A Unified Framework for Selecting a Travel Demand Forecasting Model for Developing Countries

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Abstract
The ability to judge and select a model that is appropriate for a particular application is considered to be one of the most important aspects in contemporary transport planning. However, there is no suitable procedure for the systematic selection of a model that is most appropriate for meeting the needs and requirements of a particular planning task. Although there is little literature on the criteria for model assessment and selection methodologies, none can support systematic evaluation of different models versus quality of obtainable data versus efforts for data provision. Such deficiencies support the need for further guidance on a model selection procedure for developing countries where efforts for data provision are highly susceptible to higher sampling and measurement errors. This study presents a unified framework for the systematic model selection process. Evaluation of the framework for a case study of Dar es Salaam city in Tanzania evidences its benefits and applicability.

Keywords
Travel demand forecasting model,
Model selection,
Developing country,
Transport planning,
Data quality