

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

This chapter contains four main parts of literature review. First is about the contract. Second is about the definition of delay. Third is, effects of delay. And the last part is the causes of delays

2.2 Literature Review

2.2.1 Contract

A contract is an essential document contains the agreement in general or details of all necessities to accomplish a project. Like the time duration to finish the work, the quality and the cost of the work, the drawing and other important article made by each parties concerned by the project.

The contract is the initial document that where all parties involved for the project complete the agreement about the exact starting time or date of the project and the exact finishing time of the project.

2.2.2 Definition of Delay

By Assaf in 2006 construction delay was 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” according to Zack in 2003.

2.2.3 Effects of delay

2.2.3.1 Time overrun

Time overruns occur usually when projects or tasks within a project is not completed by the time the project plan specifies. This can occur when materials to complete a project are back ordered and work cannot be completed until the materials arrive. Sometimes, labor shortages can cause work to be completed slower than anticipated.

Murali et al., (2007) argued that contractor related factors and client related factors such as inadequate contractor experience and owner interference have impact on time overrun. On the other hand, Aibinu and Jagboro (2002) studied the effects of construction delays on project delivery in Nigerian construction industry. They identified time overrun as one of the major effects of delay

2.2.3.2 Cost Changes

A cost overrun occurs when the expenses required completing a project, or one aspect of a project, exceeding the amount budget fixed for it. This can happen for any number of reasons. One common cost overrun occurs when the cost of materials rises significantly between the time you finalize your budget and actually start making purchases.

Regarding cost overrun Koushki et al., (2005) identified three main causes that were contractor related problems, material related problems, and owners financial constraints, whereas Wiguna and Scott (2005) identified the most critical factors included: high increased material price; design change by client; defective design; weather conditions; delayed payment on contracts and defective construction work.

2.2.3.3 Social problems

Disputes are the effects of major causes of delays in construction projects such as causes of client related, contractor related, consultant related and external related that might be arisen during the construction projects among the project parties. Lack of communication may also leads to misunderstandings, conflicts and disputes. Hence it necessitates the project managers to have effective communication skills, which are one of the significant soft skills with the project parties involving in construction projects. Based on Murali et al., (2007) the factors such as lack of communication between the various parties, problem with neighbors, unforeseen site conditions, delay in payments for completed work, improper construction method, delay caused by the subcontractor and discrepancies in contract documents will give rise to disputes between the various parties. Furthermore, if the disputes cannot be solved amicably or easily it can lead to arbitration or litigation.

2.2.3.4 Settlement

When the delays caused by client, contract, labor or external and contract relationship related factors happen such as delay in payment for completed works, problems with site conditions and less of labor supply where eventually rise the disputes to be settled by the litigation process. The parties involved in the construction projects use litigation as a last alternative to settle the disputes.

2.2.3.5 Total abandonment

The most critical disappointing effect of delays in construction projects is abandonment temporary or in worse condition for permanently. The major causes of

client related, consultant related, contractor related and external related may lead to project abandonment that will lead to delays in construction projects. Aibinu and Jagboro (2002) studied the effects of construction delays on project delivery in Nigerian construction industry. They identified total abandonment as one of the major effects of delay.

2.2.4 Cause of delay

SP Narayanan and Arazi B. Idrus, has surveyed the delay factors and classified them into Groups. Which has categorized the causes responsible for time delays and cost overruns in projects. They identified in a list 113 causes of delay in total of 18 categories of causes from various report in the literature.

The similar problem was study once in Indonesia by Peter F. Kaming, Paul O. Olomolainye, Gary D. Holt and Frank C. Harris. In Factors influencing construction time and overruns on high-rise project in Indonesia 1997. They found that the predominant factors influencing time overruns/delays are design changes, poor labour productivity, inadequate planning and resource shortages. In the case of cost overruns, the most important factors are material cost increases due to inflation, inaccurate materials estimating and degree of project complexity.

From Hamidreza Afshari, Shahrzad Khosravi, Abbas Ghorbanali, Mahdi Borzabadi and Mahbod Valipour (2011). They said that the most important cause of non- excusable delay, at least in the scope of this research, is “not selecting competent subcontractors”. And they identified 20 other non-excusable delays of construction project.

Garry D. Creedy, Martin Skitmore, and Johnny K. W. Wong. Found that the reasons of highway projects have overrun and evidences of the most important risks on which highway agencies need to focus their efforts. Particularly concerning changes in project designs and scopes during project development.

Sadi A. Assaf and Al-Khalif found nine major groups the factors causing delay in large building construction. They show that contractors and architectural/engineering (A/Es) substantially agree on the group of delay factors. In other hand some A/Es and owner does not agree with.

