Analysis of the Market Development of Transport and Cargo-Carrying Services in The Republic of Uzbekistan

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Abstract. The research in this article is aimed at finding ways to increase the competitiveness of railway transport. The results of the study will further reveal the possibilities of railway networks to ensure the delivery, in the shortest time, of large volumes of cargo to domestic and foreign markets, the uninterrupted functioning of the necessary infrastructure for placing cargo facilities on the railway network. The object of research is the state of the transport system, which plays a decisive role in commerce.

1 Introduction

The problem of scientific substantiation of the rational placement of freight facilities on the railway network of a particular country is the lack of clear methods of analysis and reliable forecasting of the process options, taking into account the existing infrastructure. It is necessary to maintain and develop existing foreign trade and domestic industry relations, their management, taking into account the specifics of all interested counterparties, including state and public interests.

2 Methods

The economic space of commonwealths, unions, countries, regions and individual industries is directly linked to the state of the transport system - the problems of delivering material resources and benefits play a decisive role in the organization of any trade, without which, in fact, there will be no production [1].

The global economic crisis, political and economic changes, the COVID-19 pandemic, and the related volatility in fuel and energy resources have led to serious problems in the transport service market. The slowdown in the growth rates of the economies of most CIS countries also affected the freight service market [2]. However, in 2019 there was an increase, which was facilitated by a significant increase in the overall retail turnover (especially e-commerce) and the related implementation of a number of large-scale projects in the field of infrastructural support for freight transportation, including railway lines. In this regard, the

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average transportation distance has increased significantly; electronic document management and digitalization of transport control increasingly supported the process.

Freight transport flows were mainly redistributed in the Europe-Asia direction. In 2020-2021, (as compared to 2019), negative trends emerged in the form of a regular increase in the cost of fuel and energy resources, tightening of regulatory requirements, an increase in customs duties, sanctions in the form of the abolition of previously introduced benefits, and other. At the same time, the general renewal of the railway fleet can be noted. The development of the transport industry as a whole is hampered by factors such as unfair competition, low market transparency, and insufficient development of infrastructure [3].

Trends in the development of the transport and cargo-carrying market are considered in the example of the railway network "Space 1520" for the period up to 2021. (1520 mm is the official track width of the railways of the CIS countries, the Baltic States, Mongolia and Finland. The total length of the "broad gauge" space is over 150,000 km) [4].

Since transit between Europe and Asia is one of the most profitable segments of rail transportation, the dynamics and structure of China's trade in EU foreign trade, shown in Fig. 1, are of interest.

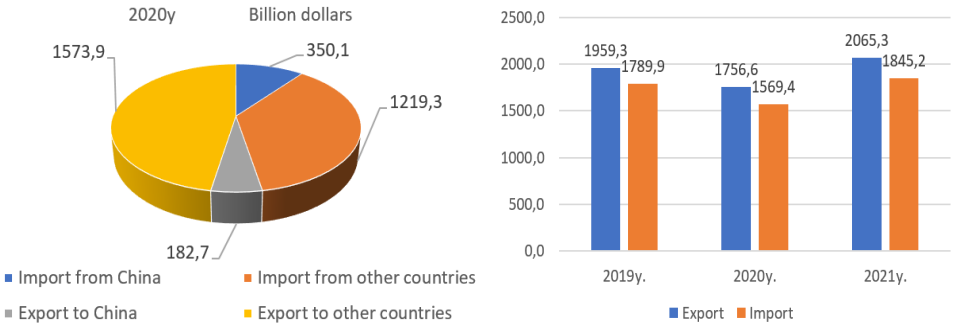

Fig. 1. Structure and dynamics of the foreign trade turnover of the EU and China for 2019-2021

According to Fig. 1, it can be seen that the volume of China's imports and exports exceeded the same indices of other countries in 2020; as for the dynamics, there is a decrease in all indices in 2020 compared to 2019, and in 2021 the indices exceeded the value observed in 2019-2020, which could not but affect the performance of railroad freight activity [5].

In 2020-2021, the WCI Drewry index, which reflects the cost of shipping a container by sea between China and Europe, exceeded the ERAI rail index, which confirmed the advantages of rail freight transportation - speed, reliability and low delivery costs. There has been a modal shift and a tendency of transition from shipping by sea to rail transport in freight shipments. Besides, one can note the stability of railway rates (Figure 2).

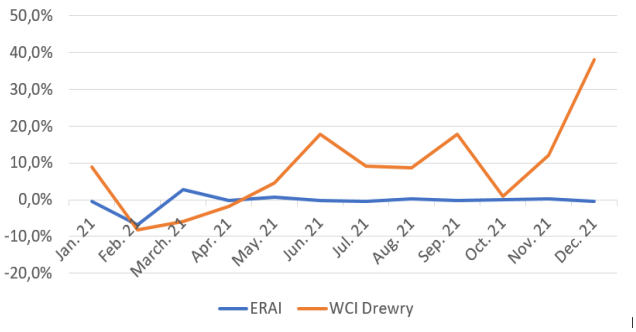

Fig. 2. Dynamics of changes in ERAI and WCI Drewry rates [5].

The virtual absence of rate volatility increases the attractiveness of rail transportation within the framework of foreign trade transactions.

The stability of rail traffic during the pandemic is another factor that increases the competitiveness of rail freight and contributes to the fight against COVID-19 [6].

The traffic volumes and the dynamics of train loading along the route are shown in Figure

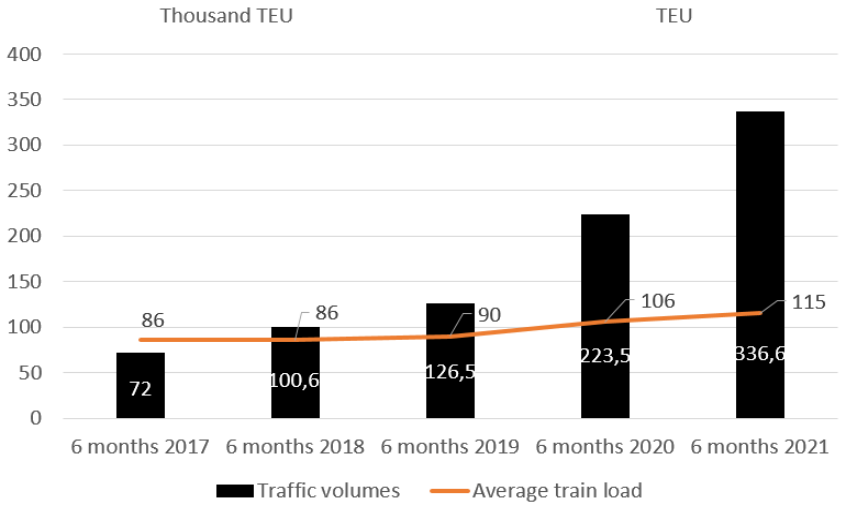

Fig. 3. Traffic volumes and dynamics of train loading on the Eurasian route in 2017-2021.

In the first half of 2021, the volume of cargo transported on the Eurasian rail route amounted to 336.6 thousand TEU, exceeding the figures for the same period last year by 50% and amounting to 61.5% of the transportation figures for the entire 2020. In the eastern direction in the first half of 2021, 135.4 thousand TEU crossed through, and in the western direction - 201.2 thousand TEU, that is, 60% of the containers passed to the west and 40% passed to the east [7]. This trend has led to a 44% increase in transported containers compared to 2020 and 99% more than in 2019. The average number of train departures per day increased by almost 1.5 times.

The continued increase in freight traffic on the Eurasian rail routes has significantly increased the load on the infrastructure of "Space 1520", which has affected such indices as container traffic speed and average travel time. The dynamics of these indices is shown in Figure 4.

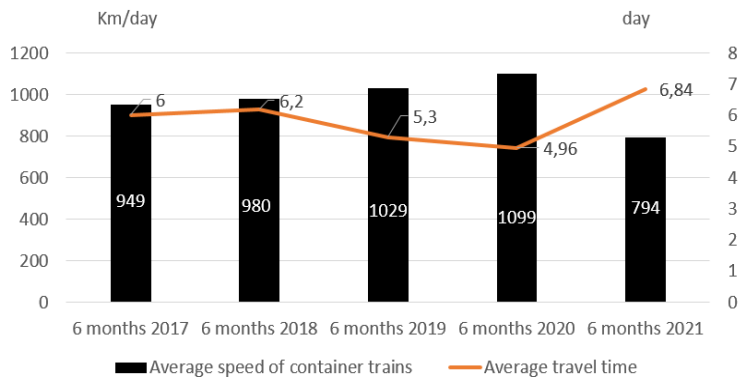

Fig. 4. Dynamics of speed and travel time of freight railway dispatch on the Eurasian route in 2017-2021.

As seen from Figure 4, the average transportation speed in 2021 dropped, and the average travel time increased; this increased the expenses of the carrier and the customer and reduced overall efficiency [8]. One of the reasons for these changes was the insufficient capacity in the points where cargo containers change gauge, as well as the insufficient infrastructure along the route and the lack of cargo facilities [9 – 12].

3 Results and discussion

At present, we can talk about the diversification of the cargo base and the trend towards full capacity loading.

The main success factor throughout 2021, which manifested itself in the form of another update of records in the volume of goods transported on the Eurasian route, was the competitive advantages of rail transport, backed by many years of fruitful and stable operation of the services of the Eurasian route and optimally built relationships with consignors and other partners. This was not the result of the state of the market, including other modes of transport, but the result of many years of efforts and activities to develop Eurasian rail transit traffic [13].

The proposed improvements in the management of operational activities may well become a new factor in increasing the competitiveness of railway transport and the routes. Besides, we can note the prospect of using intelligent sealing systems (electronic means of identification (EMI), designed to ensure a high level of safety and security of cargo through the introduction of systems of prompt response to entry, designed to reduce the number of thefts and break-ins. High-tech solutions, combined with well-coordinated actions of counterparties, will provide another competitive advantage for both international rail container transportation in general and for the Eurasian routes in particular.

The environmental friendliness of railway transport is becoming increasingly important. Here, competitiveness is enhanced due to the fact that new regulation at the EU level, and the prospect of including all types of transport in the Emissions Trading Scheme, will increase the costs of all transport-logistics companies, except for the railway ones [14].

An analysis of the trends in the market of transport and cargo-carrying services allows us to speak about the presence of problems shown in Fig. 5.

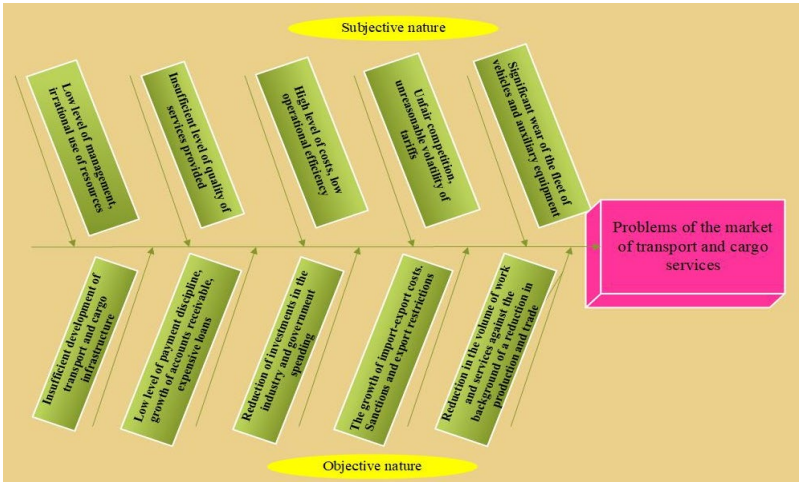

Fig. 5. Problems of the market of transport and cargo-carrying services

In general, we can talk about the presence of a large number of indices that assess the performance of the cargo transportation industry; they show a negative trend, and this indicates the economic crisis of the CIS countries, aggravated by the global political situation, leading to an increase in the problems of the transport industry. In rail freight, the situation is much better, with the share of empty containers falling from 23% in 2017 to 6% in 2021.

Separate risks and negative factors of influence on the transport and cargo-carrying market are shown in Fig. 6.

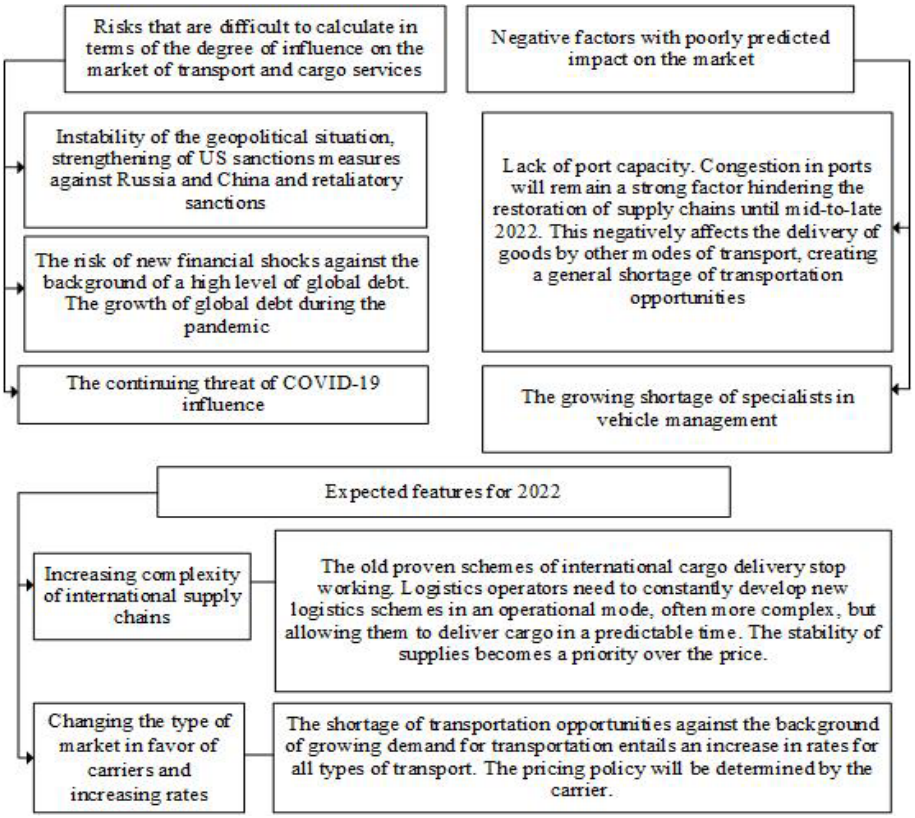

Fig. 6. Risks and negative factors of the transport and cargo-carrying market by the degree of forecasting their impact, expectations for 2022.

Taking into account the risks, negative factors and expectations, as well as the existing problems in the transport and cargo-carrying industry, the solution of which will increase the intensity of the reorganization in the industry, Fig. 7 shows qualitative changes that can bring positive results.

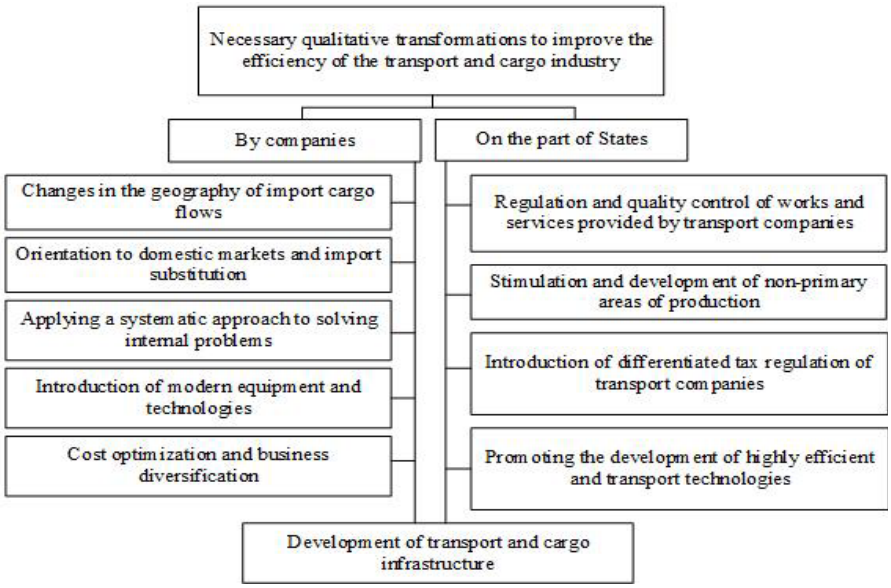

Fig. 7. Roadmap for the necessary qualitative transformations in the transport and cargo-carrying industry.

4 Conclusions

Thus, as the main positive trend in the market of railway transport and freight services on the example of the Eurasian route, one can note the growth in freight traffic, the increase in the average distance of routes, the increase in the trainload capacity due to the growth in the total volume of foreign trade turnover between the EU and China, online commerce. The growth of the competitiveness of rail transportation on the Eurasian route is due to the stability of rates, the reliability of transportation and loyal pricing. Among the negative factors, one can note a decrease in the average speed of movement of freight containers due to insufficient preparedness of the cargo infrastructure. The main risks and threats to the industry are due to the international situation, sanctions, and other factors affecting trade, production, and the volume of shipments.

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