



Willingness-to-pay of public transport users for improvement in service quality

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Abstract

In this paper, passenger willingness-to-pay (WTP) for improving the quality levels of a bus service is examined. Specifically, the objective of this research is to provide a tool for evaluating passenger willingness-to-pay by considering some qualitative service aspects, in addition to the traditional quantitative service aspects like travel time and cost. The adopted methodology is built on the calibration of behavioural models based on user choices. The WTP values are obtained as marginal rates of substitution between some service quality attributes and travel cost at constant utility. For this purpose, Multinomial and Mixed Logit models are introduced. The models were calibrated by using the data collected from an SP experiment in which each user makes a choice between an alternative representing the current service and two alternatives representing hypothetical bus services. In order to take into account the randomness of the estimated WTP, the limits of the confidence intervals are calculated.

Keywords: Service quality; Public transport; Willingness-to-pay.

1. Introduction

In the field of public transport, service quality measure is a subject of the greatest interest both for planners and transit operators. Generally, service quality is measured by asking the users their perceptions and expectations about some service quality aspects. By considering the importance and satisfaction levels stated by users, the service quality attributes to be improved can be identified.

A service quality measure can be obtained by discrete choice models based on the Random Utility Theory (RUT), and particularly by Logit models. Over the last few decades, Logit models have been widely used for the calibration of the mode choice models in which the alternatives are different transport modes. However, more recently “within mode” models have been proposed, in which the alternatives relate to a single

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