

Innovative Housing Construction Technologies in Slum Upgrading

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Abstract : Innovation in the construction industry has been characterized by new products and processes especially in slum upgrading. The need for low cost housing has motivated stakeholders to think outside the box in coming up with solutions. This paper explored innovative construction technologies that have been used in slum upgrading. The main objectives of the paper was to examine innovations in the construction housing sector and to show how incremental derived demand for decent housing has led to adoption of innovative technologies and materials. Systematic literature review was used to review studies on innovative construction technologies in slum upgrading. The review revealed slow process of innovations in the construction industry due to risk aversion by firms and the hesitance to adopt by firms and individuals. Low profit margins in low cost housing and lack of sufficient political support remain the major hurdles to innovative techniques adoption that can actualize right to decent housing. Conventional construction materials have remained unaffordable to many people and this has negated them decent housing. This has necessitated exploration of innovative materials to realize low cost housing. Stabilized soil blocks and sisal-cement roofing blocks are some of the innovative construction materials that have been utilized in slum upgrading. These innovative materials have not only lowered the cost of production of building elements but also eased costs of transport as the raw materials to produce them are readily available in or within the slum sites. Despite their shortcomings in durability and compressive strength, they have proved worthwhile in slum upgrading. Production of innovative construction materials and use of innovative techniques in slum upgrading also provided employment to the locals.

Keywords : construction, housing, innovation, slum, technology

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