

BEST VALUE PROCUREMENT FOR CONTRACTOR SELECTION IN THE
MALAYSIAN CONSTRUCTION INDUSTRY

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DEDICATION

This project is dedicated to my father (god bless his soul), who taught me that the best kind of knowledge to have is that which is learned for its own sake. It is also dedicated to my mother, who taught me that even the largest task can be accomplished if it is done one step at a time.

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ABSTRACT

Construction activities are generally prone to risks, which affect the final project performance. Therefore, a construction client must ensure that the most crucial task of selecting a suitable contractor is successfully carried out to achieve an acceptable project results. This study is aimed to assess a list of contractor selection criteria that are contributed with best value procurement (BVP) in Malaysia. A total of 31 selection factors have been identified. 26 respondents to this study were asked to assess the importance of the identified factors. Moreover, the respondents were also asked about the actual contractor selection criteria used in current practice of Malaysia. List of 17 actual criteria was prepared based on the information obtained from professionals in the Malaysian construction industry. Data collected were analyzed using the IBM Statistical Package of Social Sciences (SPSS). The analysis showed that each category of the respondents rated the importance of the identified criteria based on its perspective and experience. However, some factors were mutually agreed among the categories such as financial capability, past experience and expertise, ability to manage client satisfaction and expectation and the ability to meet the design requirements which reflects the importance of these criteria while on the other hand, Political consideration, number of staff and history of claims and disputes were found to be the least important three factors to be considered in the contractor selection from the identified factors. It was also found that most of significant actual criteria practiced in Malaysia for the contractor selection are considered in best value selection criteria which indicates that the identified selection criteria of best value procurement is considered sufficient in Malaysia.

ABSTRAK

Aktiviti pembinaan terdedah kepada pelbagai risiko yang boleh menjejaskan kemajuan projek. Oleh itu klien mesti memastikan pemilihan kontraktor dibuat dengan sebaik nya kerana kontraktor bertanggungjawab merealisasikan projek. Kajian ini bermatlamat menilai kriteria pemilihan kontraktor berdasarkan kaedah perolehan terbaik di Malaysia. Sejumlah 31 faktor pemilihan dikenalpasti. Seramai 26 responden telah diminta untuk menilai kriteria ini. Responden juga diminta menyatakan kriteria sebenar digunapakai dalam pemilihan kontraktor di Malaysia. Sebanyak 17 kriteria digunakan dlm soal selidik ini. Data dianalisis menggunakan Statistical Package for Social Sciences (SPSS). Setiap kategori responden menilai kriteria yang diberikan. Sebahagian faktor mendapat persetujuan bersama responden sebagai kriteria yang diambilkira atau dinilai. Faktor ini adalah keupayaan kewansan, pengalaman lepas dan kepakaran, keupayaan memenuhi keperluan klien dan berupaya menjalankan kerja yang ditetapkan. Politik, bilangan staf dan sejarah tuntutan serta pertelingkahan dilihat tidak penting dalam pemilihan kontraktor. Apa yang lebih penting, kajian ini mendapati kriteria yang digunakan dalam pemilihan kontraktor di Malaysia menepati kaedah perolehan terbaik.

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CHAPTER 1

INTRODUCTION

1.1 Background

The construction industry is marked as one of the top-rated booming industries globally (Sambasivan & Soon, 2007). This industry is nowadays considered an important source of support to the economy of any country. The construction sector mainly deals with different scale projects, such as roads, bridges, airports, real estate, and many more. The construction industry is also considered a developing industry that copes with new technologies. Nowadays, technology is being used in almost every stage of the construction process, from the early stages till the project delivering, and that would participate in supporting the idea behind the contribution of this industry to the economic growth of every country.

In Malaysia, the construction sector is productive, and it is as important as other industries towards the Malaysian economy. The construction sector in Malaysia contributed 5.9% to the GDP in 2017; however, the growth of the Malaysian construction industry was moderate in 2018 (estimated to be 4.5% which was relatively high in 2017). This is due to the reduction in the budget for some large-scale projects. The vision of the Malaysian government will help the construction industry with the improvement of transport networks, renewable projects, and tourism infrastructure. Thus, huge growth is expected in the next five years as the construction industry of Malaysia is going to be involved with residential, transportation, industrial, commercial constructions, and many more.

Several changes have been made to the construction project procurement systems practiced in the construction industry and this has resulted in the availability of many newly developed procurement systems that could help in meeting the contemporary clients' requirements. When deciding on the appropriate procurement

system to use, it is necessary to also consider various factors before making any practical decisions because project failures or clients' dissatisfaction can result from the wrong selection of the procurement system. Hence, it is essential to have a systematic approach to appropriate procurement approach selection to ensure project goals are met and the best value for money is achieved. Every construction process is considered unique as it depends on specific scopes and complexities. Thus, it involves several processes depending on the project type and scope. By considering the required processes and overcoming the issues, the main objective of any project will be achieved.

In the construction industry, the advancements witnessed in the sector have given rise to the availability of numerous criteria that project clients often consider when selecting project contractors. Normally, contractors evaluation often emphasizes on the tender price, giving less attention to the evaluation of the performance attributes of the contractor (j.brochner, 2006). But being that high-quality services may not be achievable by accepting only the lowest tender, there has been a growing need for a transition from the "lowest-price wins" to the "multi-criteria selection" practice when selecting a project contractor. As per Hatush and Skitmore (1997), the competence of a potential contractor should be evaluated based on a range of factors, such as the financial soundness, reputation, safety performance, technical ability, and management capability.

With the Best Value (BV) selection approach, the most suitable contractors can be selected based on provable factors that are considered during the evaluation stage instead of the traditional criteria (Abdelrahman, 2008). It is necessary that the clients and their representatives be involved in the bidding processes as it is normally a tedious and challenging task. Contractors' selection based on the conventional low-bid system is often practiced because it is easy to practice and requires less effort in evaluating the personnel, performance and expertise of the potential contractor, thereby making documentation easier (D. Kashiwagi, & Byfield, R. E, 2002). Various stakeholders have certain levels of satisfaction with this process, including the designers, engineers, project managers, vendors, and suppliers (j.brochner, 2006). This approach assumes the capability of the contractors to offer quality services

irrespective of the cost, but the BV approach guarantees the selection of the most suitable contractor irrespective of the cost. Thus, a perfect knowledge of the BV approach will be immensely beneficial to both clients and contractors.

1.2 Problem Statement

Multi criteria-based problems are normally complex or unstructured. Being that the selection of a contractor is a multi-criteria problem, it requires the use of a proper decision-making approach to ensure the selection of the appropriate contractor for a given project. Contractor selection is mainly the clients' role and its process has nowadays become an issue of importance in construction projects (Alzober & Yaakub, 2014).

The need for a systematic approach during the selection of contractors is hinged on the fact that construction projects are complex, especially when dealing with public construction projects. Nevertheless, in Malaysia, public construction projects are often prone to delay, low-quality and over-budget problems and these problems are intentionally caused by the contractors who tend to manipulate the tender price just to get the contract, thereby causing many problems during the projects' life.

During the construction of projects, success is often expressed in an exclusive manner, such as the delivery of all or most of the expected deliverables from the project, in terms of the project scope, budget performance, schedule, design goals, organizational and user satisfaction. This success is characterized by the technological infrastructure of the place the project is executed. Projects can be termed successful in terms of achieving the set goals within the budgeted time, meeting the end-users' cost impact, or compliance with quality standards. Prequalification is considered an important stage for the selection of contractors as it targets at determining the qualification of the contractor for the bidding; it is the first step in contractors' performance and responsiveness evaluation. Being a multi-criteria decision-making (MCDM) problem, contractors' prequalification involves

both qualitative and quantitative measures and when faced with such issues, it is pertinent that the decision-maker provide imprecise, undefined, and partial assessments of any lack of vital information and shortcomings in expertise. The common approach to select a contractor has often been the low-bid approach. However, this form of contractor selection comes with time and cost manipulations due to subjective bias.

Some of the consequences of low-bid selection include unrealistically low bids, disputes, schedule delays, excessive claims, increases in cost, compromises in quality, and strained relationships (K. Sullivan, 2011). The low bid process is normally associated with the claim that all contractors have the same level of capabilities; this claim facilitates the justification that the best value will be delivered by the contractor with the lowest price. Meanwhile, all contractors do not have the same level of performance as performance is mainly dependent on several factors, such as experience, technology, leadership, and standard operating procedures (Nguyen, Lines, & Tran, 2018). Owing to the issues associated with the low-bid process, many players in the industry have started to evaluate the qualification of contractors during the selection stage rather than focusing only on the price and this method of considering both the price and qualification of contractors is known as Best Value Selection (BVS) method.

The BVS method is currently being adopted by both federal and state agencies as it enhances the long-term project performance by ensuring that contractors that offer the most advantages to the project owner are selected via the consideration of both the project cost and other selection factors. Among the other factors, other than price, which can vary include financial health, past performance, and technical and managerial merit (Gransberg & Ellicott, 1997).

The inclusion of key factors that match the specific needs of a project increases the possibility of selecting the best contractor for the project. Scott (2006) shows an increasing trend in the construction sector toward the use of various best-value procurement methods. A long-standing concern expressed by government agencies is that low-bid, while promoting competition and a fair playing field may

not result in the best value for dollars expended or the best performance during construction. As noted by Scott (2006), the low-bid system encourages contractors to implement cost-cutting measures instead of quality enhancing measures and therefore makes it less likely that contracts will be awarded to the best-performing contractors who will deliver the optimum quality projects. However, the research revealed that federal agencies have moved aggressively toward the use of best-value procurement, have attempted to measure its relative success, and are convinced that it achieves better results than low-bid. The best-value system is viewed as a balance between the consideration of price and qualifications.

1.3 Research Aim

This study aims to assess the best value contractor selection criteria in the Malaysian construction industry.

1.4 Research Objectives

The objectives of the research are:

- (a) To review the current procurement practice in Malaysia.
- (b) To review best value procurement concept and contributing factors/criteria in the selection of the contractor.
- (c) To assess the perceived importance criteria for contractors selection in Malaysia.
- (d) To assess the identified contractor selection criteria of best value procurement in the Malaysian construction industry.

1.5 Research Scope

It can be stated that the main objective for any construction project remains within completing the task efficiently with low cost, short time, and highest quality. This research tries to determine the best procurement method that can be used for selecting the contractor in accordance with their best skills and experiences. Thus, this study focuses on finding the contributing factors of the BVP method in selecting the most qualified contractor. This research helps to understand the selection criteria and the best one for each case. Recently, it has been found that contractors are not selected in the best possible ways and they cannot investigate the construction project in the best possible way. This holds the possibility of finishing the construction project within the timeline. Moreover, they are unable to investigate and monitor all the processes by applying engineer-aided tools as they do not apply the proper functionality of the tools; thus, the desired output is not generated, and gaps are found. This study is limited to identify the best value procurement contributing factors in the contractor selection and investigating the identified factors in the Malaysian public projects.

1.6 Significance of the Study

The construction industry in Malaysia expects to increase its growth by improving its structure. This not only includes improvement of the construction process, but also the selection of the contractor, managing the workers, monitoring the process, investigation on the raw materials, improvement of the supply chain, and many more. The growth of the construction company remained moderate because of these issues and it should be mitigated to meet the expectations in 2020.

This research aims to explore the BVP method for selecting the contractors for the construction project as this issue is considered an important issue in the construction industry. Moreover, this study is investigating the practice of BVP selection criteria in the construction industry of Malaysia. These findings are hoped

to be helpful in guiding the efforts towards improving performance in the construction sector and to the construction players as well.

1.7 Research Methodology

A research methodology is a planned approach to execute research in a systematic manner to fulfill the expected objectives. According to Cryer (1966), the methodology of academic research is “a combination of both a retrospective summary and contextualization of the conceptualized research theoretical framework within a proposed research methodology”. To ensure the smoothness and success of this study, it is important to manage the project systematically. With the systematic management, the validity and reliability of this study can be guaranteed. This study was conducted systematically through several stages and there are important results to be achieved at each stage. The methodology of this study includes three phases as shown in Figure 1.1.

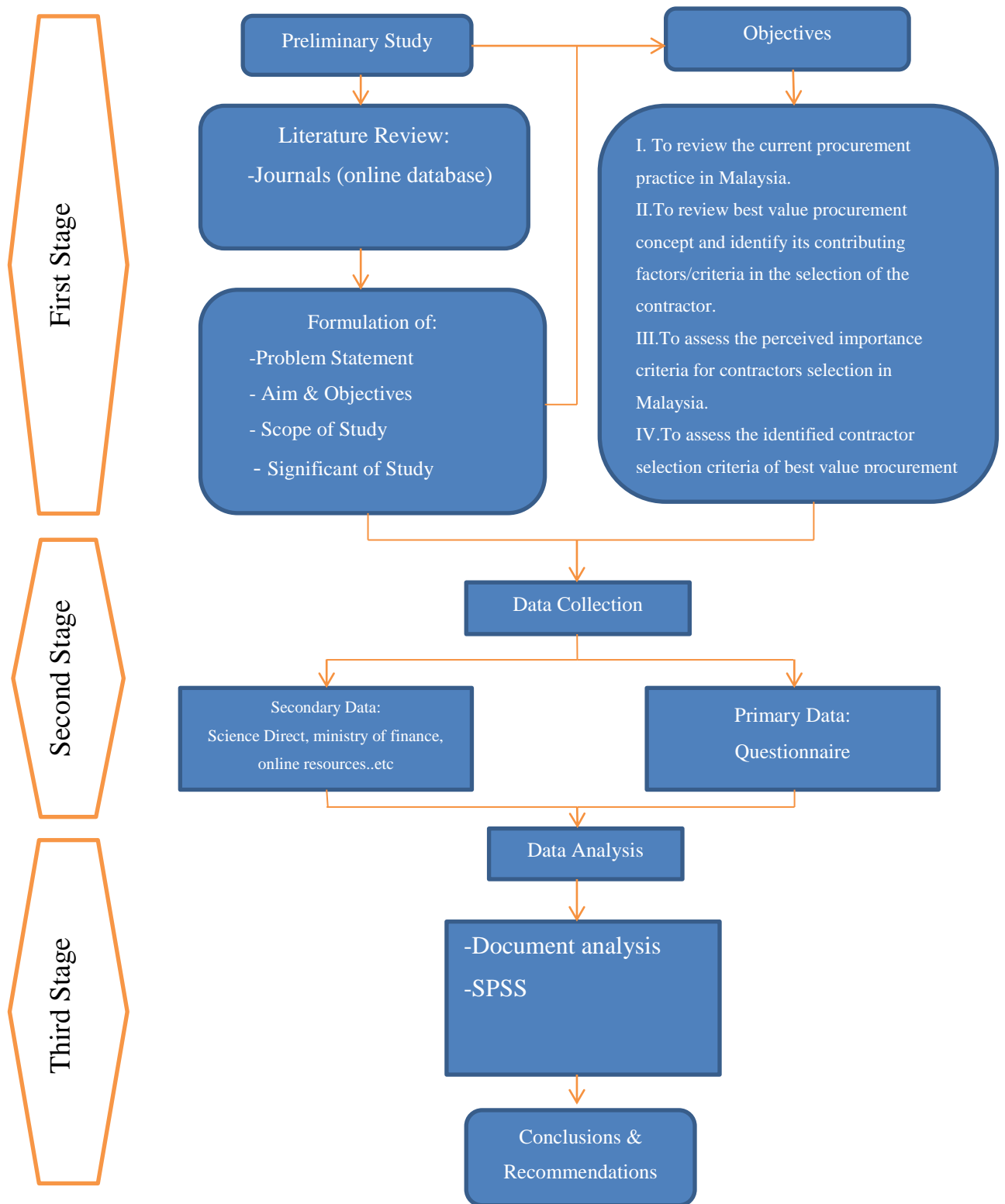


Figure 1-1 The Research Framework

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