

# Factor Causing Time Delay in Construction Malaysia

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**Abstract**—The construction industry nowadays has higher complexities with increased scope of work, number of parties involved and is technically more advanced. However, the industry does not give adequate attention to proper delay management. The causes of delay need to be identified and assessed. The methods on delay mitigation need to be mapped out to cater for these delays. Even the smallest mistake or unforeseen causes can lead to major lost and even bankruptcy to construction firms. Therefore, the aim of this study is to provide a compilation of causes and effects of delay data for Malaysian construction industry. The discussions related the field of causes and effects of delay in construction projects has been reviewed. Result of delay identification from other countries have been studied and compared to make this paper more comprehensive. The overall discussion will focus on the causes of delay related to each specific group; the direct effects of these delay, and also the correlation between the causes and effects. The data is collected by conducting structured questionnaire surveys and distributing it out to government agencies, consultants, and contractors involved in the construction industry. An in depth study is also done on different methods of delay identification available in project management.

**Keywords:** Delay causes, Delay Effects, Construction Industry, Malaysia, Correlational Analysis

## I. INTRODUCTION

Delay in construction project is considered one of the most common problems causing a multitude a negative impact on the project and its participating parties. The problem as factors that affect the delay in construction projects and will affect company's performance and overall economy of the country as well. Therefore, it is essential to identify the actual causes in order to minimize and avoid the delays and their corresponding expenses. The delay in construction projects by many factors is usually linked to the performance of time, cost, and quality.

The main purposed of this study is to investigate the causes and effects of delay on completion of projects in Malaysia. After analysed the data, the objective of this research was done, where the causes were identified and categorized into 8 factor. Which the factors are project-related, client-related, contractor-related, design team-related, material-related, equipment-related, labor-related, and external-related factor. Besides, the effects of delay also have been identified such as time overrun, cost overrun, dispute, arbitration, litigation and total abandonment. There are correlation between the causes and effects of delay.

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## 1. TYPES OF DELAY

In construction delay, the types of delay can be categorized into two types, namely excusable delay and non-excusable delays that has been shown in Figure 1 as given by [1].

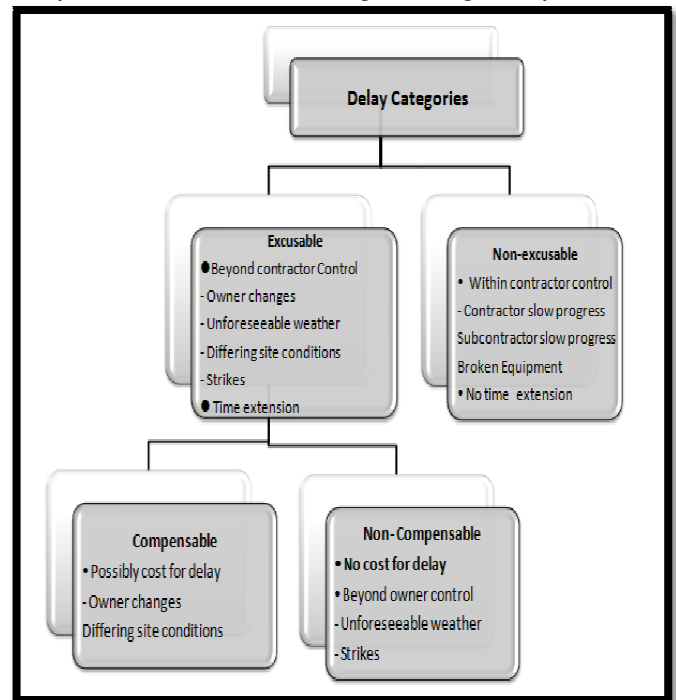


Figure 1 Types of delay

An excusable delay is a delay that is due to an unforeseeable event beyond the contractor's or the subcontractor's control. Excusable delay is further divided into two compensable and non-compensable delays. According to [2] compensable delay are caused by the owner or the owner's agents. An example of this type of delay would be the late release of drawings from the owner's architect. An excusable, compensable delay usually leads to a schedule extension and exposes the owner to financial damages claimed by the contractor, Non-compensable delay are caused by third parties or incidents beyond the control of either the owner or the contractor and are not attributable to any of the parties. Example typically includes acts of God, unusual weather, strikes, fires, act of government in its sovereign capacity. In this case contractor is normally entitled to a time extension but no compensation for delay damages.

Non-excusable delay are caused solely by the contractor or its suppliers, Fugar and Agyakwah-Baah (2010). The contractor is generally not entitled to relief and must either make up the lost time through acceleration or compensate the owner. However, non-excusable delay usually results in no additional money and no additional time being granted to the contractors. A non-excusable delay is events that are within the contractor's control or that are foreseeable. These are some example of non-excusable delays: