

Exploring Potential Success Criteria for Project Performance: Klang Valley Construction Project

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ABSTRACT: In this new era of globalization infrastructure plays an important role and becomes the most crucial pillar of productivity in the nation's economy. Infrastructure development in a developing country like Malaysia is extremely important to every resident who is born here. To date, comprehensive criteria for a successful infrastructure project implementation in developing countries have not been clearly defined. Therefore, further research needs to be done. This research intends to examine the potential success criteria for construction projects in Klang Valley area. The objectives are to explore the success criteria potentials that would be useful in performance of construction projects. Quantitative research approach was adopted in this research. A questionnaire survey was conducted to assess the identification and recognition of success criteria and factors in for project performance. About 103 respondents representing different organization ownership structures in the construction industry have participated in the questionnaire survey. The findings was analysed using SPSS Software with exploring on Kruskal-Wallis H Test and the result revealed the result as expected. In a nutshell, most of the construction company sector agree with every statement in this research study. This research is expected to enhance management skills in construction or projects in the construction community in order to have more efficiency and reliability towards the coming era.

Keywords: *Current Successful Criteria; Project Performance; Klang Valley*

1. INTRODUCTION

The infrastructure sector now becomes more significant and has been started early as the Ninth Malaysia Plan (2006-2010) and supported with various plans and initiatives in the Tenth Malaysia Plan (2011-2015) and Eleventh Malaysia Plan (2016-2020). The growth in Malaysia's construction sector in the coming years will remain to a reasonable around an estimated 6.6% at 2017, 5.4% at 2018, and 4.2% at 2019 [1]. In the long term, they forecast growth will average 3.7% per annum through to 2029. The affirmation of criteria in making a decision is very important to show a transparent process in a project proposal which can be both in qualitative and quantitative [2]. There is a need

to identify the success criteria project performance in construction industry.

2. SUCCESS FACTORS IN CONSTRUCTION PROJECTS

Project related factors consist project size and value, clear objectives and scope, subcontractor's competency, contracting method, proper planning and control and project organisation [3]. Project size can be classified into three which is small, medium and large. Small projects only involve around 1 to 2 size, medium will have 2 to 5 and large is 6 more and above. Different project sizes will have different complexity. Then, clear objective and scope is very important to a project. The whole stakeholder who is involved must understand their objectives and scope themselves to ensure the project runs smoothly from the initiation until completion [4].

Additionally, factors in a project management are evaluated by the attitude and actions. Other project management factors such as adequate communication, control mechanism, coordination effectiveness, feedback capabilities, monitoring, project organization structure and plan and schedule [3]. This is related to adequate communication. With effective communication it will be better to deliver messages out the import. Coordination effectiveness is one of the factors as well. Furthermore to conduct the construction work effectively, coordination to arrange every of them is much needed [5]. Next, plan and schedule is the most important factor which shows how a contractor works effectively and efficiently in a project. Proper planning with a list of working programme can ensure the project follows strictly with the initial plan with no further delay or extension of time needed.

Human related factors such as client, project manager, designer, contractor, subcontractors, consultants, manufacturers and suppliers [3]. Additionally, clients need to work closely with the team members, communicate and engage with every project stakeholders. Then Contractor is an organization focusing on the completion of the project which is hired by the client. To ensure a smooth development of the project, general contractors need to take care of equipment, materials and any other services.

3. RESEARCH METHODOLOGY

This research involved with quantitative approach and 103 respondents has been involved with questionnaire survey. Additionally, to generate a high accuracy, validity and reliability research findings, Statistical Package for the Social Science (SPSS) is adopted to this research. Data analysis involved in this research is Kruskal-Wallis H Test. Kruskal-Wallis H Test is a non-parametric and distribution free test [6]. The use of Kruskal-Wallis H Test no need to make any assumptions in dependent variables

4. RESULT AND DISCUSSION

The results of the Kruskal-Wallis H Test on the opinions of different organisations ownership structure towards the success criteria that would be useful in performance of construction project in Malaysia stated in Figure 1.

Criteria	Mean	Standard Deviation	Rank	Asymp. Sig. (2 tailed)	Kruskal-Wallis H	Decision
Overall						
Technical Performance	4.1359	.48605	7	.019	11.850	Null Hypothesis Rejected
Client Satisfaction	4.1650	.61193	5	.026	15.715	Null Hypothesis Rejected
Benefit to stakeholder	4.2039	.75873	4	.003	15.715	Null Hypothesis Rejected
Team Performance	4.3592	.59168	1	.790	1.705	Null Hypothesis Accepted
Project Management techniques that apply	4.1553	.75091	6	.039	10.098	Null Hypothesis Rejected
Commitment to the project	4.2718	.67438	2	.153	6.699	Null Hypothesis Accepted
Effective Site Management	4.2330	.64480	3	.716	2.105	Null Hypothesis Accepted
Personnel selection and training	4.0388	.62501	8	.054	9.288	Null Hypothesis Accepted

Figure 1 Kruskal-Wallis H Test of Success Criteria

Figure 1 shows significant difference between respondents about the opinions of different organisations ownership structure towards the success criteria of “Technical Performance”, “Client Satisfaction”, “Benefits to the stakeholder”, and “Project Management techniques that apply” that would be useful in performance of large infrastructure project in Malaysia with p-values of 0.019, 0.026, 0.003, and 0.039 respectively. This gives a meaning of no significant differences were found for the other criteria whereby their p-values were greater than 0.05. The null hypothesis that are accepted “Team Performance”, “Commitment to the project”, “Effective Site Management” and “Personnel selection and training”.

Objective of this paper was successfully met through the responses collected from the questionnaires. Later by then the data computed by arithmetic means, each criteria was ranked accordingly. The highest three

types of potential success criteria that would be useful in performance of large infrastructure project in Malaysia construction industry. Furthermore, Kruskal-Wallis H Test shows that different organisation ownership structures have significantly different perspectives on “Team performance”, as the potential success criteria that would be useful while “Commitment to the project” and “Effective site management” as well display a difference.

5. CONCLUSION

Finally the most significant of success criteria potentials are individual, organisation and project related factor which contribute the framework of successful criteria for large infrastructure project in Malaysian construction industry were obtained including requirements such as cost, scope and time meets all to achieve a successful project; innovative way is the key to meet the project success and scheduling is one of main concern tools to achieve project success.

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