EXPLORING THE PROJECT RISK MANAGEMENT

IN CONSTRUCTION SUPPLY CHAIN:

OF CONSTRUCTION COMPANIES IN SRI LANKA

MASTER OF SCIENCE

IN

CONSTRUCTION PROJECT MANAGEMENT

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May 2013

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OF CONSTRUCTION COMPANIES IN SRI LANKA

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The Dissertation was submitted to the Department of Civil Engineering of the University of Moratuwa in partial fulfilment of the requirement for the Degree of Master of Science.

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DECLARATION

I hereby certify that this dissertation does not incorporate any material without acknowledgement and material previously submitted for a degree or diploma in any university to the best of my knowledge and I believe it does not contain any material previously published, written or orally communicated by another person except where due reference is made in the text.

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Abeyruwan K.A.N.V.

Date : 20 May 2013

(09/8851)

This is to certify that this thesis submitted by Abeyruwan K.A.N.V. is a record of the candidate's own work carried out by him/her under my supervision. The matter embodied in this thesis original and has not been submitted for the award of any other degree.

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ABSTRACT

The shortcomings of current project risk management processes, tools and techniques, the construction industry still suffers from poor project performance. The increasingly complex and dynamic nature of projects, coupled with new procurement methods, the tendency to use risk quantification and risk response planning amongst the project team members. However, communication of construction project risks is poor, incomplete, and inconsistent throughout the construction supply chain. Project team members adopt different terminologies for describing risks, use different methods and techniques for dealing with risk analysis and management, which producing different and conflicting results, leads to poor project performance.

Consequently, project members do not adequately deal with problems resulting from decisions taken elsewhere in the chain. The focus of quantitative risk analysis based on estimating probabilities and probability distributions for time and cost risk analysis, do not encourage project participants to in-depth understanding of the underlying elements and structures which constitute project risk. It does not allow the risks, problems, remedial measures, and lessons learned from previous projects to be captured and re-used when developing new projects. A common methodology for describing risks based on a hierarchical-risk breakdown structure has been identified and it provides the basis for developing a sharable knowledge-driven approach to risk management. A need for better knowledge through research is present in many of the above areas, but what seems to be especially important is the present lack of frameworks for decision support within supply chain risk.

The work presented in this research is aimed to ***Explore the Risks Associated with Construction Supply Chain*** and identify a continuous risk management framework capable of enhancing the probability of project success. And also to lead the industry to establish construction supply chain risk management practices that are self-sustaining and continuously improving, effective continuous knowledge capture, re-use and learning process.

ACKNOWLEDGEMENT

This thesis is the mere physical evidence of the ride of the last few years, although only few names on the acknowledgement, a product to which many people have contributed in different ways and made their contributions. I would like to take this opportunity to express my gratitude to them.

First of all I would like to thank my supervisor Doctor Lesly Ekanayake, Senior Lecturer, Department of Civil Engineering, University of Moratuwa for his competence, patience and encouragement during this remarkable research journey.

A special recognition to Professor Asoka Perera, Head of the Project Management Division, Department of Civil Engineering, University of Moratuwa, who has given guidance and encouragement to complete this thesis and many thanks to Dr. Rangika Halwatura, Department of Civil Engineering, for your patinas, encouragement. You all have provided considerable contributions to this endeavour.

Great thanks to Vincy Goonawardhane and Lalith Karunarathne, whose friendship and fighting spirit has been a source of inspiration to me. Also much gratitude to be sent to all non academic staff within the Department of Civil Engineering, for their extended support during this period.

Finally, I would like to send a special tribute to my family; my wife Thamara, for always believing in me and being there for me, Navindee and Sandu, for their love and support during this hard period. Without their help and support this endeavour would have been impossible.

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS

SCM	Supply Chain Management
SRM	Supply Risk Management
SCRM	Supply Chain Risk Management
EPC	Engineering, Procurement and Construction
ETC	Engineer To Order
SS	Supplier Selection
ICTAD	Institute of Construction Training and Development
PFI	Privet Finance Initiative
BOOT	Build Own Operate and Transfer
CSCMP	Council of Supply Chain Management Professionals
BCM	Business Continuity Management
PRR	Project Risk Register
KBS	Knowledge Based System
IT	Information Technology
CORE	Comprehensive Outsourcing Risk Evaluation
FMEA	Failure Mode Effect Analysis
CBA	Cost Benefit Analysis
RBA	Risk Benefit analysis
TCE	Transaction Cost Economics