

**CRITICAL FACTORS AFFECTING DELAYED
COMPLETION OF FOREIGN-FUNDED
GOVERNMENT PROJECTS IN SRI LANKA**

Gabbalage Anoma Priyadarshanie

(189626U)

Degree of Master of Science in Project Management

Department of Building Economics

Faculty of Architecture

University of Moratuwa

Sri Lanka

March 2024

**CRITICAL FACTORS AFFECTING DELAYED
COMPLETION OF FOREIGN-FUNDED
GOVERNMENT PROJECTS IN SRI LANKA**

Gabbalage Anoma Priyadarshanie

(189626U)

Thesis/Dissertation submitted in partial fulfilment of the requirements for the
Degree of Master of Science in Project Management

Department of Building Economics

University of Moratuwa

Sri Lanka

March 2024

DECLARATION

I declare that this is my own work to the best of my knowledge and this dissertation does not incorporate any materials previously submitted for any other Universities or Institute of higher learning and belief it does not contain any material previously published or written without providing relevant citations and references were made in the text.

Further I hereby grant admire for the contribution of my supervisor Mr. Mahesh Abeynayake towards the successful completion of the research. I confirm that I will never publish any articles or any other publication based on this research without mentioning the name of research supervisor as co-author of this research if I have not obtained any written consent to do so.

In addition, I hereby grant the non-exclusive right to University of Moratuwa to reproduce and distribute this dissertation. Dissertation may reproduce in part or in whole using electronic or any other applicable medium. However, I retain the right of using the content of this research to produce articles, books or any other publication.

.....
G.A.Priyadarshanie

14.03.2024
Date

The above named undergraduate has carried out this research for the Masters Dissertation under my supervision.

Name of the Supervisor: Mr. Mahesh Abeynayake

.....
Signature of the supervisor

14.03.2024
Date

ABSTRACT

Critical factors affecting delayed completion of foreign-funded government projects in Sri Lanka

Delayed completion is a crucial issue in foreign-funded government projects in Sri Lanka. Anticipated beneficiaries are the main parties who suffer due to those delay factors. Thus, it is essential to investigate factors affecting delayed completion and what are the strategies to minimize such delays. This research identified critical factors affecting the delayed completion of foreign-funded projects and proposed suitable delay response strategies overcome those delays. The mixed approach was used for this research, and a literature review about the causes of delays in various countries. The significance of those causes is different based on project types. Identified thirty-two delay causes through literature review, and the research was validated by semi-structured expert interviews with the Sri Lankan foreign-funded government projects and analyzed with manual content analysis. Afterward, a questionnaire survey was conducted among the industry professionals, and the collected data analyzed using statistical method.

Identified twenty-six delay factors in foreign-funded government projects in Sri Lanka and out of them, the top 10 delay factors were identified as the most significant delay factors, such as COVID-19 (Coronavirus) pandemic in 2020, currency sinking in 2022, changes of scope/design by owner during construction, price escalation of materials, fund releasing issues from the funding agency and Treasury for completed work, safety issues in construction sites, improper planning and scheduling of project, unqualified workforce/lack of experience by contractor, contractor's organizational performance, severe weather conditions. Accordingly, proposed the most suitable delay response strategies for the selected top ten delay factors. At the same time, delay factors allocated to the owners, contractors and consultants in foreign-funded government projects in Sri Lanka. Finally, the recommendations were established to implement of most suitable delay response measures meaningfully so that they could complete foreign-funded projects on time. Similar studies can be conducted in other countries to identify factors and response measures for delays.

Key words: *Foreign-funded, government projects, Critical factors, delayed completion, Delay allocation*

DEDICATION

TO MY BELOVED PARENTS

For raising me in to real world to overcome any challenge.....

TO MY LOVING FAMILY MEMBERS

For giving me great support to do further studies.....

TO MY OFFICE STAFF AND COLLEAGUES

For giving me great encouraged completing this research.....

SPECIAL THANKS TO MY SUPERVISOR

Who has given me immense support and guidance for the successful completion of my research.....

ACKNOWLEDGEMENT

This thesis completed without the assistance, support, and encouragement of many wonderful people to whom I wish to convey my sincere appreciation.

I am grateful to, Senior Lecturer Mr. Mahesh Abeynayake for his guidance, assistance and valuable efforts in finalizing of this research. He gave advice and encouragement throughout the preparation of the research report and devoting much of his valuable time and giving profound insights to me right throughout the research.

Further, I extend my sincere gratitude to Prof. (Mrs.) Yasangika Sandanayake and all the other academic staff members as well as all non-academic staff members of the Department of Building Economics for the utmost assistance given throughout the studies.

My special appreciation goes to all the respondents who provide their valuable time out of their busy schedules to respond to both of my questionnaire surveys, it was their service that put me on the right path to collect accurate findings and ultimately carry out a proper analysis on the subject.

Further I would like to extend my sincere gratitude especially to all my family members who sacrificed their time and energy on behalf of me, as well as my batch mates and friends who wish my success throughout the MSc studies.

Thanking you.

.....

G.A.Priyadarshanie

14 March 2024

TABLE OF CONTENTS

DECLARATION.....	I
ABSTRACT.....	II
DEDICATION.....	III
ACKNOWLEDGEMENT.....	IV
LIST OF FIGURES.....	VIII
LIST OF TABLES.....	IX
LIST OF ABBREVIATIONS.....	X
CHAPTER 01.....	1
1.0 INTRODUCTION	1
1.1 Background of the Research	1
1.2 Research Problem	3
1.3 Aim of the Research	4
1.4 Research Objectives	4
1.5 Research Questions	5
1.6 Research Methodology	5
1.7 Scope & Limitations.....	6
1.8 Dissertation Structure.....	6
CHAPTER 02.....	8
2.0 LITRATURE REVIEW	8
2.1 Introduction.....	8
2.2 Definition of “Funding”.....	9
2.3 Management of Project Completion Time.....	10
2.4 Duration of a project.....	12
2.5 The Process of Project Completion	13
2.6 Planning and Monitoring of the Project	15
2.7 Delay of the Project.....	16
2.8 Classification of Delays.....	17

2.9	Factors Influence for the Project Duration	21
2.10	Delay Analysis	29
2.11	Delay Allocation	30
2.11.1	Delay Allocation to Contract Parties.....	30
2.12	Delay Response Strategies	32
2.12.1	Delay control & avoidance	33
2.13	Delay Response Measures	34
2.14	Foreign Funded Construction Projects	34
2.15	Foreign Funded Government Projects in Sri Lanka	35
2.16	Delay in Foreign Funded Projects	36
2.17	Delay Allocation in Foreign Funded Government Projects	37
2.18	Action Taken for Mitigation of Delaying Foreign Funding Developments in Sri Lanka	38
2.19	Summary.....	40
CHAPTER 03.....		41
3.0	RESEARCH METHODOLOGY	41
3.1	Introduction.....	41
3.2	Research Design	41
3.2.1	Quantitative Research Design.....	42
3.2.2	Qualitative Research Design	43
3.2.3	Mixed Method Research Design	43
3.2.4	Questionnaire Design for this research.....	44
3.3	Research Approach.....	44
3.4	Research Methods.....	48
3.5	Research Techniques	50
3.6	Research Process.....	55
3.7	Summary.....	57
CHAPTER 04.....		58
4.0	ANALYSIS AND FINDINGS OF THE RESEARCH.....	58
4.1	Introduction.....	58
4.2	Semi Structured Interviews with Experts.....	58
4.3	Questionnaire Survey	67
4.4	Finding and Analysis of Questionnaire Survey	69
4.5	Pattern Machine of This Research	80

4.6	Summary.....	83
CHAPTER 05.....	84	
5.0	CONCLUSION AND RECOMMENDATIONS	84
5.1	Introduction.....	84
5.2	Conclusion	84
5.3	Recommendations	88
5.4	Impact of the Research	91
5.5	Limitations.....	92
5.6	Area for Further Researches.....	92
REFERENCES	93	
Appendix 01	111	
Expert Interview Guideline.....	111	
Covering Letter for Interview Guideline.....	111	
Appendix 02	124	
Questionnaire Survey.....	124	

LIST OF FIGURES

		Page
Figure 2.1	Project time management process (PMBOK)	10
Figure 2.2	Probability of project completion time	13
Figure 3.1	Research design types	42
Figure 3.2	Integration of quantitative and qualitative data	47
Figure 3.3	Process of Research	56
Figure 4.1	Relative Important Index and significant of delay impacts	75

LIST OF TABLES		Page
Table 2.1	Delay Classification	19
Table 2.2	Factors affecting to delayed completion of projects identified by past researches	26
Table 2.3	Delay allocation to the contracting parties	31
Table 2.4	Classification of Large-scale projects by financing 2022	35
Table 2.5	Due payments to projects financed through foreign loans to be settle in 2022	36
Table 2.6	Project implementation affected by unresolved issues	38
Table 2.7	Decisions regarding re-strategizing and speeding up of large projects taken by committee	39
Table 4.1	Expert's profile	59
Table 4.2	Validated delay factors according to the views of experts	60
Table 4.3	Comparison of delay response strategies and related measures after experts comments	64
Table 4.4	Delay allocated parties	67
Table 4.5	Details of professionals employed experience at questionnaire survey	68
Table 4.6	Delay analysis – using Relative Important Index	69
Table 4.7	Significant delay factors in foreign funded government projects in Sri Lanka – using Relative Important Index	72
Table 4.8	Delay Analysis – using weighted average method	76
Table 4.9	Top 10 ranked delay factors affecting to completion time in Foreign-funded government projects	79
Table 4.10	Details of correlation coefficient in top 10 ranked delay factors	79
Table 4.11	Significant delay causes in government projects funded by foreign donors in Sri Lanka	81

ABBREVIATIONS

ADB	-	Asian Development Bank
JICA	-	Japan International Corporation Agency
WB	-	World Bank
AFD	-	Agence Francaise De Development
AIIB	-	Asian Infrastructure Investment Bank
IFAD	-	International Fund for Agriculture Development
OPEC	-	Organization of Petroleum Exporting Countries
PPP	-	Public-Private Partnership
UK	-	United Kingdom
PFI	-	Private Finance Initiatives
PMBOK	-	Project Management Body of Knowledge
RAMP	-	Re-strategizing and Acceleration of Mega Projects
KPI	-	Key Performance Indicators
RII	-	Relative Important Index
AHP	-	Analytical Hierarchy Process
NPD	-	National Planning Department
CPN	-	Coloured Petri Net
EOT	-	Extension of Time