

Identification of Implementation Barriers of House Lifting Construction Technology by Using Hydraulic Jack Lifting in the Sri Lankan Context

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Adopting house-lifting construction techniques promotes environmental sustainability by reducing the environmental impact of demolition and new construction. Elevating structures reduces vulnerability to flooding, hence safeguarding life and property during severe weather occurrences. This approach improves resilience, lowers rebuilding costs, and promotes sustainable development by overcoming implementation challenges including resource scarcity and ecological impact. Even though there have been significant advancements in construction technologies worldwide, innovative techniques like house-lifting construction using hydraulic jacks have not been widely utilized in Sri Lanka. Therefore, this paper aims to identify the implementation barriers of house lifting technology by using hydraulic jacks in the Sri Lankan context. Interviews and an extensive questionnaire survey were used to assess this study. The gathered data was analyzed using the frequency index approach and content analysis. The results highlighted that one of the main barriers is this hydraulic jack lifting technology incurs the highest implementation cost and the equipment associated with this technology is costly. The shortage of experts in the area of hydraulic jack lifting technology in the Sri Lankan construction industry was identified as another main barrier in this research study. To address this issue this study recommends that there should be the involvement of the government and related authorities by providing the initial investments and guidance to the construction industry practitioners.

Keywords: Implementation Barriers, House Lifting Construction, Hydraulic Jacks, Sri Lanka