The Contractors' Attributes for the Construction Project Success

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Abstract

The important contractor attributes for the construction project success are one of the main critical issues in the construction project. The contractor has challenges in term of additional knowledge and skills in order to achieve the successful project. The aim of this research is to identify the contractors' attributes for the construction project success. The objective that has been established to achieve the aim of the study is to determine the important contractor attributes for the construction project success. The descriptive data obtained through questionnaire of 33 respondents from Project Manager, Engineer, Site Supervisor and Technical Assistant that employed with contractor G7. The data gathered was analysed using Statistic Package for Social Science (SPSS). There were adopted the analysis descriptive statistics technique using score mean and percentage. The result of this study indicated that the important attributes for the construction project success are financial, management or technical, past experience, past performance, health and safety, quality and resources attributes. The finding of this study can give a guideline to contractor to improve their attributes in order to achieve the successful project.

Keywords : Contractor Attributes, Construction project, Project success

1.0 Introduction

The contractors must have a good attributes to become the successful contractors to compete with other contractors in construction industry. The experience from the contractor in terms of management and technical capabilities on their attributes regarding form the previous project is most important to determine the contractor either they can handle the project or not (Doloi, Iyer and Sawhney, 2011).

The contractor has challenges in term of additional knowledge and skills in order to achieve the successful project. Doloi (2009) reported that in modern construction projects there are significant challenges for both clients and contractors to deliver the project successfully due to increasing complexity in design and the involvement of a multitude of stakeholders. Chan and Chan (2004) reported that the concept of project success is developed to set criteria and standards to aid project participants to complete projects with the most desirable outcomes.

Baccarini (1999) examines project success criteria from the project management and product success perspectives. Accomplishment of cost, time and quality objectives is the project management success. On the other hand, product success deals with the effects of the project's final products in terms of meeting customers and organisational expectations, users' requirements and stakeholders' satisfaction.

The iron triangle (on time, under budget, according to specifications) has been the widely accepted criterion for project success during the last couple of decades (Jamal Ibrahim AL-Zahrani, 2013). However, Toor and Ogunlana (2010) reported that the same old-fashioned performance criteria can no longer be the sole determinant of project success due to a change in demands of users, evolving environmental regulations, and shifting functions of buildings.

Construction project involve of a many stakeholders in their projects such as client, architect, engineer, quantity surveyor, authorities and etc. Takim and Akintoye (2002) mentioned that the construction project involves many stakeholders, various procedure in different stage of work must be follow in order to produce the final product to both of the public and private client. This objective is to bring the project to a successful conclusion.

2.0 Problem Statement

14.2 per cent projects in Malaysia still called as a "sick" project (Hassan, 2012). This happens highly from the contractor on their attributes during construction project. The main reason of why this situation occurs is the

contractors have lack of knowledge and experience to handle the construction project. Due to lack of knowledge and poor experience from the previous or similar project, the contractors cannot forecast modifications and solve the problem or risk during construction period (Luu, Kimand and Huyh, 2008).

Besides, the contractor that has poor in performance which is shortage in term of capital resources and low capability from the contractor is one of the delay problems in construction project (Assaf and Hejji, 2006). In addition, Belassi and Tukel (1996) asserted that one thing of prime importance in determining project success or failure is the existence of groups of success factors and their interactions.

3.0 Research Objective

The aim of this research is to identify the contractor attributes for the construction project success. The objective that has been established to achieve the aim of the study is to determine the important contractor attributes for the construction project success.

4.0 Literature Review

The contractors should have a good attributes in order to success the project such as technical capability, past experience of the project and safety management practices (Doloi, Iyer and Sawhney, 2011). According to Chan was cited in Al-Tmeeny, Rahman and Harun (2011), mentioned that time, cost and quality have long been used to evaluate the performance and success of construction projects. These criteria can fulfill the client's satisfaction and achieve the clients' goals whether short or long term goals.

The financial attributes is the model of financial capability of the contractor. When the contractor has strength in their financial, that has no difficulties to conduct the project (Palanesswaran and Kumaraswany, 2001). According to Cheng and Roy (2008), mentioned that good operational performance in term of cash flow control impacts significantly upon project success. Cash flow is a financial capability of construction contractors in order to trust the client to handle their project (Huang, Tserng, Liao et al., 2013). A good record in terms of cash flow control, financial performances and provide the advances knowledge to manage cash flows give significantly in order to achieve project success (Cheng and Roy, 2011).

The work involve under the technical attributes such as experience of staff, capability of planning, site organization, project controlling, and the contractor should have the additional knowledge of construction method Morote and Ruze-vila, 2012 and Xiong Skitmore, Xia et al. (2013). According to Doloi (2009), mentioned that planning and controlling comprises the attributes associated with sound plant maintenance statement, appropriate work quality record and compliance to the quality specifications, onsite control of baseline schedule and effective time management. According to Hartmann et al. (2009), understanding technical knowledge enables use of correct working methods to competently handle machinery and equipment.

Experience has shown that it is possible to achieve a successful project even when management has failed (Munns and Bjeirmi, 1996). According to Doloi, Iyer and Sawhney (2011), mentioned that contractors' experience in similar projects as one of the most important factors for ensuring contractors' success on the project. Contractors' ability in performing on a new job highly relies on their organizational capability in terms of availability of experienced personnel with relevant expertise. Holt et al. (1994) who asserted that contractors who have the requisite experience from a similar project tend to have a greater impact on project success.

According to Palanesswaran and Kumaraswamy (2001), mentioned that the past performance will provide details of past project performance and status of the company's time management systems. It also enable the client to access the company's ability to manage and deliver projects within the specified time. The contractor performance indicators derived from the contractors' records on previously completed projects and their overall performance at corporate level (Jaskowski, Biruk and Bucon, 2010). According to Holt et al. was cited in Doloi, Iyer and Sawhney (2011), contractors' past performance refer to the length of relationship between clients and other key stakeholders, record of past conflicts and disputes in jobs.

Attalla et al. (2003) mentioned that quality and safety are the two specific issues that need to be prioritised in a 21st century construction site. Construction quality cannot be so easily quantified and measured compared to cost and time. Its assessment is rather subjective (Chan and Chan, 2004). Toakley and Marosszeky (2003) stressed that for the construction industry, the focus on quality management should not only be at the construction stage but for total quality to exist throughout the project life-cycle.

5.0 Research Methodology

A quantitative study is done through the adoption of the questionnaire method as an instrument. A total of 50 sets of questionnaire are distributed to Project Manager, Engineer, Site Supervisor and Technical Assistant that employed with contractor G7 and the total of 33 respondents were responded. The study utilised a questionnaire containing two parts, A and B. Part A consists of the demographic background while part B consists of the contractor attributes for the construction project success that have divided into seven (7) groups which are financial attributes, management or technical attributes, past experience attributes, and past performance attributes. The data has been collected from the questionnaire will be assembled and analyse to ensure the objectives of the research is achieved. The data were processed through Statistic Package for Social Science (SPSS) version 20.0. There were adopted the analysis descriptive statistics technique using score mean and percentage.

6.0 Data Analysis and Finding

6.1 Demographic Background

From the data collected, majority of the company were established more than 10 years at 81.8%, within 5 to 10 years at 9.1% and less than 5 years also shown 9.1%. Respondents position shown that the majority of the respondents are Project Managers (14) 42.4%, Engineer (10) 30.3%, Site Supervisor (5) 15.2% and Technical Assistant (4) 12.1%. A total of (3) 9.1% of the respondents are SPM holders, 17 of the respondents are Diploma holders (51.5%), 12 of the respondents are Degree holders (36.4) and 1 of the respondent are Master holder (3%). 13 of the respondents are service in the company between 1 to 5 years (39.4), 8 of the respondents are service in the company between 6 to 10 years (24.2%) and 12 of the respondents are service in the company more than 11 years (36.4).

6.2 The Important Contractor Attributes for the Construction Project Success.

Table 1 : The important contractor attributes for the construction project success

Contractors' Attributes	Means (M)	Raking
Financial attributes	4.23	2
Management or Technical attributes	4.42	1
Experience attributes	4.02	5
Past performance attributes	4.09	4
Quality attributes	4.16	3

Table 1 show the ranked and mean (M) the important contractors attributes for the construction project success. The findings showed that management or technical attributes (M = 4.42) is the highest mean values followed by financial attributes (M = 4.23), quality attributes (M = 4.16), past performance attributes (M = 4.09) and experience (M = 4.02). Management or technical attributes has the highest value indicating the item is one of the most important contractor attributes for the construction project success.

7.0 Discussion

Based on Table 1, the first highest value of contractor attributes is management or technical attributes (M = 4.42). The various works involve under management or technical attributes such experience of staff, capability of planning, site organization and project controlling. The management or technical attributes should be implemented by contractor to achieve the project goals. According to Doloi (2009), mentioned that planning and controlling comprises the attributes associated with sound plant maintenance statement, appropriate work quality record and compliance to the quality specifications, onsite control of baseline schedule and effective time management. The contractor need to provide qualified and skilled staffs that have project management responsibilities and execution capabilities during construction to ensure the project run smoothly and success.

The second highest value of contractor attributes is financial attributes (M=4.23). There are four sources under the financial attributes that usually affect the construction project success which are turnover history, credit or borrowing history, cash flow forecasting and balance sheet information. According to Cheng and Roy (2008), mentioned that good operational performance in term of cash flow control impacts significantly upon project success.

Quality attributes is the third highest value of contractor attributes (M = 4.16). There are three categories of quality attributes which are quality control, quality policy, and quality assurance. These findings are in line with previous studies by Attalla et al. (2003) and Chan and Chan (2004) which conclude that quality is a specific issue that needs to be prioritised for a 21st century construction site.

Next, it was followed by the adequacy of past performance attributes (M = 4.09). Past performance attributes consists of the high performing teams, learning, cultural issues and team integration. Contractors of high repute and better past performance will improve client confidence and raise the possibility of future business (Xiao and Proverb, 2003).

Experience attributes (M = 4.02) is the least value of contractor attributes. This finding is in line with previous study by Doloi, Iyer and Sawhney (2011) which mentioned that contractors' experience in similar projects as one of the most important factors for ensuring contractors' success on the project. Proper emphasis on past experience and how a contractor is capable of increasing his volume of work from the time of establishment are proposed as factors that impact the success of a project.

8.0 Conclusion

Construction projects and their project success are highly related to the contractors. The objectives of this study has been achieved and the findings showed that several contractor attributes such as financial, management or technical attributes, experience, past performance and quality are becoming measures of success in addition to the classic iron triangle's view of time, cost and quality. Management or technical attributes is the most important contractor attributes in order to achieve the construction project success. These findings provide a clear understanding of contractors' performance and could potentially enhance existing knowledge of construction project success. Also, it can give a guideline to the contractor to improve their attributes to achieve the successful project to acquire client confidence and raise the possibility of future business.

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