SELECTION OF THE MOST SUITABLE DELAY ANALYSIS METHOD BASED ON DELAY EVENTS

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(179158C)

Degree of Master of Science in Construction Law and Dispute Resolution

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DECLARATION

I declare that this is my own work and this thesis does not incorporate without acknowledgment any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where the acknowledgment is made in the text.

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D.M.M.P. Dissanayaka Date

The above candidate has carried out research for Masters's Dissertation under my supervision.

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Prof. Udayangani Kulatunge Date

Dissertation Supervisor

Selection of the Most Suitable Delay Analysis Method Based on Delay Events

ABSTRACT

The victory of a construction project relies on the three main parameters which are, time, cost and quality. Hence, timely completion of construction projects is of paramount importance. However, there are numerous causes that hinder the timely completion of projects and therefore, conducting a proper analysis on the delay factors and the negative consequences of these delays is highly crucial. Although there are numerous delay analysis methods existing in the current context, only a few construction companies are actively using these methods, especially in Sri Lankan construction industry. Therefore, this research focused on identifying the delay causes in Sri Lankan construction projects and tried to identify the most suitable delay analysis methods based on delay events.

Accordingly, a comprehensive literature reviews was carried out at the initial stages of this research in order to identify the existing body of knowledge regarding research area. In this regard, different causes of delays and the advantages and disadvantages of different delay analysis methods were identified. Subsequently, a qualitative research approach was followed by conducting semi-structured interviews with industry experts who are well experienced in managing construction project delays.

Based on the research finding and the analysis, it was identified that the use of delay analysis methods is at a primitive stage in the Sri Lankan context and therefore, it is important to establish the use of proper delay analysis methods in construction projects. Furthermore, it was discovered that there are different advantages and disadvantages of every delay analysis method compared to the others. Therefore, depending on the type of delay, level of details required, resource requirements and the time-constraints, the most suitable delay analysis method varies. Therefore, a brief overview of the findings was presented as the output of this research to highlight the suitable delay analysis methods for different delay events.

Keywords: Construction Delays, Delay Analysis, Delay Factors

DEDICATION

To My Beloved Husband, Son, Daughter, Parents, Brother, Sister and the Lecturers who have being the utmost inspiration and light of my life……

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Abbreviation	Description
AACE	Association for the Advancement of Cost Engineering
APAB	As Planned vs. As Built
CAB	Collapsed As Built
CPM	Critical Path Method
DAT	Delay Analysis Technique
DAM	Delay Analysis Method
EOT	Extension of Time
IAP	Impacted As Planned
IDMP	Institute of Dispute Management Professionals
SCL	Society of Construction Law
SIA	Schedule of Impact Analysis
TIA	Time Impact Analysis
WA	Window Analysis

List of Appendices