USE OF ELECTRICITY CONSUMPTION AS A SURROGATE VARIABLE FOR SOCIO-ECONOMIC ATTRIBUTES IN TRIP DISTRIBUTION MODELLING

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ABSTRACT

The history of urban travel demand studies spreads over a period of more than fifty years. Most of these are recorded from developed countries, with just a handful from developing countries. The scarcity of reliable and up-to-date socioeconomic data to the required formats seems to be the apparent reason for such differences. Alternative cost effective economic variables can be used for traffic forecasting instead of census and statistics data which are not updated frequently. The zonal strength of attraction can be related to the strength of the economic activities of all non-household establishments which can be treated as the major traffic attractors in a transport zone. This kind of relationship can be developed as a trip distribution model, using the theory of origin constrained gravity type regression model forecasting.

This paper is an attempt to investigate the possibility of using the more easily collectable and accurately measurable electricity consumption, as a surrogate variable for socio-economic status and activity level of destination zones, for trip distribution analysis.