



THE MOST SIGNIFICANT CAUSES OF DELAY IN CONSTRUCTION IN SRI LANKA

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LIST OF ABBREVIATIONS

PM	-	Project Management
M.Sc	-	Master of Science
UAE	-	United Arab Emirates
UK	-	United Kingdom
USA	-	United States of America



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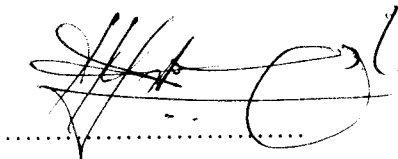
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Declaration

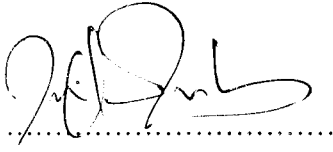
I hereby declare that this submission is my own work and that, it contains no materials previously published or written by another person nor material which, to a substantial extent, has been accepted for the award of any other degree of diploma of a University of other institution of higher learning, except where an acknowledgement is made in the text.

A handwritten signature in black ink, consisting of stylized, overlapping loops and lines, positioned above a horizontal dotted line.

D.S.K.U Jayalath

2nd February 2010

I hereby acknowledge that Mr. D.S.K Upali Jayalath has followed the dissertation process set by the Department of Building Economics.



09.02.2010

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Date



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Abstract

The delay is considered as a widespread crisis in construction projects. The delay occurs as a result of an act or failure to act by contracting parties as well as by outside forces. Sri Lankan construction industry faces a significant rate of delays in project delivery. The causes of delays in construction in Sri Lanka have been identified and have been addressed individually by stakeholders. However, the delay occurs in almost all projects in Sri Lanka continuously. The purpose of this research was to identify the most significant causes of delays in construction in Sri Lanka.

Following an in-depth review of literatures in various parts of the world, 44 causes of delay were first formulated. These identified causes were presented, based on Delphi technique, to a panel of experts from construction industry consisting of Senior Quantity Surveyors, Senior Project Managers, Senior Architects and Senior Engineers who are playing a managerial role. The experts were requested to express their opinion on the level of significance on each cause and the results were statistically summarized.

It was observed that there are ten most significant causes of delays exist in Sri Lankan construction projects viz.; poor planning and scheduling, delay in obtaining permits and permissions, poor site management, design deficiencies, suspension of works by owner, contractor's financial difficulties, variations, poor procurement methods of the contractor, slow decision making by owner and lack of familiarity of local industry. Out of these ten causes, poor planning and scheduling has recorded extremely significant and all other nine causes have recorded as very significant. The findings were slightly different to those of previous studies in other countries.

Keywords: *Significant Causes of Delay, Construction, Sri Lanka*

CHAPTER 1

Introduction

Most of Sri Lankan construction projects are susceptible to delays. Timely completion is usually rare and therefore considered as a great success if achieved. Identification of the most significant causes for delays in projects is important in mitigating delays in that industry. This research makes a contribution by identifying most significant causes of delay in Sri Lankan construction industry.

1.1 Background

A successful project means that the project has accomplished its technical performance, maintained its schedule, and remained within budgetary costs (Frimpong et al. 2002). In construction, the word “delay” means a time overrun either beyond the contract completion date or beyond the date that the parties have agreed upon for the delivery of the project. In both cases, a delay is usually a costly situation (O’Brien 1976 cited Lo et al. 2006). The problem of delays in the construction industry is a global phenomenon (Sambasivan and Soon 2006). Delay is a situation when the contractor and the project owner jointly or independently contribute to the non-completion of a project within the original or stipulated or agreed contract period (Aibinu and Odeyinka 2006). A project may be delayed as a result of the direct action of major parties, or of their failure to act especially if they have a duty to act in given circumstances. Moreover, an outside force could also intervene to delay a project (Bramble and Callahan 1992 cited Aibinu and Odeyinka 2006). Causes of construction delay are considered arisen from many sources. In general, the cause of delays in a project could be viewed in following three categories:

- Causes for which the construction owner/his representative has control
- Causes for which the contractor has control
- Causes for which neither party to the contract has any control

Internationally, there are many researches carried out in order to find out the most significant causes for delay in construction projects. Identifying causes for delay is the first step when addressing a problem so that the corrective action can be taken (Chang 2002 cited Aibinu and Odeyinka 2006).

Sri Lankan construction industry continues to occupy an important position in the national economy. Nevertheless, major criticism faced by the industry is the large rate of delays in project delivery. The delay occurs in almost all construction projects in Sri Lanka and the magnitude of these delays varies considerably from project to project.

It is obvious that the construction industry professionals are aware of every individual causes for delays. It is also obvious that the identified individual causes for delays are being addressed by the professionals. In addition, almost all standard forms of contracts identify remedies for delays which in turn denote us that the parties to contracts are aware of the possibilities of occurrences of delays in any construction project. At the same time, requirement for mitigation of occurred delays have also been identified in many standard forms of contracts. But all these conditions of contracts address the situation after the delay incident.

There are number of causes for construction delays in Sri Lanka, which are created intentionally or unintentionally by contracting parties as well as by causes outside the control of contracting parties, resulting delays which ultimately cause cost overrun and frustration of expectations of both parties and the other stakeholders.

An industry wide initiative to mitigate delays was not evident. The major barrier was that there were large numbers of delay causes. Addressing all issues simultaneously was therefore not pragmatic. Even if project stakeholders could address few issues successfully, projects got delayed due to some other cause. Therefore, a stepwise precautionary action was needed that start by addressing the most significant causes.

1.2 Aim

Aim of this research is to identify the causes of delays and their level of significance in construction in Sri Lanka.

1.3 Objectives

In order to achieve the above aim, followings are the set objectives;

- 1 Identify causes for delay in construction in Sri Lanka
- 2 Identify their level of significance
- 3 Validation of significance

1.4 Scope and Limitations

The research covers the Sri Lankan construction industry. Conclusions are based on analysis of opinions of industry experts viz. Senior Quantity Surveyors, Senior Project Managers, Senior Architects and Senior Engineers who are playing a managerial role in the construction projects in Sri Lankan construction industry.

1.5 Structure of the Report

The report is arranged as follows.

Chapter One: Chapter one presents the background to the study, aim, objectives, scope and limitations of the study.

Chapter Two: Chapter two presents the outcome of the literature review on the causes of delays in construction and thereby identification of causes of delays and development of hypothesis which is to be tested in the analysis of data.

- Chapter Three:** Chapter three explains the research methodology and statistical analysis methods adopted for this study.
- Chapter Four:** Chapter four presents the data collected from each round of questionnaire survey according to Delphi technique and analysis of data statistically, testing of hypothesis.
- Chapter Five:** Chapter five presents the conclusion and recommendations.



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