

**SUPPLY CHAIN RISK MANAGEMENT FOR
MINIMIZING DISPUTES IN CONSTRUCTION
PROJECTS IN SRI LANKA**

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DECLARATION

I declare that this is my own work and this the 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: / /2026

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

Name of Supervisor: Dr Sachie Gunathilake

Signature of the Supervisor:

Date:

DEDICATION

"I dedicate this dissertation to my beloved wife and daughters, who have been the utmost inspiration and the light of my life."

ACKNOWLEDGEMENT

This research owes its accomplishment to the dedication and support of many individuals. While it is difficult to mention each one by name, I would like to express my sincere gratitude to all those who have contributed in various ways. Firstly, I wish to thank my supervisor, Dr. Sachie Gunathilake, for her interest, encouragement, gentle guidance, and invaluable support throughout this study.

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ABSTRACT

Construction projects are inherently exposed to numerous risks throughout their lifecycle due to their complexity and the involvement of multiple stakeholders. Effective supply chain risk management (SCRM) is crucial to mitigate time delays and cost overruns, which can ultimately lead to project failure if not properly addressed. Despite advances in theoretical risk management frameworks, a gap remains between theory and practice, with many practitioners relying on experience rather than systematic approaches. The aim of this research to investigate how supply chain risk management can be utilized to minimized disputes in construction projects in Sri Lanka.

This dissertation employs a mixed-method research design, integrating qualitative and quantitative techniques to investigate the role of SCRM in minimizing disputes within Sri Lankan construction projects. A systematic literature review identified key supply chain risk factors and mitigation practices, while structured surveys and semi-structured interviews with industry professionals provided empirical data for validation.

The findings reveal that cash flow problems, poor site management, labour shortages, and material shortages are the most critical risks, based on their high impact and likelihood scores. These risks are primarily internal and manageable within project boundaries. The research also highlights the fragmented nature of the construction supply chain and its reliance on multiple stakeholders, which contributes to vulnerabilities in operational efficiency, financial stability, legal compliance, and environmental preparedness.

Proactive mitigation strategies such as effective project planning, stakeholder communication, and regular equipment maintenance are identified as the most effective in managing these risks. The dissertation concludes with practical recommendations for strengthening financial frameworks, enhancing workforce capabilities, optimizing material supply chains, and integrating environmental and regulatory risk management to improve project performance and reduce disputes in Sri Lankan construction projects.

Keywords: Construction supply chain, Risk mitigation, Supply chain risk management, Sri Lankan construction industry

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LIST OF ABBREVIATIONS

Abbreviation	Description
CSC	Construction supply chain
GDP	Gross domestic product
SCRM	Supply chain risk management

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