

**THE CAUSES, IMPACTS OF AND WAYS TO
MITIGATE THE DELAY EFFECTIVELY IN
CONSTRUCTION INDUSTRY**

BY

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DECLARATION

I Wardah Musfirah Ghazali, I12000390 confirm that the work in this report is my own work and the appropriate credit has been given where references have been made to the work of other researchers.


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ABSTRACT

The objectives of this study are to identify the causes of delays in construction, the impacts of delays in construction and ways to mitigate the construction delays. Based on the literature review and survey questionnaire of this research were carry out, there are total seven categories are take part in the causes of delays in construction industry, six factors that impacts of delays in construction project and fifteen ways to mitigate the construction delays. The survey questionnaires were distributed to the targeted respondents either in consultant, contractor or client/developer type of organization. All the three objectives in this study are fully achieved. The top five important factors that are chosen by the three parties involved contributed to the causes of delays are shortage of labour, rework due to errors during construction, improper construction methods implement, low productivity level of labours and ineffective planning and scheduling of projects. The impacts of delays the most common are time and cost overrun. The effective ways to mitigate the delays in construction are identified by the top five consist of frequent coordination between the parties involved, site management and supervision, proper project planning and scheduling, clear information and communication channels and effective strategic planning.

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

One of the biggest problems faced in the construction industry is delay. Al-Assaf and Hejji (2006) defined delay as the time overrun either beyond completion date specified in the contract or beyond the date that parties involved agreed upon the delivery of a project. It is considered as common problem if a project slipping over its plan schedule in the construction projects.

In Bassioni & El-Razek (2008) stated that the delay in construction project is considered one of the most common problems causing a multitude of negative effects on the project and its participating parties. Therefore, in order to mitigate and avoid the delays and the related expenses, it is crucial to identify the main causes.

According to Assaf and Al-Hejji (2006), the mainly causes of delay from owner point of view are related to both contractor and labours. Results indicate that owners are realizing that awarding of projects to the lowest bidder is one of the highest frequent factors of delay. Inputs of the contractors indicate that the most frequent causes of delay are related to the owners. Consultants, like owners, awarding the lowest bidder as the most frequent factor of delay. This is due to that most of owners award the lowest bidder to accomplish their projects. Generally, the lowest bidders are unqualified contractors with shortage in resources and low capabilities, which lead to low performance and which cause delay in completion of the work

1.2 Problem statement

According to Sambasivan and Soon (2006), the problem of delays in the construction industry is a global phenomenon and the construction industry in Malaysia is no exception. Normally, when the projects are delayed, they are either extended or accelerated and therefore, incur additional cost. Therefore, delays in construction projects give rise to dissatisfaction to all the parties involved and the main role of the project manager is to make sure that the projects are completed within the budgeted time and cost.

“Delays on construction projects are a universal phenomenon. They are almost always accompanied by cost and time overruns. Construction project delays have a debilitating effect on parties (owner, contractor, consultant) to a contract in terms of a growth in adversarial relationships, distrust, litigation, arbitration, cash-flow problems, and a general feeling of apprehension towards each other” (Ahmed, 2002)

In the study of Assaf and Al-Heijji (2006) in the construction, delay could be defined as the time overrun either beyond completion date specified in a contract, or beyond the date that the parties agreed upon for delivery of a project.

“Delay was also defined as an “act or event which extends required time to perform or complete work of the contract manifests itself as additional days of work” by Zack (2003)” (El-Razeki, Bassioni and Mobarak, 2008).

“Delay as referred in construction is prolonged construction period and disruptions are events that disturb the construction programme. Delays and disruptions are among the challenges faced in the course of executing construction projects. Delays as well as disruptions are sources of potential risks that current studies are looking into ways to manage. Various studies (Cohen and Palmer, 2004; Baloi and Price, 2003; Finnerty, 1996; Miller and Lessard, 2001) have identified sources of and types of construction risks that need to be managed as part of project management process. There are also risks and factors (Zou, Zhang and Wang, 2006; Aiyetan, Smallwood and Shakantu, 2008) that affect construction project delivery time which are also causes of delays” (Kikwasi, 2012).

“Delay was also defined as an act or event which extends required time to perform or complete work of the contract manifests itself as additional days of work. Poor site management can cause project delay and affect productivity. A lot of research efforts have been made to study delay causes in different countries. For example, material-related delay is the main cause of project delays in Saudi Arabia. Bordoli and Baldwin examined the causes of delays in building projects in the United States. Weather, labor supply, and sub-contractors were found to be the major causes of delays. Poor risk management, poor supervision, unforeseen site conditions, slow decision making involving variation, and necessary variation works are the principle delay factors in Hong Kong. Unforeseen soil condition, poor site supervision, low speed of decision making involving all project teams, client initiated variations, necessary variations of work, and inadequate contractor experience are the six significant factors contributing to delays in building and civil engineering works. Materials-, equipment-, and labor-related delays were identified as major causes of contractors’ performance delays. Design changes, poor labor productivity, and inadequate planning and resources were found to be responsible for delays in Indonesia.

In Saudi Arabia, contractor performance, owner's administration, early planning and design, government regulation, site and environment conditions, and site supervision were found to be the important causes of delay" (Marzouk and El Rasas, 2013).

From the above findings there are many projects have faced various problems and delay of time in construction. In order to mitigate the delay effectively, it is important to find out the causes, impacts, method and delay must be avoided to obtain value for money projects.

1.3 Objectives

The objectives of the study are as follows:

- a) To investigate the causes of the construction delay.
- b) To evaluate the impacts of delay.
- c) To discuss ways to mitigate the delay through implementation of the parties (contractor, consultant and client) involved.

1.4 Scope of Study

The scope of study is generally focused on the literature review and the questionnaire survey form distributed to the targeted respondent either by hand or by email (online) through all Malaysia including Sabah and Sarawak. The respondent of this research will be Client's Quantity Surveyor (QS), Contractor QS and Consultant QS. The questions were designed based on the three main objectives of this study. This research must be completed within four month where there will be not enough time to collect the data and may affect the research of data analysis.