

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

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Degree of Master of Science in Construction Law and Dispute
Resolution

Department of Building Economics

University of Moratuwa

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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

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Date

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

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Prof. Udayangani Kulatunge

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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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TABLE OF CONTENTS

DECLARATION	i
ABSTRACT	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS.....	v
List of Figures.....	ix
List of Tables.....	x
List of Abbreviations	xi
List of Appendices	xii
CHAPTER 01	1
1.0 INTRODUCTION.....	1
1.1 Research Background	1
1.2 Problem Statement.....	4
1.3 Aim	4
1.4 Objectives.....	4
1.5 Research Methodology	5
1.6 Scope and Limitation	5
1.7 Chapter Breakdown	6
1.8 Chapter Summary	6
CHAPTER 02.....	7
2.0 LITERATURE REVIEW	7
2.1 Introduction	7
2.2 Importance of Time in Construction Projects	7
2.2.1 Time as a Major Project Constraint	9
2.3 Delays in Construction Projects	9
2.3.1 Causes of Delays	11

2.3.2	Negative Consequences of Delays	12
2.4	Delay Analysis in Construction Projects	14
2.4.1	Evolution and Significance of Delay Analysis	14
2.4.2	Process of Delay Analysis.....	15
2.5	Delay Analysis Methods Utilized in the Construction Sector.....	16
2.5.1	As Planned Vs. As-Built Method	18
2.5.2	Impacted As Planned Method	18
2.5.3	Collapsed As-Built Method.....	19
2.5.4	Window Analysis Method	20
2.5.5	Time Impact Analysis Method.....	20
2.6	Review of the Benefits and Drawbacks Related to Delay Analysis Methods 21	
2.6.1	Benefits of Delay Analysis Methods	22
2.6.2	Drawbacks of Delay Analysis Methods.....	22
2.7	Application of Delay Analysis Methods in Sri Lankan Construction Sector 24	
2.8	Chapter Summary	25
CHAPTER 03.....		26
3.0	RESEARCH METHODOLOGY	26
3.1	Chapter Introduction	26
3.2	Research Design	26
3.3	Research Process	27
3.3.1	Background Study	28
3.3.2	Literature Synthesis	28
3.4	Research Approach.....	29
3.4.1	Qualitative Approach.....	29
3.4.2	Quantitative Approach.....	30
3.4.3	Suitable Research Approach for this Study	30
3.5	Research Strategy	30
3.6	Research Techniques	31
3.6.1	Data Collection Techniques	31
3.6.2	Data Analysis Techniques.....	33
3.7	Chapter Summary	33

CHAPTER 04.....	34
4.0 DATA ANALYSIS AND DISCUSSION.....	34
4.1 Chapter Introduction.....	34
4.2 Background of Expert Interviews.....	34
4.3 Analysis of the Expert Interview Findings.....	35
4.4 Significance of Timely Completion in Construction Projects	35
4.5 Causes of Delays in Construction Projects	37
4.6 Significance of Delay Analysis for the Success of Construction Projects...	40
4.7 The procedure of Delay Analysis	41
4.7.1 Current Procedure of Delay Analysis in Sri Lankan Construction Projects 41	41
4.8 Use of Standard Methods in Delay Analysis in Sri Lankan Construction Projects	42
4.9 Advantages and Disadvantages of Different Delay Analysis Methods	43
4.9.1 As-Planned vs As-Built Method.....	43
4.9.2 Impacted As-Planned Method.....	45
4.9.3 Collapsed As-Planned Method.....	46
4.9.4 Window Analysis Method	47
4.9.5 Time Impact Analysis Method.....	48
4.10 Specific Delay Factors in Sri Lankan Construction Projects.....	50
4.10.1 Impact of Different Delay Factors on Construction Projects.....	50
4.11 Applicable Delay Analysis Methods for Different Delay Factors.....	53
4.12 Chapter Summary.....	58
CHAPTER 05.....	59
5.0 CONCLUSIONS AND RECOMMENDATIONS	59
5.1 Chapter Introduction	59
5.2 Overview of the Research Method	59
5.2.1 Objective 1 – To identify various types of delay analysis methods in the construction industry	60
5.2.2 Objective 2 – To identify the advantages and disadvantages of identified delay analysis methods.....	61
5.2.3 Objective 3 – To evaluate the delay analysis procedure in the Sri Lankan construction industry	62

5.2.4	Objective 4 – To examine the factors affecting delays in building construction projects in Sri Lanka	63
5.2.5	Objective 5 – To suggest way to identify the impact of each factor affecting delays and select the most suitable delay analysis method.....	64
5.3	Contribution to Knowledge	65
5.4	Recommendations for Industry Practitioners	66
5.5	Recommendations for Further Research.....	67
5.6	Chapter Summary	67
REFERENCES	69

List of Figures

	Page
Figure 1-1: Chapter breakdown.....	6
Figure 2-1: Delay analysis methods in the construction industry	17
Figure 3-1: Research process	27
Figure 4-1: Most suitable delay analysis methods based on delay factors	57

List of Tables

	Page
Table 2-1: Causes of delays.....	12
Table 2-2: Characteristics of DATs	21
Table 2-3: Drawbacks and benefits of DATs	23
Table 4-1: Profile of the respondents	35
Table 4 2: Causes of delay from findings.....	39
Table 4-3: Advantages and disadvantages of As-Planned vs As-Built method	45
Table 4-4: Advantages and disadvantages of Impacted As-Planned method	46
Table 4-5: Advantages and disadvantages of Collapsed As-Built method	47
Table 4-6: Advantages and disadvantages of Window Analysis method	48
Table 4-7: Advantages and disadvantages of Time Impact Analysis method	49

List of Abbreviations

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

Appendix	Description	Page
Appendix I	Interview Guideline	78
Appendix II	Interview Transcript	84