Identify the Barriers to Reduce the Life Cycle Cost of Green Buildings in Sri Lanka

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The implementation of green construction is being spearheaded by the global building sector as society shifts toward greater sustainability. The building industry can expand despite Sri Lanka's current energy and financial crises because to green building concepts. A building's Life Cycle Cost (LCC), which includes cost features for replacement, operations, maintenance, and demolition, should be considered. Therefore, the main objective of this research is to identify the barriers to reduce the LCC and provide strategies for reducing that component's impact to further limit LCC. To achieve this main objective this study used qualitative method as the research design. As qualitative research to collect data semi structured interviews were used with the constructional professionals in Sri Lanka. Four different data analyzing methods for qualitative research including thematic analysis, manual content analysis, PRISMA, and literature surveys. For this research to analyzed data manual content analysis was used. Purposive sampling was used as the sample and professional Quantity surveyors, Engineers, Project managers, Architects and Contractors were used as the sample of this research. Finally, this research achieved the main objective of this research and found the barriers to reduce the LCC in a green building and mitigating methods to those barriers. And this study identified 10 barriers and among those barriers the high initial cost as the most affected barrier to minimization of the LCC in A Green Building. To overcome these barriers in this research found 8 mitigating methods and among that giving education and awareness about the Green Buildings was the most suitable way to mitigate those barriers. Finally, this research identified as future research implementation of BIM-related software to minimize the LCC on GB, implement smart technologies for optimizing occupant comfort in green buildings, can be developed.

Keywords: Green Building, Life Cycle Cost, Operational Cost, Maintenance cost, Replacement Cost, Demolition Cost