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A MULTICRITERIA DECISION-MAKING-BASED APPROACH FOR PRIORITIZING SUSTAINABLE BUILDING CONSTRUCTION BARRIERS IN A DEVELOPING ECONOMY

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Abstract – Implementation of sustainable practices in building sector has always been a great concern but often neglected. The situation becomes more serious for under-developed or developing countries where more focus remains on the economic aspects of construction. Neglecting such vital aspects usually results in unsuitable practices with negative impact on social and economic growth in the long run. Many factors are attributed to such practices. However, managing such an important challenge requires a thorough identification of barriers along with investigating the level of impact on sustainable building development, thus enabling policy makers to formulate the targeted strategies. The current work aims to develop a hierarchal framework to investigate the social, economic, environmental and governance barriers undermining sustainable construction practices in a developing country. A comprehensive literature review guided to shortlist 54 critical factors. A semi-structured questionnaire tool, based upon the Delphi technique, was developed to assist data collection. Multicriteria decision analysis technique, Analytical Hierarchical Approach (AHP), ranked the identified alternatives using pairwise comparison criteria. Fuzzy comprehensive matrix (FCM) was developed to assess the overall evaluation of individual factors. With a centesimal value of 62.034, the social aspects were observed to be the highest contributing factors in such barriers, with governance making the least. This indicated that social factors would require a comprehensive strategy to be managed properly to support sustainable endeavors for future developments.

Keywords – *Fuzzy Logic Approach (FLA); hierarchical framework; multicriteria decision; sustainable development*