Quality Assessment of Regional Railway Passenger Transport



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Abstract The passenger transport sector in the European Union today is very customer-oriented. Transport operators have recognized that having a satisfied customer means a passenger will return to use the service again and so increase the overall income of the transport operator. In railway passenger transport over the last decade, there have been efforts to place the passenger in the focus of the railway transport process, but the overall effort has been very slow. The primary focus is usually on railway lines with great demand, especially high-speed train lines and national train lines. Various methodologies that support this effort are different methods of quality of transport services. Quality is a fundamental influence on services in passenger transport. One of the most useful methods for assessing the quality of service is surveys. Surveys can be done from the passenger point of view but also from the transport operator's point of view. During the past decade the level of service on regional railway lines in Croatia is relatively stable with a trend towards downgrading the level of service. One of the observations is there is no regular assessment of services and no interaction with passengers. This paper presents the results of a survey-based quality assessment of passenger transport services on a regional line in the north-western part of Croatia where a comprehensive survey identified how to maintain the existing level of service, some proposals on how to improve the level of service are also presented.

Keywords Quality of service · Railway · Survey · Passengers · Regional

1 Introduction

A hot topic in transport over the last few years has been the mobility of the population. The latest White Paper Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system (European Commission 2011) specifically emphasised the development of mobility as a service. The

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main goal outlined is increasing the overall mobility of the population with emphasis on ecologically and economically efficient transport solutions.

Increasing the mobility of the population is not only the task for the urban, but also for peri-urban and rural areas. Usually, passenger railway transport is divided into international and national lines. National lines are then divided into long distance, regional, urban and suburban lines. Long distance lines connect country centres with each other and with regional centres. Urban and suburban lines aim to connect urban and suburban areas. The regional lines connect places inside the region. The focus of our research is on a regional line in the north-western part of the Republic of Croatia. For local populations, regional lines are very important because they provide everyday mobility option. Also, local populations expect adequate level of quality of service.

Quality of service is an assessment of provided service from the viewpoint of both service provider and the users. In this case study, the service provider is the railway passenger operator and the users are referred to as passengers. The feedback from passengers to the passenger railway operator is the crucial element for long-term planning and the provision of railway services. The feedback can be positive and negative, but both are important to improve the services. Regularly assessment of quality of service in a regional railway passenger context is a positive sign for the passenger, showing that operators are customer-oriented and that they are doing their best to keep up and improve the service.

2 Literature Review

A comprehensive approach to conducting surveys for the purposes of transport planning is presented in Richardson et al. (1995), 'Survey Methods for Transport Planning'. Tyrinopoulos and Aifadopoulou (2008) define quality of service with a wide range of characteristics in the transportation system services as provided to the passengers. These include safety, on-time performance, accessibility, efficiency, and many others. Their research provides an overview of a methodology developed by the Hellenic Institute of Transport to assess the levels of quality and performance of public transport services. Raised by Lalive et al. (2013) on whether increases in service frequency reduce road traffic externalities, they exploit the differences in service frequency growth by a procurement mode following a railway reform in Germany to address endogeneity of service growth. Their conclusive remarks identify that increases in service frequency reduce the number of severe road traffic accidents, carbon monoxide, nitrogen monoxide, nitrogen dioxide pollution, and infant mortality. Černa et al. (2017) proposed a methodology of selecting the transport mode for companies on the Slovak transport market where the main focus was freight transport. The criteria adopted in their methodology could be adapted for passenger transport research. The criteria comprised: (1) price for transport, (2) transport time, (3) transport safety, (4) reliability of carrier, (5) information, (6) flexibility, (7) additional services, (8) expertise and references, and (9) responsibility. Dolinayova

(2018) further researched possibilities of utilization of selected calculation methods for long-distance and regional railway passenger transport. Dolinayova et. al. (2019) also examines regional railway transport in the Slovak Republic using various indicators such as (1) transport performances, (2) operators, (3) regional railway line length, and (3) financing. This research shows interesting results that regional railway lines located in the regions with lower standards of living showed the best utilisation and the lowest loss for operators. Train passenger responses on provided services in case studies: PT Kereta Api (Indonesia) and Statens Järnvägar (SJ) AB (Sweden) were investigated by Saputra (2010). The research identified seven factors of service quality attributes that significantly influence customer satisfaction: (1) travel time, (2) information, (3) scheduling, (4) comfort, (5) tangible, (6) safety and security, and (7) service coverage. Dedik et al. (2017) made a comparative analysis of two connections between Bratislava and Sered in their research, which acknowledged point assessment for quality indicators. Gašparik et al. (2015) researched the quality in regional passenger rail transport with a comprehensive evaluation of the quality of the services in regional transport. Dell'Olio et al. (2011) conducted a study on how to use surveys to determine the desired level of service quality for users of public transport. Furthermore, Chang and Yeh (2002) conducted a research project using surveys in the field of air transport on the service quality of domestic flights. Marinov et. al. (2014) investigates the level of customer satisfaction as well as customer services in a passenger railway station Newcastle Central, UK. The results of this study indicate areas to investigate in the survey: (1) information, (2) infrastructure, (3) design, (4) accessibility, and (5) peak times. An important part of the survey is to keep the questions as simple as possible and open and closed questions are designed to be easily understood with limited options to answer. Some authors develop and employ a simple method for analyzing customer satisfaction surveys using different approaches and then employ a survey to collect the necessary data for analysis. Rüger (2019) researched the influence of passenger behaviour and passenger needs on the infrastructure facilities of stations. The results show that behaviour of passengers has a major influence on operational components such as (1) passenger flows in railway stations, (2) passenger exchange times and thus the (3) punctuality of trains. Moreover, Dolinayova (2011) investigated factors and determinants of modal split in passenger transport. In the field of railway passenger traffic, De Oña et al. (2014), used surveys, conducting research in northern Italy. The decision tree approach was used to analyse the data. Abramović et al. (2015) conducted a survey and comparative analysis in IC trains in Slovakia and Croatia. Abramović (2017) performed a passenger's satisfaction research on long distance terminals on the case study of the City of Zagreb. Stoilova (2018) conducted a study of railway passenger transport in the European Union. The study is a combination of a multicriteria model for rating railway passenger transport development. The factors for the classification include the following: (1) social and economic factors, (2) infrastructure factors, (3) factors associated with travel, and (4) technological factors. The learning from the literature review indicates: (1) levels of quality of services, (2) different criteria, and (3) survey techniques and analysis. This information is applied to this case study on regional railway line in the north-western part of the Republic of Croatia.

3 Case Study: Regional Railway Line Zabok-Đurmanec

3.1 Catchment Area

Krapina–Zagorje County is located in the north-western part of the Republic of Croatia and represents a stand-alone geographical area. It is bordered by the mountain peaks of Macelj and Ivančica in the north, the river Sutla in the west. The area is separated from Slovenia, the basins of rivers Krapina and Lonja in the east and the rest of the country. In the south-east the county is surrounded by the Zagreb mountain Medvednica. The surface area of the county is 1229 km² with a population of 132,892 (2011 Population census), and an average population density of 108 (Krapina–Zagorje County 2018).

The total track length in the county is 103,318 km, divided into regional and local railway lines: R201 R201 Zaprešić–Čakovec (section Žeinci–Podrute) with a usable length of 45.173 km; R106 Zabok–Krapina–Đurmanec–DG, 27.187 km; L102 Savski Marof–Kumrovec–DG, (section Prosinec–DG) 16.783 km; L202 Hum Lug–Gornja Stubica, 10.823 km and L201 Varaždin–Golubovec, (section Očura–Golubovec), 2.449 km. Along the Krapina–Đurmanec–DG track, the train speeds reach 50 km per hour, with allowed axle load of 16 tons (Network statement 2018). The following official stops are located along the railway line: Zabok, Štrucljevo, Sveti Križ Začretje, Dukovec, Velika Ves, Pristava Krapinska, Krapina, Doliće, Žutnica and Đurmanec. The train stations are: Zabok, Krapina i Đurmanec. Krapina–Zagorje County and railway lines are represent on Fig. 1.

The passenger carriage operates with Diesel railcars HŽ7121 and HŽ 7122. The railcars are more than 35 years old, so at the end of lifespan, hence the purchase of new Diesel railcars intended for regional passenger carriage, is essential in the near future.

3.2 Survey Procedure

The participation in the survey was entirely voluntary. Therefore, the interviewers, university students of railway transport, asked the respondents for permission before starting the survey. The interviewers had undergone training that involved methods and procedures of conducting a survey, rights of the respondents, and rights and obligations of the interviewers. A special focus was put on the sensitive groups of respondents (underage, mobility reduced, and senior passengers). A supervisor, university professor of railway transport, was present during the survey.

The trains were open-spaced, when one passenger agreed to the survey, others followed suit. The only passengers that did not participate were the ones sleeping or exiting at the next stop/station.



Fig. 1 Krapina–Zagorje County and railway lines *Source* Adapted by the authors Krapina–Zagorje County (2018)

3.3 Questionnaire

The survey comprised a total of 27 questions, divided topically into two units: (1) general questions (5), and topical questions (22). There were 4 types of questions: 2 with free answer, 9 with single choice answer, 15 with numeric answers, and one multiple choice. We used a Google form sheet—the questionnaire was accessible via mobile phones (Android and iOS). The average duration of filling in the questionnaire was 4 min. Survey questions and question types are shown in Appendix.

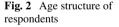
3.4 Field Implementation of the Survey

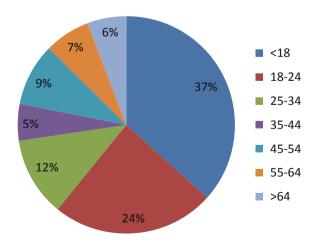
The survey was conducted over the course of three days: Tuesday, 6 December, Wednesday, 7 December and Thursday, 8 December, 2016. There were a total of 13 participants and the survey was carried out in 20 passenger trains with the exception of early and late trains. There were 8 trains on the Zabok–Durmanec Section (3124, 3126, 3128, 3130, 3132, 3134, 3136, and 3138), and additional 8 trains along the Durmanec–Zabok Section (3117, 3119, 3125, 3127, 3129, 3131, 3103 and 3139), making it a total of 16 trains. A final number of 603 filled in questionnaires was obtained. Tuesday saw 248 participants, Wednesday 184, and Thursday 171.

3.5 Analysis of Demographic and Social Economic Question

There were 339 male (56.2%) and 264 female (43.8%) respondents. The question on age structure was a single choice with a scale ranging from less than 18 years, between 18 and 24 years, between 25 and 34 years, between 35 and 44 years, between 45 and 54 years, between 55 and 64 years, and more than 65. 221 respondents (37%) were less than 18 years old, 146 respondents (24%) were aged between 18 and 24, 71 respondents (12%) between 25 and 34, 33 respondents (5%) between 35 and 44, 56 (9%) between 45 and 54, 41 respondents (7%) between 55 and 64 and 35 (6%) more than 65. Age structure of respondents is representing in Fig. 2. A significant decrease in passengers with age indicates that the majority, 61%, were pupils and students are using railway transport. The question on the highest level of education was a single choice with offered responses: completed primary school, completed high school, completed college, a university degree, a Master degree of Science, and completed PhD. 275 (46%) respondents had completed primary school, 211 (35%) respondents had completed high school, 55 (9%) respondents had finished college, 42 (7%) respondents had graduated from university, 17 (3%) respondents had obtained a Master of Science degree, and 3 respondents have obtained a doctoral degree. The structure of education coincides with the level of education at the national level with significant deviation towards higher educational attainment and higher levels of education. The completed education degree is in proportion to the level of income that actually represents passengers who use the public transport system for financial

A question on the monthly income was a single-choice question providing five options: (1) high (< 1000, (2) medium (\leq 500– \leq 1000), low (less than \leq 500), (4) no income, and (5) I would rather not say. There were 20 (3%) responses for high, 106 medium, 96 low income participants (16%), 344 (57%) with no income and 37 (6%) of those who would rather not say. There is also a significant correlation between





the income distribution and population age, as well as a direct correlation with the degree of education.

3.6 OD Matrix

Based on two questions about the origin and the destination of travel, we established an OD matrix for the passengers in the survey. A total of 603 passengers were interviewed in the trains on the line between Zabok and Đurmanec. Based on their answers obtained were 33 unique origins, 29 unique destinations, and 39 places of the start and end of the journey.

The survey in the trains forms a 39 times 39 OD matrix. Because of the complexity of presenting the matrix of 39 times 39, it is not presented in the paper. The matrix was filled in by searching the origins and filling in the matrix with destinations.

By analyzing the OD matrix in the trains, to and from Krapina, it may be concluded that in the implementation of the survey, 31.0% of passengers had Krapina as the origin of their journey whereas 33.2% of the passengers indicated Krapina as the destination of their journey. This result corresponds to the fact that Krapina is the centre of the Krapina Zagorje County.

Furthermore, interesting are the places that have a share greater than 2% as origins, and these are: Zabok (15.9%), Sveti Križ Začretje (11.6%), Đurmanec (7.0%), Zagreb (6.8%), Velika Ves (4.1%), Dukovec (3.5%), Doliće (3.3%), Žutnica (2.5%), and Donja Stubica (2.3%).

Also interesting are the places that have a share higher than 2% as destination, and these are: Zabok (23.2%), Zagreb (16.6%), Đurmanec (5.3%), Sveti Križ Začretje (4.5%), Bedekovčina (2.3%), and Velika Ves (2.3%).

3.7 Analysis of Questions About Quality of Service

The survey was conducted aboard the train and the origin/destination question refers to the final stop/station. An additional question was asked of respondents about how they arrived/departed from the stop/station, including the following options: bus/tram, personal vehicle, and on foot. Tram could have only been taken at Zagreb GK railway station and Zagreb ZK. Bicycles were used by 8 (1.3%) of the respondents, 56 took the bus (9.3%), 45 drove a car (7.5%), and 391 (64.8) walked. As for the departed from the final station/stop, there were 3 cyclists (0.5%), 57 took the bus (9.5%), 20 drove a car (3.3%) whereas 49 were passengers in a car (8.1%), while 474 (78.6%) walked. Considering the age structure, the walking part was expected, turning out at 2/3. It is also worth noting that the station is well-situated and accessible to pedestrians. A relatively high number of respondents (17.1%) arrive by cars with means it is too far for them to walk. Alternatively, they could have used the bus.

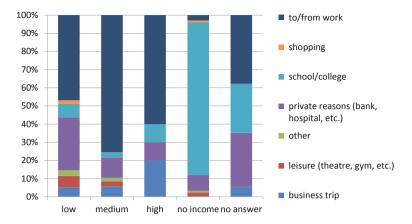


Fig. 3 Connection between average monthly income and purpose of the journey

The question "purpose of your journey" was a single-choice question for most of the respondents, 311 (51.6%), the purpose was traveling to/from school/college, for 161 (26.7%) to/from work, 83 (13.8%) travelled for private reasons (bank, hospital, etc.), 18 (3.0%) were on a business trip, 16 (2.7%) leisure (theatre, gym, etc.), and for other travel purposes there were 8 (1.3%), and for shopping only 6 (1.0%) respondents. 51.6%, or more than half, of the respondents cited going to/returning from school or college, while only 13.8% stated arriving to/going to work. We identified that, public passenger transport in Croatia, mainly deals with the transport of pupils and students who have largely subsidised transport. There has, for last few years, been a state and county-funded subsidy, so pupils and students travel at no cost. For future development of the public transport system this is a significant cost and a great challenge to recoup funds in a different manner. Most journeys are the ones including commuting to school/college-as many as 47.9% of the respondents, while the groups low, medium and high there is a high number of commuters to/from work, 7.5, 13.3 and 2%, which amounts to 22.8%. It is necessary to point out that purpose of journey school/college includes 92.9% with no income and 3.2% passengers that did not give an answer. But rest of respondents claim that they have income. Analyzing this answer according to the age, identifies that passengers are going to additional activities at school/college. Figure 3 shows the connection between the average monthly income and the purpose of the journey.

Questions on the reasons why respondents use rail as a mode of transport was a multiple choice type with following options: (1) accessibility, (2) financial reasons, (3) another reason, (4) regularity, (5) comfort, (6) speed, and (7) punctuality. The majority of passengers have chosen accessibility and financial reasons as to why they are using rail. As pointed out earlier, railway stations are well-situated and very convenient for passengers to opt for railway transport, making accessibility a reasonable factor. Keep in mind that majority of passengers are pupils/students and

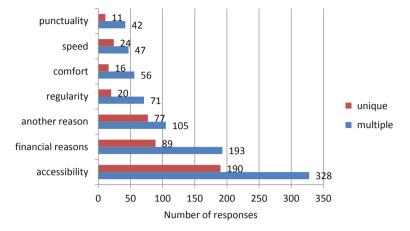


Fig. 4 Reasons why you use the railway as a means of transport

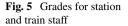
they do not pay direct fares and this is a strong reason to use rail. Detailed results are shown in Fig. 4.

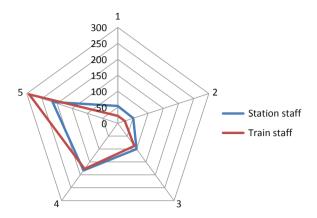
Frequency of travelling by train has been examined with the question on 'how often one travels by train in one direction per week'. Ten times travelling per week correspondents with five trips per week. Overall, 48.6% of passengers take 5 trips per week and 8.6% of passengers take 6 trips per week. Interestingly, 12.6% of passengers take only one trip per week and 6.6% have made three trips per week. The number of trips correlates with the purpose of travel so 66.9% purpose of the trip "school/college" have 5 trips per week. It is an interesting purpose of the journey "to/from work" that 43.5% of working people have 5 journeys per week, and 24.8% have 6 trips per week. The questionnaire had eleven numeric questions to evaluate passenger satisfaction. These questions were a single-choice type with the scale ranging from 1 (poor) to 5 (excellent).

Travel comfort was rated poorly by 33 (5.8%) respondents, satisfactory by 86 (14.3%), good by 213 (35.3%), very good by 193 (32%), and excellent by 78 (12.9%). The overall travel comfort was rated as good for more than a third of the passengers. One of the reasons is the more than 35 years old railway diesel multiple units are at the end of their lifespan. That means that on one hand it's very uncomfortable for passengers and on other hand very challenging for maintenance work.

Time of the trip was rated poorly by 57 (9.5%) respondents, satisfactory by 94 (15.6%), good by 164 (27.2%), very good by 159 (26.4%), and excellent by 129 (21.4%). Distribution of time travel is almost uniform across categories. More than 50% of passengers evaluate trip time as good and very good.

The possibility of having a seat in the train was rated poorly by 24 (4.0%) respondents, satisfactory by 72 (11.9%), good by 126 (20.9%), very good by 199 (33.0%), and excellent by 182 (30.2%). Exactly one third of passengers evaluated available seats as very good, and more than 30% evaluated available seats as excellent. We





can draw a conclusion that the capacity of trains is adequate or, in different point of view, that demand for seating places is satisfied.

Trip price was rated poorly by 26 (4.3%) respondents, satisfactory by 48 (8.0%), good by 142 (23.5%), very good by 175 (29.0%), and excellent by 212 (35.2%). The result is obvious because of age structure of passengers who are not students, and therefore not subsidised, and purpose of journey.

The process of buying the ticket was rated poorly by 25 (4.1%) respondents, satisfactory by 69 (11.4%), good by 124 (20.6%), very good by 182 (30.2%), and excellent by 203 (33.7%). The majority of passengers have a monthly pass which explains the high grades for process of buying a ticket. They are using ticket office only once per month.

Station staff was rated poorly by 54 (9.0%) respondents, satisfactory by 51 (8.5%), good by 100 (16.6%), very good by 183 (30.3%), and excellent by 215 (35.7%). Train staff was rated poorly by 23 (3.8%) respondents, satisfactory by 23 (3.8%), good by 88 (14.6%), very good by 177 (29.4%) and excellent by 292 (48.4%). Station and train staff are railway workers who communicate regularly with passengers and represent the public appearance of the railway company. The analysis of rating is excellent for the railway company because more than one third of passengers rate station staff and almost half of passengers rate train staff as excellent. Figure 5 show the grades between station and train staff.

Punctuality was rated poorly by 35 (5.8%) respondents, satisfactory by 57 (9.5%), good by 128 (21.2%), very good by 208 (34.5%), and excellent by 175 (29.0%). More than one third of the passengers have rated punctuality as very good. This is a very high rate for the railway service in Croatia, as trains operate only on this line, so there is no interface with other trains on the network and delays are likely only when something unpredictable happens.

The frequency of departure was rated poorly by 40 (6.6%), satisfactory by 79 (13.1%), good by 180 (29.9%), very good by 179 (29.7%), and excellent by 125 (20.7%). Interestingly, this is almost the same number of passengers who rate fre-

Table 1 Grade for average
and mode for all questions
about quality of service

Question	Short description	Average	Mode
1	Travel comfort	3.3	3
2	Trip time	3.3	3
3	Available seats	3.7	4
4	Trip price	3.8	5
5	Ticket buying	3.8	5
6	Station staff	3.8	5
7	Train staff	4.1	5
8	Punctuality	3.7	4
9	Frequency of departure	3.4	3
10	Fit of timetable	3.5	5
11	Train information system	2.8	1

quency as good and very good. Almost one quarter of passengers are unsatisfied with the frequency of trains. This data reveals that there is place for improvement of the frequency of train departures.

The question "How does the timetable line fit your needs?" was rated poorly by 61 (10.1%), satisfactory by 68 (11.3%), good by 151 (25.0%), very good by 146 (24.2%), and excellent by 177 (29.4%) respondents. More than one quarter of passengers are dissatisfied with the timetable. In fact, the timetable has remained unchanged for the last 30 years. Surely, in such a large period, there were huge changes in demand.

The train information system was rated as poorly by 165 (27.4%), satisfactory by 94 (15.6%), good by 129 (21.4%), very good by 124 (20.6%), and excellent by 91 (15.1%). The only information system is physical, in the form of train staff. They have a very limited source of information for unplanned and unpredicted situations and have to rely on their own knowledge. Indeed, there is a necessity for implementation of a new on-board train information system.

Keeping in mind all eleven questions about the quality of service, the average grade is 3.6 and the mode grade is 4. The total grade is, therefore, 4 or very good. Table 1 lists average and mode grade for all questions about service quality. The worst grade is given to Train information system. The main reason is that there is only one ticket inspector aboard the train. They give information from time to time but, according to the passengers, this is completely inadequate. An illustrative example that a passenger put forward during the survey was that the train was delayed for more than 10 min, and the information from the train staff was that the train was delayed for 5 min. Using today's technology, the train information system is a very simple and low-cost solution.

As many as 85% of the passengers believe that Wi-Fi services are needed aboard the trains. This is very reasonable and completely in line with technological advances in other countries. Only 58% of passengers believe that the railway is an environmentally conscious mode of transport. Although the media, politicians and scientists talk about the ecological benefit of the railway, the passengers do not recognize it. It

is interesting to note that in the conversation with passengers they pointed out that train runs on diesel, and in their opinion, that is not environmentally friendly.

The question "Will you use integrated ticket?" was answered positively by 85% of the respondents. This fact undoubtedly confirms, that is a greater need for the introduction of an integrated passenger transport system and a uniform transport ticket.

4 Conclusion

Population mobility has been a hot topic in transport for the last few years. Increasing the mobility is not only the task for urban, but also for peri-urban and rural areas. The focus of our research was on regional lines in north-western part of the Republic of Croatia. For the local population, the regional lines are very important because they provide everyday mobility options. Local populations expect an adequate level of service quality because they pay for the service. Regular assessment of service quality in railway regional passenger transport has revealed a positive sign for passengers because the operator is customer-oriented and doing his best to keep up and improve the services.

Our research was conducted on the railway regional line in the northwest part of Croatia - the railway line between Zabok and Đurmanec. This line has every characteristic of a passenger regional railway line in central part of Europe. Our findings suggest that there is need for regular quality assessment. For sure passengers in this area need rail transport; it is a public service obligation (PSO).

Reasons why the survey respondents use rail as a mode of transport was a multiple-choice question with following options: (1) accessibility, (2) financial reasons, (3) another reason, (4) regularity, (5) comfort, (6) speed, and (7) punctuality. The majority of passengers have chosen accessibility and financial reasons as to why they choose rail transport.

Regarding all the eleven questions about the quality of service, the average grade was 3.6 and the mode grade was 4 (very good), which makes the total grade very good. The worst grade was attributed to the train information system. The main reason behind that, is because there is only one ticket inspector aboard the train who provides information from time to time and according to the passengers, this is completely inadequate. In today's technology, train information systems are a simple and low-cost solution. As many as 85% of the passengers believe Wi-Fi services are needed aboard. This is very reasonable and completely in line with technological advancements in other countries. Only 58% of the passengers believe that the railway is an environmentally conscious mode of transport with 85% of respondents confirming they would like to have an option for buying an integrated transport ticket for different modes of transport and different operators. The paper confirmed there is a great need for the introduction of an integrated passenger transport system.

Appendix: Survey Questions

	Questions	Questions types	
1	Date	Numeric	
2	Train number	Numeric	
3	Sex	Single choice	
4	Age	Numeric	
5	Highest level of education	Single choice	
6	Average monthly income	Single choice	
7	Origin	Free text input	
8	How you have reach your origin	Single choice	
9	Destination	Free text input	
10	How you proceed from your destination?	Single choice	
11	Purpose of the journey	Single choice	
12	Specify the reasons why you use the rail as a means of transport?	Multiple choice	
13	How often do you travel on trains?	Numeric	
14	Travel comfort	Numeric	
15	Trip time	Numeric	
16	How do you rate the number of available seating areas?	Numeric	
17	Trip price	Numeric	
18	Way of buying the ticket	Numeric	
19	Station staff	Numeric	
20	Train staff	Numeric	
21	Punctuality	Numeric	
22	Frequency of departure	Numeric	
23	How does the timetable line fit your needs?	Numeric	
24	Train information system	Numeric	
25	Wi-Fi	Single choice	
26	Ecology	Single choice	
27	Will you use integrated ticket	Single choice	

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