

## **Major Causes of Construction Delays under Client Category and Contractor**

### **Category**

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### **Abstract**

Delays can be defined as the late completion of works as compared to the planned schedule on the contract. Delays can be avoided or minimized only when their causes are identified. When delay occurred in to our project, it will have adverse consequences on project objectives in terms of time, cost and quality. The aim of the study reported in this paper was to identify causes of delays that could threat project objectives in construction projects. A comprehensive literature review from various sources through books, conference proceedings, the internet, and civil engineering journals was made to carry out the study. The results of this study identified seventeen causes of delay in construction projects under two major categories of construction delays that were category of contractor related factors and category of client related factors.

The study also revealed that the category of client-related causes of delays was identified to be the most significant category that had high influence on delay. It is hoped that this study will become the foundation of further research in the area of project delays and mitigation measures.

**Author Keywords:** Project Objectives; Construction Project Delays; Adverse Consequences; Client Related Causes; Mitigation Measures.

### **Introduction**

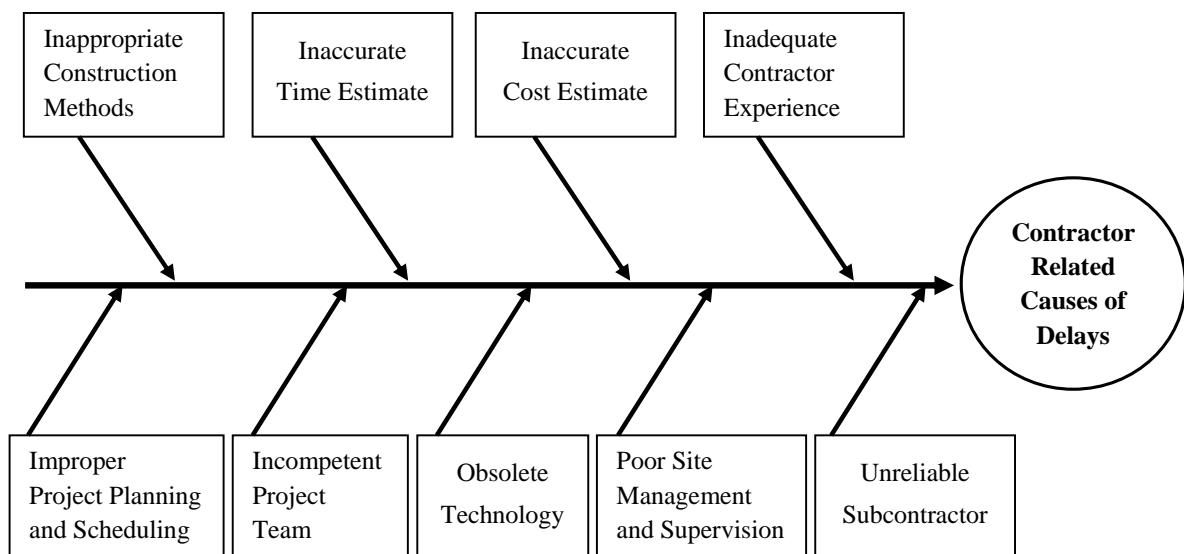
A construction project is commonly acknowledged as successful when the aim of the project is achieved in terms of predetermined objectives that are mainly completed the project on time, within budget and specified quality in accordance with the specifications and to stakeholders' satisfaction. Functionality, profitability to contractors, absence of claims and court proceeding and "fitness for purpose" for occupiers have also been used as measures of project success. One of the most important problems that may cause in the construction project is delays. Delays may occur in any construction project and the magnitude of these delays varies considerably from project to project. Some projects are only a few days behind the schedule: some are delayed over a year. So it is essential to define the actual causes of delays in order to minimize and avoid the delays in any construction projects. The construction industry is a major player in the economy, generating both, employment and wealth. However many projects experience extensive delays and thereby exceed initial time and cost estimates (G Sweis et al., 2008). Construction industry is necessary in every country because of getting better and also comfortable life which must be provided in order to achieve and become an advanced country within duration of time.

As defined in developed countries (Hillebrandt, 1985), construction is considered unique in that it can stimulate the growth of other industrial sectors. Hence, improving construction efficiency by means of cost effectiveness and timeliness would certainly contribute to cost saving for the country as a whole. Based on Arshi Shakeel Faridi and Sameh Monir El-Sayegh (2006) they argued that construction delay is considered one of the most recurring problems in the construction industry; delays have an adverse impact on project success in terms of time,

cost, quality and safety. Bramble and Callahan (1987) have defined that; “ a delay is the time during which some part of the construction project has been extended or not performed due to an unanticipated circumstance. “ An incident of delay can originate from within the contractor’s organization or from any of the other factors interfacing upon construction project.

### Category of Contractor Related Causes of Delay

Based on the literature review from Abd Majid and McCaffer (1998), Long et al., (2004) , Odeh and Battaineh (2002), Chan and Kumaraswamy (1996) and Ogunlana et al., (1996) there are nine major causes of contractor related leading to delays that were illustrated as shown in figure 1.

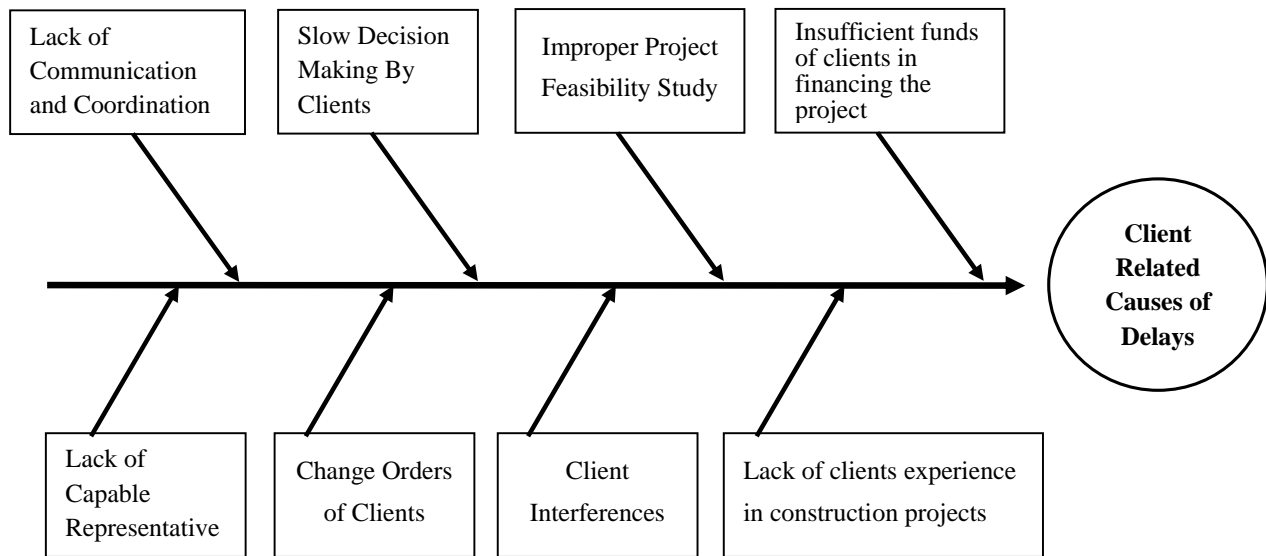


**Figure 1 Diagram of contractor related causes of delay**

### Category of Client Related Causes of Delay

Based on literature review, there are several studies that identified the factors or causes of client related leading to delays in construction projects. These factors included finance and payments of completed work, owner interference, slow decision making and unrealistic duration

imposed by owners. In conditions of disruptions in payment for completed work in construction projects work progress could be delayed due to the late payments from the clients because there is lack of clients funding or financial issues from the clients. Based on the literature review from Odeh and Battaineh (2002) , Long et al., (2004) , Ogunlana, et al. (1996) and Koushki et al., (2005) there are seven major causes of client related leading to delays were illustrated as shown in Figure 2.



**Figure 2 Diagram of client related causes of delay**

### Findings

All in all based on the literature review, seventeen factors under categories of contractor related factors and client related factors leading to delays in construction projects were identified as illustrated in Table 1.

**Table 1: Categories and causes of delays**

<b>Categories</b>	<b>Major Causes Leading To Delays</b>
<b>Contractor Related Causes</b>	<ol style="list-style-type: none"> <li>1. Inappropriate Construction Methods</li> <li>2. Inaccurate Time Estimate</li> <li>3. Inadequate Contractor Experience</li> <li>4. Improper Project Planning and Scheduling</li> <li>5. Incompetent Project Team</li> <li>6. Inaccurate Cost Estimate</li> <li>7. Poor Site Management and Supervision</li> <li>8. Unreliable Subcontractor</li> <li>9. Obsolete Technology</li> </ol>
<b>Client Related Causes</b>	<ol style="list-style-type: none"> <li>10. Slow Decision Making By Clients</li> <li>11. Improper Project Feasibility Study</li> <li>12. Insufficient funds of clients in financing the project</li> <li>13. Lack of communication and coordination</li> <li>14. Change Orders of Clients</li> <li>15. Lack of Capable Representative</li> <li>16. Lack of clients experience in construction projects</li> <li>17. Client Interferences</li> </ol>

### **Conclusion**

A construction project is commonly acknowledged as successful when the aim of the project is achieved in terms of predetermined objectives that are mainly completed the project on time, within budget and specified quality in accordance with the specifications and to stakeholders' satisfaction. One of the most important problems that may arise in the construction project is delays and the magnitude of these delays varies considerably from project to project. Some projects are only a few days behind the schedule: some are delayed over a year. So it is essential to define the actual causes of delays in order to minimize and avoid the delays in any construction projects. The study also revealed that client-related causes of delays were identified

to be the most significant category that had high influence on delay. The most significant causes of delays under categories of client related factors that were identified in this research included insufficient funds of clients in financing the project, improper project feasibility, lack of capable representative and under contractor related factors were inappropriate construction methods, inadequate contractor experience and incompetent project team.

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