

**EFFECTIVENESS OF CONTRACTOR'S ALL RISK (CAR)
INSURANCE POLICIES IN ROAD CONSTRUCTION
PROJECTS**

Kavitha Ganeshamani

Degree of Master of Science



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

Department of Civil Engineering
University of Moratuwa

Sri Lanka

January 2014

LB/DON/80/2014

22 06/

EFFECTIVENESS OF CONTRACTOR'S ALL RISK (CAR) INSURANCE POLICIES IN ROAD CONSTRUCTION PROJECTS

LIBRARY
UNIVERSITY OF MORATUWA, SRI LANKA
MORATUWA

By

Kavitha Ganeshamani

Supervised by

Dr. R. U. Halwatura

University of Moratuwa, Sri Lanka.

Electronic Theses & Dissertations

www.lib.mrt.ac.lk

University of Moratuwa



107105

“The Dissertation was submitted to the Department of Civil Engineering of the University of Moratuwa in partial fulfillment of the requirements for the Master of Science in Construction Project Management”

**Department of Civil Engineering
University of Moratuwa**

Sri Lanka

January 2014

107105

624 "14"
69: 005.8 (043
107105

Abstract

There is a growing body of interests in insurance, supporting interactions between the construction industry and insurance industry. However, it is not always clear why construction insurance exists and how it operates from the perspective of the construction industry.

In Sri Lanka the construction insurance focus with the contract documents such as ICTAD SBDs, FIDIC and particular specifications. This traditional approach to insurance has been one that requires the contractor should purchase appropriate levels of coverage for all parties to a contract such as employer, consultants, contractor and subcontractor as called out in the contract documents through their own insurance underwriters.

While this approach to insurance remains predominant in the construction industry in Sri Lanka, it is recognized for its inherent inefficiencies in terms of cost, administrative management, claims management, gaps and overlaps in coverage. Because of the rapid and ever increasing costs of insurance, construction professionals, owners and construction insurers have required a more effective and efficient insurance programmes aimed at addressing existing shortcomings.

The objective of this research was to study how the contract risk can be handled through insurance in the road construction projects to minimize the inefficiencies.

Data collected through RDA, PRDA, road construction contractors and insurance underwriters.

The results can be used by public agencies when preparing bidding documents and by construction contractors to better understand, which factors affect their insurance premium and to realize that there are significant factors to be considered when obtain insurance covers and preparing claims against damages.

Key words: Insurance, Construction industry, insurance underwriters, public agencies, inefficiencies, CAR policy

Acknowledgement

May this be a gratitude, for those who offered me encouragement, valued cooperation, advices and assistance for achieving my objectives.

It is my foremost duty to give special thanks to my supervisor Dr. R.U. Halwatura for the valued guidance and support offered with his busy schedules.

I pay my sincere thanks to the Construction Management unit of Department of Civil Engineering, University of Moratuwa for organizing Construction Project Management course which is very useful in the emerging infrastructure projects in Sri Lanka.

I would like to thank the Construction Project Management staff unit of the UOM, those who all motivate and help several ways to do my research. Specially, I would like to thank Prof. Asoka Perera to give valuable assistance and motivation to complete my research study.



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations

I would like to thank Mrs. M.N. Karthi Menike, Technical officer from the Construction Project Management Unit, UOM to support me in several ways.

I appreciate the staff in Road Development Authority, who helped me to collect data and hold interviews. Especially, I would like to thank Eng.(Mrs.)Piyaseeli. Madegedera & Eng.(Mrs). S. Prashanthy who gave valuable support and encouragement to my research study.

Ultimately, I make this an opportunity to appreciate each and every person who gave their assistance in every mean to achieve successful completion of this research.

TABLE OF CONTENTS

List of Tables	vii
List of Figures	viii
Appendices	ix
Abbreviations	x
1 Introduction	1
1.1 Background	1
1.2 Objectives	2
1.3 Methodology	2
1.4 Main Findings	3
1.5 Arrangement of the report	4
2 Literature Review	5
2.1 General	5
2.2 Risk Analysis	5
2.2.1 Definition of Risk	5
2.2.2 Risk management	6
2.2.3 Construction project risk management	7
2.2.4 Risk allocation in construction projects	7
2.3 Insurance	8
2.3.1 History of Insurance sector in Sri Lanka	8
2.3.2 Structure of Insurance Market	8
2.4 Construction Insurance	9
2.4.1 Insurable and non-insurable risks	10
2.4.2 Contractors all risk insurance (CAR insurance)	11



University of Moratuwa, Sri Lanka
Electronic Theses & Dissertations
www.lib.mrt.ac.lk



2.4.3	Limitation in the insurance policies	11
2.4.4	Innovative insurance practices	12
2.4.5	Governing insurance laws and guidelines in Sri Lanka	13
2.5	Summary	15
3	Methodology of study and data collection	16
3.1	General	16
3.2	Data collection	16
3.2.1	Questionnaire survey	16
3.2.2	The existing format CAR insurance policies of road projects	17
3.2.3	The allocation for insurance in Bill of Quantities and premium charged by insurers	17
3.3	Data analysis methodology	17
3.4	Limitations to the research	17
4	Data Analysis and discussion	20
4.1	General	20
4.2	Data analysis and discussion	20
4.2.1	Questionnaire survey	20
4.2.2	Formats of Contractors All Risks Insurance policy	25
4.2.3	Allocation for insurance in Bill of Quantities and premium charged by insurers	28
4.2.4	The insurance claims against damages in road construction projects	30
4.2.5	Interview with road construction personnel and insurers	32
4.3	Summary	34
5	Conclusions and recommendations	35
5.1	Conclusions	35



5.2 Recommendations.....36

5.2.1 Recommendations to RDA 36

5.2.2 Recommendations for contractors 37

5.3 Recommendation for future studies39

Reference 40



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

LIST OF TABLES

Table 2.1: Insurance companies in Sri Lanka..... 13.

Table 4.1: Risk allocation in the BOQ..... 28

Table 4.2: Premium Percentage for CAR insurance policy for road projects 29

Table 4.3: Insurance details of set of project in one area with similar scope by one contractor 30

Table 4.4: Damage claim details of one construction company 30

Table 4.5: Claim reimbursement dispute in express way project 31

Table 4.6 :Interview answers by RDA engineers. 32

Table 4.7: Interview answer by major road contractor..... 32



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk



LIST OF FIGURES

Fig.2.1: Phases of Risk Management (Max Wideman1992, II-6) 6

Fig. 2.2: Insurance in Construction (DeSilva, 2003) 9

Fig. 4.1: View of the construction people about insurance..... 21

Fig. 4.2: Expectation on the guidelines for obtain insurance..... 21

Fig. 4.3: Comparing risk management and insurance..... 22

Fig. 4.4: Options for avoiding insurance 22

Fig. 4.5: Effect of premium amount..... 23

Fig. 4.6: Difficulties during claiming against damages 23

Fig. 4.7: Necessity of insurance..... 24

Fig. 4.8: Insurable risks..... 24

Fig. 4.9: Cost efficiency of insurance 25

Fig. 4.10: General outline of CAR policy 26



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

Appendices

- Appendix A - Questionnaire form
- Appendix B - Interview with insurance underwriters
- Appendix C - Diction of CAR insurance cover



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

Abbreviations

ICTAD	Institute of Construction Training and Development
SBD	Standard Bidding Document
FIDIC	International Federation of Consulting Engineers
BOQ	Bill of Quantity
RDA	Road Development Authority
PRDA	Provincial Road Development Authority
CAR	Contractors All Risk
PAI	Principle Arrange Insurance
CAI	Contractor Arrange Insurance
DSU	Delay in Start Up
ALOP	Advance for Loss of Profit



University of Moratuwa, Sri Lanka.
Electronic Theses & Dissertations
www.lib.mrt.ac.lk

