UNIVERSITI TEKNOLOGI MARA

PERFORMANCE INDEX AS A MONITORING AID TOWARDS SUSTAINABLE URBAN TRANSPORT

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ABSTRACT

Currently, Malaysia's urban public transport service is facing difficulties in meeting users' demands; traffic congestion is increasing as it hampers urban mobility and causes a major challenge to achieve a sustainable development. There are problems with public transport services, especially the urban bus system that is frequently associated with the weakness in accessibility and low user satisfaction. This study aims to develop bus service performance index as a benchmark by using a multi-method approach. The data were gathered by a user satisfaction survey using a structured questionnaire with observations on frequencies, accessibilities, characteristics of the services provided, an open interview and review of ridership figures. A total of 573 samples from four selected routes designated as benchmarks were collected in the Klang Valley and Penang areas and classified by the relative loading of all dimensions using factor analysis. The discrepancy or gap between a user's perceptions and expectations was generated as an index of service quality that should be used as a priority indicator for improvement. Accessibility level is measured based on the points of interest for service access that is focused on the high ridership density of the particular location. The results of the study indicated that Reliability, Safety, Physical Facilities and Understanding are the four factors found in the selected routes. In particular, Reliability is the highest priority factors requiring improvement. The average index for the overall performance evaluation shows an index value of between -5 and 0, which is very bad and moderate score respecting an accessibility-assessment study found that the frequency of trips greatly affects the accessibility index. Consequencely, the performance index technique is hoped to provide a best practice method for measuring, monitoring and planning urban bus service for operators, authorities and policymakers. Besides that, service quality parameters as generated in the web page (www.mytrans.my) can be a good reference or base lines for all public transport stakeholders. It is expected to provide support in establishing baselines, identifying trends, predicting problems, assessing options and setting performance targets. Sustainable transport indicators as addressed in this study are part of the government's National Key Result Area (NKRA) in improving urban public transport.

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