

**Sarimsakova Malokhat Khikmatullaevna**  
*Teacher of "Transport Economics" department,  
Tashkent State University of Transport,  
Tashkent, Uzbekistan.*

## **PROSPECTIVE DIRECTIONS OF RAILWAY TRANSPORT SERVICES DEVELOPMENT**

### *Introduction*

One of the most important infrastructural sectors of the world economy is the transport system, the development of which is one of the priorities of every national economic policy. In the context of 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, which currently account for only 1.0% - (exceeding the volume of passenger traffic in India and Japan). 2 trillion of the world's 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 billion. passenger-km<sup>1</sup>.

Today, the share of the transport sector in the country's GDP is 11%. This, in turn, shows its large network, an infrastructure sector that has a high impact on the development of other sectors. Railway transport has a leading position in the transport system of the country, which currently accounts for 93% of total transit cargo and 98% of passengers. In the context of uncompromising competition in the international transport services market, it is important to develop an effective marketing strategy for the development of the market of railway transport services to meet consumer demand, enter new market segments and ensure operational efficiency.

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<sup>1</sup> [www.worldbank.org](http://www.worldbank.org)

In our country, especially in recent years, attention has been paid to the rapid development of transport communications as an important sector of the economy on the basis of modern requirements, and comprehensive and targeted program measures are being implemented. "We need to increase our transit capacity from the current 7 million tons to 16 million tons through the improvement of infrastructure, the introduction of flexible tariffs and the formation of new promising routes."<sup>2</sup>. This, in turn, makes it necessary to conduct large-scale research in areas such as safety and environmental protection of transport infrastructure, the organization of an evaluation system taking into account the marginal value of the efficiency of national transport infrastructure and the level of risk impact on infrastructure development.

### *Analysis and results*

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

Modern society is characterized by the 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 services revenues in GDP was observed in some countries in the 60s and 70s of the twentieth century. The level of development of services varies greatly in some countries. According to this indicator (share in GDP) and differentiation of growth rates over the last 30 years allows to divide all countries into five groups (Table 1).

*Table 1*

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<sup>2</sup> Address of the President of the Republic of Uzbekistan to the Oliy Majlis. January 24, 2020.

### Countries according to the share of services in GDP grouping (%)<sup>3</sup>

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

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

Passenger traffic marketing includes:

- analysis of the state of the transport services market and the dynamics of consumer demand in the market;
- identification and study of consumer preferences;
- assessment of the level of competition in the market of transport services and the external environment;
- determining the capacity of the market of transport services and the market share of railway transport;
- market segmentation;
- identification of existing and promising segments of the market of transport services for the population;
- pricing policy;
- Improving advertising and stimulating demand for passenger traffic;
- development and promotion of new transport services to the population.

<sup>3</sup> The UNCTAD Handbook of Statistics 2017 is available as a printed copy or in PDF format from the UNCTAD website, at <http://unctad.org/en/Pages/Publications/Handbook-of-Statistics.aspx>.

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 is leading to the development of international relations - the formation of a global economy - by ensuring the growing flow of freight and passengers around the world. Achievements in the field of scientific and technological progress, ie the mass introduction of innovations in various sectors of the economy, including in the field of transport services, have become a relevant process.

The importance of the transport system requires the implementation of a targeted program for economic development, ie the implementation of a comprehensive targeted program for the development of various modes of transport. This targeted program addresses the existing challenges described below for the development of the transportation system:

- operation and development of transport infrastructure;
- Improving passenger and freight services;
- meeting the needs of the national economy in transportation;
- elimination of existing problems in international transport links and transport corridors; - traffic safety and environmental issues in the transport infrastructure.

In Uzbekistan, large transport and forwarding organizations have begun to establish their own terminal systems, so there is a need to create freight and logistics centers, information and computer systems to support logistics services, 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 parts of the country through a 19.2-kilometer underground road from the Kamchik Pass. With the commissioning of this railway, a single complete railway system covering all regions of the country has been created.

The Tashkent-Bukhara and Bukhara-Tashkent high-speed Afrosiyob

passenger electric trains have been launched. The 291.5 km long Samarkand-Bukhara railway electrification project has been completed. The fleet was replenished with 2 modern Boeing 787-800 Dreamliners. As a result of the measures taken, in 2019 the volume of freight traffic increased by 5%, including road transport by 5.3% and air transport by 8.8%.

It is necessary to clearly define the tasks to be solved in the implementation of programs for the development of the market of railway transport services, ie to take into account the specifics of the railway network. These include:

- improving the safety and reliability of production and ensuring the smooth operation of freight and passenger transportation, the development of mechanization and automation of production processes, improving working conditions;

- creation of conditions for reduction of operating costs, increase of labor productivity and return of funds and reduction of freight tariffs without lowering the quality of transport services in the provision of services to the population and organizations;

- introduction of resource-saving technical means and technologies based on the acceleration of innovative processes, providing a new generation of rolling stock.

From the above data, the diversity of activities carried out by the railway industry underscores the importance of the investment factor in the development of the system. In this context, there is some methodological difficulty in directly assessing the effectiveness of investment activities. In order to conduct the analysis qualitatively, we summarize the revenues from services rendered on the main activities of the company for the period from 2010 to 2019 and for the regression analysis with the effect of inflation and investment volumes, we obtain revenues in US dollars at the average exchange rate for that year (Table 2).

*Table 2*

### Dynamics of income from the main activities of JSC “Uzbekistan Railways” for 2010-2019<sup>4</sup>

Years	Revenue from shipping		Revenue from passenger traffic		Total revenue from transportation	Average exchange rate	Total revenue from transportation
	All	Transit	All	Transit			
	mln.sum	mln.sum	mln. sum	mln.sum	mln.sum	dollars/sum	mln. dollars
2010	708195,9	298258,1	96973,0	10093,0	805 168,9	1342,12	599,9
2011	917874,0	400682,8	107815,0	13907,0	1 025 689,0	1454,89	705,0
2012	985981,2	841244,2	150102,0	14888,0	1 136 083,2	1576,06	720,8
2013	1326752,5	668924,2	216460,0	21339,0	1 543 212,5	1717,5	898,5
2014	1793972,6	1029666,1	227203,0	26027,0	2 021 175,6	1889,5	1 069,7
2015	2063321,0	713770,0	278495,0	23997,0	2 341 816,0	2093	1 118,9
2016	2243367,0	687574,0	250643,0	18322,0	2 494 010,0	2312,4	1 078,5
2017	3279953,0	948940,3	250315,0	38719,0	3 530 268,0	2555,65	1 381,4
2019	3476749,0	918247,0	289060,0	40714,0	3 765 809,0	2885	1 305,3

In regression analysis, the collection of initial data for regression analysis should try to eliminate the effect of inflation and functionally related factors, otherwise the result of the regression equation estimating the interaction of factors cannot be considered valid. The reason is that the purpose of using regression dependence is to study the effect of factors that are not functionally directly related to each other.

The next requirement is that a logical substantiation of the interdependence of these factors is required, i.e. regression analysis should be based on certain theories and hypotheses. In our case, we assume that the efficiency of investment costs incurred during the reporting period is difficult to detect in the reporting year, i.e. it is necessary to study the results of the one-year period to fully assess the return or efficiency of the investment. Therefore, our logical hypothesis in the regression analysis is that we believe that this year’s revenues should be regressed by the expenses of a previous period rather than by this year’s investment expenditures. Logically, if we calculate the power efficiency of the second half of the year compared to the rest of the year, it is clear that the original efficiency does not appear to be correlated, but rather inversely correlated, leading the analysis to draw incorrect conclusions.

<sup>4</sup> Prepared on the basis of annual reports of JSC “Uzbekistan Railways”.

Table 3

**The impact of total investment in fixed assets in 2009-2018 on the company's earnings for 2010-2019<sup>5</sup>**

<i>Regression analysis</i>				
R in the plural	0,863972			
R-square	0,746448			
Normative R-square	0,710226			
Default error	147,1098			
Tracking	9			
	<i>Коэффициент</i>	<i>Default error</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, to conduct our analysis in determining the impact of the volume of investments in the railway system on operating income:  $Y = A_0 + X_t + E$ ; (1) is not a regression dependence in appearance, but  $Y = A_0 + X_{t-1} + E$ ; (2) assume that there should be a regression correlation in appearance, and we perform a regression analysis using the data on fixed capital investment presented in Table 3. The following result was obtained when the regression analysis regressed the impact of the total investment on fixed assets on the company's income using the capabilities of the program Microsoft Excell.

Analyzing the results obtained, the average capital account for previous years was 471.5 million, although no investment was made for this period. dollars in income from operating activities, and for every dollar spent, the investment will yield an average of \$ 1.21 in the next period. While the reliability level (R-square) of the regression equation indicates a 75 percent effect correlation strength, the fact that the significance level (P-value) of the coefficients in front of the factors tends to zero indicates that these factors are important in explaining changes in each other.

The level of competition in the market of transport services of the railway company and the competitiveness of existing services, the level of development

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<sup>5</sup> Author's development

and maintenance of transport infrastructure, competition between manufacturers or suppliers of spare parts, fuels and other energy resources, stable consumer demand for transport services, new transport and the possibility of introducing new technologies.

The number of entities operating in the transport services market and their place in the market make it possible to determine the level of competition and its impact in practice. An increase in the types of services offered by transport service providers may lead to a reduction in competition. While an increase in the solvency of consumers leads to a decrease in competition among market participants, a decrease in solvency leads to an increase in competition. Offering a wide range of services to a wide range of consumers in the transport services market will lead to increased competition. The availability of a carrier option in the market, i.e. the ability to move from one carrier to another at low cost, increases the likelihood that the customer will leave the competitor and vice versa.

### **Conclusions**

Thus, the essence of the transport services market, its structure and development of the railway transport services market will lead to an increase in the performance of sectors of the economy. The following areas of development of railway services have been identified:

- it is necessary to ensure a competitive advantage in the optimization of the market of railway transport services, the formation of a complex that provides competitiveness through the maximum use of their economic, financial, material and labor resources. Therefore, it is necessary to increase the competitiveness of the transport services market through the formation of marketing strategies;

- increasing the volume and improving the quality of transportation services requires the introduction of new innovative technologies in the industry, which will ensure resource savings, reduce the cost of services and increase

labor productivity.

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