

**IMPACT OF SCOPE DEFINITION INDETERMINACY
ON IRON TRIANGLE PERFORMANCES IN PUBLIC
BUILDING CONSTRUCTION PROJECTS**

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Dissertation submitted in partial fulfilment of the requirements for the degree Master
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DECLARATION

I declare that this is my own work and this dissertation does not incorporate without acknowledgement any material previously submitted for a Degree or Post graduate Degree 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.

Further, I acknowledge the intellectual contribution of my research supervisor Dr. (Mrs) Chandanie Hadiwattege for the successful completion of this research dissertation. I affirm that I will not make any publication from this research without the name of my research supervisor as contributing author unless otherwise I have obtained written consent from my supervisor.

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Date

Dissertation Supervisor

ABSTRACT

Public building projects are vital in the construction industry since they can provide a variety of public benefits and improve the efficiency of public utilities. The Iron Triangle is a crucial driver of public building projects, ensuring project success through proper management of the Iron Triangle's components. However, when it comes to the elements that have identified in this research, the scope is the most important factor to consider. As a result, analysing the impact of the Iron Triangle due to scope indeterminacy in public building projects is a critical performance metric for reducing negative impacts on the Iron Triangle and ensuring the efficacy of public building projects. Therefore, the study focuses on the assessing the above impact of scope indeterminacy on the performance Iron Triangle in public building projects. Case content analysis and descriptive statistics were used to analyse the empirical data acquired from expert interviews and a questionnaire survey.

The studies revealed twenty-seven causes for scope indeterminacy in public building projects, with twelve (12) of them being unique to public building projects. In addition to that, the study discovered 34 handling strategies for reducing the impact of scope indeterminacy. In the context of public building projects, eleven of the most severe causes of scope indeterminacy for Iron Triangle performance were discovered, with "Lack of Planning" and "Lack of Concentrate on Defining Scope" being the most severe causes of scope indeterminacy for Iron Triangle performance in public building projects.

Keywords: Public Building Projects, Scope Indeterminacy, Iron Triangle

DEDICATION

**I'd want to dedicate my work to my devoted
father who taught me the meaning of life and
esteemed instructors, who have never wavered
in their support, devotion, and
encouragement.**

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LIST OF ABBREVIATIONS

CIA - Construction Industry Association

CIDA- Construction Industry Development Association

DAB - Dispute Adjudication Board

ER - Employer's Requirement

GDP – Gross Domestic Product

ICTAD- Institute for Construction Training and Development

NPA – National Procurement Agency

NPD- Department of National Planning

NPPIS- National Public Project Implementation System

PDRI - Project Definition Rating Index

PE - Procuring Entity

PMI - Project Management Institute

RDA – Road Development Authority

RII – Relative Importance Index

ROI – Return of Investment

SBD – Standard Bidding Document

SL – Sri Lanka

SPSS - Statistical Package for the Social Sciences

UDA – Urban Development Authority