

Assessment of the impact of transport corridors on the economy of the Eurasian region

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Abstract. In modern conditions, the economy of the regions of the Russian Federation is in conditions of high uncertainty associated with an unstable political situation. Not having had time to completely eliminate the consequences of the pandemic caused by the spread of coronavirus infection, the regions of Russia are forced to face new circumstances. Respectively, it requires an analysis of the current situation, determination of possible directions of development. At the moment, the conjuncture of regional markets is undergoing significant changes, new political alliances are being formed, and cargo flows are rotating. The article considers the processes of integration and globalization affecting the world economy and the transport industry. The state of the transport infrastructure of the Russian Federation is analyzed: the problems preventing the timely renewal of the transport infrastructure are identified, the assessment of the transport industry of Russia by international organizations is considered, the level of investment activity is studied. The trends of cargo transportation in the Eurasian region have been established. The directions of development of the Eurasian transport corridors are formulated. Thus, it can be concluded that the conducted research is relevant: the Eurasian transport corridors open new opportunities for many regions, producers and investors, as well as for end users of products.

1 Introduction

The globalization of the processes of the transport system is the process of the actual internationalization (internationality) of the transport infrastructure, the integration of means of transport, the universalization of technologies and methods in the field of communication exchange, occurring primarily as a result of the formation of a unified international transport terminology and documentation [1].

The process of creating a single transport space continues in the world, but due to the tense political situation in 2022, there is a reorientation of transport flows and partnerships. Trade wars between the United States and China have made a negative contribution to global development, which led to a reduction in mutual and, consequently, world trade (US commodity exports to China decreased by 4% in the six months of 2020 compared to the same period of 2019, imports by 14,9%), falling prices for hydrocarbon fuel and the reduction in demand for it, the general uncertainty associated with the aggravation of geopolitical conflicts [2].

Transport is an important link in the economic system with high socio-economic significance, respectively, it is entrusted with the function of integrating Russia into the world economy. But the state of the transport infrastructure and other problems of the transport industry reduce the pace of the integration

process. The process of integration is accompanied by the processes of globalization, expressed in the diversification of world markets and in the increase of global competition.

The transformation of the planned economy into a market economy, according to experts, has almost occurred. In 2022 The Russian Federation is under the influence of another economic crisis caused by political events, respectively, inflationary processes have worsened, which leads to price increases, freezing of investment projects, and budget redistribution. Consequently, the transport industry is subject to a higher load, at the same time the deterioration of the transport infrastructure is even more aggravated. The issue of ensuring the safety of transport networks is also acute, especially in aviation transport, since the availability of aircraft and spare parts is noticeably reduced.

Sea transport, which is subordinate to the operators of shipping companies from the Russian Federation, during the pandemic caused by the spread of a new coronavirus infection, significantly increased its profit in 2020 due to an increase in freight rates. In 2022, this type of transport also began to experience difficulties due to the blocking of calls to European ports, an obstacle to the employment of Russian sailors by foreign shipping companies.

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2 Materials and Methods

Let's consider how international organizations assess the involvement of the Russian Federation in global transport processes.

According to the World Bank data, Russia ranks 75th in the ranking of countries on the logistics efficiency index in 2018, having improved its performance compared to 2016, with the exception of the "Competence in Logistics" indicator (Table 1).

Table 1. Dynamics of the logistics efficiency index of the Russian Federation, %.

Indicator	2016	2018	Growth rate, %
Infrastructure quality	2.43	2.78	14.4
Competence in logistics	2.76	2.75	-0.4
Tracking deliveries	2.62	2.65	1.1
Ease of organization of international cargo transportation	2.45	2.64	7.8
Timely delivery	3.15	3.31	5.1
Customs efficiency	2.01	2.42	20.4
Total index	2.57	2.76	7.4

It should be recognized that the market of transport and logistics services of the Russian Federation is significantly inferior in important indicators not only to the most developed countries, but also to outsider countries [4].

The World Bank also estimated the number of investments received for infrastructure development from the budget of the Russian Federation, which amounted to only 1% of GDP (the study was conducted in 2012-2014). Russia is ahead of only Brazil and India in this respect, but these countries have a higher value of private investment. And the situation will only get worse – every year, according to experts, the gap between the need for investments and their size will increase more and more in the world (Fig. 1).

The Russian Federation occupies a rather low position in terms of the density of railways among the leading countries in the world economy. In general, the situation is disappointing for other types of transport – sea, river, aircraft are very outdated.

There is a possibility that the above problems can be solved through the further development of the international transport corridors (ITC) system, which will be able to stimulate the attraction of private investment due to the interest of investors in accelerating delivery and higher capital turnover, which, in turn,

contributes to the renewal of transport infrastructure at a faster pace.

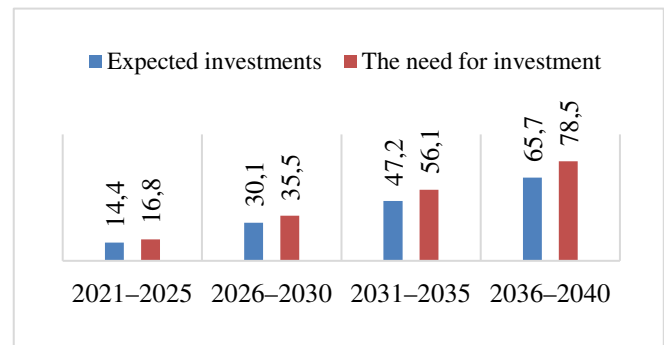


Fig. 1. Dynamics of infrastructure investments in the world until 2040, \$ trillion.

When studying the research materials, system-structural, comparative-analytical, and economic-statistical methods, the method of grouping and classification, the method of expert evaluation were used.

3 Results and Discussion

An attempt to solve the problems of the transport industry by developing a system of international transport corridors is due to the fact that transport has a significant impact on the distribution of productive forces, at the same time being part of material production.

Since international transport corridors run mainly through the territory of the Eurasian region, let's consider local trends in cargo transportation. All EAEU member states are interested in developing the transit transportation market in Europe–Asia and vice versa [5].

The effective functioning of the transport system is based on the balance of the locomotive and transmission capacity of the network with the needs of domestic and international transit [6]. The transit of the Eurasian region mainly consists of the cargo flow of containers transported by rail, so we will focus on this type of transport. Road transport here acts as an element of multimodal transportation and works only in conjunction with sea and rail.

In the world, the largest share in container transportation is occupied by sea transport. In modern conditions, there is a possibility of a decrease in the share of sea transport for the following reasons: a decrease in throughput on the way to seaports on land; an increase in freight rates; the development of regional trade along the Europe-Asia corridors. Due to these circumstances, rail transport can compete with sea transport, for example, because of the higher speed of delivery. If the container arrives from China to the European Union by sea in 60 days, then by rail the delivery time will be 14 days. In addition, there are already services that can deliver a container through the territory of the EAEU in 7 days.

Another advantage of rail transport is the implementation of transportation in smaller batches,

which also affects the efficiency of the use of working capital. After all, one of the trends in the shipbuilding market is an increase in the carrying capacity of sea vessels, therefore, to ensure the full loading of the vessel, an increasing size of the transport batch is required, respectively, the need for storage space is growing in conditions of increasing the value of land plots due to population growth and the duration of cargo storage in a warehouse.

It is also worth noting the environmental compatibility of railway transport in terms of direct carbon dioxide emissions and environmental impact.

For the above reasons, the EAEU is actively working to increase its transit potential. The Eurasian transport corridors are already able to speed up the delivery of goods, at the same time ensuring lower costs. The latitudinal railway lines of Russia, Kazakhstan and Belarus are the infrastructural basis of these corridors. These countries have made considerable efforts to

develop the transit potential of the Eurasian region, for example, in 2014 the United Transport and Logistics Company (UTLC EPA) was established.

Also, Russia and Kazakhstan, in cooperation with China, are creating a Transcontinental international Road Corridor "Western Europe – Western China" ("WE-WC"), which will connect the seaport of Lianyungang with ports on the Baltic Sea. All the EAEU countries will be connected to the WE-WC corridor through a system of branches, therefore its infrastructure is designed for intra-union communications and transit transportation [7].

4 Conclusion

As a result of the events of 2020-2022, the following trends in the development of Eurasian Transport corridors can be identified (Fig. 2).

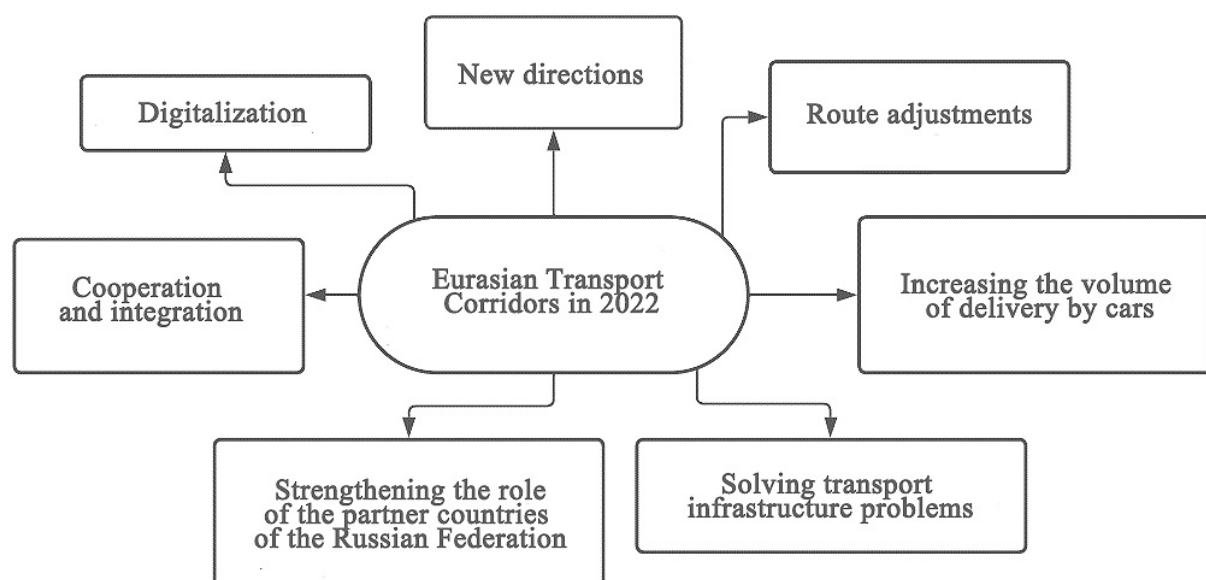


Fig. 2. Directions of development of the Eurasian transport corridors in 2022.

1. Active development of new directions. For example, in 2022, the first container trains went in the direction of Turkey – Azerbaijan – Russia, and the traffic flow has sharply increased since March. Another new direction for container trains is China – Kazakhstan–Turkmenistan–Iran.

It is worth noting the integration project "Eurasian Agroexpress", aimed at developing the export of agricultural products of Russian agro-industrial producers and producers of the EAEU member states to the countries of Southeast and Central Asia. Within the framework of the project, it is planned to achieve the volume of cargo transportation of the agro-industrial complex between the EAEU member states and in the directions to the countries of Central and South-East Asia up to 500 thousand tons by 2025 and up to 1 million tons by 2030, while ensuring competitive

advantages for shippers in terms of sea freight rates and accelerated delivery times.

2. Reorientation of cargo flows. For example, ITC "North –South" can additionally attract cargo such as grain and beans, oil, petroleum products, fertilizers, metals, woodworking products, construction materials, food products in refrigerated containers. For Russia, this also means the ability to import goods to Europe through countries that have not been sanctioned, and to export fertilizers blocked in warehouses in Latvia, Belgium, Estonia and the Netherlands. In the future, the North–South ITC may become a real competitor to the Suez Canal, through which the only meridian route currently runs.

3. The growth in the volume of road transport along International transport corridors. In the spring of 2022, Turkey's role in organizing delivery from Europe by road

has increased: the cargo flow goes from Turkey through Georgia and the Upper Lars border crossing, or through Azerbaijan and further to Russia through Dagestan. In July 2022 Kazakhstan has opened ten automobile checkpoints.

4. Increasing the importance in the international market of countries such as Azerbaijan, Belarus, Georgia, Kazakhstan, India, Iran, Uzbekistan, Turkmenistan, Turkey. For example, all three routes of the North–South ITC: Western, Eastern and Trans–Caspian - will pass through the territory of Iran, respectively, this will ensure the loading of the local transport infrastructure. The North–South ITC car route passes through the Russian-Georgian border; therefore, this means an opportunity for Georgia to increase its transit potential. It is planned to create new international cooperation, for example, a joint logistics operator of Russia, Azerbaijan, and Iran.

It is impossible not to note the strengthening of China's role in the political arena. Obviously, this is due to the implementation of the "One Belt, One Road" ("New Silk Road") strategy. For the Russian Federation, this means obtaining the status of a "Eurasian bridge" between Eastern and Western countries, the active development of the regions of the Asian part of Russia, the formation of a belt of investment activity [3]. In 2020, which can be considered a crisis for the global economy, the volume of container traffic on the China–Europe route through the territory of the EAEU increased by almost 64%. At the same time, the growth of container rail traffic through the territory of the Russian Federation amounted to 592 thousand. TEU, (growth rate of 54,2% compared to 2019).

5. Difficulties in the construction of transport infrastructure. For example, on the Western Railway route, the Rasht–Astara section is not completed, on the Trans–Caspian one, there is a shortage of fleet and the shallowing of the Volga-Caspian Canal. The railway in Azerbaijan is single-track and non-electrified. From May 2022 Kazakhstan is experiencing a deficit of free freight transport (especially on the routes from Alma-Ata to the West and North), there is an imbalance in traffic flows, as well as downtime associated with waiting for the return loading of transport in Russia.

Nevertheless, there are also positive changes in the state of the transport infrastructure. For example, the development of the ports of Astrakhan, Makhachkala, and Olya. Within the framework of the Eurasian Agroexpress project, it is planned to create a digital ecosystem of agrologistics through the construction of wholesale distribution centers both in Russia and in the EAEU member states, including the East-West and North-South routes of the ITC. JSC "Russian Railways Logistics" has purchased a fleet of modern refrigerated containers.

6. Coordination issues. For example, there are difficulties with the coordination of tariffs on the Eastern Railway Route. There are also problems with obtaining visas for drivers (Turkmenistan, Iran), permits for road carriers, insurance of goods and vehicles due to local peculiarities of legislation and bureaucratic delays. As a result of the introduction of restrictions on the transit of

cargo transport to the Kaliningrad region through the territory of Lithuania, there was a problem of exporting goods with the status of the EAEU to the territory of continental Russia.

Nevertheless, there are positive aspects in this direction. Within the framework of the Eurasian Agroexpress project, competitive end-to-end tariff rates have been established with the participation of the railways of Iran, Kazakhstan and Turkmenistan. The mechanism "simplified customs corridor and phytosanitary corridor" was also launched for the project.

7. Digitalization of the Eurasian transport corridors. The development of digital technologies will increase the share of transit through the territory of the EAEU to 20% in the segment of high-margin cargo. In September 2021 the Council of the Eurasian Economic Commission has approved the Russian initiative to launch a digital project to create an information and communication showcase of services, which will form an ecosystem of digital transport corridors of the EAEU. Due to the project, it is planned to increase the profitability of the EAEU transport industry by 80 billion rubles per year and reduce the time for control and supervisory measures by 10% in rail transport and by 25% in road transport. Digitalization of the transport industry is inevitable. Practice clearly proves the demand for robotization and digitalization of many processes, since this provides several advantages and, first of all, economic ones [8, 9].

Thus, the current situation in the world opens new opportunities for ECO member States in the development of international transport corridors, which will provide competitive advantages, reduce the cost of delivery and increase its speed. It is also worth emphasizing that the development of transport corridors at the present stage, in the author's opinion, will require close cooperation between the state and business (for example, the mechanism of public-private partnership), as well as research institutes, which will improve the state of transport infrastructure on an innovative basis.

References

1. G.N. Lihosherstova, I.V. Semchenko, S.N. Yasenok, The globalization of the world economy and its impact on development of the transport system of the Russian Federation: the regional aspect. *Management of Economic Systems* **3(121)**, 26, (2019)
2. O.N. Baburina, G.V. Kuznetsova, Prospects for digitalization of international sea transportation. *Marine Intellectual Technologies* **4-4(50)**, 67–72, (2020)
3. K.H. Akmaev, D.K. Izmajlova, M.A. Drejcen. Formation and prospects of development of international transport corridors. *Seaports* **8** (2020)
4. V.A. Hajtbaev, K.A. Klimashin, Improving the transport and logistics infrastructure as a direction for the socio-economic development of territories. *Vestnik SamGUPS* **3(45)**, 69–78 (2019)

5. S.V. Dorohin, V.A. Zelikov, A.Sh. Subhonberdiev, E.V. Titova, M.E. Brazhnikov, Analysis of the impact of external economic factors on the development of transit traffic on the territory of the EAEU. *Vestnik VSUET* **1(82)**, 419–425 (2020)
6. A.P. Shramko, Optimization of transport and technological processes by dynamic programming *Marine Intellectual Technologies* **4-1(54)**, 184–194 (2021)
7. In Czyuj, International transport corridors of the EAEU – China: formation, development and challenges. *Science and Innovation* **11(213)**, 47–53 (2020)
8. M.V. Botnaryuk, M.I. Klassovskaya, Digital technologies: new solutions in business process management for transport logistics. *Marine intellectual technologies* **4(50)**, 73–78 (2020)
9. A.N. Popov, M.V. Botnaryuk, Ensuring the efficiency of the shipping ecosystem in the digital economy paradigm: the concept of e-navigation. *Marine Intellectual Technologies* **1-2(43)**, 86–91 (2019)