



# Evaluation Criteria of Facilities Management Through Public-Private Partnership (PPP) Scheme

Nurul Aqilah Samsudin<sup>1</sup>, Hariati Abdullah Hashim<sup>2\*</sup>, Ezdihar Hamzah<sup>2</sup>, Nurul Nadiyah Zainol<sup>3</sup>

<sup>1</sup>Department of Built Environment and Surveying,  
Universiti Teknologi Malaysia, Skudai, Johor, MALAYSIA

<sup>2</sup>Centre for Real Estate Studies (UTM CRES), Institute for Smart Infrastructure and Innovative Construction (ISIIC),  
Universiti Teknologi Malaysia, Skudai, Johor, MALAYSIA

<sup>3</sup>Centre of Studies for Estate Management, Faculty of Architecture, Planning and Surveying,  
Universiti Teknologi MARA, Shah Alam, Selangor, MALAYSIA

\*Corresponding Author

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**Abstract:** The delivery of facilities management (FM) services through the Public-Private Partnership scheme has been increasing in recent years. The long-term success of this partnership depends mainly on the choice of the best-suited private partner. However, an issue regarding the unavailability of evaluation criteria was discovered when selecting the best FM service providers within this scheme. Preliminary research shows that evaluation criteria are the fundamental elements of the FM procurement process, yet little attention is given to this subject. The evaluation criteria are fundamental in choosing the most qualified FM service providers, especially in a complex project like PPP. Thus, this research aims to identify the evaluation criteria for FM through the PPP scheme. An in-depth literature review was conducted in this paper. The focus of the review was associated with the evaluation criteria of FM service providers in the PPP scheme. This paper identified four criteria that should be considered, namely clients' requirements, external environment/factors, project characteristics, and financial advantages. The outcome of this paper can be used as a theoretical basis for the development of the FM procurement framework for the PPP scheme.

**Keywords:** Facilities management, Public-Private Partnership (PPP)

## 1. Introduction

Public-Private Partnership (PPP), a way of contracting for public-sector projects, has been employed globally, as well as in Malaysia. For instance, Hong Kong has a lot of fundamental issues from the design stage that are included in their PPP projects. These include contract risks associated with long-term PPPs, which include fundamental uncertainties and a drastic realignment of roles and benefits among various project partners. Additionally, the private sector carries a great deal more risk than a simple contractor. The projects' profit or limited recourse is an unbalanced and complicated contractual arrangement between project competitors. Fundamental considerations in selecting private sector partners should include the required skills, knowledge, and resources to manage these risks and offer high-

quality, cost-effective facilities and services. A building project's success is decided by four factors: project characteristics, contractual adaptation, project contributor, and interactive operation (Zhang, 2005).

PPP, in its broadest sense, refers to any planning between the public and private sectors in delivering public services (Zhang, 2005). In Malaysia, the confusion regarding public objectives and evaluation criteria, delays in negotiation, higher charges to single sources, no clear guidelines and involvement in political debate are the fundamental issues in the PPP FM project (Ismail & Harris, 2014). PPP adoption in Malaysia has shown several benefits for the government and the general population. Malaysia has undertaken various productive PPP projects that have benefited the country's citizens in general, like KL Sentral, Light Rail Transit (LRT), clinical offices, and numerous parkways and transportation stations (Beh, 2010; Abd Karim, 2011). In any event, there are also hurdles to the beneficial activities of PPP plans, including the likelihood of risk aversion, project completion at a higher cost to the government, and projects with an unclear monetary incentive (Cheung et al., 2009).

One of the key successes in achieving these benefits is the availability evaluation criteria of the FM procurement process (Lam, 2019). Governments in certain countries have emphasised delivering facilities management (FM) by means of the Public-Private Partnership (PPP) method, considered as among the feasible solutions for delivering better FM services to the community. According to Robinson and Scott (2009), the significance of implementing this arrangement is apparent, as there is a growing trend toward providing a high-quality facility management service throughout the operating period of a PPP project. Brewer et al. (2013) pointed out that providing facilities management through PPP may have the greatest influence on the asset's total life cost, hence impacting the project's overall success.

According to the Royal Institution of Chartered Surveyors (RICS) Professional Standards on Procurement of Facilities Management (RICS & IFMA, 2018), clear objectives on procurement projects and evaluation criteria that reflect the objectives are fundamental in FM procurement strategy. Within FM and PPP contexts, a comprehensive procurement strategy is crucial in selecting the best private partners, thus ensuring the long-term success of the partnership between government and FM service providers. By completing a comprehensive examination of bidder qualification and proposal, the government can boost the possibility of developing a trustworthy relationship and delivering on the PPP project's promises (The World Bank Group, 2018).

However, while evaluation criteria are claimed as the key elements of FM procurement, a specific procurement strategy for FM through PPP is yet to be established. To date, there are no available guidelines or documents that can be referred to for the procurement of PPP facilities management. According to Ismail and Haris (2014), uncertainty about the government's aims and assessment criteria is one of five barriers to PPP implementation in Malaysia. According to the authors, this is due to inadequate PPP implementation strategies, resulting in inadequate alignment between the government's explicit goals and the assessment criteria that the private sector must meet in acquiring PPP projects.

Without precise assessment criteria for PPP facility management, the procurement process would lack clarity, fairness, and transparency, which may discourage competition among bidders. As highlighted by RICS and IFMA (2018), the evaluation criteria and their methodology should be transparent, shared with bidders, and remain unchanged throughout the FM procurement process. Besides, it has been reported that PPP is beset by higher transaction costs than their alternatives (De Schepper et al., 2015) due to complicated tendering procedures, lengthy and complex negotiations among the stakeholders, and the time taken compared to that of conventional procurement (Akintoye et al., 2003; Robinson & Scott, 2009; The World Bank Group, 2018). In this situation, the unavailability of a procurement strategy for FM delivery through PPP may contribute to the existing complexity of the overall PPP development process.

This concern must be handled appropriately since the risk connected with the development phase will influence the operational performance of PPP projects (Doloi, 2012). An evaluation criterion of FM through PPP and its evaluation methodology should be in place. The necessity for this study topic is obvious since the trend toward PPP facility management is likely to rise as the Private Finance Initiative (PFI) and other forms of PPP procurement for social infrastructure grow in popularity, particularly in developing countries such as Malaysia. On top of that, this study can be considered an effort of to improve FM practise in Malaysia as Nik and Pitt (Nik & Pitt, 2014) mentioned that FM culture in Malaysia is still passive and lacks standardised FM guidelines and standards. Therefore, this research aims to identify the evaluation criteria of Facilities Management through the PPP scheme.

## **2. Research Design**

This study presents an in-depth evaluation of the literature. The study focuses on the general assessment criteria for FM under the PPP framework. The outputs of the analysis were utilised to answer the research question. They were based on implementing the fundamentals of PPP FM projects across the theoretical framework. Following that, a path for future FM assessment criteria is offered and debated using the PPP method.

## **3. Evaluation Criteria of Public-Private Partnership Projects**

The following criteria were used to evaluate the PFI project in the United Kingdom: (1) innovation, (2) operational compatibility, (3) deliverability, (4) adaptability, and (5) risk transfer. The evaluation is dependent on the nature of the project, which includes the following: (1) risk transfer, (2) arrangement/site consideration, (3) design, (4) superfluous

premises, (5) consequential risk, (6) inhabitancy risk, (7) development risk, (8) programme, (9) accommodation requirement, (10) facilities management, (11) alternative revenue streams, (12) contract substructure, (13) consortium structure, and the Hong Kong government's evaluation of BOT tunnel projects (Blackwell, 2000). PPP professionals include those with expertise in the following areas: (1) finance, (2) technology, (3) safety, health, and the environment, and (4) management [1].

According to Rafie et al. (2018), the Public-Private Partnership Unit under Malaysia's Prime Minister's Department evaluates the project using common criteria. The project must meet output specification criteria; the economic life of the asset or service must be 20 years at the minimum; it must have the lowest risk of technological obsolescence; and the project sponsor must be financially sound, with the SPV's paid-up capital equal to a minimum 10% of the project's worth.

### 3.1 The Stages of Performance Evaluation Criteria of PPP Projects

Previous studies such as that by Ismail et al. (2011) broke down the critical elements of Value for Money (VFM) at the early stages into undertaking activity, social advantage, and specialised and ecological models utilising the head-part investigation technique. Meanwhile, Cheung et al. (2009) divided the VFM of PPP projects based on mechanical development, item execution, hazard sharing, open offering, and item level.

During the development stage, Gohary et al. (2006) revealed that compelling correspondence can increase the fulfilment of partners and work on the productivity of development and activity as well as accomplish the task objectives. Furthermore, Sanghi et al. (2007) stated that the administrative level of the public authority is a critical component in determining the exhibition of PPP projects. Following that, during the development phase of PPP projects, increasing the degree of government board and improving communication may be used to work on the presentation of PPP projects.

Shen et al. (2016) established the Sustainable Performance-based Assessment Model (SPbEM) during the project's transition phase to evaluate the viability of PPP projects by dissecting the venture circulation between the public authority and the social market. It was suggested that every PPP endeavour should pursue key execution indicators in the agreement and track the project's life-cycle execution (Augustinová & Daubner, 2014). Other studies led to a careful survey on the PPP-related regularising factors, featuring key achievement factors, job of the public area, choice of establishment rights, issues associated with project cost and booking, as well as financing. Then, at that point, they proposed a powerful theoretical plan to survey the existence pattern of PPP projects (Liu et al., 2015).

### 3.2 PPP FM Evaluation Criteria

Through literature review, there were several criteria identified and divided into four main scopes of PPP FM essential throughout these processes, namely: project characteristics, financial advantage, external environment or factor, and client requirement. The criteria identified in the literature review can be referred to as follows:

#### 3.2.1 Project Characteristics

Existing building conditions are evaluated using criteria such as project size or design, contractual adaptation, project contributor, and interactive operation (Zhang, 2005). Meanwhile, Boussabaine (2007) mentioned that the selection criteria for the preferred bidder are usually based on legal and the client's financial capability.

#### 3.2.2 Financial Advantages

The primary criterion for selecting private sector partners should be that they deliver high-quality, reasonably priced, or cost-effective facilities and services (Zhang, 2005). The selection criteria also involve financial advantage, strategic alignment, and the need to focus on core business (Lankford & Parsa, 1999). UKAS technical professionals develop the Value for Money (VFM) ratios for each project and establish their baseline values. The PPP project must meet the VFM ratio requirements. Profile goals and VFM are vital to all ministries in the Malaysian government, as the auditor general of Malaysia inspects the VFM and achievement of profile objectives on a yearly basis.

Yuan et al. (2009) have drawn five unique arrangements of VFM evaluation criteria: (i) Actual trait of tasks (plan, innovation, bidders' information and abilities, hazard portion); (ii) Financing and promoting; (iii) Innovation and learning; (iv) Stakeholder's marker (customer fulfilment); and (v) Interaction marker (offices the executives, assets usage, wellbeing and climate as well as using time productively). The project worker evaluation criteria expressed ought to be fittingly chosen and circumspectly assessed by coordinating the customer targets and the task prerequisites. A complete review of proposals should recognise the bid that best balances monetary and non-monetary considerations. In any case, albeit numerous specialists have featured the previously mentioned standards in the VFM evaluation bid, there has been scarce unequivocal thought of the real critical models that ought to be accepted in the evaluation of offers towards VFM.

Furthermore, one of the major advantages of PPP is that there is a bidding process designed to create competition among private partners and thus help the government to attain better value for money and guarantee an effective transfer of risk (Philippe Burger et al., 2008).

### 3.2.3 External Environment/ Factor

Jacobson and Choi (2008) adopted a fundamental criterion by PPP FM involving 'specific plan or vision,' 'commitment,' 'open communication and trust,' 'negotiation,' 'respect,' 'community outreach,' 'political support,' 'expert advice and review,' 'risk awareness,' and 'clear roles and well-organised culture.' The results showed that 'high degrees of commitment' and 'shared vision between client, architect, and expert contractor availability' were the most important factors for construction success. Jefferies et al. (2002) mentioned that the new key criteria were: 'negotiation,' 'customer brief/outcome,' 'bid feature,' 'business diversification,' 'business viability,' 'competition,' 'credit rating investor,' 'teamwork,' 'existing infrastructure,' 'delivery of asset,' 'investment growth,' and 'project identification.' It was discovered that "the issue of command, which is effectively taken over by the government," "the project agreement, which is a very restructured approval," and "the negotiating process" were vital success determinants for PPP projects.

### 3.2.4 Clients' Requirements

According to Lankford an Parsa (1999), PPP project success is vital to getting a scheduled time arrangement. As a result, an appropriate arrangement period, timely completion of project construction, and start-up of project operations are critical success factors for PPP projects. Furthermore, the criteria include value generation (Brewer et al., 2013) as well as risk allocation during the service delivery phase of PPP facilities management (Wang, 2010). Jefferies et al. (2002) mentioned that the procurement strategies of the PPP projects include: "compatibility/complementary skills among the stakeholders" and "technical innovation in overwhelming project complexity." Like in conventional acquisition, ex-post evaluation is broadly used for PPPs (Chinyio & Gameson, 2009; Shaoul, 2009; Yong, 2010). Additionally, PPP initiatives are more uncertain than traditional one-off projects. With this point of view, an exploration question about "regardless of whether the traditional ex-post evaluation is adequate to successfully measure the presentation of PPP projects" has been raised. A deficiency in effective execution estimates in PPPs might serve as a catalyst for developing a framework that is less than optimal in terms of administration (Yuan et al., 2009; Yuan et al., 2012).

In light of its relevance, this study conducts a literature review on the general evaluation criteria for the FM PPP scheme. The findings of this article may be utilised as a theoretical foundation for developing a thorough and successful PPP project from construction to operation. Table 1 summarises the evaluation criteria of PPP FM.

## 4. Conclusion

Thus, the current research will add to the body of knowledge by demonstrating that the evaluation criteria for FM in a PPP scheme are critical in choosing the best services. Moreover, this study provides a systematic approach for the government to select the best private partners to ensure the good performance of FM services to be delivered to society. Additionally, it enables the enhancement of facility management within the social infrastructure (e.g., hospitals, universities, and schools). Within economic impact, the use of the evaluation criteria during the procurement phase of PPP facilities management may reduce the cost of pre-construction due to time-savings in the evaluation process. The use of standard methodology during the evaluation process is in conjunction with the principles of the government, which will enhance the reputation of the government towards the taxpayers.

The clear evaluation criteria established in this research can be used as a guideline for FM service providers in preparing their proposal. It can serve as an evaluation methodology for related government departments, such as the Public-Private Partnership Unit (PPPU) under the Ministry of Finance, as well as the Ministry of Works in evaluating and selecting the best FM service providers for their partnership projects.

This article offered a theoretical foundation for the future development of FM PPP project assessment standards. While the topic offered and addressed in the study is theoretically important, there is no validation provided to substantiate the assertion. There was a constraint on the study. However, continuing research is attempting to close this gap.

**Table 1 - Summary of PPP FM evaluation criteria**

<b>Evaluation Criteria</b>	<b>Sub-criteria</b>	<b>References</b>
Project characteristics	<ul style="list-style-type: none"> <li>● Project size or design</li> <li>● Contractual adaptation</li> <li>● Project contributor</li> <li>● Interactive operation</li> <li>● Clients' financial capability</li> <li>● Project sponsor monetarily strong</li> </ul>	[Zhang, 2005; Rafie & Mohamed Shuib, 2018; Boussabaine, 2007]
Financial advantages	<ul style="list-style-type: none"> <li>● Price/Cost effectiveness</li> <li>● Effective quality</li> <li>● Strategic alignment</li> <li>● Paid up capital</li> <li>● Value for money (VFM)</li> </ul>	[Zhang, 2005; Rafie & Mohamed Shuib, 2018; Lankford & Parsa, 1999]
External environment/ factor	<ul style="list-style-type: none"> <li>● Investment growth</li> <li>● Risk awareness</li> <li>● Clear well-organised approval process</li> <li>● Negotiation</li> <li>● Political support</li> <li>● Specific plan or vision</li> <li>● Expertise contractor availability</li> <li>● Good communication</li> <li>● Safety, health and environment</li> <li>● Managerial</li> </ul>	[Zhang, 2005; Jacobson & Choi, 2008; Jefferies et al., 2002]
Clients' requirements	<ul style="list-style-type: none"> <li>● Concession's period</li> <li>● Value generation</li> <li>● Risk allocation</li> <li>● Degree of complexity and flexibility</li> <li>● Clarity of scope</li> <li>● Ideal administration</li> <li>● Complementary skills</li> <li>● Output specification</li> <li>● Technical innovation</li> </ul>	[Zhang, 2005; Brewer et al., 2013; Rafie & Mohamed Shuib, 2018; Lankford & Parsa, 1999; Yuan et al., 2009; Jefferies et al., 2002; Wang, 2010; Chinyio & Gameson, 2009; Shaoul, 2009; Yong, 2010]

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