menang Corporation, and also Global Facility Management. All respondents are chosen based on their speciality and involvement in PPP/PFI project. Summary of the background of each respondent is tabulated in Table 1.

6.1 Discussion on Research Question 1

RQ 1: What are the mechanisms of PPP/PFI used in campus development in Malaysia?

Based on the answers given by the all the interviewees, it is found that R1 and R4 feels that the frequently used PPP/PFI mechanism in Malaysia is Built Lease Maintain Transfer (BLMT). This is supported by the newly awarded concession agreement of Zelan Bhd and International Islamic University Malaysia (IIUM). Under the agreement, the project would be on a Build-Lease-Manage-Transfer (BLMT) basis by way of private finance initiative (PFI) scheme (The Star, 2012).

However, R4 also mention that BOT is used in PPP/PFI as well. He however stressed that, BOT is more to highway concession rather than campus development. R4 also feels that PFI in Malaysia has different structure and elements. On the other
hand, R2 and R3 did not give the exact answer on the type of mechanism used in PPP/PFI. Response from R2 and R3 are more on the process and components of the mechanism only.

From the outcome of the analysis, it is found that the understanding on the mechanism of PPP/PFI is widely different. However, there is similar answer between R1 and R4 which is BLMT. BLMT is used as the mechanism as it involves maintenance (M) that may help the government in maintaining the property. This is important as this concession will last for a period of 20 to 30 years. The public sector also entrusts the concession company with the operation and maintenance of the infrastructure such as schools and hospitals. The public sector can then focus on delivering their core services of education and healthcare (Lembaga Jurutera Malaysia, 2007). In this case, the core business is service of education. Based on the report by National Audit Office (2008) the key advantage for PPP/PFI project is a planned and consistent approach to maintenance, as the contractor is under an obligation to maintain the asset in good condition until the end of the contract 20 period and, if maintenance is not undertaken, it risks being penalized for not meeting agreed availability and performance standards.

The mechanism also consist of some main player such as the concessionaire, the government sector (UKAS), and also the end users (university). Besides, there are also important components such as VFM, KPI, WLCC, and risk allocation that make PPP/PFI mechanism unique compared to traditional procurement method. Such elements will be discussed in case study section. The mechanism can also be depicted in Figure 1.

![Figure 1: Simplified PPP/PFI Mechanism](image)

### 6.2.1 SWOT Analysis on Mechanism of PPP/PFI

SWOT analysis on mechanism will be explained by Table 2

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Involves maintenance which helps to keep property in good shape during the concession period.</td>
<td>• Not all parties are clear on the terminology of the mechanism.</td>
</tr>
<tr>
<td>• UKAS as a mediator to regulate all process and discussion in forming the concession agreement.</td>
<td>• Mechanism is still in early stage and needs long time to be well established.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Threat</th>
</tr>
</thead>
<tbody>
<tr>
<td>• To develop customized PFI mechanism and model.</td>
<td>• Confusion on the types of mechanism that should be used in the PFI procurement.</td>
</tr>
<tr>
<td>• Exploration on overseas PPP/PFI mechanism to develop a better understanding PPP/PFI procurement while applying suitable technics in Malaysia.</td>
<td>• Changes in the mechanism due to immature structure may cause unwanted loses for both public and private sector.</td>
</tr>
<tr>
<td>• More rooms to educate future investors on PPP/PFI</td>
<td></td>
</tr>
</tbody>
</table>
Discussion on Process of PPP/PFI Procurement

Based on Merriam Webster (2012) mechanism is defined as a process, technique, or system for achieving a result. Thus, process of the PPP/PFI in Malaysia is important to the mechanism as well. From the interview analysis, the process of PPP/PFI is most well explained by R2. R2 representing the private sector describes the process from the beginning till the end where the property is handed over to the government. It is said to be a tedious and long process and from his experience, many mistakes have to be done in order to obtain the concession agreement with the government. Besides, R1 also responded to the process by dividing it into 3 phases, these phase stands for technical negotiation, cash flow negotiation, and agreement discussion. However, R1 did not continue till the end of concession period as the ongoing projects were still new and it is bound to be changes on the process in the future. Both responders had similar response but R2 have a more detailed explanation on it. The summary of the whole process of PPP/PFI procurement in Malaysia is appended in Appendix A.

SWOT Analysis on Process of PPP/PFI

SWOT analysis on the process will be explained by Table 3

Table 3: SWOT Analysis of Process of PPP/PFI Procurement (Researcher, 2012)

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detailed process which will decrease the possibility of error.</td>
<td>Too detail and tedious, waste of time.</td>
</tr>
<tr>
<td>Truly depicts the ability of the concessionaire to solve problems and its sincerity on the project.</td>
<td>Process will consume a large amount of cost.</td>
</tr>
<tr>
<td>Starts from need statement where project is tailored based on the needs of users.</td>
<td>Concessionaire not educated on the process.</td>
</tr>
<tr>
<td>Opportunities</td>
<td>Threat</td>
</tr>
<tr>
<td>Discover problems during discussions and improves the process as time passes.</td>
<td>Tedious process caused delays in developments.</td>
</tr>
<tr>
<td>Detailed process enables PPP/PFI mechanism to grow while solving various constraints.</td>
<td>May lead to waste of lots resources from both public and private sector.</td>
</tr>
</tbody>
</table>

Discussion on Research Question 2 (RQ2)

RQ 2: What are the constraints and challenges of implementing PPP/PFI in HLI of Malaysia?

From the response from all respondents, it is found that all respondents feel financial aspects contribute to the constraint and challenges of PPP/PFI procurement. R1 representing the public sector states that it is crucial for the public sector to determine the profit that the private sector obtain from the investment of PPP/PFI project. Their challenge is to scrutinize every aspect in terms of cost in order to make sure that the government is paying the private the right amount.

Besides, R1 feels that there are too little players in the financial institution that are willing to participate in the PPP/PFI project which is supported by R2, who is representing the private sector suggest that the concessionaire is challenge in the obtaining financial loans from financial institution to fund the development. Local financing bodies are still relatively inexperienced and skeptical in providing project financing for PFI projects for various reasons. One of these might be the involvement of huge amount of capital invested for a long concession period (Takim et. al., 2008). Furthermore, this is also agreed by R3 where by, stating that financial institution which are involve in the PPP/PFI investment is clearly inadequate. From the interview, it is also known that all ongoing projects are finance by Bank Pembangunan while only few banks are showing interest in PPP/PFI procurement.

As for R3, financial matters once again become the constraints of the players in PPP/PFI. It is stated that FM players do not have the adequate funding to run the projects as it involves a long concession period. Thus, it has become a challenges to all parties in obtaining financial back up for PPP/PFI projects while the constraints is not having the adequate amount of capital to invest such large and long term projects. In addition to that, R2 states that, the concessionaire will need to have the wits and take up challenge to set up the management team with a lot of cost as government will only start to pay back after the construction period. The management team should consist of engineers’ consultants, quantity surveyors, legal advisors, financial advisors, and so on. Other than financial constraints, R1 also states that agreement has created a number of challenges for them. In negotiation process of the agreement, all parties will need to agree to all terms and condition stated in the clause of the agreement. However, there are
some clauses bound to protect the benefits of the government. This, have however raise some issue and some private parties are not willing to accept the clause which may cause a longer negotiation. This long process is also one of the constraints stated by R4. Thus the complex contracts (Carrillo et.al., 2008) becomes a significant constraints for PPP/PFI procurement. Long process may also lead to loss of confident and also sabotages which may cause great losses to the private company. Besides, land issue has also become a blunder in some projects. Based on the attorney general, land issue must be settled before anything else. The government must be the owner of the land for PPP/PFI projects. This has also become a problem when the concessionaire does not own the land.

Besides, R3 also said that there is inadequate participation of FM players in PPP/PFI. FM players should be included in the SPV to ensure that they are included in the planning process. Only this way, the FM players will be able to ensure the operation of the property may run smoothly till the end of the concession period. FM must be considered as part of any PFI initiatives. The concept of PFI and the definition of FM must be clearly defined and understood. PFI must be looked in a holistic view which incorporate design, construction related activities on one side and operation, maintenance (i.e. FM) on the other side. It shall be a win-win situation approach that fulfills client-concessionaire public/customer satisfaction (Hamid, 2012).

6.3.1 SWOT Analysis for Constraints and Challenges of PPP/PFI

SWOT analysis is then being conducted on the constraints and challenges of PPP/PFI procurement as Table 4

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weakness</th>
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<tbody>
<tr>
<td>• To train concessionaire on their ability to mitigate risk and also obtain financial aids from financial institution.</td>
<td>• Solution to the constraints and challenges need time to be overcome.</td>
</tr>
<tr>
<td>• As when government become the land owner of projects, there will be less unforeseen problem at the handover stage after the concession period.</td>
<td>• Legislative constraints are inevitable.</td>
</tr>
</tbody>
</table>

7.0 CASE STUDY

Some important elements that affect the mechanism of the PPP/PFI procurement will be brought into further discussions through case study. These elements are carefully studied via content analysis method. Content analysis is a systematic research method for analysing textual information in a standardized way that allows evaluators to make inferences about the information (Weber, 1990). However, location and name of case study will not be revealed due to privacy constraints. It will be denoted by indicators such as Project A, Project B and etc. as shown in Table 5

Table 5: Denotation of Project with Elements for Discussions

<table>
<thead>
<tr>
<th>No.</th>
<th>Denotation</th>
<th>Elements for Discussions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Project A</td>
<td>Cash flow of Campus Development</td>
</tr>
<tr>
<td>2</td>
<td>Project B</td>
<td>Availability Charges</td>
</tr>
<tr>
<td>3</td>
<td>Project C</td>
<td>WLCC</td>
</tr>
<tr>
<td>4</td>
<td>Project D</td>
<td>WLCC/ Maintenance Service</td>
</tr>
<tr>
<td>5</td>
<td>Project E</td>
<td>Concession Agreement</td>
</tr>
<tr>
<td>6</td>
<td>Project F</td>
<td>Progress Report</td>
</tr>
</tbody>
</table>

7.1 Cash Flow of Campus Development

The cash flow of the campus development depicts the income and the cost of the development project during the concession period. In Project A, the concession period includes 3 years construction period with 20 years leasing period which adds up to 23 years as a whole. As PPP/PFI is different from traditional procurement method, the cash flow is not only for the 3 years construction period but is for the whole concession period which is 23 years in this case. The unique cash flow can be divided into six (6) important parts based on Project A as below:-

1) Construction period costs
2) Financing structure
3) Forecast cash flow statement
4) Project returns
5) Cash flow tax
6) Forecast profit and loss account

7.2 Availability Charges

The concession company shall be entitled to the availability charges by way of monthly payment in arrears in the amount as set out from the agreement of both parties. Formula for availability charges is as follows:

\[
\text{Availability Charges} = \text{Gross Floor Area (GFA) \times Rent \times Month} = \text{Total Availability Charges per Annum}
\]

7.2.1 Payment schedule for availability charges

Example of payment schedule for the availability charges is extracted from Project B. It is tabulated in Table 6.

Table 6: Payment schedule for availability charges (Researcher, 2012)

<table>
<thead>
<tr>
<th>Year (Asset Management Services Period)</th>
<th>Monthly Payment</th>
<th>Annual Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-20</td>
<td>RM3,323,430.00</td>
<td>RM39,881,160.00</td>
</tr>
</tbody>
</table>

7.2.2 Financial parameters

The agreed Availability Charges is calculated based on the following parameters:

1) Construction Cost of RM260,000,000.00;
2) The agreed for all-in-interest rate for the financing of the development of the Project is 7.5% per annum for the first 5 years from commencement of construction, 8.0% for the second 5 years thereafter and 8.5% for the third 5 years with a loan tenure of 15 years (3 years of Construction Period and 12 years of Asset Management Services Period);
3) Interest during the Construction Period shall be capitalized to form part of the overall financing facilities for the remainder of the loan period;
4) The agreed Equity Internal Rate of Return (IRR) is 14.90%; and
5) Debt to equity ratio of 90:10.

7.3 Asset Management Service

Asset management service is also another important element in PPP/PFI procurement. Based on the response form R2, WLCC is under asset management service. WLCC derived consists of elements such as civil, electrical and mechanical and ICT aspect of the property. In the life cycle costing, the life cycle of all equipment is determined and the cost is identified.

7.3.1 Asset Management Programme/ WLCC

A programme as set out in the Asset Management Services Manual for the management of the facilities and infrastructure in order to maintain their functionality, objective and intent within their expected life span in the most cost effective manner during the Asset Management Service period. The asset management programme is estimated based on the manufacturer’s specification/recommendation and engineering best practice. Formula for asset management programme for Project D is as follow:

The total asset management programme per annum = GFA \times \text{Rent} \times \text{Month}

Table 7: Payment schedule for asset management programme (Researcher, 2012)

<table>
<thead>
<tr>
<th>Year (Asset Management Services Period)</th>
<th>Monthly Payment</th>
<th>Annual Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1 to year 20</td>
<td>RM 209,685.60</td>
<td>RM2,516,227.20</td>
</tr>
</tbody>
</table>

7.3.4 Maintenance Service.

The services and work in relation to the maintenance of the facilities and infrastructure are as required to be carried out in accordance with the asset management service manual during the asset management service period. Formula for maintenance service of Project D is as follow:

Total maintenance service charge per annum= GFA \times \text{Rent} \times \text{Month}

Table 8: Payment schedule for maintenance service charges (Researcher, 2012)

<table>
<thead>
<tr>
<th>Year (Asset Management Services Period)</th>
<th>Monthly Payment</th>
<th>Annual Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1 to year 20</td>
<td>RM 361,125.20</td>
<td>RM4,333,502.40</td>
</tr>
</tbody>
</table>

7.4 Key Performance Indicator (KPI)
KPI used in PPP/PFI procurement is derived from the basic Jabatan Kerja Raya (JKR) format. The KPI shall be used to measure the degree or quality or performance of the agreed service. Different project may have different requirements or service required. By implementing KPI, the contractor shall submit official monthly performance report against KPI for S.O. approval. KPI derived is based on two (2) criteria. These two criteria are performance based and frequency based. KPI is used to in order to keep the facility in good condition until the end of concession period. By having KPI, it determines the condition of the building and the facility. KPI is a measurement of the delivery of the operation of the development project.

Based on KPI benchmark given by JKR, the important elements includes the description for the measurement, performance measurement, target value (KPI) and also the source data.

Besides, Ascertained Performance Deduction (APD) is deduction of monthly payment to contractor. This is used when contractor did not reach the targeted KPI fixed. The example given is based on the example set from JKR and is not based on real case. However, the same format is used for PFI project as well.

### 7.4 Concession Agreement

Based on the explanation of all respondent on the mechanism of PPP/PFI in Malaysia, the concession agreement is awarded to the concessionaire after all clauses in the agreement is agreed upon. The parties involved in the concession agreement are the government, the concession company and also the end user (in this case would be the university). In most cases, the concession agreement period is 3 years construction and 20 years operation. Based on the concession agreement of the case study, there are together 52 clauses involved.

### 7.5 Progress report of case study

Progress report is very important in the construction phase of the project development. As PPP/PFI project is initiated by the needs of the end users, the time and scope of the development should always be closely monitored. This progress report will enable project manager to take control and be aware of the progress and deters delays that may jeopardize the whole project. Progress for PPP/PFI procurement is the most important element. This is because; end users cannot afford delays as planning of the intake of student has to be made before construction. If delays occur, students may not have facilities to use and university will need to find alternative facilities that may be a big problem to accommodate large number of students. The progress report of the campus development consists of the following:

1) Summary of the progress report
2) Master work programme
3) S-curve for both financial and physical aspects of development
4) Progress of construction works
5) Weather report
6) Labour report
7) Equipment and machinery report

From all the important elements that were discussed using real life example of the PPP/PFI procurement in campus development, the mechanism of the PPP/PFI procurement is more clearly defined and understood. Each element has its unique quality that portrays the customized PPP/PFI mechanism used. Although PPP/PFI in Malaysia is still in the early stage of establishment, it has a very systematic process and mechanism that clearly underline what is needed in the campus development project.

### 8.0 RESEARCH FINDINGS, SUGGESTIONS, VERSATILITY OF THE RESEARCH AND RECOMMENDATIONS FOR FURTHER STUDIES

The main purports of this research are to study the mechanism of PPP/PFI within the selected research areas. Besides, the aims to understand more on the constraints and challenges that is face by both public and private sector in HLI development.

### 8.1 Research findings for Phase 1 qualitative analysis

Research findings obtained in the first phase of analysis is the in-depth interview analysis towards the implementation of PPP/PFI procurement in providing university campuses in HLI. From the analysis done, there are significant differences in the response given by different parties. As the respondents are from different background, their opinion is very much different from one another.
However, there are some similarities that could be found from the interview analysis.

8.2 Research Findings for Phase 2
Qualitative Analysis

A total of 3 SWOT analyses were being conducted in this phase on the mechanism, constraints and challenges, and also the process of the PPP/PFI procurement. From phase 2 qualitative analysis, information gathered in phase 1 is being used to discussed on the significant of responses from all respondent on the research questions arise for this research.

8.3 Case Study

Case study was carried on multiple on-going PPP/PFI developments. However, the name and location of project was not disclosed due to privacy issue.

8.4 Suggestions

After much research on the implementation of PPP/PFI in providing university campuses in HLI, the constraints and challenges arise has help in providing suggestions for the improvement of PPP/PFI procurement in the days to come. Some suggestions provided are based on the suggestion given by the practitioners themselves and some are from the overview of researchers research as a whole. Following are some suggestions derived based on the research:

1) Government should encourage more players to participate in the PPP/PFI procurement by conducting talks, seminars, and forums. Players shall not include big tycoons only but also includes small players into PPP/PFI procurement.

2) Encourage more financial institution to participate in PPP/PFI to ease the problem of inadequate finance facilities face by the concessionaire.

3) Government should establish a benchmark or format to fix the Availability Charges that the concessionaire is subjected to pay. This benchmark should be agreed by both public and private sector.

4) KPI in PPP/PFI should be very good defined to avoid confusion.

5) The allocation of construction cost should take into consideration fluctuation in price of materials, labour and economy condition.

6) FM players should be given a chance in forming the SPV in the concession agreement so that management of the building can be thoroughly plan through and executed as planned.

7) Mechanism of PPP/PFI should be highly customized and shall not be confused with other conventional construction method.

8) Process of the PPP/PFI procurement should be shorten and simplified to gain more interest and confidence from the practitioners.

9) Education on the mechanism of PPP/PFI should be given to all parties stressing on the uniqueness of the procurement in Malaysia.

8.5 Versatility of the Research & Recommendations for Further Studies

There are qualities of versatility present in this study as the research is able to be further studied in other areas like in the real estates, risk allocation, WLCC, KPI, VFM, concession agreement and availability charges of the implementation of PPP/PFI in Malaysia. Versatility qualities have the ability to foreground the value of the research by highlighting its dynamic mechanism into diversifying the research to various schools of thoughts.

After fully understands them mechanism and process of PPP/PFI, the constraints and challenges looming the PPP/PFI procurement could be identified and mitigation method was suggested to make improvement to the established PPP/PFI procurement. The recommendation corresponds with the various fields of studies mentioned above were discussed as follows:

8.5.1 Real Estate

The focus of future studies after this research is to see the relationship on how PPP/PFI affects real estate development trend and what will be the factors of causes to the phenomenon.

8.5.2 Risk Allocation

Further studies should focus on the allocation of risk to both public and private parties.

8.5.3 WLCC

Further studies can be done to test the effectiveness of WLCC in PPP/PFI procurement projects.
8.5.4 KPI

Research on how to develop a systematic defined KPI for PPP/PFI procurement in Malaysia.

8.5.5 VFM

The effectiveness of VFM in PPP/PFI on the project development and further research that are potential in this area is to find a more suitable way to promote VFM in PPP/PFI procurement

8.5.6 Concession Agreement

Examine the viability of every clause in the concession agreement of PPP/PFI procurement.

8.5.7 Availability Charges

Studies can be performed in examining how availability charges are being derived and the important elements are being taken into consideration in fixing the availability charges that the government needs to pay. Besides that, a research can also be conducted to set a guideline or formula to derive the availability charges for a better understanding for both public and private sector.

9.0 Conclusion

PPP/PFI procurement in Malaysia is an alternative way for project development which has the potential to grow to higher and bigger length. It tackles the inadequacy of fund of government in project development.

Although PPP/PFI procurement is the early state in Malaysia, interest in developing a more matured mechanism of PPP/PFI procurement are rising drastically. Investors are looking for more PPP/PFI procurement as it generate long term income and is more secure taking the government as its client. Thus, the potential of growth on PPP/PFI procurement is enormously significant in Malaysia. In future, PPP/PFI procurement may be the key to success in developing and shaping Malaysia into a developed country.

REFERENCES


