

Slum Upgrading Schemes for Better Liveability :Case of Pune, India

Liveability studies are mostly limited to formal settlements, whereas in emerging economies like India, a large proportion of the population lives in informal settlements. Lack of liveability studies for informal settlements often lead to the assumption that ensuring safer housing structure and providing basic services like household-level water, sanitation, and electricity, inevitably leads to an improved living experience. Consequently, slum upgrading schemes rarely consider improvement in liveability as one of the criteria. The research paper addresses this knowledge gap by studying the change in liveability perceptions of residents when they move to upgraded housing. It hypothesises that liveability indicators related to community ties are most influential and despite improvement in housing quality and basic services, community ties are lost when up-gradation is done through relocation or redevelopment to a multi-storey housing. The goal of the study is to develop a method to understand residents' perception of the quality of life and the influence of individual liveability indicators on one another, to find the most central indicator which can work as performance leverage for improving overall liveability. The method developed includes interviewing residents to elicit the causal relationship between each indicator and analysing it through Fuzzy Cognitive Maps to find the most influential (central) indicator. Three residents each from four settlement types were interviewed: Slums with no intervention, Slums in-situ upgraded through retrofitting, Slums Rehabilitated through resettlement in a new location, and Slums upgraded in-situ by redeveloping a multi-storey housing. The result of the analysis highlights the applicability of the method in highlighting areas of improvement which can act as a leverage for a better liveability in the upgraded settlement.

With the rising urban population, the share of people living in informal settlements, often called slums, is also increasing proportionately. As of 2018, 23.5 per cent of the total urban population was living in slums (United Nations, 2019). Overcrowded dwellings, no security of tenure, and no access to clean water or formal supply of basic services are some of the key characteristics of a slum settlement. They are more vulnerable to climate change-induced disasters and other manufactured hazards due to their location and infrastructural precariousness. While there are various approaches to uplifting the physical infrastructure, from insitu rehabilitation to relocation to a formalised settlement, there is a limited study about the postupgrading liveability, especially in comparison of the various approaches. With most liveability studies limited to formal settlements, there is a knowledge gap in understanding how liveability perceptions vary in developing countries like India, where a large proportion of the population lives in informal settlements like slums. Consequently, it is often assumed that ensuring safer housing structure and providing basic services like householdlevel water, sanitation, and electricity, inevitably leads to an improved quality of life. Thus, slum upgrading schemes rarely consider improvement in liveability as a separate criterion, but a by-product of upgrading physical infrastructure. The thesis addresses this

knowledge gap by studying the change in liveability when the slums are upgraded, by comparing the before and after liveability perceptions of the residents. Four neighbourhoods in the city of Pune, India are considered for the study: Slums with No Intervention, Slums In-situ Upgraded through Retrofitting, Slums Rehabilitated through Resettlement in a New Location, and Slums Upgraded In-situ by Redeveloping to a Multi-storey housing. Following a brief review of slum upgrading policies in India, the thesis takes the stand of defining liveability keeping residents' perception as the focus and establishing Liveability Indicators applicable to the specific case of slums.

1.1 Hypothesis and Research Questions

The thesis hypothesises that when slums are upgraded through relocation, whether into a multistorey housing within the same area or housing in a different locality, the loss of pre-existing community ties is the central cause reducing the overall liveability experience. "Community relationships in slums are often found to be much stronger, with a higher level of trust than in affluent suburbs where people don't know each other" (UN-Habitat, 2009, p. 128). Wellman and Wortley (1990, p. 559) cite Pahl (1984) to argue that community ties form the backdrop for informal arrangements crucial for a household's survival, expansion and reproduction. Rehabilitation housing often offers only restricted access to communal spaces which were an integral part of the residents' lives in slums, where these spaces were used for socialising with neighbours (Debnath et al., 2019). This could be one of the causes behind the weakening of community ties post upgrading