

## ABSTRACT

Public transport (PT) in developing countries often does not play a very major role, as the traffic is often dominated by paratransit and other individual transport means. Dhaka, the capital city of Bangladesh is an over densely populated mega city and its transport system comprised of many different modes of travel both motorized and non-motorized, using the same insufficient road space resulting a high level of operational disorder, traffic congestion and related problems.

The aim of this thesis is to identify the potentials for the optimisation of PT system to develop suitable measures for improving the urban PT system in Bangladesh following the established process for transport planning in Germany (*FGSV 116 Leitfaden für die Verkehrsplanung*).

Bus based PT system of Dhaka city is not capable of meeting the increasing demand with sufficient quality of service. Scope and necessity of the optimization for the PT system of Bangladesh (Dhaka) is justified by analysing the current situation and pointing out the existing limitations. A set of potential measures are chosen to improve the current situations by solving the outlined PT problems. The selection of the suitable measures out of potential measures is carried out through the feasibility study considering the actual socio-economic situation of Bangladesh. The most effective measures are prioritized based on the weighting values considering a list of defined weighting criteria. To assign the respective weighting value, the impact of the individual measures are thoroughly analysed on the basis of the weighting criteria. Recommendations are made in favour of a list of essential higher prioritized optimisation PT measure, which through comprehensive analysis are proven to be the most effective for the improvement of the current PT system of Bangladesh.

Finally, to ensure a more sustainable and stable optimal results of the selected measures, a single packaging approach is devised which covers the implementation of several measures from suitable measures list. Implementation benefit of such a package on the existing PT scenario of Bangladesh is analysed along with a comprehensive implementation guide line.

The evaluation of the proposed measures is carried out on the existing connectivity, ticket price and PT services on a particular main route between two locations in Dhaka city. The result indicates that through the implementation of the considered measures, it is possible to achieve a significant amount of improvement in term of connectivity, ticket pricing, travel time, service quality along with passenger's comfort and satisfaction of the current bus PT system of Dhaka city.