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To Link this Article: <http://dx.doi.org/10.6007/IJARBSS/v8-i1/3894>

DOI:10.6007/IJARBSS/v8-i1/3894

Received: 20 Dec 2017, Revised: 12 Jan 2018, Accepted: 23 Jan 2018

Published Online: 30 Jan 2018

In-Text Citation: (Ismail, Talib, Salleh, & Japri, 2018)

To Cite this Article: Ismail, K., Talib, Y. A., Salleh, N., & Japri, A. (2018). Critical Success Factors in Operation Phase of Private Finance Initiative (PFI) Projects. *International Journal of Academic Research in Business and Social Sciences*, 8(1), 877–886.

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Vol. 8, No.1, January 2018, Pg. 877 - 886

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Critical Success Factors in Operation Phase of Private Finance Initiative (PFI) Projects

Kharizam Ismail*, Yuhainis Abdul Talib, Noraini Salleh and Afiqah Japri

Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Perak Branch, Seri Iskandar Campus, 32610 Seri Iskandar, Perak, Malaysia.

Abstract

Private Finance Initiative (PFI) is a collaboration between private and public sector in procuring public infrastructure projects begin with designing until the operational phase. The notion has existed in Malaysia since 1980s and trend would have been maintained to the present day. The schemes have unveiling by Malaysian government with aimed to enhancing the efficiency and quality of public infrastructure projects. However, there are some criticism arises during the operational related to the quality of the service delivery had been provided by the facilities management Contractors (FMC). Hence, the aim of this paper is to cultivate the significant success factors in operation phase in order to upsurge the effectiveness of PFI projects. Nine critical factors of operational phase has been identified through in depth analysis of case study via semi structured interviews. The research output is expected to assists the FMC to identify success factors during the operational phase, which could be reinforcing the quality of the service delivery performance of PFI projects.

Keywords: Facilities Management Contractors, Operational Phase, Private Finance Initiative Success Factors, Service Delivery.

Introduction

Under Ninth Malaysian Plan in 2009, the government began incorporating more private participation in public infrastructure projects due to many factors such as budget restraint and provide more innovative approaches. The pressure felt by the government has headed to the execution of Private Finance Initiative (PFI) concept, which involve the sharing and rewards of risks, expertise and finance between public and private sectors. PFI scheme has introduced a whole life concept where private sector would accountable for design, finance, build and operate the project for about 20 to 30 years' concession period. The schemes had been formally defined in the Tenth Malaysian plan report (2011-2015) which to catalyst the private investment in nationally strategic areas. Within this method, the private sectors are responsible to maintain the asset and facilities throughout the long term operational period which the payment being

made based on the pre-determined standard and performance of the service delivery by Facilities Management Contractor (FMC). On other hand, FMC must be able to provide high quality services as required by the standard in terms of level, quality and time as agreed in output based specification. Dissimilar with conventional procurement, PFI is procured using performance based output specification in which ultimate goal were to achieve Value For Money (VFM) and whole life asset performance in relation to payment mechanism. As the scheme has adopted the long term procedure, much enthusiasm has been given towards the services delivered in operational phase. Nevertheless, there are some unruly related to the quality of the services delivered during the operational phase. As mentioned by Woon (2013), ventilation problems, technical issues and defect of the building had been encountered by the users of PFI projects. In the operational phase, service delivery failure was often reported which can disastrous performance of the projects.

While, Mladenovic et, al. (2013) identified a number of factors could be influenced the PFI project performance during life cycle phases such as favorable legal framework, competent governance, availability financial market and sound economics policy. The identification of critical success factors (CSF) is a pillar to the success of project objectives. However, there has been inadequate discussion undertaken to elaborate CSF during operation phase for PFI Projects. Even though there are many speculative on nature of PFI, the escalating of the PFI projects is increasing. Hence, it is vital to explore the probable delinquents arise during the operational phase, a relevant CSF will be needed in order to strengthen the triumph and enlightening the project service delivery via PFI schemes. Henceforward, this study aims to fill the gap and has embarked on qualitative methods in order to provide some indication on the presents research issues.

Overview of Private Finance Initiative (PFI) in Malaysia

From the beginning of the 1980s, there has been growing pressure to increase the quality of development projects in Malaysian construction industry and for the government to provide more infrastructures. As a result, the development of infrastructure and public facilities becomes a significant factor for the economic growth of the country. Despite the government's prime objective to deliver world-class public services, the implementation towards this goal had faced fraught with various problems and constraints that resulted of public funding resources unable to keep fulfill the needs and demands.

Consequently, PFI will be undertaken as part of the new modes of procurement under the Public Private Partnership (PPP) to further enhance private sector participation in economic development for many countries. A similar trend exists in the Malaysian construction industry, as quoted by Economic Planning Unit (2009), the PFI principle as announced in the Ninth Malaysia Plan for a subset of the umbrella PPP principles from the Malaysian perspective, the implementation of PPP refers to sharing or partnership between public and private sectors in terms of risks, rewards and benefits of projects. The announcement of the implementation of Privatisation Policy made by the Prime Minister in mid-1983 Rashid (2010) and Yong (2010) was the starting point in the absorption of privatisation methods in Malaysia. From that point onwards, the Privatisation Policy in Malaysia formed the basis of Nation building and increased the role of the private sector in various fields especially in the development and management of

the nation. Additionally, in the Ninth Malaysia Plan, the implementation process was further streamlined including adopting new approaches and mechanism to enhance the efficiency of the privatisation called Private Finance Initiative (PFI). The ultimate aim is to improve and ensure the full benefits can be reaped especially with the inclusion of the whole life costing and (VFM) concept. The announcement of PFI implementation in Ninth Malaysian Plan (2006) has become the prominence for the overall picture of PFI in Malaysia. While, in eleventh Malaysia Plan, the private investment is the prime of economic growth in Tenth Malaysia Plan.

Primarily, this approach was intended to facilitate the transfer of responsibilities for financing and managing public sector capital investments and services to the private sector. In return, the private sector will receive payment in the form of lease rental charges, which commensurate with the levels, quality and timeliness of the service provision throughout the concession period. As for PPP projects in Malaysia these involve a fixed- term contract typically about 25- 30 years after which it is expected that the asset concerned will return to public ownership. On the other hand, the government of Malaysia draws on five principles of PPP includes: cost savings on whole life basis, long term partnership, paradigm shift (input to output focus), private sector innovation and expertise and to optimise utilisation of the nation's financial resources.

The structure and life cycle phases of PFI

The PFI implementation differs from country to country (Broadbent & Laughin, 2003). The nature of the PFI implementation differs due to the regulatory, policy, vision and purpose of adopting the approach. In general, PFI involves the transfer of finance and management responsibility of public sector to private sector in delivery of public projects such as buildings, infrastructure, equipment and facilities. Based on review of the literature, Rashid (2010), Alshawi, (2009), Public Private Partnership Unit of Malaysia (2009), National Treasury of Africa (2007) and Harris (2006), it seems that most of the researcher share similar views on the outlook of PPP structure. They agree that under PFI approach, there is an agreement as a contract between a Principal (government) and Special Purpose Vehicle (SPV) to carry out the works with a considerable period of time and involved many parties both from public and private sectors.

Dick and Akintoye (1993) provides an example of PPP structure, PPP is typically involved the concession agreement between a principle (government), a promoter known as Special Purpose Vehicle (SPV) and a privilege (Concessionaire) to carry out the works together with an obligation to operate those works for a specified period of time (concession period). The SPV or concession company could be a consortium comprising of a construction company, design team, Facilities Management Company and financial institutions. Thus, the PFI can be seen as the long term partnership between two parties. According to Wang (2011), the processes and phases of the PFI projects is unique and diverge from conventional approach which embrace four phases namely; tendering, construction, operation and hand over. While, Liu et al (2015), categorized into three major phases: initiation and planning; procurement and partnership phase. However, study by Ismail (2012) discovered diverse term used to elucidate the PFI phases in Malaysia: strategy formulation, procurement, construction and operation and maintenance phases. Among the phases, most of the literature indicated that the operational phases obviously are the most vital phase since incorporate the longest period throughout the concession contract and service

delivery performance and payment conditions are generated during this phase. As mentioned by Akbiyiki and Eaton (2006), the payment of the annual unitary charges is depending on the performance of service delivery by FMC and the payment can be deducted if the standard is not achieving.

Critical Success Factor(CSF) in operational phases

Principally, PFI project is distinguish concept from other procurement in many aspects such as the method of delivering the public assets and services. Several performance tools are created interconnected in which the payment mechanism become essential part of PFI approach. It linked to the standard to be achieved in terms of facilities availability, safety, user satisfaction, operation and maintenance. The management of the operational services is obtaining an increasing recognition as the significant factor in order to determine the level of the performance that had been comply by FMC which related to the payment. Cartlidge (2006) remarked, facilities management in PFI approach are the formation and provision of an operational environment that enriches the ability of the clients to deliver and escalating their core services throughout the building and maintenance system. In addition, the function of the facilities management should be considered as important factor during strategy formulation phase in order to ensure the PFI project able to deliver the performance as stated in output based specification.

Liu et al (2015) asserted, the concept of project success encompasses two main components: product success in which refers to final product and project management success emphasize managing the development process. Within his study, nine CSF in operational phases had been identified, namely, (i) effective contract, (ii) management (time cost and quality), (iii) safety management and health control, (iv) efficient material utilization, (v) management for prominent technique and skills, (vi) conflict management, (vii) facility management, (viii) evaluation for PFI implementation, interface management and (ix) good governance. In respect of prison case studies carried out by Cartlidge (2005), seven CSF relevant to the project had identified include, (i) keeping the prisoners in custody, (ii) safe environment, (iii) providing the decent conditions in order to safeguarding the prisoner's personnel property, (iv) positive regimes, preparing pre-release course, (v) selection and (vi) recruitment policies for the staff and enhance the community relationship.

Methodology

This study espoused data collection through qualitative method, which involves the case study by using semi structured interviews. This corresponds with the semi structured face-to-face interviews with the PFI experts who had been involved in development of five (5) PFI UiTM campuses. Theoretically, conducting a case study technique will enhance the understanding, perceptions and knowledge of the PFI practitioners which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence. The case studies were selected from a representative sample of a similar client organization (Development Division of Universiti Teknologi MARA). The selection of the cases was based on pragmatic consideration such as the availability of personal contact with the project client, the ease of access to information and to gain accurate information.

A purposive sampling is used in selecting the respondents. The rationale for selecting this method of sampling is based on Shehu (2008) and Sekaran (2003) who claimed that in qualitative research it is possible to use any of the sampling design since the purpose of this approach is to gain the intensive nature and information. The primary consideration in purposive sampling is the judgment of that person who can provide the best information to achieve the research objectives. This type of sampling is useful since PPP approach is new in Malaysia and only little is known. Based on this assumption, five selected projects for case studies were analysed which involved two categories of project stakeholders associate during operational phase mainly client and facility management contractors.

Analysis and Finding Discussion

All information obtains from the interview involve in a large quantities and require the process of organizing the information into a comprehensible structure. The content analyses technique was used by generalization of the transcript and coded it down into a manageable category of level through the conceptual analysis. The vast amount of data collected in the case study project was mostly qualitative data. The content analysis method translates qualitative data into number to provide more accurate analysis. The method has been applied in various researchers for example Ismail (2012) and Wang et al (2014). The frequency analysis method was used to deal with the data collected in the research. The frequencies of the appearance of the factors show how many times the factor was mentioned by the respondents.

Data were accumulated from five case studies. All the projects had been constructed under the PFI schemes as mentioned in the Malaysian Plan and had been operated for at least two years. Overall the target respondents are anticipated to view a broad knowledge and experience regarding the PFI practice in Malaysia.

Demographic Information

Demographic information of the respondents is showed in figure 1, which indicated 50% of the respondents are from public sectors (users) whilst remaining 50% are from the private sector (FMC). In relation to working experience, table 1 indicated that majority of the respondents (90%) have been involved more than five years' working experiences. The demographic information of respondents imitates their validity and credibility in providing trustworthy data during the interview.

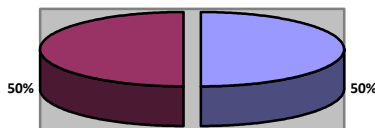


Figure 1: Respondent's designation

Classification	Experience				
	Less than 5 years	6-10 years	11-15 years	16-20 years	More than 20 years
Client	1	3			1
FMC		2	2		1
Total	1	5	2		2

Table 1: Profile respondents and experiences

Results on critical success factors in operation phase

Table 2 reveals the overall results of CSF in operation phase of PFI projects. There are six most important factors that had been suggested by the respondents.

CSF	Project A	Project B	Project C	Project D	Project E	Total
Key Performance Indicator (KPI)	2	2	2	2	2	10
Effectiveness managing operation phase	2	2	2	1	2	9
Client requirement	2	2	2	1	1	8
Service delivery	2	2	2	1	1	8
Price Performance Mechanism (PPM)	1	1	2	2	1	7
Effective commitment	1	1	1	1	2	6

Table 2: Critical Success factors of PFI projects

Generally, the clients and FMC had view a similar opinion regarding the factors. On the whole, first important CSF is Key Performance Indicator (KPI) which will effect to performance of service delivery. Align with that, there are seven KPI outline by UiTM which must be comply and as a basis of evaluation for service level provided by the FMC during operation of the building. There are: (i) Action time, (ii) pending work instruction, (iii) maintenance index, (ix) facilities condition index, (x) condition auditing, (xi) health, safety and environment and (xii) maintenance customer rating services. The key principle of PFI is the link between performance and incentive payments to the private sector based on the successful delivery of services to the public sector. Thus, During the operational phase, services delivery can frequently be measured to determine its compliance with the output specification and payment deductions and KPIs act as a useful tool to measure the performance of PFI projects.

Second important factor indicated by respondents is on effectiveness of managing operation phase which related to keeping the building in custody. This finding was aligned with Grimsey and Lewis (2002) which enlightened that a PFI project must be kept in custody during operational phase in order to ensure the building will perform well. As quoted by respondents

“the FMC must keep the completed building in the custody because it is their responsibility to maintain the building for 20 years of operations”. During the Operation stage, the processes consist of managing production of services strategies, production of contracted services, delivering the services and maintaining the facilities and also is a continuous process that requires making changes and improvements, strategic planning, and auditing.

Furthermore, third important factor choose by respondents is providing the decent conditions and meeting the user’s requirements. All the decent conditions which had been planned in the planning stage must be comply by the FMC during the operational of the building facilities. In PFI approach, there is a requirement to be based on performance by used “output” terms in a way that they describe the end goals of Project and specify the level of performance to be achieved in provision of services or works. The Output Specifications usually cover a range of services that will be related to the functionality and availability of the public sector infrastructure or facilities used by Public sector to provide some public service. Output Specification in PFI are mostly related to Design, Construction, Maintenance and other facility management services such as Cleaning, security, electrical and mechanical. Output specification is the basis by which the client or government defines the services and outputs that the PFI consortium needs to provide. In other words, the public sector client, by procuring authority, specifies the services it wants as well as some basic standards. However, the FMC has control over how the services are delivered. The maintenance operations are expected to comply with the output specification using a variety of maintenance service regimes

While, fourth important factor which may affect to the successful of project delivery is delivering high quality service. Clifton and Diffield (2006) revealed, the delivery of service during the operational phase should in the high quality since will affect the quality and performance of the PFI projects thus will greatly improve the quality of life. The respondents opined was “ *if the service delivery is not achieve required levels, it will present a poor quality of maintenance by FMC and the building condition might dilapidated to be maintain in 20 years time.* Therefore, FMC should have taken into account these factor in order to make certain the performance of service delivery. The operation and maintenance stage of PFI projects brings uncertainty in terms of risk and impact to the project because many changes will occur, particularly technological and functional demands (Alexander, 1997; Nutt, 2000), over the life of a PFI contract. Thus, through the facilities management service provider, the FMC has to accept the challenges in defining and providing the maintenance services in order to cope with their facilities’ performance

Furthermore, Price Performance Mechanism (PPM) presents as fifth important CSF in operational phase of PFI projects. The PPM is measured according to the reference on the agreed performance (KPI). Majority of the respondents are at the same agreement that the PPM must be clear transfer of operational risk because the PFI concept is literary about sharing of risk. There is a need to examine the role of the performance monitoring mechanism in ensuring that ‘value for money’ is achieved throughout the delivery of services. Value for money in a PFI project depends crucially on performance monitoring to provide incentives for improvement and to ensure that service delivery is in accordance with the output specification. A monitoring mechanism is needed to provide incentives and sanctions for the service provider to deliver the

level of services stipulated in the output specification. Therefore, developing a robust performance measurement system with relevant metrics to capture a wide range of services and choosing appropriate monitoring methods

Sixth important factor ranked by respondents is relay on the effective commitments among stakeholder. This factors seem as crucial to the continuous improvement of service delivery of PFI scheme. Sun and Fewings (2014) asserted that continuous commitment between all the parties from beginning phase will influence the whole life performance of the PFI projects. Both respondents view the similar perceptions towards this factors, which mentioned *“commitment is seem as an important aspect in the operation phase in order to guarantee the building can be maintain and sustain throughout the concession period. Long term proactive and frequent collaboration between the various parties is needed to be contacted throughout the whole life of the projects. An effective partnership between the public and private sector is central to a PFI project’s ability to deliver the services required and meet the expectations of the public sector. Both parties should have a superior trusted system given that the FMC should fulfill requirements which spell out in output based specification that had been specify by the Users. Furthermore, the HM Treasury (2000) recognises that long-term relationships are an issue during the operational stage. This can be best accomplished by understanding the other’s business, sharing a common vision, good knowledge transfers and trust between the parties. In other words, the key to success in a PFI project is the establishment of a collaborative working or partnering relationship throughout the duration of PFI project.*

Conclusion

The research has produced an exploratory result on the successful factors in operational phase of PFI schemes in Malaysia. Generally, the findings indicate that all the Critical Success factors (CSF) were rated as either important or most important which had view from different angle by the respondents. The results showed that six factors which anticipate as most significant consist of (i)Key performance Indicator(KPI),(ii) effectiveness managing operation phase,(iii); providing the decent conditions and meting the user’s requirements, (iv) delivering high quality service, (v) Price performance mechanism and (xi) effective commitment.

Despite, the successful of the service project delivery during operation phase are obstruct inter related with some barrier exist for instance internal dispute, failure in identifying risk, failure in communication, inexperience FMC and deficiency of project planning during strategy formulation phase. Therefore, in order to add more efficiently feature of service delivery, it is recommended that the stakeholders should ponder more in factors during providing the facilities. Thus, this present study offers useful insight and valuable information for the stakeholders scrutinised in ensuring the successful employing of PFI projects in Malaysia.

Corresponding Author

Kharizam Ismail

Email: khari511@perak.uitm.edu.my

Faculty Architecture planning & Surveying, UiTM Perak Branch

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