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## The impact of the quality of transport services on passenger demand in the suburban bus transport

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### Abstract

The demand for transport services is determined by several factors at the same time, the impact of these factors is varied, and the impacts of individual factors of demand are different according to the groups of passengers making the demand for bus services. The article deal with the design and the application of the methodology for measuring and evaluating the impact of the quality of transport services on the demand of passengers for suburban bus transport. The results may contribute to the stabilization of the demand for bus services, or they can serve as a basis for the improvement of transport services in the bus transport sector.

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*Keywords:* demand; transport services; quality; passengers.

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### 1. Introduction

Nowadays quality has a growing importance in the field of transport. Quality of service is a significant determinant of transport demand. Quality is an effective tool to maintain and increase the competitiveness of transport on the transport market. Suburban bus transport has a continuing decline in output as well as the transported passengers. To stop the fall, stabilization, resp. increase performance, it is necessary to identify the various factors that negatively affect the demand for bus services. One of these factors is the quality of services provided. The paper deals with the

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design and application of the methodology for measuring and evaluating the impact of quality of service on passenger demand for suburban bus transport. [2,6,7]

## 2. Characteristics of transport demand and the quality of services

Demand for transport can be characterized as a variable that expresses the demand for transport between locations. We need to distinguish between potential and actual traffic demand. Potential demand for transport services is of outputs, resp. realized the extent of transport services where the price for carriage from the customer's perspective was negligible. Whereas carriers providing transportation services shall bear the same degree of cost and purpose of business is to make profit, the price of the transport is not negligible, resp. zero. The volume of transport demand realized clients with real transfer price is called the real traffic demand.

Transport demand is demand secondary (derived), who do not pay for a full definition of microeconomic demand. Transport demand follows from the demand for products, substrates, both general and specific goods consumption. One of the ways to express the demand for bus transport is by the number of passengers for the monitored period.

Quality of service can be defined as a set of quality criteria, designed to meet the demands and needs of our customers (passengers), either by the carrier to or the customer. Quality of service is closely related to passenger satisfaction and therefore is possible through quality affect demand for services. The role of carriers, providing bus service is to offer the highest quality services and thus to retain existing customers, but also attract new ones.

In order to assess the impact of quality of service, demand for it is first necessary to measure and evaluate the level of quality. In connection with the measurement of quality is necessary to distinguish quality of transport services and quality of transport system. [1,2,9]

The quality of the bus services are regulated by the standard EN 13816, EN 15140 standard, Act no. 56/2012 on Road Traffic and REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (EC) No. 1370/2007 on public service contracts by rail and by road. [3,4]

## 3. Methods and processes for measuring and evaluating the impact of quality on demand for transport services in suburban bus transport

Figure 1 shows a diagram that describes the procedure for measuring the quality and demand and the subsequent evaluation of the measured parameters.

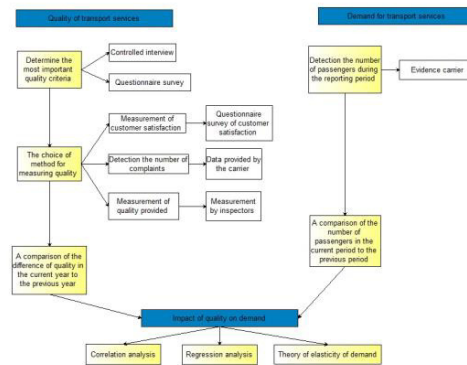


Fig. 1. Scheme of the procedure examining the impact of quality on transport demand

The first step is to identify the most important quality criteria, for example by controlled interviews and a questionnaire survey among passengers. The key quality criteria are selected by the penetration requirements of passenger transport, services customer opinion and service transport contract. The second step requires a choice of methods for measuring quality. Quality measurement is possible by measuring customer satisfaction, or by detecting

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