

Introduction of Mass Rapid Transit System and Its Impact on Para-Transit

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Abstract : In developing countries increasing the automobile and low capacity public transport (para-transit) which are creating congestion, pollution, noise, and traffic accident are the most critical quandary. These issues are under the analysis of assessors to break down the puzzle and propose sustainable urban public transport system. Kabul city is one of those urban areas that the inhabitants are suffering from lack of tolerable and friendly public transport system. The city is the most-populous and overcrowded with around 4.5 million population. The para-transit is the only dominant public transit system with a very poor level of services and low capacity vehicles (6-20 passengers). Therefore, this study after detailed investigations suggests bus rapid transit (BRT) system in Kabul City. It is aimed to mitigate the role of informal transport and decreases congestion. The research covers three parts. In the first part, aggregated travel demand modelling (four-step) is applied to determine the number of users for para-transit and assesses BRT network based on higher passenger demand for public transport mode. In the second part, state preference (SP) survey and binary logit model are exerted to figure out the utility of existing para-transit mode and planned BRT system. Finally, the impact of predicted BRT system on para-transit is evaluated. The extracted outcome based on high travel demand suggests 10 km network for the proposed BRT system, which is originated from the district tenth and it is ended at Kabul International Airport. As well as, the result from the disaggregate travel mode-choice model, based on SP and logit model indicates that the predicted mass rapid transit system has higher utility with the significant impact regarding the reduction of para-transit.

Keywords : BRT, para-transit, travel demand modelling, Kabul City, logit model

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