# ASSESSMENT OF IMPACT OF LATENT DEFECTS IN CONDOMINIUMS IN SRI LANKA

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Dissertation submitted in partial fulfillment of the requirements for the degree of Master of Science in Project Management

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#### **ABSTRACT**

Condominiums have become the most predominant and popular form of residential development and identified as an ideal solution to the ever increasing housing demand in Sri lanka. However, latent defects are considered as one of the recurring problems in condominiums and have adverse effects on condominiums' performance and occupants or end-user satisfaction. The lack of focus on latent defects leads to negative impacts on cost, time and quality of condominiums. In view of that, this research aims to assess the impact in terms of frequency of occurrence, severity and rework/rectification cost of latent defects in condominiums in Sri Lanka.

A survey research strategy was employed in the current study, quantitative research approach. The questionnaire designed based on the knowledge gained through literature was distributed to occupants of condominiums. The collected data was analysed by using descriptive statistical analysis such as mean weighted rating to accomplish the research aim.

Questionnaire findings identified nineteen types of latent defects which were experienced by occupants of condominiums. Further, in order to assess the impact of latent defects in condominiums, questionnaire findings recognised that water seepage was the most frequently occurred latent defects while cracks and stains were higher severity latent defects and cracks required the highest rework/rectification cost. Moreover, external wall has been developed the highest frequency of latent defect in condominiums. Eventually, water seepage, cracks, functioning defects in service equipment and pipe leaking were recognised as having a significant impact in terms of frequency of occurrence, severity and rework/rectification cost of latent defects. Moreover, use of poor quality construction materials, faults during the construction, faults during the design and lack of maintenance in condominiums were identified as significant human causes where the focus should be laid upon in mitigating latent defects.

Thus, this research provides inputs to the occupants, maintenance professionals, condominium management and construction professionals on assessing impacts of latent defects in order to effectively mitigate the latent defects in condominiums in Sri Lanka.

**Key words:** Condominiums, Latent defects, frequency of occurrence, severity, rework/rectification cost.

**DEDICATION....** 

# TO MY BELOVED FAMILY

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## LIST OF ABBREVIATIONS

ASR Alkali-Silica Reaction

CIB International Conference on Building Education and Research

CMA Condominium Management Authority

DLP Defects Liability Period

MDF Medium Density Fiberboard

MEP Mechanical Electrical and Plumbing

MWR Mean Weighted Rating

Qi Question number

UK United Kingdom