

Assessment of Railway Transport Service Quality Levels

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Abstract- In this paper has been researched assessment of railway transport service quality levels. By author concluded that the essence of the market of transport services, its structural structure and the development of these services lead to the growth of indicators of the country's economic sectors.

Keywords: National economic policy, transport system, transport network, GDP, railway services, passenger.

1. INTRODUCTION

One of the important infrastructural sectors of the world economy is the transport system, and its development is one of the priorities of every national economic policy. In the context of the globalization of economic relations and the development of international trade, high competitiveness in domestic and foreign markets is determined by the level of qualitative development of the transport system. According to the World Bank, passenger traffic accounts for 20.0% of total rail traffic, including high-speed trains, currently only 1.0% – (passenger traffic exceeds freight in India and Japan). 2 trillion of world railways. passenger-km passenger turnover is distributed by countries as follows: Japan and Europe - 370-380 billion. passenger-km; India and China - almost 300 billion. passenger-km; other countries - 200 bln. passenger-km.

Today, the share of the transport network in the gross domestic product of our country is 11 percent. This, in turn, shows that it is an infrastructural sector that has a large influence on the development of other sectors. Railway transport has a leading position in the transport system of our country, at the same time, it accounts for 93% of the total transit cargo and 98% of passengers. In the conditions of uncompromising competition in the international transport services market, it is very important to develop an effective marketing strategy for the development of the railway transport services market, to meet consumer demand, to enter new market segments and to ensure the efficiency of operations.

In our country, especially in recent years, attention has been paid to the rapid development of transport communications as an important branch of the economy based on modern requirements, comprehensive and targeted program measures are being implemented. "It is necessary to increase the transit capacity from the current 7 million tons to 16 million tons due to the improvement of the infrastructure, the use of flexible tariffs and the formation of new prospective routes." In turn, it is advisable to carry out scientific research on a large scale in areas such as safety and nature protection in transport infrastructure objects, organization of an assessment system taking into account the marginal value of the efficiency of the national transport infrastructure and the level of risk impact in the development of the infrastructure.

2. ANALYSIS AND RESULTS

In recent years, the service sector has gained a stable position in the world economy. In many countries, the volume and share of services in GDP is increasing, the number of employees is increasing, and international trade in services is developing. The impact of these changes is so great that the modern economy today is called the service or service economy. Despite the fact that the importance of the service sector in the world economy and the trend of its growth became evident only in the last years of the last century, it was predicted by experts earlier.

Modern society is characterized by personalization of consumer demand. The demand for different services determines the tendency to expand the range of services. The tendency to increase the share of income from services in the GDP was detected in some countries in the 60s and 70s of the 20th century. The level of development of services in some countries varies greatly. Based on this indicator (share of GDP) and differentiation of growth rates over the last 30 years, all countries can be divided into five groups (Table 1).

Table 1: Grouping of countries according to the share of services in GDP (%)

№	Share	Countries
1.	Higher – 75 %	Countries with an advantage in economic structure - United States of America, Denmark, Germany, Belgium, France, Netherlands, Luxembourg, Great Britain, Cyprus, Malta, Monaco, Australia, Canada, etc.
2.	Higher – 70 %	Countries where the development of services is considered the main direction of economic development - Austria, Finland, Italy, Spain, Norway, Sweden, etc.
3.	Higher – 60 %	Countries with economic structures advantage in tourism are Greece, Jordan, Jamaica, Costa Rica, Colombia, Morocco, Chile, Tunisia, etc.
4.	Lower– 50 %	Countries with growth in this indicator are Mexico, Iran, Burundi, Ghana, Botswana, Mali, etc.
5.	Lower – 20 %	Countries with a low level in this indicator are Angola, Zambia, Nepal, Bolivia, etc

The characteristics of the market of transport services are reflected in the conduct of marketing research in the field of passenger and cargo transportation. Passenger transport marketing is a management system aimed at fully and effectively meeting the public's transport needs.

Marketing of passenger transportation includes:

- analysis of the state of the transport services market and the dynamics of consumer demand in the market;
- identifying and studying consumer preferences;
- assessment of the level of competition and the external environment in the transport services market;
- determining the population capacity of the transport services market and the size of the market share of railway transport;
- market segmentation;
- identification of existing and prospective segments of the transport services market for the population;
- price policy;
- improvement of advertising activity and stimulation of demand for passenger transportation;
- development and promotion of new transport services to the population.

In Uzbekistan, which is rapidly integrating into the world economy, special attention is paid to the development of transport infrastructure.

Today, a wide range of transport services leads to the development of international relations - the formation of the global economy by maintaining the increasing flow of cargo and passengers worldwide. Successes in the field of scientific and technical development, i.e. mass introduction of innovations in various sectors of the economy, including the field of transport services, have become a process.

The importance of the transport system requires the implementation of a targeted program for economic development, that is, the implementation of a comprehensive targeted program aimed at the development of various types of transport. This target program for the development of the transport system presents the existing problems described below:

- operation and development of transport infrastructure;
- improvement of passenger and freight transport services;
- meeting the demand of the national economy for cargo transportation;
- elimination of existing problems in international transport connections and transport corridors;
- ensuring traffic safety in the transport infrastructure and environmental problems.

In Uzbekistan, large transport and forwarding organizations have started to organize their terminal systems, so there is a need to create cargo distribution and logistics centers, information and computer systems supporting logistics services, and to create many free economic zones in the regions.

A new Angren-Pop electrified railway line has been built, connecting the Fergana Valley with other regions of the country through a 19.2-kilometer long underground road through the Kamchik Pass. With the commissioning of this railway, a single complete railway system covering all regions of our country was created.

"Afrosiyab" high-speed passenger electric trains have been launched on the Tashkent-Bukhara and Bukhara-

Tashkent routes. The electrification project of the 291.5 km long Samarkand-Bukhara railway section has been completed. The aircraft fleet has been supplemented with 2 modern Boeing 787-800 Dreamliner aircraft. As a result of the implemented measures, the volume of cargo transportation increased by 5% in 2019, of which road transport increased by 5.3% and air transport by 8.8%.

When researching the activity of railway transport and implementing its development programs, it is necessary to clearly define the tasks to be solved, that is, they should be defined taking into account the specific characteristics of the railway network. These include:

- increase the quality of service and increase the efficiency of service and transport to regions, population and organizations, attracting additional volume of passenger and cargo transportation;
- to reduce operational costs, to increase labor productivity and return on funds without reducing the quality of transport services in providing services to the population and organizations, and to create a basis for lowering freight rates.

From the information presented above, the diversity of activities carried out by the railway sector emphasizes the importance of the investment factor in the development of the system. In this situation, it is somewhat difficult from a methodological point of view to directly assess the efficiency of investment activity. In order to carry out a qualitative analysis, we collect the income from the services provided by the main activities of the company for the period from 2014 to 2022, and in order to eliminate the effect of inflation and perform a regression analysis with investment volumes, we receive the income in the international currency US dollars at the average exchange rate of that year (Table 2).

Table 2: The dynamics of the income from the main activities of JSC "Uzbekistan Railways" during 2014-2022

Years	Revenue from shipping		Income from passenger transport		Total shipping revenue	Average exchange rate	Total shipping revenue
	Total	Including transit	Total	Including transit			
	mln.sum	mln.sum	mln.sum	mln.sum	mln.sum	Dollar/sum	mln.dollar
2014	708195,9	298258,1	96973,0	10093,0	805 168,9	1342,12	599,9
2015	917874,0	400682,8	107815,0	13907,0	1 025 689,0	1454,89	705,0
2016	985981,2	841244,2	150102,0	14888,0	1 136 083,2	1576,06	720,8
2017	1326752,5	668924,2	216460,0	21339,0	1 543 212,5	1717,5	898,5
2018	1793972,6	1029666,1	227203,0	26027,0	2 021 175,6	1889,5	1 069,7
2019	2063321,0	713770,0	278495,0	23997,0	2 341 816,0	2093	1 118,9
2020	2243367,0	687574,0	250643,0	18322,0	2 494 010,0	2312,4	1 078,5
2021	3279953,0	948940,3	250315,0	38719,0	3 530 268,0	2555,65	1 381,4
2022	3476749,0	918247,0	289060,0	40714,0	3 765 809,0	2885	1 305,3

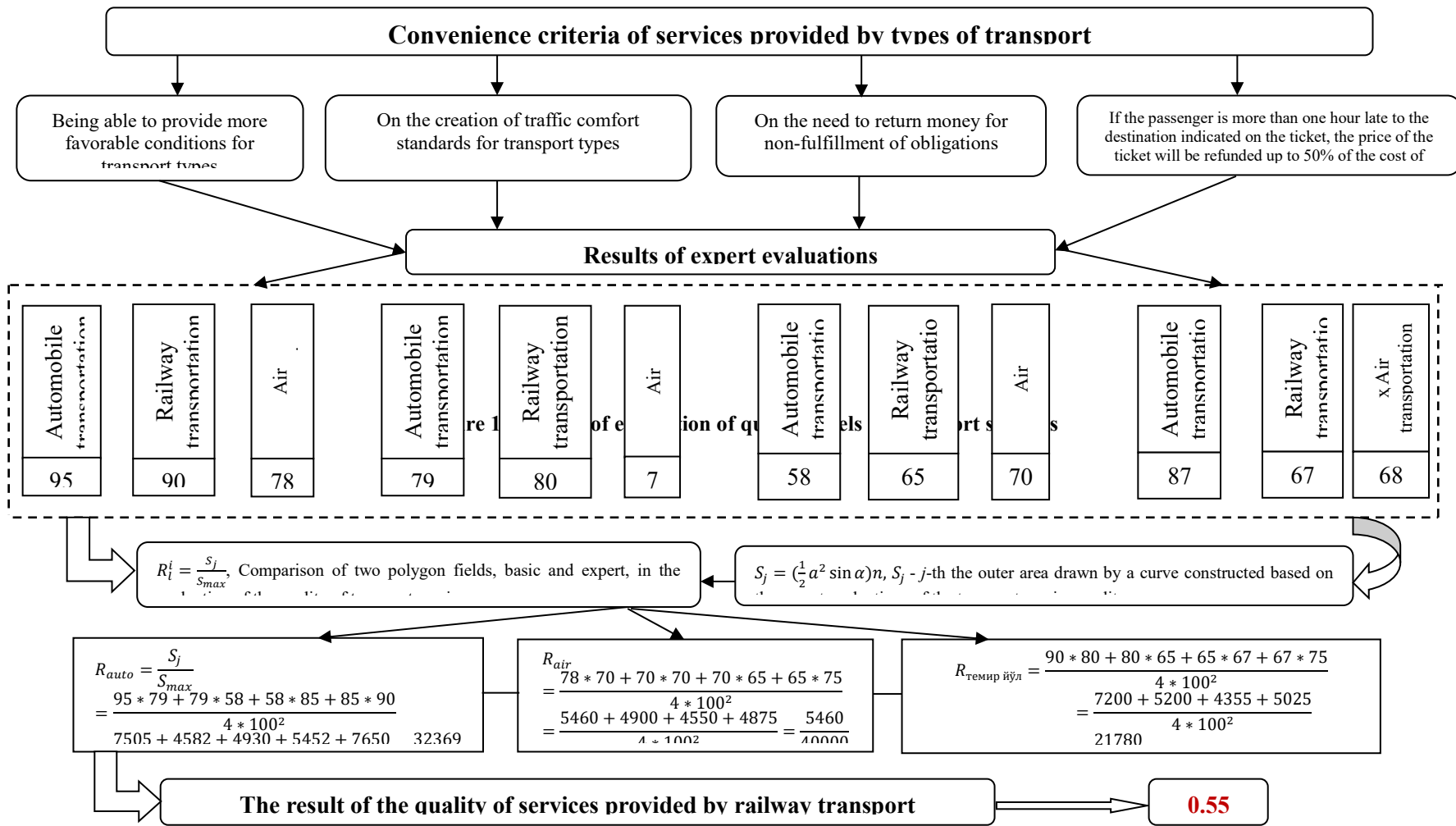
When collecting initial data for regression analysis, it is necessary to try to eliminate the influence of inflation and factors that are functionally related to each other, otherwise the result of the regression equation that evaluates the influence of factors on each other cannot be regarded as legitimate. This is because the purpose of using regression correlation is to study the influence of factors that are not directly functionally related to each other.

The next requirement is that the interdependence of these factors is logically justified, that is, the regression analysis is required to rely on certain theories and hypotheses. In our case, we assume that it is difficult to notice the effectiveness of the investment costs during the reporting period in the reporting year, that is, to fully assess the return or effectiveness of the invested funds, it is necessary to study the results of the one-year period. Therefore, our logical assumption is that in regression analysis, we should regress this year's income not with this year's investment expenses, but with the expenses of a period ago. Logically, if you calculate the efficiency of the power used in the second half of the year compared to the rest of the year, it is clear that the original efficiency is not correctly connected, but rather it is inversely connected, and it leads to the analysis to draw a wrong conclusion.

Table 3: The impact of the total investment in fixed capital in 2009-2018 on the company's income in 2014-2022

<i>Regression analysis</i>				
Prob > R	0,863972			
R-square	0,746448			
Adjustment R-square	0,710226			
Standard errors	147,1098			
Observation	9			
	<i>Coefficients</i>	<i>Standard errors</i>	<i>t-statistics</i>	<i>P-value</i>
Y-intersection	471,5084	123,5794	3,81543	0,006581
Variable X 1	1,215029	0,267653	4,539573	0,002669

Based on the above hypothesis, in order to conduct our analysis, in determining the impact of investments in the railway system on the income of the main activity: $Y = A_0 + X_1 + E$; (1) is not a regression relationship, but $Y = A_0 + X_1 + E$; We assume that there should be a regression in the form of (2), and we conduct a regression analysis using the data on investment in fixed capital presented in Table 3.7. The following result was obtained when regression analysis of the impact of the total investment in the fixed capital on the company's income was regressed using the capabilities of the Microsoft Excel program. If we analyze the obtained results, even if no investments are made for this period, 471.5 mln. dollar amount of income to the main activity and shows that every dollar of investment spent will generate an average of \$1.21 in the next period. If the level of reliability of the regression equation (**R-square**) indicates a 75% strength of influence, the significance level of the coefficients in front of the factors (**P-value**) tending to zero indicates that these factors are important in explaining the changes in each other. The services offered by the unitary enterprise "Uzbek railway expedition" for international and domestic railway transportation have a special place in the market of transport services due to their convenience and efficiency. According to the analysis, the costs of railway transport in neighboring countries are much higher in Uzbekistan, but the quality of services provided by railway transport is much lower according to the experts' assessment on the scale (0-1). In the assessment of the quality of transport services, the comparison of two polygonal areas, such as the base and expert, and the external field.



3. CONCLUSIONS AND SUGGESTIONS

Thus, the essence of the market of transport services, its structural structure and the development of these services lead to the growth of indicators of the country's economic sectors. The following directions of development of railway services were determined:

- it is necessary to ensure competitive advantages in the optimization of the market of railway transport services, to form a complex that ensures competitiveness due to the maximum use of their economic - financial, material labor resources. Based on this, it is required to increase the competitiveness of the transport services market based on the formation of marketing strategies;
- the increase in the volume of transport services and the improvement of its quality require the introduction of new innovative technologies into the network, which creates an opportunity to ensure resource savings, reduce the cost of services and increase labor productivity.

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