

Developing a Suitable Method to Evaluate Mobility Levels in Urban Areas of Sri Lanka

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This paper aims to develop a suitable method to measure urban mobility in Sri Lanka using an appropriate indicator set. The study only focuses on vehicular mobility. The study covers four sub-objectives: review and identification of the limitations of existing evaluation methods, application of already developed evaluation mechanisms to Sri Lankan context in comparison with foreign cities, determining the best criteria to analyse the mobility index for the selected case studies, and urging decision makers to take necessary actions to upgrade the mobility index in Sri Lankan cities. The proposed method includes 13 indicators related to vehicular mobility. Methodology includes creating a definition using cluster analysis, deriving suitable parameters according to content analysis, expert survey and factor analysis in the preceding part. Data analysis is performed using different formulas and spatial analyses, a mobility index is developed using arithmetic mean, and the index is applied to selected case studies from Colombo, Kandy and Galle. The “Urban mobility index” and “Sampling mobility index” are also applied to those cities. Non-judgmental probability sampling method was used for expert analysis with 22 experts participating. Random sampling was used for the public survey. Sample size was 140 from each city. Five experts validated the method. According to the findings Colombo and Galle cities have barely acceptable mobility levels, and in order to improve indicators returning lower values, some targets should be established. Kandy has an unacceptable mobility level. This is not critical but in order to reverse the situation, there should be immediate interventions from society and administrators. Moreover, in the final part of the research, it is expected to urge decision makers to take necessary actions to upgrade the mobility level in Sri Lanka. These indicators will demonstrate areas that should become policy priorities in future. After achieving acceptable mobility, more indicators can be incorporated to the index.

Keywords: *Sampling mobility index, urban mobility index, mobility indicators, vehicular movement, urban centres*