DIRECTIONS OF ECONOMIC DEVELOPMENT OF THE RAILWAY TRANSPORT SYSTEM

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ABSTRACT

In this article, the main directions determining the development of the organizational and economic foundations of the railway transport system, the main tasks of the economic development of the railway transport system, the volume of transportation of certain types of goods in railway transport and the trends of indicators of the work of railway transport in Uzbekistan were studied, the structural reform of railway transport the most important conditions were indicated, the studied problems were systematized according to the results of the analysis, and at the same time, the principles of strategic integration of railway transport and a model of the development of the railway transport system were proposed.

KEYWORDS: *Organizational And Economic Basis Of The Railway Transport System, Simulation Model, Cargo Delivery, Transport Logistics System, Hierarchy Of Tasks, Transport Complex, Transport-Expedition, Transit Potential, Intermodal And Multimodal Transport Types, Services Market, Railway Transport Infrastructure, Main Routes, Logistic Concept, Simulation Model.*

INTRODUCTION

The stable development of international economic relations is mainly determined by transport activities. The length of transport routes in the world is 50 million. Stabilization was noted at the level of more than a kilometer. According to the World Bank, today "the international transport market is estimated at 2.2 trillion (6.8% of GDP)". In most countries of the world, the share of transport in GDP is 4 - 9 percent, and in population employment is 3-7 percent [1]. On the one hand, the transport system reflects the level of development of the national economy, and on the other hand, the level of security of the country.

In the world, extensive scientific research is being conducted on the effective development of the transport system. In particular,economic development of the railway transport systempositive effects of the development of the railway transport network have been noted in the studies conducted on the formation of economic approaches that ensure the effective development of the railway transport system, a comprehensive approach to the issues, however, a comprehensive opinion on the direction and scope of these effects has not been formed. Based on this,economic development of the railway transport systemdetermines the need to conduct additional research.

Special attention is being paid to rapid development of transport communications as an important branch of economy in our country. In this regard,In 2022-2026, the Development Strategy of

New Uzbekistan also calls for "development of the market and infrastructure of transport and logistics services, raising the level of electrification of the railway infrastructure to 60% and rapid development of the highway network, "green corridors" for foreign trade in the field of transport and expansion of transit opportunities and transit cargo priority tasks such as bringing the volume to 15 million tons" [2]. important tasks have been determined and the President of the Republic of Uzbekistan stated in his Address to the Oliy Majlis that "We need to develop the transport and logistics sector in order to deliver our products to the domestic and foreign markets, to reduce the cost of goods" [3].This, in turn, means the effective use of the country's transport-transit potential and modern delivery technologies, as well as the expediency of conducting scientific research on ways of economic development of the railway transport system.

Analysis of Literature on the topic

The theoretical and methodological foundations of the development of the railway transport system are reflected in the scientific research of a number of local and foreign scientists. According to the English economist Anthony Venables, the transport complex is a set of national economic networks specialized in meeting the needs of social production for transporting goods and passengers [4].

D. According to Bauersox, he paid special attention to the problems of multimodal and intermodal transportation, including the advantages and economic efficiency of transportation organization compared to traditional methods. At the same time, the author specifically mentions the transport system, which includes transport networks, vehicles and transport companies [5].

According to G. Samadov, A. Zoxidov, A. Gulamov and M. Ravshanov, among the scientists of our country, "the transport system is a complex of transport modes and infrastructures that are interconnected in the process of delivering goods and passengers to their destination, that is, interdependent transport sectors, labor resources and the country in order to effectively manage the economy, the management system of all types of transport is understood" [6].

Research Methodology

Effective development of the railway transport systemThe results of the scientific research of national and foreign scientists, who were engaged in the analysis of the problems, served to evaluate the theoretical and methodological basis of this study and the system in terms of both quantity and quality. In the preparation of the article, abstract and analytical observation, comparative and factor analysis, indicative, selective observation, comparison, economic-statistical, induction and deduction, indicative, selective observation, comparison, correlation and regression analysis, economic-mathematical modeling, isikawa diagram, etc. methods used.

Analysis and Results

The transport complex, which performs the main "blood circulation" function, is of particular importance in the effective development of the economy of world countries. An effective transport system optimizes the movement of goods and products in the domestic market, as well as increases the economic competitiveness of the country in foreign trade, and provides an opportunity to accelerate the processes of integration into the world market. In general, the large-scale development of the country, the high speed of interregional economic relations, in a broad sense, directly depends on the effective operation of the transport infrastructure [7].

Fundamental economic reforms in railway transport require development of the concept of its development. Accordingly, there is a need to develop a new system of views on the economic development of railway transport. This is the lack of effective communication and cooperation between management at all levels of the railway production system, including ensuring the transportation process, availability of sufficient number of appropriate rolling stock, track quality, optimal circulation of wagons, effective scheduled maintenance, logistics, marketing, etc. It is explained by the fact that it is the most important problem of the existing organizational and economic mechanism of the railway transport system.

It is appropriate to consider the impact of the country's transport network on economic development not only in terms of quantitative growth, but also in terms of qualitative changes in the economy, that is, scientific and technical progress and the spread of innovations. The transport system is revealed through specific results of influence on the socio-economic development of the country (Table 1.1).

TABLE 1.1 THE RESULTS OF THE IMPACT OF THE TRANSPORT SYSTEM ON THE COUNTRY'S ECONOMIC DEVELOPMENT[1]

No	Type of exposure	Results of the impact
1.	Directly	decrease / increase in the cost of product production; decrease / increase in efficiency of local enterprises; growth / limitation of population movement, recreational opportunities, social relations.
2.	Indirectly	improving the investment environment; increase innovative activity. stimulate the intensive development of related industries; increase the efficiency of the use of other production factors, increase market opportunities for their use; formation of aggregate demand.
3.	Term	**Long-term improvement:**meeting the needs of businesses and residents for high-quality transport services; increasing tax revenues from the availability of transport infrastructure; delivery of residents to workplaces; job creation; providing the population with products (delivery). **Short-term effect:**effects of cost reduction or, on the contrary, cost increase; meeting the needs of the population to move for various purposes at a certain time of the year.
4.	According to the means of exposure	**Endogenous effect:**improving transport links for businesses and residents; increase investment attractiveness of the region and as a place of permanent residence. **Exogenous influence:**inclusion of the region in interregional and foreign economic relations.
5.	Depending on the level of exposure	**Local level**- development of internal transportation, expansion of local markets, increase of opportunities for business, increase of population mobility. **Regional level**- expansion of business, increasing the possibilities of forming agglomerations; improving population mobility and staffing of

		enterprises. **National level**- ensuring national security, territorial integrity of the country, creating opportunities for business expansion, population and capital mobility.

The results of the long-term socio-economic growth of the transport system and the impact on the country's economic development are shown in the following. A direct effect of the transport infrastructure is to reduce production costs while improving the infrastructure. In the institutional direction of economic theory, the physical and institutional infrastructure has the ability to reduce transaction costs (communication, transport, information).

Assessing the position of the railway network in the country's economy, determining the prospects for the development of the network, and conducting research on the study and forecasting of trends, with a direct impact on the medium and long-term strategy of the railway network, today's policy, material and technical resources, labor force and the development of the financial situation serves as a basis for determining the need and developing its long-term strategy.

The level of development of railway transport has a direct impact on the development of the country's economy, because the transport costs included in the final price of the product and the ability to ensure timely delivery are important competitiveness factors of local enterprises. Therefore, studying the main performance indicators of the railway transport system, the stages of development of transport and logistics infrastructures, and developing recommendations for eliminating existing problems in the system is one of the main issues today. In Uzbekistan, 5.3% of the local freight volume and 92.5% of the transit volume are accounted for by railway transport [9].

The main commodities offered for transportation include coal, grain, oil, ore, mineral fertilizers and other bulk bulk and liquid cargoes (Table 1). As can be seen from the data in the table, the main part of the cargo transported by railway transport falls on the products of the mining industry (coal, oil and oil products, ferrous and non-ferrous metals, ores).

TABLE 2 VOLUME OF TRANSPORTATION OF CERTAIN TYPES OF CARGO IN RAILWAY TRANSPORT[2] THOUSAND TONS

Indicators	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Coal	3 971.0	3 712.7	442.9	5 632.6	5 231.0	4 459.2	5 673.8
Oil products	10,773.9	10,661.4	10,961.9	6 769.4	6 156.2	5 951.6	5 372.2
Black and non-ferrous metals	959.5	887.2	812.7	1 079.3	1 280.9	1 113.2	1 054.9
Chemical and mineral fertilizers	4 304.2	4 381.3	4 049.8	3 451.4	3 602.6	4 210.9	4 641.7
Construction goods	7 728.7	6 690.3	6 329.4	5 475.3	5 575.5	4 071.9	5 607.7
Cement	5 325.7	5 514.1	4 846.4	4 866.4	5 112.0	5 044.5	4 582.1
Wood products	46.3	21.2	18.9	27.1	31.2	19.7	23.0
Grains and grain products	1 266.9	1 269.6	1 662.4	1 737.1	1 645.2	1 898.6	2 000.4

Total	**34 376.2**	**33 137.8**	**29 124.4**	**29,038.6**	**28,634.6**	**26,769.6**	**28,955.8**

The delay in the delivery of goods is explained by the fact that there are still problems at the stopping points of the rolling stock, this situation shows the need to improve the efficiency of the rolling stock in order to ensure the effective performance of the assigned tasks by the railway transport. Table 2 presents information describing the use of some types of workers, cargo, rolling stock in general use.

TABLE 3 INDICATORS OF RAILWAY TRANSPORT IN UZBEKISTAN[3]

Indicators	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Locomotive productivity, gross tkm per day	947	1015	1056	1110	1190	1200
Freight car productivity, tkm net per day	30	30.4	30.8	31.1	32	32.2
Average speed of the freight train on the section, km-h	32	31	30.6	31.3	30	31
Technical speed of the freight train, km-h	39.3	39.7	40.4	40.7	41.1	41
Average cycle time of a freight car, per day	4.6	5.78	4.2	4.1	3.84	3.9

In the last fifteen years, the volume of cargo transportation has increased by 27% and the number of passengers has increased by 86%, but it can be observed that the inventory of mainline locomotives used in the transportation process has decreased by 18.2%. The reduction of the section speed of the freight train by 9.6% has led to a certain decrease in the capacity of the railway transport [10]. In 2016-2021, the technical and section average speed of freight trains is much lower than the specified speed, and in our opinion, the following factors have a negative effect on the speed of trains:

freight trains are late for the specified time;

technical failures at stations;

increase in technological time standards for trains at stations;

increase in the standard of time spent on troubleshooting at the station;

adverse effects of working personnel associated with the movement of freight trains.

The extensive nomenclature of transport-logistics services and their wide range of possible changes in quality, the impact they can have on the competitiveness of services and the cost of spending, while other factors require the enterprise to have a clear, specific strategy in the field of providing logistics services to consumers. A comparative analysis of freight costs by types of transport is presented (Table 3).

If we pay attention to the price analysis on a comparative basis, we can see that the costs of our country's producers are somewhat higher. For example, to deliver one standard carload (60 t of textiles) per kilometer, the rail transport service costs $7.29.[12]. The same figure is $4.24 in neighboring Kazakhstan, $3.65 in Kyrgyzstan, $6.83 in Tajikistan, and $2.65 in Turkmenistan.

This has a negative impact on the competitiveness of our country's railway transport in international transportation [8].

TABLE 4 COMPARATIVE ANALYSIS OF FREIGHT COSTS IN MODES OF TRANSPORT[4]

The price of transporting 20 tons of cargo per 1 km by car(in the case of a textile product)				
Uzbekistan	**Kazakhstan**	**Kyrgyzstan**	**Tajikistan**	**Turkmenistan**
$2.45	$1.70	$1.55	$1.35	$0.92
The cost of transporting 1 standard wagon of cargo per 1 km(up to 100 km.)				
Uzbekistan	**Kazakhstan**	**Kyrgyzstan**	**Tajikistan**	**Turkmenistan**
$7.29	$4.24	$2.65	$6.83	$2.65
Number of necessary procedure documents for export and import				
10/11	10/12	9/10	11/12	6/5

It should be noted that today the share of private companies in cargo transportation activities in the country is constantly increasing. Transports carried out by the rolling stock of private companies are formed under the influence of the state tariff system. Accordingly, the most important conditions for the structural reform of railway transport were as follows [13]:

ensuring continuous operation and safety of the transportation process;

state regulation and self-management mechanisms of the market economy.

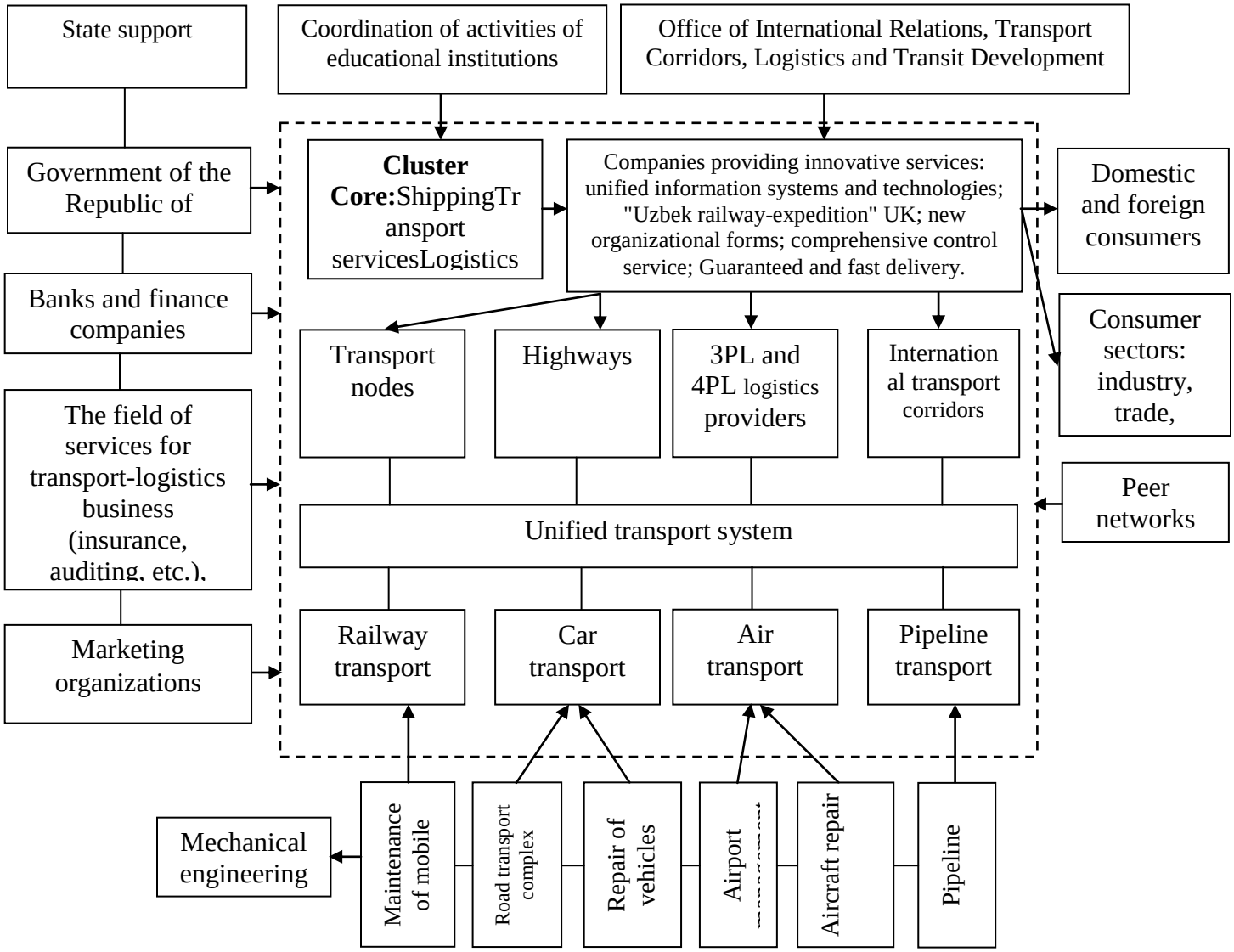
In this regard, it is appropriate to implement the following measures:

creation of a system of integrated legal and economic relations that encourages the reduction of costs by each participant of the transportation process;

ensuring legal responsibility between freight carriers, owners of rolling stock, cargo owners, as well as other organizations participating in the transportation process;

gradual separation of monopolistic and competitive activities;

distinguish between budgetary and non-budgetary financial resources according to the methods of accounting and their use.



1. Directions of economic development of the railway transport system[5]

At the same time, some types of railway transport activities, namely infrastructure, trunk railway network services, power supply systems and devices, locomotive management, etc., have

retained their monopolistic nature for technological reasons [14]. Reorganization of Uzbekistan's railway transport created initial conditions for quality management of this network and introduction of optimal market structure. An imitation model of the economic development of the railway transport system was proposed below (Fig. 1).

The proposed general approach to the economic development of railway transport includes six directions. This direction is the basis for solving the problem of developing a scientifically based long-term strategy for the development of railway transport [15]. The simulation model, which ensures the development of the complex, leads to the development of market factors that allow increasing the strategic competitiveness of railway transport, effective use of the transport-logistics system and transport-transit potential, reducing costs, increasing the level of service and offering new services.

CONCLUSIONS

The proposed model of economic development of railway transport includes legal, managerial, financial-economic, ecological and innovative aspects aimed at ensuring a balance between the interests of the state, society and railway transport. The directions presented in the model of comprehensive development of railway transport ensure its stable and comprehensive development by strengthening integration with insorting and outsourcing, expanding strategic diversification, joining the world transport system.

Also, economic development of the railway transport systemit is appropriate to implement the following measures for:

- Change the principles of setting tariffs and gradually move to a new tariff system, reduce the number of correction coefficients, reduce the types of financing of railway transportation from all sides;
- Creation of a competitive environment in the field of railway cargo transportation by creating conditions for the establishment of private companies dedicated to freight transportation in railway transport, which have their own locomotives and wagons;
- Increasing the speed and reliability of the transport and logistics system, increasing the share of railways supplied with electricity to 55% by 2030. For this, it is necessary to provide electric power to 168 km of railway every year, and the amount of investments is 5.34 billion. should amount to dollars. 1.2 billion to upgrade locomotives and wagons until 2030. dollar investment is required:
- In order to reduce the transport costs of cargo transported in containers by 10%, it is necessary to increase container transportation by 25-30%;
- Increase the efficiency of the transport systemto expand the network of multimodal transport-logistics centers in the regions;
- Harmonizing the regulatory and legal basis, technical and technological regulations and standards of cargo transportation, intermodal and multimodal cargo transportation, logistics centers, transport-forwarding activities in accordance with international standards;
- Organization of an integrated information system to ensure the effectiveness of multimodal transportation;

- It is necessary to form a national network of customs logistics centers, to ensure that transport-logistics operations in them are at least 3PL level.

Thus, the presented development model determines the solution to the problem of developing a scientifically based strategy for the development of railway transport in modern conditions. A model that ensures the development of the complex leads to the development of market factors that allow to increase the strategic competitiveness of railway transport, reduce costs, improve the level of service and offer new services.

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