INVESTIGATE THE COMMON FACTORS TO THE CONFLICTS IN THE CONSTRUCTION INDUSTRY SRI LANKA

DKGGWijesinghe

168595U

Master of Science in Construction Project Management

Department of Civil Engineering

University of Moratuwa

September 2021

INVESTIGATE THE COMMON FACTORS TO THE CONFLICTS IN THE CONSTRUCTION INDUSTRY SRI LANKA

D K G G Wijesinghe

168595U

"This dissertation was submitted to the Department of Civil Engineering of the University of Moratuwa in partial fulfilment of the requirements for the Master of Science in Construction Project Management"

Department of Civil Engineering

University of Moratuwa

Sri Lanka

September 2021

TABLE OF CONTENTS

Front page		i
Table of Co	ontents	ii
List of Tab	les	iv
List of Figu	ures	\mathbf{v}
Aknowledg	gment	ix
Declaration	1	X
Abbreviation	ons	xi
Abstract		xii
CHAPTEI	R 1 – Introduction	1
1.1. Backgr	round	3
1.2. Aim		4
1.3. Object	ive	4
1.4. Limita	tion of the Study	4
1.5. Structu	are of the report	5
1.6. Delive	rables	6
СНАРТЕІ	R 2 - Literature Review	7
2.1 Introdu	ction to Sri Lankan Construction industry	7
2.2 Introdu	ction to Disputes in Construction Industry	8
2.3 Cause of	of Disputes	10
2.4 Value o	of the dispute and Length of the Dispute	27
2.5 Dispute	e Resoution Process	29
2.5.1	Negotiation	30
2.5.2	Dispute Review Board (DRB)	30
2.5.3	Alternative Dispute Resolution (ADR)	31
2.5.4	Mediation and Conciliation	31
2.5.5	Adjudication	32
2.5.6	Arbitration	32

2.5.	7 Litigation	33
CHAPT	ER 3 - Methodology	
3.1 Introd	luction	38
3.2 Meth	ods of Data Collection	39
3.2.	1 Design of Quectionnairs	40
3.2.	2 Subjects of the survey and responses	41
3.3 Analy	vsis of Data	42
	ER 4 - Data Analysis and Results	
4.1 Introd	luction	43
4.2 Litera	ature Review	43
4.2.1	Literatur Reated to Global Construction Industry	43
4.2.2	Literatur Related to local Constrction industry	48
4.2.3	The Global Construction Dispute Report	50
4.3 Case	Studies	52
4.4 Quest	tionnaire Surveying	54
4.4.1	Selection of Conflict Factor for Questionnaire Survey	54
4.5 Char	actoristict of Respond	54
4.6 Discu	assion on Analysis	73
CHAPT	ER 5 - Conclusion and Recommendations	79
Reference	ees	81
APPENI	DIX	90
A	ppendix A	89
Appendix B		95

LIST OF TABLES

		Page
Table 01:	The contribution to the GDP from Construction industry	8
Table 02:	Causes of disputes in the construction industry	10
Table 03:	Calgary of the disputes and causes for the disputes	17
Table 04:	Dispute category and cause of dispute	23
Table 05:	Dispute category and cause for the disputes Source	25
Table 06:	The average dispute value	27
Table 07:	The average length of the dispute	28
Table 08:	The summary of the cause of dispute with rank according to the	e
	literature	34
Table 09:	The Summary of the cause of dispute according to the Global	
	Construction Disputes Report 2015 to 2020	37
Table 10:	Selected cause of Dispute	44
Table 11:	The most common cause of dispute according to the literatures	47
Table 12:	The distribution of cause of dispute according to the literature.	48
Table 13:	The cause of dispute related to the Sri Lankan Construction Industry	49
Table 14:	The distribution of cause of dispute according to the literature	.,
	related to the Sri Lankan Construction industry	49
Table 15:	The Cause of disputes According to the Global Dispute Report.	. 51
Table 16:	The distribution of cause of dispute according to the Arcadis	51
Table 17:	The Cause of Dispute identified from case studies.	53
Table 18:	The distribution of cause of dispute according to the case studie	es. 53
Table 19:	The cause of dispute selected for questionnaires survey.	54

Table 20:	Result, RII and rank of the causes of the disputes.	70
Table 21:	The most common cause of disputes.	73
Table 22:	The most common cause of dispute According to the questionnaire surveying the results	73
Table 23:	Comparison of Cause of disputes	75

LIST OF FIGURES

	Page
Figure 01: The contribution to the GDP from Construction Industry	8
Figure 02: Beyond the conflict the good, the bad and the Ugly	9
Figure 03: The Average Dispute Value	28
Figure 04: The Average Length of the Disputes	28
Figure 05: Construction Dispute Resolution Steps (source Cheung,1999)	30
Figure 06: Methods and Source of the data collection	38
Figure 07: Steps of the research	39
Figure 08: Steps for selecting the variable for the questioners.	40
Figure 09: The distribution of cause of dispute according to the literature	49
Figure 10: The distribution of cause of dispute according to the	
literature related to the Sri Lankan Construction industry	50
Figure 11: The distribution of cause of dispute according to the	
Arcadis (2015-2020)	52
Figure 12: The distribution of cause of dispute according to the Literature Review	w 54
Figure 13: Nature of the Organization of the Respond	57
Figure 14: Working experience of the Respond	57
Figure 15: Experience of the field of Construction management of the Respond	57
Figure 16: Responds for A1 Variation Initiated by Owner	58
Figure 17 Responds for A2 Change of Scope	58
Figure 18 Responds for A3 Late giving possession of site	58
Figure 19 Responds for Unrealistic Expectation	59

Figure 20 Responds for Delays of Payments	59
Figure 21 Responds for Unrealistic Tendering	59
Figure 22 Responds Supremacy of Owner and Unfair Stakeholders involvement	60
Figure 23: Responds for Methods of Quality Control	60
Figure 24 Responds for Lack of Communication	60
Figure 25 Responds for Extension of time	60
Figure 26 Responds for Failure to Understand and comply	
with its contractual obligations.	61
Figure 27: Responds for Unforeseen Site condition	61
Figure 28; Responds for Delays in work Progress	61
Figure 29: Response for Technical inadequacy of the contractor	62
Figure 30; Responds for Contractors Valuation error	62
Figure 31 Responds for Quality of Works	62
Figure 32: Responds for Defects in Construction	63
Figure 33: Responds for contractor Site Management	63
Figure 34: Responds for Contract Administration	63
Figure 35: Shortage of materials and equipment	64
Figure 36: Response for Poorly drafted Unsubstantial Claims	64
Figure 37: Responds for Exaggerated Claims	64
Figure 38: Response for Lack of Experience in Construction	65

Figure 39: Responds for Design Errors	65
Figure 40: Responds for Quality of Design	65
Figure 41: Responds for Inadequate / incomplete specifications	66
Figure 42: Responds for Ambiguities in contract Documents	66
Figure 43: Responds for Unbalance risk allocation	66
Figure 44: Responds for Poor scope definition	67
Figure 45: Responds for Interparty and Personnel Problems	67
Figure 46: Responds for Personality Traits	67
Figure 47: Responds for Weather	68
Figure 48: Responds for Legal and Economic factors	68
Figure 49: Responds for Competitive Environment	68
Figure 50: Response for Third-party delays or force majeure events	69

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to Dr Chandana Siriwardana, Senior Lecturer of the Department of Civil Engineering, the University of Moratuwa for his guidance and support throughout this research. His knowledge and experience were the sources of inspiration to make this thesis a reality. Without his constant support, this research would never have been possible and successful. I would also like to especially thank my family for letting me occupied with the many of works required to conduct this research.

I would also like to extend my gratitude to all the academic and nonacademic staff from the Department of Civil Engineering, the University of Moratuwa for their guidance and support in effectively completing the studies.

Finally, I wish to express my thanks to the respondents of the questionnaire who were very supportive in providing the essential primary data and feedbacks for this research. I hope that the findings of this research will be beneficial to Project Management discipline and it will deliver insights for further examination in and around the topic.

DECLARATION

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university to the best of my knowledge and believe it does not contain any material previously published, written or orally communicated by another person or myself except where due reference is made in the text. I also hereby give consent for my dissertation, if accepted, to be made available for photocopying and interlibrary loans, and for the title and summary to be available to outside organizations.

Signature of Candidate	30/09/2021 Date
Signature of Candidate	Date
The above particulars are correct, to the be	st of my knowledge.
Cinnoton of Companies	Doto
Signature of Supervisor	Date

ABBREVIATIONS

GDP: : Gross Domestic Product

LKR : Sri Lankan Rupee

PMI : Project Management Institute

PMBOK : Project Management Body of Knowledge

CIDA : Construction Industry Development Authority

GOSL :Government of Sri Lanka

EOT :Extention of Time

ABSTRACT

The construction industry environment is very complex, very competitive and very

sensitive to the financial fluctuation than other industries. The conflict/dispute is any

disagreement or argument on contract-related mater. Most of the dispute is a waste of

resource, if not managed well. However, the disputes identified and managed well, it

may be benefited to the project by alternative design and economical solutions.

The objective of this research is to identify the common causes of conflict/disputes in

the construction industry which is benefited to the contract management professionals.

To achieve this objective, extensive literature survey and thirty number of dispute cases

were analyzed related to the construction industry. The questionnaire survey was

carried out to validate the causes of disputes with the experience of the professionals in

the construction industry. The questionnaires were distributed to 150 professionals in

construction industry through google form & e-mails. Out of 150 professionals, 77

professionals were responded which are working for owners, consultants and

contractors. The analysis was done comparing the relative importance index of the

cause of dispute.

Hundred numbers of cause of disputes have been identified from the literature review

and shortlisted thirty-seven (37) causes of disputes have been used for the questionnaire

survey. The most common causes of disputes base on the experience of the professional

are "Delay of payments" and "Delay in works progress". However, according to the

literature survey the most common causes of disputes are "Failure to properly

administrator the contract" and "Ambiguities in contract document". According to the

case studies the most common causes of dispute were "Inadequate/incomplete

specification" and "Extension of time to the contract".

Keywords: Construction Industry, Dispute, Conflict, Causes of Dispute, Sri Lanka

xii