

**DEVELOPMENT OF AN EVALUATION FRAMEWORK  
FOR SUBCONTRACTOR SELECTION MECHANISM  
FOR SRI LANKAN CONSTRUCTION PROJECTS**

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Degree of Master of Science

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Sri Lanka

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This thesis is submitted in partial fulfilment of the requirements for the  
degree Master of Science in Construction Project Management

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## Declaration

I, Lakmali D.K.L.C., confirm that this work is unique and that this dissertation does not include any previously submitted material for a degree or diploma from any other university or institute of higher education, without proper acknowledgment. To the best of my knowledge and belief, it does not contain any previously published or written material by another individual, unless explicitly acknowledged within the text.

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The above candidate has researched the Masters thesis under my supervision.

Dr. Chandana Siriwardana

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...29.03.2024....

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## **Abstract**

The construction industry in Sri Lanka is vital to the country's GDP and labor force. However, many contractors struggle to meet project targets due to difficulties in subcontractor selection. This research paper aims to understand the current practices and challenges in the industry, focusing on factors affecting subcontractor selection efficiency. The study will analyze the impact of project completion timeliness, cost-effectiveness, communication and collaboration efficiency, resource availability, quality, and safety in the selection process. The goal of this study is to recognize the crucial role of subcontractors in completing construction projects successfully.

To achieve these objectives, a quantitative research approach was used. Primary data was collected through a structured questionnaire survey targeting professionals in the construction industry. The sample included 50 respondents from various occupations and organizational backgrounds. Regression analysis was used to examine the relationship between identified parameters and subcontractor selection efficiency.

The findings highlight the importance of quality and timeliness in selection decisions, with quality being the most significant predictor. Communication, collaboration, and safety also have a positive impact, though to a lesser extent. The availability of resources did not significantly affect subcontractor selection success.

This study highlights the importance of considering multiple factors beyond bid price alone when selecting subcontractors in Sri Lanka's construction industry. By recognizing factors such as quality, timeliness, communication, collaboration, and safety, construction professionals can make more informed decisions and improve efficiency. These findings emphasize the need for construction companies to prioritize quality and punctuality in subcontractor selection while also considering communication, collaboration, and safety. The research provides empirical data from Sri Lanka's construction sector, laying the foundation for future research and offering practical implications for enhancing subcontractor selection procedures.

**Keywords:** Sub-Contractor, Primary Contractor, Selection Criteria, Successfully Completed, Construction Industry

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## TABLE OF CONTENTS

Declaration .....	iii
Abstract .....	iv
Acknowledgement.....	v
LIST OF FIGURES .....	xi
LIST OF TABLES .....	xii
LIST OF ABBREVIATION .....	xiii
Chapter 1 .....	14
1 Introduction .....	14
1.1 Background of the Study .....	14
1.2 Context of the Study .....	15
1.3 Research Problem .....	16
1.4 Problem Statement .....	18
1.5 Research Questions .....	18
1.6 Research Objectives .....	18
1.7 Significance of the Study .....	19
1.7.1 Academic Significance.....	19
1.7.2 Practical Significance.....	19
1.7.3 Policy Relevance.....	20
1.8 Chapter Organisation.....	20
Chapter 2 .....	22
2 Literature Review .....	22
2.1 Introduction .....	22
2.2 Theoretical Review .....	22
2.2.1 Agency Theory.....	22

2.2.2	Transaction Cost Economics (TCE) Theory .....	23
2.2.3	Resource-Based View (RBV) Theory.....	23
2.2.4	Stakeholder Theory .....	23
2.2.5	The Theoretical Foundation of the Study.....	24
2.3	Empirical Review .....	29
2.3.1	Development of Evaluation Criteria .....	29
2.3.2	Impact on Project Success.....	30
2.3.3	Integration of Technology and MCDM Methods .....	30
2.3.4	The Subcontractor Selection Criteria in Construction Projects .....	31
2.3.5	Development of Comprehensive Criteria.....	33
2.4	Review on Variables .....	34
2.4.1	The Effectiveness of Subcontractor Selection .....	34
2.4.2	Timeliness of Project Completion.....	36
2.4.3	Cost Effectiveness .....	37
2.4.4	Communication and Collaboration Efficiency.....	38
2.4.5	Resource Availability.....	40
2.4.6	Quality.....	41
2.4.7	Safety.....	43
2.5	Chapter Summary .....	44
Chapter 3	.....	45
3	Methodology of Study .....	45
3.1	Introduction .....	45
3.2	Previous Research .....	45
3.3	Conceptual Framework .....	46
3.4	Research Philosophy .....	47

3.5	Research Approach.....	48
3.6	Research Strategy .....	48
3.7	Time Horizon .....	48
3.8	Methodological Choice .....	49
3.9	Population, Sample, and Data .....	49
3.9.1	Sample and Sampling Technique.....	50
3.9.2	Data and Data Collection .....	50
3.9.3	Structure of the Questionnaire .....	51
3.10	Data Analysis .....	54
3.10.1	Descriptive Statistics.....	54
3.10.2	Empirical Strategy.....	55
3.11	Methodological Challenges .....	56
3.12	Ethical Considerations.....	57
3.13	Reliability and Validity .....	57
3.14	Chapter Summary.....	58
Chapter 4	.....	59
4	Analysis and Discussion of Results .....	59
4.1	Introduction .....	59
4.2	Sample Profile .....	59
4.2.1	Age Distribution.....	59
4.2.2	Gender .....	60
4.2.3	Sector.....	61
4.2.4	Specialized Grade.....	61
4.2.5	Designation .....	62
4.2.6	Project Type .....	63

4.3	Reliability Test .....	63
4.4	Descriptive Statistics .....	64
4.4.1	Dependent Variable: Effectiveness of Subcontractor Selection .....	65
4.4.2	Independent Variable 1: Timeliness of Project Completion .....	65
4.4.3	Independent Variable 2: Cost Effectiveness .....	66
4.4.4	Independent Variable 3: Communication and Collaboration Efficiency 66	
4.4.5	Independent Variable 4: Resource Availability .....	67
4.4.6	Independent Variable 5: Quality .....	67
4.4.7	Independent Variable 6: Safety .....	68
4.5	Correlation Analysis .....	68
4.6	Results of the Regression Analysis .....	70
4.6.1	Timeliness of Project Completion.....	72
4.6.2	Cost Effectiveness .....	72
4.6.3	Communication and Collaboration Efficiency.....	73
4.6.4	Resource Availability.....	73
4.6.5	Quality.....	73
4.6.6	Safety.....	73
4.7	Chapter Summary .....	74
Chapter 5 .....		75
5	Conclusion and Recommendations .....	75
5.1	Introduction .....	75
5.2	Conclusion.....	75
5.3	Recommendations .....	77
5.3.1	Effect of Economic Crisis and Covid 19 Pandemic.....	78
5.4	Limitations of the Study and Future Directions .....	79

References .....	80
APPENDIX A – QUESTIONNAIRE.....	90

## **LIST OF FIGURES**

Figure 3.1: Conceptual framework .....	47
Figure 4.1: Age distribution of the sample .....	60
Figure 4.2: Gender distribution of the sample .....	60
Figure 4.3: Representative sector .....	61
Figure 4.4: Specialized grade .....	62
Figure 4.5: Designation held in the organization .....	63
Figure 4.6: Project type .....	63

## LIST OF TABLES

Table 2. 1: Scope of Sub-Contracting according to SBD .....	25
Table 2. 2: Issues Faced by Sub-Contractors while Sub-Contracting.....	27
Table 2. 3: Issues Faced by General Contractors while Sub-Contracting.....	28
Table 2. 4: Current Practice for Selection of Sub-Contracting in Sri Lanka.....	32
Table 3. 1: Summary of Several Previous Researches.....	45
Table 3. 2: Operationalization of variables .....	51
Table 3. 3: Ranges for Internal Consistency used in Cronbach's Alpha Coefficient .	58
Table 4. 1: Results of Reliability Test.....	64
Table 4. 2: Descriptive statistics .....	64
Table 4. 3: Correlation Analysis .....	69
Table 4. 4: Model Summary .....	71
Table 4. 5: ANOVA Table of Regression Model .....	71
Table 4. 6: Regression results .....	72

## **LIST OF ABBREVIATION**

Abbreviation	Description
GDP	Gross Domestic Product
BIM	Building Information Modelling
TCE	Transaction Cost Economics
RBV	Resource-Based View
VRIN	Value, Scarcity, Inimitability and Non-Substitutability
SBD	Standard Bidding Documents
MCDM	Multi-Criteria Decision-Making
OLS	Ordinary Least Squares
CIDA	Construction Industry Development Authority
SD	Standard Deviation
SS	Sum of Squares
MS	Mean Square
Root MSE	Root Mean Square Error