

**UNRAVELLING CONTRACTUAL CHALLENGES
FACED BY THE CONSTRUCTION INDUSTRY IN A
PANDEMIC SITUATION: THE CASE OF COVID-19**

Rathugamage Dona Wimarshi Wandana Jayathilaka

(218085M)

Dissertation submitted in partial fulfillment of the requirements for the
Degree Master of Science (Major Component Research)

Department of Building Economics
Faculty of Architecture

University of Moratuwa

Sri Lanka

November 2022

DECLARATION

Declaration, Copyright Statement, and the Statement of the Supervisor

“I declare that this is my own work, and this thesis/dissertation does not incorporate without acknowledgement 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 acknowledgement is made in the text. I retain the right to use this content in whole or part in future works such as articles or books.”

Signature:

Date: 30.11.2022

(R.D.W.W.Jayathilaka)

The above candidate has carried out research for the Masters dissertation under my supervision. I confirm that the declaration made above by the student is true and correct.

Name of the supervisor: Ch. QS. Dr. (Mrs.) Anuradha Waidyasekara

Signature of the supervisor:

Date: 30.11.2022

DEDICATION

***...To My Family,
My Partner
and
My Supervisor
Who Always
Encouraged Me
to Go on
Every Adventure...***

ACKNOWLEDGEMENT

This research study succeeded because of the dedication of numerous individuals and organisations who committed their time, knowledge, and effort. Hence, I should convey my honour and gratitude to everyone who committed to this work in different ways.

First and foremost, I pay my heartfelt gratitude to my dissertation supervisor, senior lecturer, Ch. QS. Dr. (Mrs.) Anuradha Waidyasekara, for her excellent supervision, guidance, encouragement, and constant support towards the successful completion of my MSc journey. Without her constructive criticism and valuable advice, this research study may not become a success. Besides, I should be grateful to all the experts of my progress review and viva panels for their constructive advices and suggestions given to improve my research study. I would like to pay my indebtedness to Senate Research Committee (SRC) for offering me a research grant to begin my MSc journey. Many thanks to all staff members of the Department of Building Economics, University of Moratuwa for their valuable assistance and support during this study.

I am highly indebted to all the industry professionals who gave me immense support for the data collection despite their busy schedules. Finally, I express my sincere gratitude to my family members, my partner, my friends and all others who supported me to make this research a success.

ABSTRACT

Unravelling Contractual Challenges Faced by the Construction Industry in a Pandemic Situation: The Case of COVID-19

The construction industry cannot be exempted, as it has faced huge issues due to COVID-19 pandemic. Among them, contractual challenges, which have legal implications, can lead to many disputes and it raised to assist contractors in claiming a loss, expenses, and extension of time. Conflicts arise between parties to the contract and among the majority of stakeholders. A successful contractual implication can manage the contractual challenges arising within construction job sites. Following questions are addressed to manage these unprecedented situation-related contractual conflicts: ‘what are the contractual challenges faced by the construction industry?’, ‘what are the most applicable contractual provisions to a pandemic situation?’, and ‘what are the strategies to unravel the contractual challenges in a pandemic situation?’.

The questions were discussed by descriptive elucidation of existing literature. A Systematic Literature Review (SLR) was conducted to identify contractual challenges encounter during a pandemic. Disruption in project works, issues in the supply chain, labour shortage and productivity loss, delayed payments, and nine other main contractual challenges were identified through SLR. Multiple-mixed qualitative methodological research choice was adopted aligning the inductive approach and qualitative survey strategy.

First, the document review was conducted and analysed by reviewing the internationally popular forms of contract, FIDIC and locally popular forms of contracts standard bidding Documents (SBDs). Consequently, contractual provisions for pandemics in a few standard forms of construction contracts and case laws were synthesised. Adjustments for Changes in Legislation/Law, Force Majeure, Compensation Events, Right to Claim, Extension of Time, and Exceptional Events were identified as main contractual provisions as outcomes of the document review. Moreover, semi-structured interviews were conducted adopting the purposive sampling method and each respondent had experience and knowledge about contractual challenges and was involved in construction projects during the pandemic period. Thirty-four contractual challenges were identified including price increments and the uncertainty in project commencement through literature review and interviews. Finally, the study provided individual strategies for identified fourteen contractual challenges, to prepare for future pandemics and to minimise the destructive impact of contractual challenges due to any pandemic.

Keywords: Contractual Challenges; Contractual Provisions; COVID-19 Pandemic; Strategies

CONTENT

DECLARATION	i
DEDICATION.....	ii
ACKNOWLEDGEMENT	iii
ABSTRACT	iv
CONTENT	v
LIST OF FIGURES	viii
LIST OF TABLES.....	x
LIST OF ABBREVIATIONS	xi
1. CHAPTER 1 - INTRODUCTION.....	1
1.1. Background	1
1.2. Problem Statement	3
1.3. Aim.....	5
1.4. Objectives	5
1.5. Research Methodology.....	5
1.6. Scope and Limitations	7
1.7. Chapter Breakdown.....	7
1.8. Chapter Summary.....	7
2. CHAPTER 2 – RESEARCH METHODOLOGY	9
2.1. Introduction.....	9
2.2. Research Design.....	9
2.3. Philosophical Position Specific to the Research	10
2.4. Approach to Theory Development of the Research	11
2.5. Methodological Choice of the Research.....	11
2.6. Research Strategy of the Research	12
2.7. Time Horizon of the Research	14
2.8. Research Techniques and Procedure of the Research	14
2.8.1. Data collection.....	15
2.8.2. Data analysis	18
2.9. Research Process	18

2.10.	Chapter Summary.....	19
3.	CHAPTER 3 – LITERATURE SYNTHESIS	21
3.1.	Introduction.....	21
3.2.	COVID-19 as a Pandemic.....	21
3.2.1.	Idea of a pandemic.....	21
3.2.2.	COVID-19 pandemic and the world.....	22
3.3.	COVID-19 Pandemic and the Construction Industry.....	23
3.3.1.	Threats to the construction industry	25
3.3.2.	Opportunities to the construction industry.....	26
3.4.	General Challenges with a Pandemic in Construction Sites.....	27
3.5.	Contractual Challenges in Construction Sites.....	29
3.5.1.	Contractual challenges in construction sites in general	30
3.5.2.	Contractual challenges in construction sites in a pandemic situation ..	31
3.5.2.1.	Systematic literature review	32
3.6.	Contractual Provisions Related to a Pandemic Situation in Construction Industry.....	38
3.6.1.	Regulations/act/ordinance/circulars/guidelines.....	39
3.6.2.	Contractual implications related to COVID-19.....	40
3.6.3.	Contractual provisions related cases applicable to a pandemic situation	47
3.7.	Strategies to Deal with Pandemics	53
3.7.1.	Strategies to deal with general challenges in construction sites during a pandemic.....	53
3.7.2.	Strategies to deal with contractual challenges in construction sites during a pandemic	55
3.8.	Chapter Summary.....	57
4.	CHAPTER 4 – DATA COLLECTION, ANALYSIS AND DISCUSSION.....	58

4.1.	Introduction.....	58
4.2.	Administration of the Data Collection Process and Background Information.....	58
4.2.1.	Background information of preliminary interviews	59
4.2.2.	Profile of interview respondents.....	59
4.2.3.	Content of the interview guideline	61
4.3.	Analysis of the Findings and Discussions	61
4.3.1.	Impact of the pandemic on construction organisations – Generic aspects	62
4.3.2.	Perception of contractual challenges due to a pandemic	63
4.3.3.	Contractual provisions related to a pandemic situation based on standard forms of contracts.....	65
4.3.4.	Challenges with the implementation of contractual provisions	67
4.3.5.	Strategies to overcome the pandemic related contractual challenges...72	
4.4.	Chapter Summary.....	82
5.	CHAPTER 5 – CONCLUSIONS AND RECOMMENDATIONS	88
5.1.	Introduction.....	88
5.1.	Overviewing the Research Objectives and Research Process	88
5.2.	Contribution of the Study	94
5.2.1.	Contribution to theory.....	94
5.2.2.	Contribution to practice	94
5.2.3.	Limitations of the study	94
5.2.4.	Recommendations for further research.....	94
	REFERENCES	96
	ANNEXURE 1 – INTERVIEW GUIDELINE	116
	ANNEXURE 2 – INTERVIEW TRANSCRIPT.....	121

LIST OF FIGURES

Figure 1-1: Chapter Breakdown	8
Figure 2-1: Saunder’s Research Onion	9
Figure 2-2: Types of Research Strategies	12
Figure 2-3: Comparison of Qualitative Survey and Quantitative Survey	13
Figure 2-4: Methods of Data Collection	15
Figure 2-5: Research Process	20
Figure 3-1: Contractual Challenges During Construction Phases in General	31
Figure 3-2: Co-occurrence of Authors Key Words	34
Figure 3-3: Flow Diagram of SLR.....	36
Figure 3-4: The frequency of contractual challenges mentioned by the researchers ..	38
Figure 3-5: Force Majeure Model.....	46
Figure 3-6: Summary of the Case Law Findings.....	52
Figure 3-7: Safety Measures for the Construction Industry.....	54
Figure 4-1: Data Collection Process	58
Figure 4-2: Contractual Challenges in Pre-Contract Stage During a Pandemic	63
Figure 4-3: Contractual Challenges in Post-Contract Stage During a Pandemic	64
Figure 4-4: Strategies to Unravel the Contractual Challenges due to Project Cost Increments	73
Figure 4-5: Strategies to Unravel the Contractual Challenges due to Extension of Time	74
Figure 4-6: Strategies to Unravel the Contractual Challenges due to Disruption in Project Works	75
Figure 4-7: Strategies to Unravel the Contractual Challenges due to Supply Chain Issues.....	75
Figure 4-8: Strategies to Unravel the Contractual Challenges due to Labour Shortage and Productivity Losses	76
Figure 4-9: Strategies to Unravel the Contractual Challenges due to Delayed Payments and Cashflow Issues.....	77
Figure 4-10: Strategies to Unravel the Contractual Challenges due to Work Suspensions and Terminations	78

Figure 4-11: Strategies to Unravel the Contractual Challenges due to Uncertainty in New Project Execution.....79

Figure 4-12: Strategies to Unravel the Contractual Challenges due to Failure in Claim Notification on Time79

Figure 4-13: Strategies to Unravel the Contractual Challenges due to Failure to Secure Site Efficiency.....80

Figure 4-14: Strategies to Unravel the Contractual Challenges due to Failure to Implement Quality Monitoring and Control Process.....81

Figure 4-15: Strategies to Unravel the Contractual Challenges due to Interpretations of the Contractual Language81

Figure 4-16: Research Findings – Challenges and Available Contractual Provisions83

Figure 4-17: Strategies for Construction Industry to Unravel the Contractual Challenges in a Pandemic Situation -184

Figure 4-18: Strategies for Construction Industry to Unravel the Contractual Challenges in a Pandemic Situation -285

Figure 4-19: Strategies for Construction Industry to Unravel the Contractual Challenges in a Pandemic Situation -386

Figure 4-20: Strategies for Construction Industry to Unravel the Contractual Challenges in a Pandemic Situation -487

LIST OF TABLES

Table 2-1: Traditional Review Vs Systematic Review	16
Table 3-1: COVID-19 Impact on Construction Industry in Globally	25
Table 3-2: General Challenges Related to COVID-19 in Construction Sites	28
Table 3-3: Key Words for the SLR.....	32
Table 3-4: Steps of SLR.....	33
Table 3-5: Contractual challenges due to a pandemic situation in construction industry.....	37
Table 3-6: Comparison of Force Majeure and Changes in Law Clauses in Standard Forms of Contracts.....	42
Table 3-7: Applicable Contractual Provisions for a Pandemic Situation	43
Table 3-8: Summary of the Entitled Contractual Provisions	44
Table 3-9: Strategies to Deal with Contractual Challenges	56
Table 4-1: Profile of Respondents	60
Table 4-2: Contractual Provisions for Pandemics Incorporated by the Contractors ..	66
Table 4-3: States of the COVID-19 Related Claims of the selected cases.	68
Table 4-4: Contractor’s Foresight for the Disputes	70

LIST OF ABBREVIATIONS

- CCC - Contractual Challenges due to COVID-19
- COVID-19 - Infectious Disease Caused by the SARS-CoV-2 Virus
- EOT - Extension of Time
- FIDIC - Standard forms of contracts published by International Federation of Consulting Engineers (French name Fédération Internationale Des Ingénieurs-Conseils)
- SBD - Standard Bidding Document
- SLR - Systematic Literature Review
- WFH - Work From Home
- WHO - World Health Organisation