

STUDY OF PASSENGER STREAMS AND SERVICE QUALITY OF AN URBAN TRANSPORT COMPANY

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Abstract

Passenger transport companies increasingly aim to implement passenger transport services of improved efficiency and effectiveness by raising the comfort of travel and ensuring passenger satisfaction by increasing quality of their service. The comfort of the journey is seen as security, punctuality, efficiency and friendly passenger service. The analysis and evaluation of the quality of passenger transport services allow to specify the time of travel, comfort, punctuality, availability of public transport links and the costs of transport services provided. The passenger streams and assessment of the urban transport services quality covered by this study allow for indication of problems in the researched area and suggestion of improvements in the transport services. The development of urban transport is subject to the increasing number of population, expansion of cities and constant technical progress. Expansion of cities and large number of citizens are closely linked to the urban transport allowing for the citizens' mobility by various means of public transport.

Carriage operations are repeatedly grouped according to travel direction, scale of demand for transport, the scope and length of the carriage, stability of transport needs or required transport speed.

Keywords: *passenger streams, passenger Transport Company, quality of service*

1. Introduction

There are numerous definitions for collective urban transport. Transportation tasks performed and implemented by the employees of collective transport are related to movement of persons so that the society can cover and carry out their scheduled transport needs. At urbanised areas, passenger carriage is provided by urban transport often called public transportation [7]. W. Starowicz defines collective urban transport as “organised forms of passenger transport subject to law regulations and using public spaces such as roads, railways, stations, i.e. organizational activities of local self-government public administration and business entities that provide public services (available for everybody), to satisfy the needs of residents, of the economy and its members individually” [4]. Transport improvements promote construction of settlements and location of the people. Depending on a city specific nature, passenger transport may be carried out by one or more means of transport. Transport services are carried out by the individual carriers providing bus, tram or rail transport services. Each competes in the range of price rates and quality of service provided [1].

2. The role and tasks of the urban transport company

The foremost role of Międzygminny Związek Komunikacji Pasażerskiej (Inter-Municipal Passenger Transport Union) is to meet the local collective transportation needs of persons residing in municipalities that are members of the Union. The main tasks of the undertaking include

maintenance and expansion of infrastructure, organising collective transport within the area of the Union member municipalities, observation of transport services and improvement of transportation systems, in particular. The company office is divided into several sections that in detail deal with individual tasks [3]. The office consists of: Department of Transport Organization, Coordination and Inspection whose tasks include: create timetables and adjust them to the actual carriage needs, analysis of conclusions and proposals to modify bus timetables, coordination of projects for traffic modifications in collective transport, carrying out all tasks related to bus stops opening, their relocation or liquidation, development of passenger information [2]. Department of Economic Analyses and Debt Recovery whose tasks comprise recovery of additional debts, analysis of appeals against imposed fines, creating financial analyses, transfer of cases to the Police or court proceedings. HR Department tasks include managing all cases connected with coordination of HR issues, preparation of the Management Board meetings, keeping all and any records and documentation required by law. The Accounting Department is responsible for organising the financial tasks in accordance with the provisions of law, effecting all payments, making money transfers and financial accounting, working out financial reports. Passenger Service Bureau deals with notices regarding timetables, acquainting passengers with analysis analyses of complaints related to the ticket controllers' work, implementation of the timetables and the drivers' work [6].

3. Study of passenger streams and service quality of the line number 5 by MZKP urban transport company

Commissioned by the Inter-Municipal Passenger Transport Union, the study has been carried out on the line no. 5 supported by Świerklaniec Urban Transport Company. Direct observation and survey have been the research method applied. Measurements concerned defining the number of passengers who got in and off at each bus stop of line no. 5 as well as calculation of the number of passengers travelling after the bus moving from the stop. The measurements carried out within the framework of passenger streams research have been carried out for: one working day, one Saturday and one Sunday. For the transport carried out upon the MZKP order, the measurement has been made on Tuesday, Saturday and Sunday. It is important that the days selected are not special days in a year, the study cannot be carried out on holidays. A technique applied in the study: passengers who "got on-got off-travelled". An overall measurement has been recorded in accordance with a questionnaire prepared in advance which involved the name of a bus stop, real time, scheduled time, number of people who got on and off and who travelled on the bus. The study group consisted of 50 respondents. The survey has been addressed to persons travelling on the urban passenger transport line no. 5 serviced by the Inter-Municipal Passenger Transport Union in Tarnowskie Gory. The scope of the survey included: timeliness of services carried out by public transportation, availability of timetables, comfort of transport services, e.g. convenience, certainty to travel, directness of connections, travel information on vehicles and at bus stops as well as personal safety.

4. Average number of passengers in the studied line no. 5 on working days

Number of persons carried on line no. 5 from Tarnowskie Gory to Katowice:

- on a working day 1520,
- on Saturday 1927,
- on Saturday 1248.

The development of urban transport is subject to the increasing number of population, expansion of cities and constant technical progress. Expansion of cities and large number of citizens are closely linked to the urban transport allowing for the citizens' mobility by various means of public transport.

Tab. 1. Average number of passengers in the studied line no. 5 on working days

No.	Bus stop name	Number of people (got on)	Number of people (got off)	Number of people (on a vehicle)
1	Tarnowskie Góry Railway Station	32	0	32
2	Tarnowskie Góry Stara	1	17	16
3	Tarnowskie Góry Obwodnica	0	0	16
4	Nakło Śląskie Pałac	1	1	16
5	Nakło Śląskie	0	3	13
6	Świerklaniec Szkoła	2	1	14
7	Świerklaniec Park	3	1	16
8	Świerklaniec Sady	0	0	16
9	Kozłowa Góra	5	3	18
10	Kozłowa Góra Tarnogórska	2	0	20
11	Piekary Śląskie Lipki	0	0	20
12	Piekary Śląskie Dwór	0	0	20
13	<u>Osiedle Wieczorka School</u>			20
14	<u>Osiedle Wieczorka Dworzec</u>			20
15	<u>Osiedle Wieczorka School</u>			20
16	Piekary Śląskie Bazylika	1	3	18
17	Szarlej Poczta	0	2	16
18	Szarlej Wyszyńskiego	6	1	21
19	Szarlej Osiedle Sowińskiego	0	0	21
20	Brzozowice Reymonta	0	0	21
21	<u>Brzozowice</u>	0	0	21
22	<u>Kamień</u>	4	1	24
23	<u>Osiedle Powstańców</u>	6	0	30
24	<u>Kamień Kopalnia Andaluzyja</u>	0	0	30
25	Brzeziny Śląskie Bednorza	1	0	31
26	<u>Brzeziny Śląskie</u>	6	1	36
24	Brzeziny Śląskie Dom Kultury	0	0	36
27	Dąbrówka Wielka Przyjaźni	0	0	36
28	<u>Dąbrówka Wielka Szkoła</u>	2	1	37
29	<u>Dąbrówka Wielka</u>	3	6	34
30	<u>Dąbrówka Wielka Skrzyżowanie</u>	5	1	38
31	Dąbrówka Wielka Rozalki	0	0	38
32	Dąbrówka Wielka DK 94	0	0	38
33	<u>Michałkowice Tarnogórska</u>	0	2	36
34	<u>Michałkowice Bank</u>	11	1	46
35	<u>Michałkowice Kościół</u>	4	2	48
36	<u>Michałkowice Urząd Miasta</u>	7	0	55
37	<u>Siemianowice Łącząca</u>	0	0	55
38	<u>Siemianowice Nowy Świat</u>	2	0	57
39	<u>Siemianowice Plac Wolności</u>	14	9	62
40	<u>Siemianowice Plac Skargi</u>	8	9	61
41	<u>Wełnowiec Plac Alfreda</u>	2	4	59
42	<u>The Gniezno Wełnowiec</u>	0	5	54

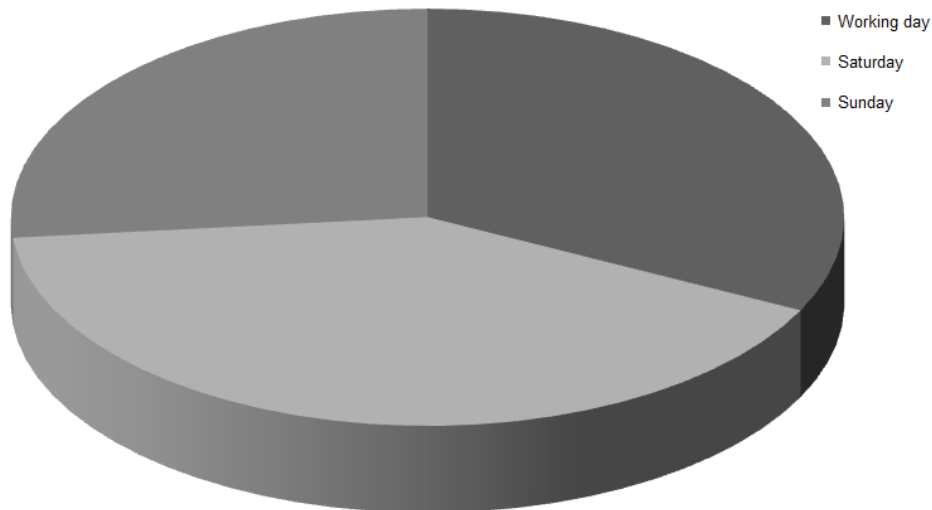


Fig. 1. Number of passengers carried on weekdays and weekends

Summary

Transport requirements and tasks should be divided into specific groups showing their specificity. Carriage operations are repeatedly grouped according to travel direction, scale of demand for transport, the scope and length of the carriage, stability of transport needs or required transport speed. Carriage tasks of urban transport involve transport within agglomerations and cities as well as transport within the provinces that possess urban transport, transport within settlements and small towns, travels within the area of connection points with the elements of nodal infrastructure. Relevant selection of a means of transportation is necessary to carry out transport tasks and appropriate quality of the service. Each means of transportation is characteristic for another technical and operational attributes. Adequate choice of the means of transportation with reference to its features required in implementation of specific transportation tasks is indispensable in the transport of persons. Each of the means has a distinctive capacity and different frequency of travel. As regards the buses, their capacity varies depending on their construction from 10 to 150 seats. The travel frequency should be 60 journeys within one hour. The travel frequency opts for working out carriage opportunities and should ensure sufficient passenger transport connections.

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