



Research Article

A GIS Based Integrated Approach to Measure the Spatial Equity of Community Facilities of Bangladesh

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Abstract: The distribution of public facilities and their spatial equity is an important matter to be considered while planning public facilities. However, most of the studies in the literature have taken into consideration only a single type of facility while leaving other facilities unconsidered. In this paper an integrated spatial index for public facilities has been developed integrating GIS and spatial analysis models. The index measures the spatial equity based on the accessibility of 6 different types of public facilities for 5247 unions and 476 sub-districts of Bangladesh. Spatial autocorrelation techniques have been applied to understand the spatial pattern of accessibility. In fact it helps to understand the characteristics of spatial equity both for disaggregated and aggregated levels. It has been found that variation accessibilities to the facilities across the space are significant. Distribution of some facilities are spatially clustered to some particular areas means those areas are in an advantageous position in terms of accessibility while other areas are in a backward condition. The proposed index and the spatial autocorrelation will help to identify which areas should receive more priority in allocating particular types of public facilities in the future.