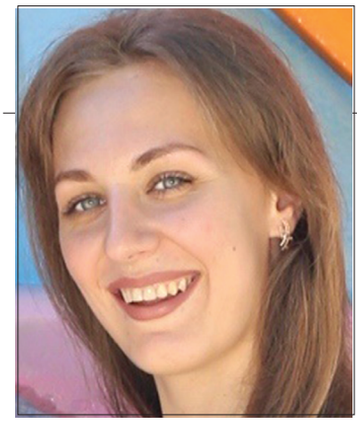

Performance Changes Influencing in Passenger Traffic of Urban Transport.

Ann Zhabina
Post-graduate student

Department of Urban Construction, O. M. Beketov National University of Urban Economy in Kharkiv, Revolyutsii str., 12, Kharkov 61002

Phone: +380996655694.
E-mail: nyuta_buryak @mail.ru

Indicators of transport work determine preferences and characteristics of various modes of transport. Some activities characterize transport possibilities, others allow consumers to evaluate and select the most appropriate alternative transport service.

The indicators allow to evaluate:

- the amount of the work, such as volume and range of transportation, passenger traffic, transport network density, transport mobility of the population, labor productivity, labor input;
- technical and operational characteristics such as carrying and traffic capacity, time and speed of delivery, flow rate of vehicles, quality keeping level;
- economic (cost) data and results, for example, tariffs and prices for transport services, cost of fixed assets, specific capital investments, traffic prime cost, profitability, cost of freight in transit, mass profit.

The primary task of the science of the city's transport system is to develop a standard methodology for predicting mobility to estimation terms. There are two possible approaches.

For long-term prognostication (urban development, master plan) should be based on socio-economic objectives of the city development - in this case, a "social norm" can be used which reflect the demands of the city residents , i.e. the taxpayer. Then, there is the starting point, namely, the mobility of the initial year, determined as the result surveys, and the final point, the given "normative" point, i.e. the mobility of the estimated period. These two points determine the overall development strategy of the city transport system. The ways to achieve the final ("normative") values of mobility, and, what is the most important, the pace of progress towards this value (versions development) and, consequently, the degree of satisfaction of the taxpayers' claims predetermined by the magnitude and dynamics of investments in the transport system, depending on the state of the city economy and behavioral patterns of the population.

Transport mobility of the population within the boundaries of the village leads to formation of passenger flows having different directions and power.

Passenger traffic is a movement of passengers in a certain part of the transport network.

A successful solution of issues of rational organization of passenger transport and an efficient use of the rolling stock is not possible without a systematic study of the nature of changes in the passenger transport network. The study of passenger traffic reveals their timing, route length and direction.

Only possessing the data on the size and direction of the passenger flows one can select the track routes, to choose the mode of transport and the type of rolling stock as well as to determine the required amount of vehicles.

Passenger traffic is characterized by:

- power, i.e., the number of passengers passing at certain times through a specific section of the route or the entire transport network of the village in the same direction;
- the voltage at separate sections of the route or at the whole length, and the number of passengers for each route segment at a time units, in the forward and reverse movement of buses;
- volume of traffic, the number of passengers on the whole route or route network per time unit in the forward and reverse directions.

Indicators of traffic flow changes are:

· irregularity coefficient in passenger traffic in time:

$$К_в = Q_{max.ч} : Q_{ср.ч}$$

where $Q_{max.ч}$ – maximum hour passenger traffic (total in the directions), in passengers;

$Q_{ср.ч}$ – average hour passenger traffic (total in the directions), in passengers.

For medium-sized cities $К_в = 1,5 \div 2,0$.

· irregularity coefficient of passenger traffic through the route:

$$К_{уч} = Q_{max} : Q_{ср}$$

where Q_{max} – maximum average passenger traffic per hour in the busiest direction of the route, in passengers;

$Q_{ср}$ - average intensity of passenger traffic in the reverse direction.

· irregularity coefficient of passenger traffic in directions:

$$К_н = Q_{ср.max} : Q_{ср.min}$$

where $Q_{ср.max}$ – maximum average passenger traffic per hour in the busiest direction, in passengers;

$Q_{ср.min}$ – minimum average passenger traffic in the reverse direction, in passengers.

$К_н = 1,3 \div 1,6$.

Passenger traffic survey allows to get information about the route passengers correspondences, the volume and direction of passenger traffic on the routes of public transport, interchange of passengers at stopping points and filling of the rolling stock.

Summing up it should be noted that passenger traffic prognostication is based on the regularities derived from field surveys of population movement as well as on theoretical models. The latter are very promising. They take into account the factors that contribute to the growth of passenger traffic (population size, density, degree of motorization, social structure, the level of well-being) or restrain it (the amount of time, range, cost of travel, etc.). Established correlations between the characteristics of the settlement and its inhabitants behavior when choosing the mode of transport and the solution of other transport issues. This takes into account the actual traffic situation i.e. the density of the transport network, provision by vehicles, traffic intensity and others. Taking into consideration the difficulty of these parameters predicting at the stage of transport calculations a heuristic design is used.