Availability and Accessibility Assessment of Public Transit System

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ABSTRACT

Majority of the million plus cities in India are facing serious problems of traffic congestion and pollution due to the unprecedented and rapid pace of urbanization in last decade. City planners are providing solution to these twin problems by developing Mass Rapid Transit System including Metro & BRT in many Indian Metropolitan cities. The availability of transit network and pedestrian accessibility is key issue in planning of effective Public Transit, which affects the ridership significantly. The studies around the globe have shown that lack of accessibility and poor quality pedestrian infrastructure has led to the continued loss of mode share for public transit trips in cities. In the present study, public transit network availability and pedestrian accessibility has been estimated for the city bus routes in Jaipur city. To assess the availability of public transit network on spatial basis some numerical index has been developed based on capacity, frequency and coverage as Public Transit Coverage Index (PTCI), similarly to measure the pedestrian accessibility numerical indices, as Ideal and Actual Stop Accessibility Index (ISAI and ASAI) and Stop Coverage Ratio Index (SCRI) has also been determined on GIS platform. These indices indicate the well served or underserved area by existing transit network and accessibility of a bus stop through the surrounding road network which may help town planners to develop future transit network and also the pedestrian facilities around a bus stop in order to make transit system more accessible and to increase the public transit mode share in the city.

Keywords: Public** Transit Availability, Bus Stop Coverage, Pedestrian Accessibility, GIS