

INFRASTRUCTURE OF CITY PUBLIC TRANSPORT AND ITS INFLUENCE ON PASSENGER'S SATISFACTION

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Abstract: *The city public transport is a necessary precondition for accomplishing all kinds of public services available for the population. Contribution aims with infrastructure of city public transport in Žilina and on the base of consumer research it rates performance of passenger's satisfaction.*

Key words: *infrastructure of city public transport, passenger's satisfaction*

ADMINISTRATIVE DISTRICT – ŽILINA

Žilina is a centre of northeast Slovakia and one of the largest towns of the Slovak Republic. It is a seat of administration of the Žilina Region, one of the eight regions of the Slovak Republic, with the area of 6 788 sq. km, and with the population nearly of 692 582.

The Region of Žilina involves 4 historical regions: Kysuce, Liptov, Orava and Turiec. It consists of the following districts: Bytča, Čadca, Dolný Kubín, Kysucké Nové Mesto, Liptovský Mikuláš, Martin, Námestovo, Ružomberok, Turčianske Teplice, Tvrdošín and Žilina. The District of Žilina covers an area of 815 sq. km, and its population (156 921) inhabit fifty villages and three towns - Žilina, Rajec and Rajecké Teplice.

The city of Žilina is situated in the Váh River Valley, in Žilina Basin, at the confluence of Váh River with the rivers Kysuca and Rajčanka. The whole basin is situated among the mountain ranges Malá Fatra, Strážovské vrchy, Súľovské vrchy, Javorníky and Kysucká vrchovina.

Population of Žilina as to the 1 January 2006 reached 84 425 inhabitants, out of them 98 per cent of Slovak nationality.

The city of Žilina is formed by the following 19 city quarters: Staré Mesto (Old Town), Hliny,

Hájik, Solinky, Vlčince, Rosinky, Trnové, Mojšova Lúčka, Bytčica, Závodie, Bánová, Žilinská Lehota, Strážov, Budatín, Považský Chlmec, Vranie, Brodno, Zádubnie and Zástranie. [6]

CITY PUBLIC TRANSPORT IN ŽILINA

Public city transport in Žilina is provided by Transport enterprise of Žilina, Ltd. (DPMŽ).

The enterprise has a trade form of limited guarantee company. It has one owner - Žilina's municipality shares 100%. Characteristics of DPMŽ are: utilization of modern diagnostic methods, electronic tickets known as smart cards, voice and sound communication serving blind and weak-sighted people in and outside the means of transport, and controlling by on-board computers. [5]

DPMŽ operates eight trolley-bus lines and eleven bus lines. It employs 43 trolley-buses and 53 buses. Trolley-bus lines cover traffic in Old Town and between Old Town and all settlements (Hliny, Hájik, Solinky, Vlčince) and bus lines cover traffic between Old Town and other quarters – small villages which were appendant to Žilina (Rosinky, Trnové, Mojšová Lúčka, Bytčica, Závodie, Bánová, Žilinská Lehota,

Strážov, Budatín, Považský Chlmec, Vranie, Brodno, Zádubnie and Zástranie).

Two bus lines (number 50 and 51) work only at night.

Following table [3] shows average distances of lines (km), number of passengers per first six months and number of services on lines.

Table 1

Lines	Average distance	Number of passengers	Number of services	
			Mo-Fri	Sat-Su
1	17,2	106 014	17	0
3	11,8	881 166	67	47
4	13,3	1 150 688	69	49
5	8,45	373 049	79	62
6	10,45	878 899	97	99
7	11,95	309 739	44	12
14	13,3	1 019 029	69	49
16	12,2	213 303	30	0
2	9,3	204 697	42	0
21	8,65	327 174	83	43
22	11,05	481 997	92	43
24	11,15	365 784	79	50
26	10,25	206 387	50	2
27	12,55	276 215	74	37
29	13,75	71 779	31	27
30	4,75	31 145	23	17
31	13,6	108 875	48	23
50	14,4	-	5	5
51	11,1	-	3	3
Total	-	7 005 940	1010	568

Absolutely the heaviest volume line is line number 4. Relatively is it the same line, which carried average (Monday to Sunday) 9 751 passengers on every service.

The least number of passengers was absolutely carried with line number 30, but relatively with line number 29.

The bus and trolley-bus transport is divided into 2 fare zones. Zone 1 represents journey up to the fifth stop since one gets on the bus. If he travels more than just 5 stops, he gets into his own Zone 2.

DPMŽ uses active social policy. On the one hand it allows a discount of fare. These discounts are allowed for pupils, students, disabled person and pensioners.

DPMŽ provides bigger discount of fare for users of smart cards until this year. It has context with euro transition next year.

On the other hand it allows service access by disadvantaged groups:

- voice and sound communication serving the blind,
- low-floor buses (9 from 53) and stops with disabled shoulders of road (7) serving the disabled person.

PASSENGER'S SATISFACTION RESEARCH

Research has been carried on 250 passengers.

Questionnaire contained following questions:

1. What is your social status?
2. How old are you?
3. How many times do you travel by city public transport per week?
4. Are you satisfied with city public transport in Žilina?
5. Are you satisfied with cleanness on the stops?
6. Are you satisfied with information about schedules, tariffs, etc. which are located on stops?
7. Are you satisfied with cleanness in means of transport?
8. Is information in means of transport sufficient?
9. What do you mean about rate between price and quality in city public transport?
10. Are you satisfied with number of services on the lines at the working days?
11. Are you satisfied with number of services on the lines at the weekend?
12. Are you satisfied with interlock of services?
13. Are you satisfied with accuracy and reliability in the city public transport?
14. Are you satisfied with willingness of drivers, ticket-inspectors and sellers of tickets?
15. Do you expect improvement in any field? Present it!

There have been asked persons with different social status in this research - 30 % were students, 38 % were working, 19,6 % were pensioners, 6 % were unemployed and 6,4 % were disabled person.

The most of respondents have been in productive age. They have been using city public transport five and more time a week.

Age structure of respondents is shown by Figure 1.

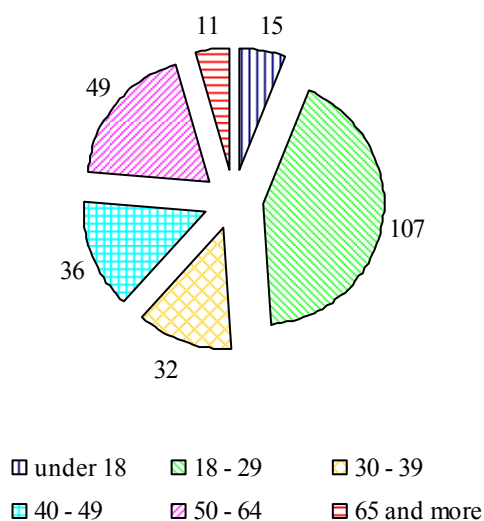


Fig. 1 Age structure of respondents [1]

On the base of answers we can establish following statement:

- respondents are satisfied with information about schedules, tariffs, etc. which are located on stops – 116 respondents are satisfied, 15 are exactly satisfied, 63 are less satisfied and only 56 are unsatisfied,
- respondents are satisfied with information in means of transport – 66 % of respondents are satisfied and only 10 % are unsatisfied,
- respondents are mostly satisfied with number of services on the lines at the working days – 68,8 % respondent are satisfied and only 8,8 % are unsatisfied,
- respondents are mostly satisfied with willingness of drivers, ticket-inspectors and sellers of tickets – 99 respondents are satisfied, 56 are exactly satisfied and only 8 are unsatisfied,
- respondents are mostly unsatisfied with cleanness on stops – only 5 respondents are exactly satisfied, 64 are satisfied, 85 are less satisfied and 96 respondents are unsatisfied,
- respondents are mostly unsatisfied with cleanness in means of transport – 97 respondents are less satisfied, 65 are

unsatisfied and only 15 respondents are exactly satisfied,

- respondents are mostly unsatisfied with number of services on the lines at the weekend - 34 % of respondents are less satisfied, 23,6 % are unsatisfied, 26 % are satisfied, and 16,4 % of respondents are exactly satisfied.
- respondents are mostly unsatisfied with interlock of services – 31 respondents are unsatisfied, 139 less satisfied, 68 satisfied and only 12 respondents are exactly satisfied,
- 44 % respondents are satisfied with accuracy and reliability in the city public transport and 56 % are unsatisfied,
- approximately fifty percent respondents are satisfied and approximately fifty percent respondents are unsatisfied with rate between price and quality.

We will discuss little more about answer to question number 4 “Are you satisfied with city public transport in Žilina?” This answer contains answers to all other questions.

Table 2 [1] shows absolutely frequency of respondents’s answers.

Table 2

Measurement	Number of respondents
Exactly satisfied	20
Satisfied	156
Less satisfied	49
Unsatisfied	25
Total	250

We can see that only twenty five respondents are unsatisfied and forty nine are less satisfied. It is very good result, because more than 2/3 respondents are satisfied or exactly satisfied.

Better we can see it in Figure 2, which shows relatively frequency of respondents’s answers.

Answer to this question is very good sign for transport enterprise (DPMŽ), because it point out that DPMŽ meet wishes of passengers pretty good.

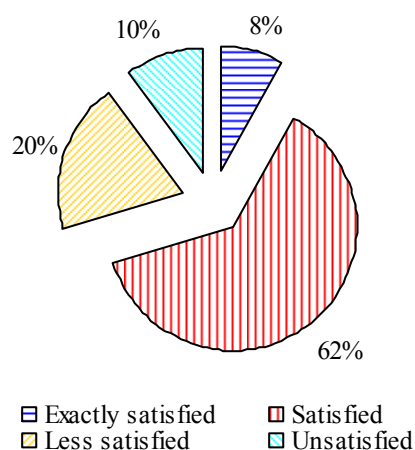


Fig. 2 Satisfaction with city public transport [1]

PROPOSALS FOR AN AMENDMENT

Some proposals for an amendment result from carried passenger's satisfaction research. If DPMŽ wants to improve, it has to consider following request, which respondents wrote in questionnaire:

- more morning and evening services,
- better connection between settlements Hájik and Vlčince,
- better interlock with suburb transportation,
- reduction of time for waiting for means of transport between services,
- more low-floor buses and trolley-buses,
- schedule time keeping,
- better conservancy in means of transport,
- moderate fare for every passengers.

Unfortunately, the last request is not real for any transport enterprise, because their costs are ever-growing.

CONCLUSION

On the base of carried passenger's satisfaction research we can observe that passengers are

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Резюме: Градският транспорт е необходимо условие за осъществяването на всички видове обществени услуги за населението. Докладът е насочен към инфраструктурата на градския обществен транспорт в Жилина и на основата на изследване потреблението оценява удовлетвореността на пътниците.

Ключови думи: инфраструктура на градския обществен транспорт, удовлетвореност на пътниците.

satisfied with provided transport services in general. Despite it DPMŽ has to remember satisfaction of users's requests because it is one of the primary business requirements. There still exist areas for improving and DPMŽ has to find them, because only satisfied customer is good customer.

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