EFFECTIVE PROJECT DELIVERY : STRATEGIES FOR SUCCESSFUL IMPLEMENTATION OF PROJECTS UNDER 10TH MALAYSIA PLAN

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Abstract: Public Work Department (PWD) often faces ineffective project delivery during project cycle . The objectives of this study are to identify the causes of ineffective project delivery , determine the effectiveness of current project management practice in PWD and to recommend appropriate strategies for successful project implementation during 10th Malaysia Plan . From the analysis of questionnaire survey among the 164 PWD's staff , the top-three causes of ineffective project delivery were (1) poor communication and coordination, (2) poor contractor's site management and (3)slowness in decision making process. It is also believed that (1) usage of CPM, (2) technical audit management during construction and (3) implementation of quality procedures are the most effective project management practices. (1)Reduce government bureaucracy, (2) adoption of standardized project delivery. Discussion focus group was conducted to discuss the ranked information's within PWD's current limitations.

1.0 INTRODUCTION

Malaysia has started her national development plan for every 5 years since 1956. Throughout the past Malaysia Plans, Public Work Department (PWD) has been entrusted as the technical advisor to the government regarding the implementation of development projects and maintenance of infrastructure assets. In implementing the government projects, the problem of ineffective project delivery has always been common. According to Sambasivan and Soon (2006), the problem of contract delays in the construction industry is a global phenomenon, with no exception in Malaysia. Normally, delays in construction projects cause dissatisfaction to all the parties involved and the main role of PWD is to ensure that the projects are completed within the budgeted cost, time and client's objective. The 10^{th} Malaysia Plan (2011 – 2015) has earmarked the pressure to increase efficiency while delivering improved and integrated services. As a technical arm to the Malaysian government, PWD could no longer rely on past approaches and strategies that had previously driven the project implementation. The department needs new strategies and approaches to propel the government projects to be delivered in a high level of efficiency.

1.1 Problem Statement

PWD has been entrusted with 6,104 projects implementation throughout 9th Malaysia Plan (2006 -2010), in which in this plan, the department has been burdened with ineffective project delivery problems despite various strategies and recovery measures taken. The failures of the projects are high as showed by the issues pertaining to the traditional success factors which are time, cost and quality:

- a) Findings showed that 80% of the projects managed by PWD until 2009 could not be completed within the original contract period
- b) Changes in scope is quite common in government projects, which resulted in implicating the cost and extension of time (delay)
- c) Lacking of quality has always been associated with government projects despite various quality system adopted during their implementation

Looking at the present scenario, history can always repeat itself in the 10th Malaysia Plan which begins in 2011. Therefore, PWD must come out with strategies and tactics to ensure that the projects under this coming plan are delivered on time, completed within the allocated budget and with the expected quality. Completing projects on time, cost and quality are indicators of efficiency. However, it is also important to note that construction process is subjected to many unpredictable factors and variables that could not fit to all organizations (Assaf and Al-Hejji ,2006).

1.2 The Objectives

The objectives of this study presented in this paper are as following:

- a) To identify the causes of ineffective government project delivery under PWD's supervision
- b) To determine the effectiveness of current project management practice in PWD
- c) To recommend implementation strategies for effective government project delivery during 10th Malaysia Plan

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1.3 Scope of Study

In this study, the ineffective project delivery and current project management practices in PWD would be identified first in order to validate the common problems that occurred during 9th Malaysia Plan implementation. The questionnaire survey will be distributed at the Headquarters in Kuala Lumpur that involves directly with project management implementation. The strategies of successful project implementation would be defined in the context of government construction projects in Malaysia which are managed by Public Work Department (PWD).

2.0 LITERATURE REVIEW

The literature review of this study will begin with identifying and addressing the causes of unsuccessful project delivery. This is highly important in order not to repeat the cycle of mistakes in the five-year development plan. Critical success factors need to be identified as an early indicator towards developing the strategies in successful project implementation.

This statement was supported by Al-Tmeemy, Zakaria and Harun (2010) who stressed that it is really important for contractors to identify problems and innovate ways of delivering successful projects which could be achieved with clear success criteria.Similarly, Pinto and Kharbanda (1996) explained that previous examples of famous project failures should give us the opportunity to jump to the relevant lessons that can be learned from the failures, if only we are willing to draw them for the future.

2.1 Causes of Ineffective Project Delivery

Assaf and Al-Hejji (2006) conducted a survey on time performance of large construction projects in Saudi Arabia. The survey showed 73 different causes of delay. They studied the importance of various causes from the viewpoint of contractors, consultants, and owners. The most common cause of project delay identified by all the parties was "change order".

Odeh and Battaineh (2002) presented the findings of a survey aimed at identifying the most important causes of delays in construction projects. Findings of the survey indicated it was agreeable that owner interference, inadequate contractor experience, financing and payments, labour productivity, slow decision making, improper planning, and non-performance of subcontractor were among the top ten most important factors. Dey (1999) had concluded that the main reasons of non-achievement of a project were changes in design and scope, changes in Government regulation and policies, unforeseen inflation, under-estimation and mis-estimation. These non-achievements were considered as part of the reason of unsuccessful project delivery.

2.2 Current Project Management Practice

In project management initiative, PMI (2004) stated that project management was accomplished through the implementation of the cycle such as: initiating, planning, executing, controlling and closing. Furthermore, it described the project team supervises the project activities , and the activity typically involved competing demands for scope, risk, time, cost , quality and stakeholders with different needs.

Project management is now well developed and accepted as a domain for the exercise of professional expertise and as an area for academic research. Numerous methods and techniques have been developed, covering all aspects of managing projects from their start to their completion, and these have been disseminated widely in books and journals and through the work of professional bodies.

2.3 Strategies For Successful Project Implementation

Patanakul and Milosevic (2009) suggested that to improve efficiency and management, nowadays many organizations employ multiple project management (MPM) practices that currently adopted by Public Work Department but seem to be in ad-hoc basis. Normally, it refers to have a project manager lead multiple concurrent projects which the management of a group of multiple projects.

Project Management Institute (PMI) has issued a new standard, the Organizational Project Management Maturity Model which suggests Standardised Project Management (SPM) as a major strategy. Companies commonly choose to implement SPM, which can be defined as a standardized set of project management practices (Milosevic and Patanakul, 2005). According to them, Standardized PM may steer to project success.However, PWD is in early stage to adopt the Standardized Project Management through the establishment of Complex Project Management Branch.

Partnering is an arrangement between two parties (e.g. client and contractor or contractor and subcontractor) which can be either open-ended, for a specified term or for a single project (Matthews, 1996). The partnering procurement method aims to eliminate adversarial relationships between client and contractor by encouraging the parties to work together towards shared objectives and achieve a win-win output (Griffiths , 1992). Partnering seeks to develop closer relationships between parties to a project.

3.0 RESEARCH METHODOLOGY

The research methodology for this study is as illustrated in Figure 1 below :



Figure 1: Schematic of Research Methodology

4.0 ANALYSIS AND DISCUSSION

The demographic characteristic of the respondents (164 PWD's staff) are given in Table 1.

Table 1 :	Demographie	c characteristic	of respondents

Demographic Characteristic	Frequency(/164)	Percentage (%)				
Type of involvement						
Project Management (HOPT/HODT)	105	64.0				
Project Management (construction site)	18	11.0				
Management	32	19.5				
Others	9	5.5				
Position in the organization						
Director and above (JUSA)	1	0.6				
Senior Officer (Grade J48 - J54)	69	42.1				
Junior Officer (Grade J41 - 47)	70	42.7				
Non-Officer (Grade 1 - 40)	24	14.6				
Experience in construction						
< 5 years	56	34.1				
5 - 10 years	36	22.0				
11 - 15 years	13	7.9				
> 15 years	59	36.0				
Gender						
Male	90	54.9				
Female	74	45.1				

Field of specialization				
Architecture	28	17.1		
Mechanical	19	11.6		
Quantity Surveyor	11	6.7		
Civil & Structure	61	37.2		
Electrical	45	27.4		
Age				
20 - 30 years	56	34.1		
31 - 40 years	44	26.8		
41 - 50 years	27	16.5		
> 50 years	37	22.6		
Education				
Certificate	8	4.9		
Diploma	14	8.5		
Degree	131	79.9		
Master	9	5.5		
PhD	2	1.2		

Based on reliability analysis, the value of Cronbach's Alpha for overall shows **0.9542** and indicated that all the data are reliable as its p value ≥ 0.70 . Based on survey analysis, factors are ranked according to Relative Important Index (RII) and mean as per Table 2, Table 3 and Table 4.

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CAUSES	RII	MEAN	RANK
Poor communication and coordination	0.870	4.348	1
Poor contractor's site management	0.862	4.305	2
Slowness in decision making process	0.849	4.250	3
Conflicts in sub-contractors coordination and schedule		4.213	4
Inadequate experience of consultant	0.835	4.177	5

Table 3 : Ranking	of Effectiveness	of Current	Project	Managemen	nt Practice

CURRENT PROJECT MANAGEMENT PRACTICE	RII	MEAN	RANK
Usage of Critical Path Method (CPM)	0.830	4.152	1
Technical audit management during construction	0.783	3.915	2
Implementation of SPK procedures and documentations	0.773	3.866	3
Execution of regular meeting for reporting/solution	0.759	3.793	4
Application of lesson learned/post-mortem database	0.758	3.787	5

Table 4 : Ranking of Strategies For Effective Project Delivery

ACTION PLAN	RII	MEAN	RANK
Reduce government procedures /bureaucracy for government's construction management	0.819	4.098	1
Adoption of standardized project management tools	0.808	4.043	2
Job matching based on talent/academic/self interest		4.018	3
Create competitive culture among PWD's staff		3.988	4
Adoption of integrated technical course for contractor	0.789	3.945	5

The top ranked of analysis are further discussed in discussion focus group which involves three senior PWD's staff with at least 25 years experiences. They were asked about why the particular problem are happen and how to initiate strategies for overcoming it. They believe that current communication practices in PWD are not functioning well because of its objectives are already compromised. They think that competency of PWD's staffs in project management tools is not up to the mark . For them, the implementation strategies need to be look in holistic ways rather than function in silo mentality.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The objectives of this study have been reached and it could be concluded that:

- a) Study indicated that the top ranked for causes of ineffective government project delivery directly involve with management and communication issues from all parties involved. The results reinforce that greater understanding and appreciation of management skills should be accommodated properly towards pinnacle of success. Besides, human management is the main critical factor above all others to ensure good project delivery.
- b) PWD's staffs as the respondents believe about significant relationship between project management tools and project success which provides empirical support for the assumption that adoption of formal project management practices improves project performance. However, in reality its success is cling to the competency and maturity by particular construction players who need to look it objectively rather than task completed. Study also indicated that civil and structure respondents as majority force in PWD were not favoured with implementation of multiple project management (supervises many projects concurrently) that currently adopted and inherited since PWD exist.
- c) The study had demonstrated that PWD tend to experiment with various implementation strategies during 5 years of Malaysia Plan but the impact and objectives achievement are rarely been revisited. Thus building up a more holistic view of project management solutions in the competitive construction environment is more appropriate. The study showed that quantity surveyor respondents who currently oversee the contract implementation and documentation were agreed that current government procedures in construction need to be revamped. Other than that, repeatability should be look as great opportunity for government projects to be consistently delivered successfully as mentioned by Milosevic and Patanakul (2005).

Since the author had covered only limited scope in this study, it is proposed that study can be conducted with the whole of construction players like consultants and contractors. Also, more extensive study can be conducted regard to the current implementation strategies. In addition, project management tools effectiveness is recommended for advanced study in order to gauge their acceptance among local construction players. More successful projects performance can be achieved if project team players take the problem factors identified in this study seriously in their construction work.

REFERENCES

- Al-Tmeemy, S.M.H.M, Hamzah Abdul-Rahman and Zakaria Harun (2010). Future Criteria For Success of Building Projects in Malaysia. *International Journal of Project Management*.
- Assaf, S.A. and Al-Hejji, S. (2006). Causes of Delay in Large Construction Projects. International Journal of Project Management.24, 349-357.
- Dey, P.K. (1999). Process Re-Engineering for Effective Implementation of Projects. International Journal of Project Management.17 (3), 147-159.
- Odeh, A.M. and Battaineh, H.T. (2002). Causes of Construction Delay. International Journal of Project Management. 20, 67-73.
- Griffiths, F. (1992). Alliance Partnership Sourcing A Major Tool for Strategic Procurement . Frank Griffiths Associates Limited.
- Mathews, J., Tyler, A. and Thorpe, A.(1996). Pre-Construction Project Partnering: Developing the Process. *Engineering Construction and Architectural Management* 1(2),117 131.
- Milosevic, D. and Patanakul, Peerasit P. (2005) Standardized Project Management May Increase Development Projects Success. *International Journal of Project Management*. 23, 181-192.
- Patanakul, P. and Milosevic, D. (2009). The Effectiveness in Managing a Group of Multiple Projects: Factors of Influence and Measurement Criteria . *International Journal of Project Management*. 27, 216–233
- Pinto, J.K. and Kharbanda, O.P. (1996). How To Fail In Project Management (Without Really Trying) . What Made Gertie Gallop? Learning from Project Failures. (pp. 45-53). New York: Van Nostrand Reinhold.
- Project Management Institute. (2004). A Guide to the Project Management Body of Knowledge, Third ed. Project Management Institute, Newtown Square, PA.
- Sambasivan, M. and Soon, Y.W. (2006). Causes and Effects of Delays in Malaysian Construction Industry. *International Journal of Project Management*. 25,517–526.