

STUDY ON LOCAL PUBLIC TRANSPORT SERVICES FOR PEOPLE

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Abstract

Through the paper called Study on local public transport services the consumers' attitude on the degree of satisfaction of the quality of services offered by the local public transport supplier was analyzed. The present study is based on a direct research, based on a questionnaire-type survey, the results being grouped according to the subjects' responses.

After completing the study, the results showed that there is a demand for local public transport services, the majority of consumers being employed people, pupils / students and retired people who travel more often with a one way ticket or a weekly ticket, on working days. As the safety of citizens in the means of transport is very important, a majority of consumers consider that they are satisfied with the quality of the transport services offered. In order to improve the quality of local public transport services, consumers make proposals regarding the traffic graphs, ticket validators, the purchase of subscriptions in electronic system and the printing of tickets for two trips.

As in the present study also identified some dissatisfactions, regarding the quality of the services offered, it is necessary to extend the research in the future, even if some improvements have been proposed.

Keywords: services, public services, public transport, quality, offer

JEL: R4, R41

1. INTRODUCTION

Specialty literature underlines the fact that the services activity was not recognized for a considerable period of time, services being neglected by economists and framed in the non-productive sphere. In time, the economic theory also addresses the services sphere, so that the most significant services definitions have been elaborated by authors from American, Nordic, French, Romanian schools, as well as from the perspective of the European Union and the international ISO standard 9004-2: 1994:

“Services are activities or benefits that one party may offer to another, which are generally intangible and the results of which do not imply ownership of a material property” (Kotler (1997));

“A service is a more or less tangible activity or group of activities that usually takes place at the moment of the interaction between the buyer and the supplier” (Grönroos (1990)). The definition refers to the simultaneity of services;

Pierre Eiglier and Eric Langeard define the system of creation and delivery of services called *Système de servuction*. (Eiglier and Langeard (1987));

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“Services are useful, immaterial and intangible effects, resulting from the conduct of inter-conditioned activities” (Olteanu (2005));

“The service is any intangible economic activity consisting of providing a benefit that is the subject of an economic counterpart” (European Parliament - Bolkenstein Directive (2004));

“The service is the result of some activities performed by a service supplier - provider - in order to meet the customer’s needs, both at the customer-supplier interface and through the internal activities of the supplier” (International Standard ISO 9004-2: 1994).

In the European Union, services are classified in: market services (commercial) - provided to the population on demand (transport, food, banking, accommodation, tourism, etc.) and public services - they are addressed to a whole community (transport, education, culture, defense, health, energy distribution, gas, water, etc.).

Serving the public interest is the main objective of any public institution. The public interest represents the specific social need of a community that the public administration must satisfy. Leon Duguit considers that “the public service is the activity that the governors are obliged to perform in the interests of the governed.” Andre de Laubadere defines “the public service as the activity of general interest, provided by a private person having the prerogatives of public power, under the control of the administration.” (Petrescu and Muscalu (2003)).

Public services are “those activities of general interest that satisfy individual needs of the population or collective needs, determined by the social existence of man” (Ionciță (2000)). One can say that, public services cannot be stored, standardized, offered or communicated immediately; they are consumed directly at the location, not being returned or redirected.

In order to improve the quality of local public transport services, direct research should be carried out periodically in order to obtain information regarding the degree of trust, satisfaction and consumer satisfaction.

2. STUDY ON LOCAL PUBLIC TRANSPORT SERVICES FOR PEOPLE

Local public transport services for people from Resita are provided by S.C. Urban Transport Resita SRL, based on the Regulation for local public transport services for people and on the contract for management delegation of the local public transport services assigned in the Municipality of Resita (Annex 4 and Annex 15 to H.C.L no. 333 / 20.12. 2017, available on the website Urban Transport Resita www.tur.ro), being led by a unique administrator named by Decision of the Resita Local Council.

The Resita Local Council has the right to control and coordinate the company Urban Transport Resita and ensures the equal, non-discriminatory and competitive access of public transport operators for people, on the local market including taxi companies.

Since the safety of citizens in the local public transport means for people is very important, the present study aims to evaluate the consumers’ attitude regarding the degree of satisfaction of the quality of the local public transport services offered by S.C. Urban Transport Resita S.R.L.

In order to elaborate the present study, the direct research was used as research method - the occasional questionnaire-type survey, and the measurement was performed using scaling methods, as well as the percentage method. The

questionnaire formulated contains 10 questions, of which: 2 are identification questions, 7 closed questions structured on scales with binary and multiple variables, as well as one open question. The information was collected in bus stations and on the routes of local public transport means, during the period November-December 2018, using as tool the questionnaire administered to a sample of 382 subjects. In order to determine the sample size, statistical information regarding the stable population, on gender and age group, was used:

- Gender total - 73282 (100%): Males - 35111 (47.91%), Females - 38171 (52.09%);

- Age: up to 29 years - Total - 23064 (31.47%), of which: M - 11769 (51.03%), F - 11295 (48.97%); 30-59 years - Total - 35223 (48.07%), of which: M - 17024 (48.33%), F - 18199 (51.67%); 60, p. 60 years - Total - 14,995 (20.46%), of which: M - 6318 (42.13%), F - 8677 (57.87%), (Final results of RPL 2011, available at <http://www.recensamantromania.ro/results-2/> on October 10, 2018).

The calculation formulas presented below were used (Dobre C. et al.), by replacing values and performing calculations, as follows:

sample size:

$$n = \frac{t^2 \times p \times q}{e^2} = \frac{1.96^2 \times 0.50 \times 0.50}{0.05^2} = \frac{3.8416 \times 0,25}{0.0025} = \frac{0.9604}{0.0025} = 384.16 \text{ people}$$

the size of the corrected sample:

$$n' = \frac{n \times N}{n + N} = \frac{384 \times 73282}{384 + 73282} = \frac{28140288}{73666} = 381.199 = 382 \text{ people}$$

survey rate: => non-exhaustive survey

$$R = \frac{n}{N} \cdot 100 = [382/73282] \times 100 = 0.52127\% < 1/7 (14.2857\%) \text{ of } N$$

Table no.1 Determining the sample size according to the gender and age criteria

Criteria	I. Gender criteria	II. Age criteria			TOTAL sample
		Up to 29 years	30-59 years	60- and over 60 years	
Share pers./gender	M	61	89	33	183
	F	59	95	45	199
TOTAL sample	M+F	120	184	78	382
PERCENTAGE	M+F	100	100	100	300
of which:	M	50.83	48.37	42.31	141.51
	F	49.17	51.63	57.69	158.49

(Source: realized by the author)

After the questionnaire was applied, for the local public transport services offered by Urban Transport Resita, the following hypotheses were identified:

The demand for local public transport services is higher for consumers who travel most often with a subsidized or fully paid subscription or a travel ticket;

The use frequency of local public transport means and the payment method for these services is realized by the majority of subjects for the entire month or for 5 days/week;

A part of the consumers sped at a monthly basis, for the local public transport, the amount of 4-20 lei, and the second part the amount of 21-150 lei;

Consumers are satisfied with the local public transport services offered;

In taking the purchase decision, consumers consider important the safety of transport means of and the traffic graph;

In making a list on the importance of local transport services, consumers have the highest confidence in Urban Transport Resita and appreciate that the prices applied by it are neither low nor high. The proposals regarding the improvement of the quality of urban public transport services of the Urban Transport Resita aims: the installation of several validators, the modification of traffic graphs, the purchase of tickets and subscriptions in electronic system.

The results of the study were elaborated on the basis of information collected and processed on types of questions, from Q03 to Q10 from the questionnaire, as follows: After processing the information collected, we found that in the local public transport buses of S.C. Urban Transport Resita S.R.L., the subjects:

males travel with subsidized travel pass for retired people, pupils / students (A3.3.) - 23.30% (89 subjects), travel pass ticket paid in full by the traveller (A3.2.) - 11.26% (43 subjects), travel ticket (A3.1.) - 9.69% (37 subjects), travel ID subsidized for public administration employees (A3.5.) - 2.09% (8 subjects) and subsidized travel card for people with disabilities (A3.4.) -1.57% (6 subject);
 - females travel with subsidized travel pass for retired people, pupils / students (A3.3.) - 26.44% (101 subjects), travel pass ticket paid in full by the traveller (A3.2.) - 14.14% (54 subjects), with travel ticket (A3.1.) - 8.38% (32 subjects), travel ID subsidized for public administration employees (A3.5.) - 2.36% (9 subjects) and subsidized travel card for people with disabilities (A3.4.) - 0.79% (3 subjects);

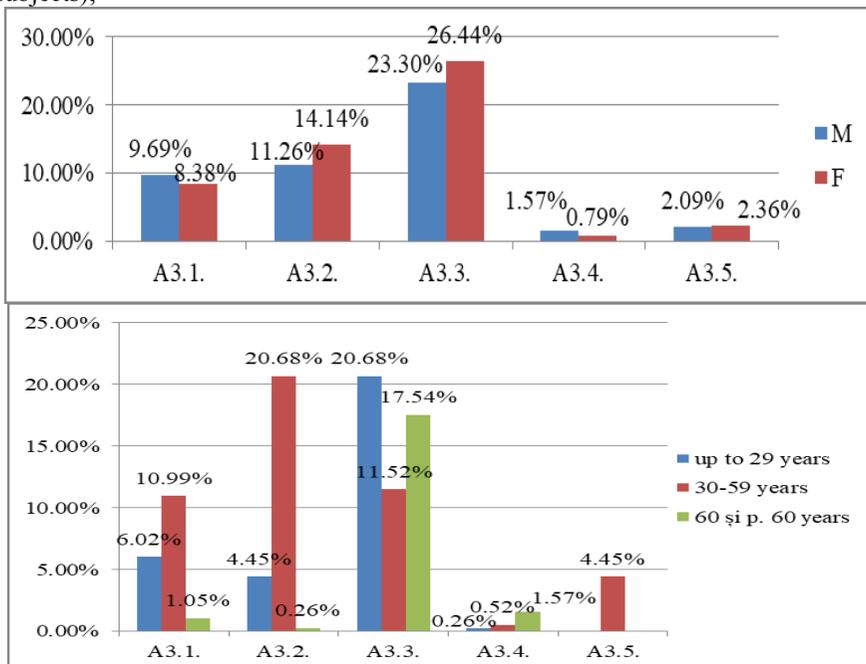


Figure 1 - The demand for local public transport services, gender and age criteria
 (Source: realized by the author)

- people up to 29 years travel with subsidized travel subscription for retired people and students (A3.3.) - 20.68% (79 subjects) and travel ticket (A3.1.) - 6.02% (23 subjects);
- people from the age category 30-59 years travel with a travel subscription pass paid by the traveller (A3.2.) - 20.68% (79 subjects), travel ticket (A3.1.) - 10.99% (42 subjects), subsidized travel card for the employees from the public administration domain (A3.5.) - 4.45% (17 subjects);
- people in the age category 60 and over 60 years travel with subsidized travel subscription for retired people and students (A3.3.) - 17.54% (67 subjects) and subsidized travel card for disabled people (A3.4.) - 1.57% (6 subjects).

The scores arithmetic mean of 0.8539 shows that there is a demand for local public transport for people from the Resita municipality, and depending on the use frequency of local transport means and the services payment methods, most subjects travel with:

- Travel subscription subsidized for retired people, pupils / students, for the entire month (A4.1.) with a score of 2.4869 and a percentage of 49.74% (190 subjects);
- Travel subscription paid by in full by the traveler with a score of 0.8482 and the following percentages: 5 days / week (A4.2.) - 15.97% (61 subjects), 4 times / month (A4.5.) - 6.54% (25 subjects), the entire month (A4.1.) - 2.88% (11 subjects);
- Travel ticket, with a score of 0.5942 and the following percentages: 5 days / week (A4.2.) - 6.81% (26 subjects), 3 days / week (A4.3.) - 4.97% (19 subjects), 2 days / week (A4.4.) - 2.62% (10 subjects out of 382), the entire month (A4.1.) - 2.09% (8 subjects), 4 times / month (A4.5.) - 1.57% (6 subjects);
- Subsidized travel card for employees from the local and county public administration, with a score of 0.2225 and a percentage of 4.45% (17 subjects) -the entire month (A4.1.);
- Subsidized travel card for people with disabilities, with a score of 0.1178 and a percentage of 2.36% (9 subjects) - the entire month (A4.1.).

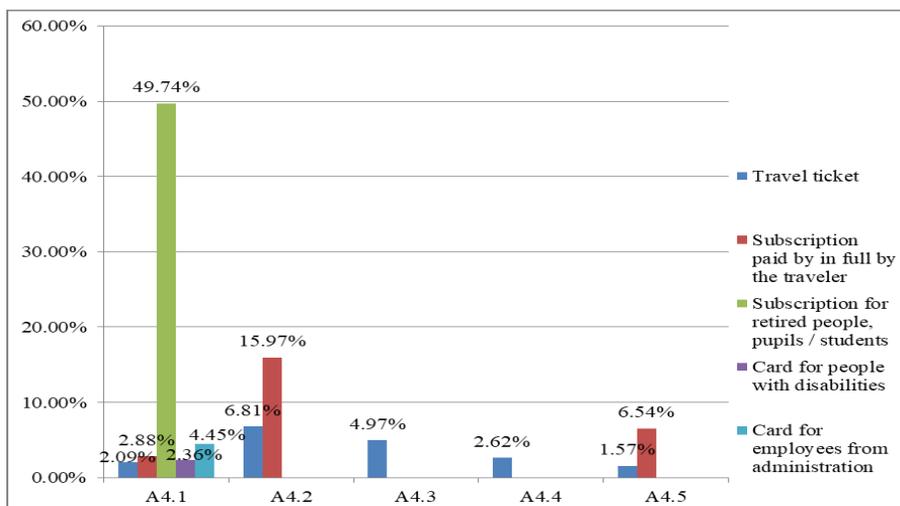


Figure 2 - The use frequency of local public transport means and the payment method
(Source: realized by the author)

Most of the subjects using the local public transport offered by Urban Transport Resita, spend the following amounts:

- males: 4-20 lei (A5.1.)- 32.98% (126 subjects), 21-150 lei (A5.2.)- 11.26% (43 subjects) and not paying (subsidized by the mayor’s office) (A5.3.)- 3.66% (14 subjects);

- females: 4-20 lei (A5.1.)- 34.82% (133 subjects), 21-150 lei (A5.2.)- 14.14% (54 subjects) and not paying (subsidized by the mayor’s office) (A5.3.)- 3.14% (12 subjects);

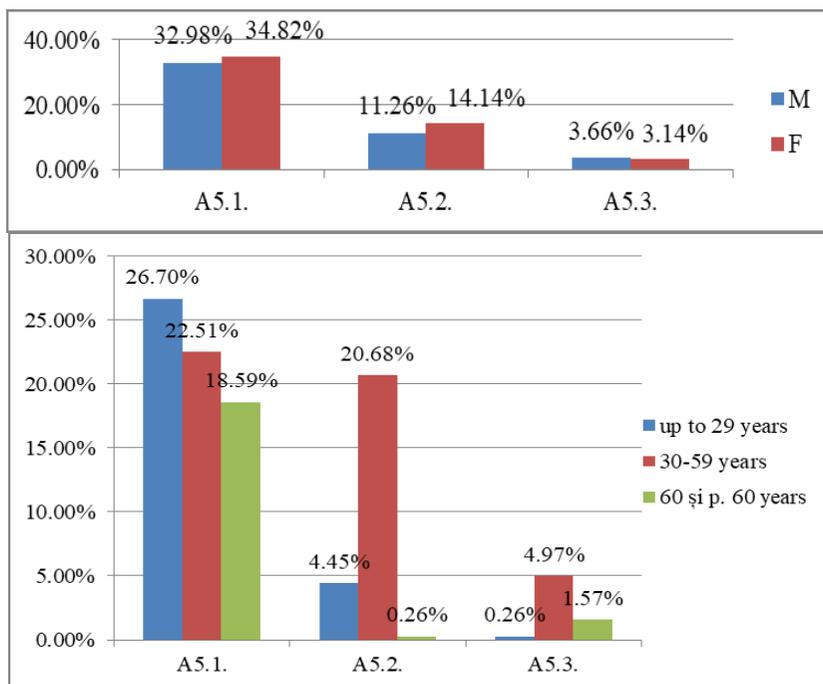


Figure 3 – Most of the subjects spend at a monthly basis the amounts, gender and age criteria
(Source: realized by the author)

- up to 29 years: 4-20 lei (A5.1.) - 26.70% (102 subjects), 21-150 lei (A5.2.) - 4.45% (17 subjects), not paying (subsidized by the mayor’s office) (A5.3.) - 0.26% (1 subject);

- in the age group 30-59 years: 4-20 lei (A5.1.) - 22.51% (86 subjects), 21-150 lei (A5.2.) - 20.68% (79 subjects) and not paying (subsidized by the mayor’s office) (A5.3.) - 4.97% (19 subjects);

- in the age group 60 and over 60 years: 4-20 lei (A5.1.) - 18.59% (71 subjects), 21-150 lei (A5.2.) - 0.26% (one subject) and not paying (subsidized by the Resita Town Hall) (A5.3.) - 1.57% (6 subjects).

The score obtained = 3.5916 and the percentage of 55.50% (212 subjects), shows that the subjects are satisfied with the services offered by Urban Transport Resita, being followed by Neither satisfied-Neither dissatisfied, with a percentage of 28.80% (110 subjects), very satisfied - 9.69% (37 subjects), dissatisfied - 3.66% (14 subjects) and very dissatisfied - 2.36% (9 subjects).

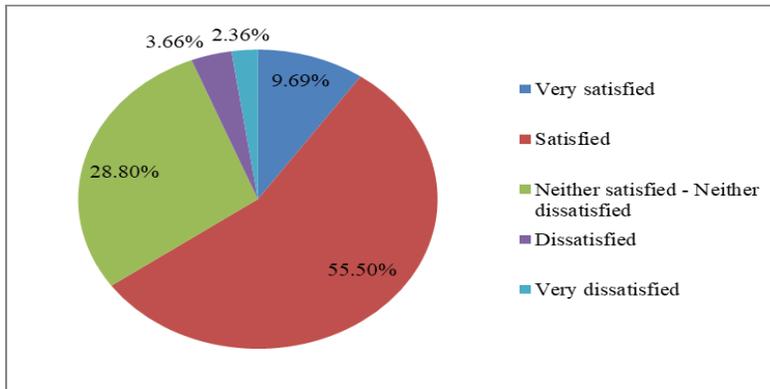


Figure 4 – The subjects are satisfied with the local public transport services
 (Source: realized by the author)

The scores obtained and the arithmetic mean of the scores = 3.9459 demonstrate the importance of the criteria underlying the decision to purchase the local public transport services offered by Urban Transport Resita, as follows:

L1 - The safety of transport means (A7.4.), Score = 4.1414, is considered important with tendencies towards very important, also proved by the percentage of 42.93% (164 subjects).

L2 - Compliance with the traffic graph displayed in the travel stations (A7.2.) Score = 4.0393 - is considered important, also proved by the percentage of 42.41% (162 subjects).

L3 - Compliance with the comfort rules (A7.3.): optimal temperature (air conditioning, heating), cleanliness, lack of noise, Score = 3.8351, is considered neither important nor not important with tendencies towards important, also proved by the percentage of 56.28% (215 subjects).

L4 - The attitude of the staff (A7.1.), Score = 3.6571, is considered neither important nor not important with tendencies towards important, also proved by the percentage of 51.83% (198 subjects).

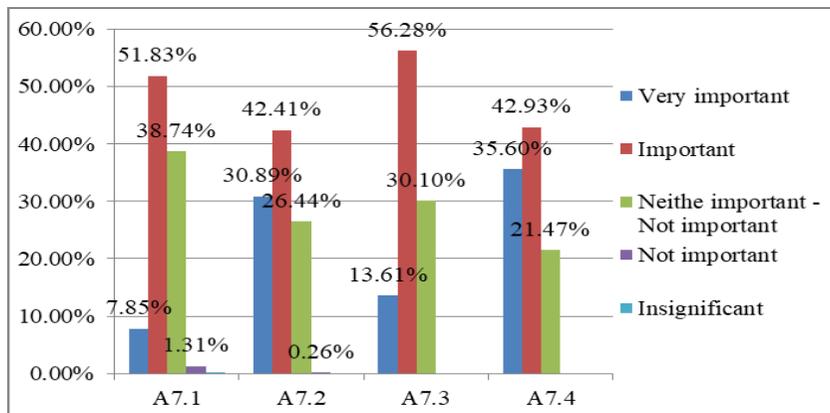


Figure 5 – The importance of the criteria underlying the decision to purchase the local public transport services
 (Source: realized by the author)

When compared to other local transport services, the subjects have the greatest confidence in the offer of S.C. Urban Transport Resita S.R.L., as proved by the scores and percentages obtained in the following intervals:

- 0-33% - Taxi Prima (A8.3.) - Score = 0.6082 and the percentage of 39.27% (150 subjects), followed by Favorit Taxi (A8.2.) - Score = 0.6247 and the percentage of 38.22% (146 subjects);
- 34-67% - Urban Transport Resita (A8.1.) - Score = 0.7135 and the percentage of 40.58% (155 subjects), followed by Taxi Prima (A8.3.) with the percentage of 39.01% (149 subjects).
- 68-100% - Urban Transport Resita (A8.1.) - with the percentage of 36.65% (140 subjects), followed by Taxi Ok (A8.4.) - Score = 0.6948 and the percentage of 36.39% (139 subjects).

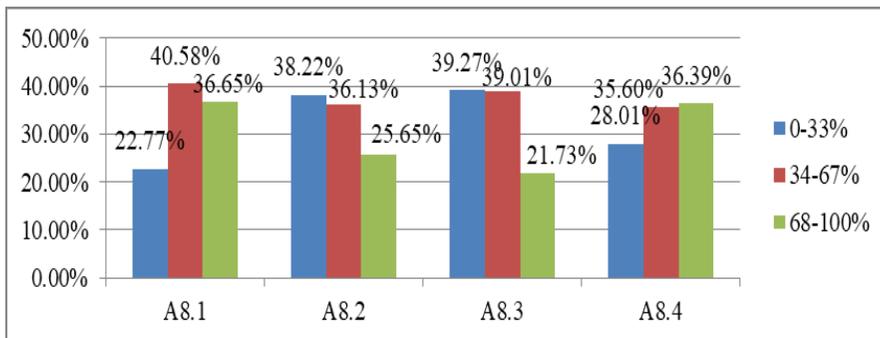


Figure 6 – The confidence the subjects have in local transport services
 (Source: realized by the author)

Most subjects consider the level of tariffs (prices) practiced by Urban Transport Resita as neither small, nor high, fact proved by the score obtained of 3.0599 and the highest percentage of 49.21% (188 subjects), being followed by small - 28.01% (107 subjects), high - 18.85% (72 subjects), very high - 2.36% (9 subjects), very small - 1.57% (6 subjects).

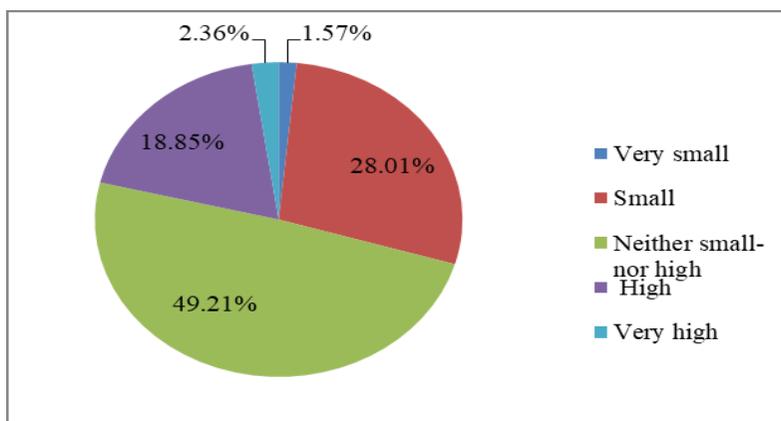


Figure 7 – The subjects appreciate the prices practiced by of Urban Transport Resita
 (Source: realized by the author)

In order to improve the quality of local public transport services in Resita Municipality, only 126 subjects elaborated proposals, representing 32.98% of the total of 382 subjects.

According to their importance, the proposals made by the 126 subjects were:

- setting up several ticket validators in buses - 21.43% (27 subjects);
- changing the operating schedules of buses to reduce the waiting time in the station - 19.84% (25 subjects);
- purchase of tickets and subscriptions in electronic system, that can be carried out at the bus stations - 15.87% (20 subjects);
- display of travel graphics in bus stations - 15.08% (19 subjects);
- printing tickets for 2 trips - 14.29% (18 subjects);
- service uniforms registered for the employed control staff - 13.49% (17 subjects).

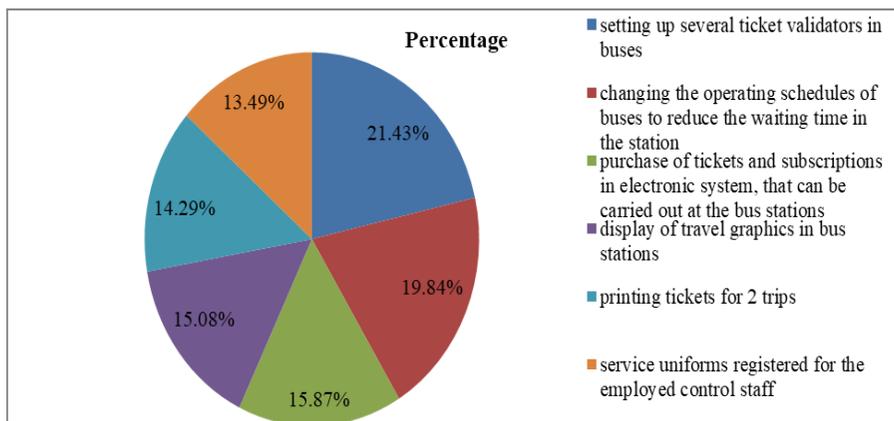


Figure 8 – The proposals regarding the improvement of the quality of urban public transport services

(Source: realized by the author)

3. CONCLUSIONS

After completing the study, the research hypotheses were confirmed, which is why Urban Transport Resita, through the local public transport services offered for people, must improve the quality of the services so as to satisfy the requirements and the public utility needs of the local community in Resita and of outer neighbourhoods.

As the majority of consumers travel in the local public transport means based on subsidized or fully paid subscriptions or travel tickets for the whole month or 5 days / week, it is necessary to inform consumers, respectively display in the travel stations the program / traffic graphs of the means of transport, of local public transport for the ten different regular routes from Resita and for the exterior districts (Țerova, Cuptoare, Moniom and Doman), as well as public transport as convention, through special routes.

For local public transport access is free to all categories of people, and the majority of consumers fall spend the amount of 21-150 lei - employed people for public transport, 4-20 lei - pupils / students and retired people, because the Resita Town Hall subsidizes transport services for people without incomes or with minimum incomes.

On the market of local public transport services, according to their importance, consumers have the greatest confidence in Urban Transport Resita, and the prices applied are considered neither small nor high, so they appreciate being satisfied with the local public transport services offered to people.

Consumers believe that at the basis of the decision to purchase local public transport services one can find the safety in the means of transport for people and goods, as well as the keeping of traffic graphs.

After processing the study information, the most important proposals regarding the improvement of the quality of the urban public transport services offered by Urban Transport Resita underlined were: setting up several ticket validators, buying tickets and subscriptions in electronic system, changing the functioning graphics of the means of transport, depending on the flow of passengers.

Urban Transport Resita must provide means of transport that does not excessively pollute Resita, the outer neighbourhoods where buses run and at the same time, ensure the optimization of the capacity of means of transport, optimum temperature, depending on the seasons, and to issue electronic travel cards.

It should be mentioned that the Resita Town Hall has the right to control the provision of public transport services for people through regular travel schedules in Resita and the outer neighbourhoods, as well as the obligation to establish and apply strategies to improve, extend, develop and modernize these services. In order to establish optimal strategies, attention must be given to: consumer demand, urban planning and spatial planning, the economic and social development programs from Resita and the exterior neighbourhoods, reduced costs in using the means of transport, as well as minimal environmental pollution.

The present research can be the basis of in-depth research or comparisons with similar research in the field of public transport services.

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