

# **MANAGEMENT OF DEFECT CLAIMS IN INFRASTRUCTURE PROJECTS IN SRI LANKA**

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Master of Science in Construction Law and Dispute Resolution

Department of Building Economics

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Dissertation submitted in partial fulfilment of the requirements for  
the Master of Science in Construction Law and Dispute Resolution

Department of Building Economics

University of Moratuwa  
Sri Lanka

November 2022

## DECLARATION

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“I declare that this is my own work, and this 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.

Further, I acknowledge the intellectual contribution of my research supervisor Chartered Quantity Surveyor Professor (Mrs.) B.A.K.S. Perera for the successful completion of this research dissertation. I affirm that I will not make any publication from this research without the names of my research supervisor as contributing authors unless otherwise I have obtained written consent from my research supervisors.

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09<sup>th</sup> November 2022

Thusharika A.P.J.N.

Date

The above candidate has carried out research for the Dissertation under my supervision.

.....

09<sup>th</sup> November 2022

Ch. QS Prof. (Mrs.) B.A.K.S Perera

Date

Thesis Supervisor

## ABSTRACT

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Defect claims are inevitable in construction projects. The complexity, high cost, and time consumption for the completion of infrastructure projects lead to more defect claims. Thus, this study aimed at how to manage defect claims in infrastructure projects in Sri Lanka. Firstly, the types, causes, consequences, and strategies to manage claims were identified through a literature review. This was followed by a detailed study of defect claims in infrastructure projects to identify the types, causes, consequences, and management strategies of defect claims in Sri Lanka. This was accomplished via semi-structured interviews. Next, a questionnaire survey was carried out to identify the most significant types, causes, consequences, and management strategies of defect claims in infrastructure projects in Sri Lanka. Manual content analysis and relative importance index helped analyse the collected empirical data through interviews and questionnaires, respectively.

The research findings revealed seven types of defect claims and identified the most significant defect claim types as construction defects, workmanship defects, design defects, and material defects. The most significant causes of defect claims were indented as subcontractor failures, inadequate and inexperienced professionals employed, site conditions, improper approvals, bad quality of work, inaccurate topological data, lack of resources, improper project management, selected inexperienced contractors, and inadequate specifications. The research findings further disclosed the most significant consequences of defect claims as cost overrun, deterioration of the quality of the product to be delivered, producing low-quality projects, damage to Business relationships, and sharing information with project parties. Furthermore, the most suitable strategies to manage defects claims were disclosed as clear and frequent communication, distribution of the required information, establishing quality control measures, keeping records, early notification, use of named subcontractors rather than nominated subcontractors, creating, implementing, and utilising a logical and user-friendly schedule, monitoring the system set up by the main contractor, scope assessment, and conducting regular site meetings.

**Keywords:** *Defect Claims, Infrastructure projects, Management, Sri Lanka*

I dedicate this  
dissertation to my  
beloved parents for  
their immense love,  
care, support, and  
encouragement.

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## ABRIVIATIONS

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|       |   |   |
|-------|---|---|
| FIDIC | : | Federation Internationale Des Ingenieurs Conseil              |
| BOQ   | : | Bill of Quantities  |
| CRCCI | : | Cooperative Research Centre for Construction<br>Innovation    |
| GDP   | : | Gross Development Percentage                                  |
| AEC   | : | Architectural, Engineering, and Construction                  |
| AECO  | : | Architectural, Engineering, Construction, and<br>Organization |