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# Development of the transport industry of the EAEU countries in the conditions of the pandemic

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## Abstract

The problems of the development of the transport sector have never lost their relevance, however, in the context of a pandemic, the introduction of restrictions on movement, the closure of borders, the aggravation of economic crises, many countries are convinced of a noticeable deterioration in the transportation situation. This applies not only to passenger transportation, but also cargo transportation. The transport industry has suffered such economic damage, which was not there before. In 2020 alone, the gross product of the industry has significantly decreased in the EEC countries, passenger and cargo transportation has decreased, and the profitability of the industry has decreased. In this regard, it became necessary to analyze the crisis state of the transport sector and determine measures for its restoration and further development.

The purpose of this publication is to identify and analyze the state of development of the transport industry in the EAEU countries in the context of the coronavirus pandemic and the deterioration of the socio-economic situation, to study its causes and problems associated with it, to develop proposals for measures of state support for the industry. The writing of the article was based on the use of general methods of scientific knowledge of economic processes. The authors have collected and analyzed a wide statistical material on the main indicators of the development of the industry, studied the world experience of state support of transport. It was revealed that the decline in the main indicators of transport development in the EEC countries occurred unevenly. Measures to support the industry also vary.

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## 1. Introduction

The coronavirus pandemic has caused damage to all sectors of the economy of the EAEU countries, as well as all countries of the world. However, one of the most affected areas was the transport industry. This was a direct consequence of the closure of borders between countries and the restrictions imposed on the movement of people and the movement of goods. The indirect causes were a drop in household incomes. The decrease in demand led to a reduction in the supply of goods. Moreover, the crisis affected all types of transport.

Reducing restrictions during the period of declining morbidity gives the industry certain chances. But as we can see, the pandemic has a wave-like nature, so the further development of the transport sector is still unpredictable. The OECD International Transport Forum predicts a reduction in traffic in Central Asia and Russia by more than half.

Without transport, all sectors of the economy may stop working. Therefore, States must ensure the smooth operation of transport infrastructure in a pandemic and post-pandemic period. All the EAEU countries have projects for the construction of new transport infrastructure facilities (roads and railways, air and sea ports), so it is impossible to reduce investments in this area. In addition, the infrastructure must be constantly maintained, which requires stable sources of financing.

In these conditions, it is necessary to increase state support for the industry, using forms and methods specific to this situation. Developed countries, with the onset of the pandemic, began to apply measures of state support for transport and other most affected industries. This support is also provided in the EEC countries. However, no joint coordinated measures have been developed. Each country uses its own methods. They do not always bring the desired result.

The article analyzes the state of development of the transport sector in the conditions of a pandemic in the EAEU countries, identifies the main problems of the industry, studies and summarizes the world experience of state support for the industry, offers recommendations for expanding the methods of state support in the Union countries.

## 2. Methods

In the course of the research and writing of this work, we have studied, filtered and presented in the article an overview of the available relevant publications on the impact of coronavirus on the development of the transport industry with definitions of concepts and existing problems, official government and international documents, and the analysis of statistical data.

The writing of this article was based on the use of general methods of scientific knowledge of economic processes, including the collection and processing of theoretical and practical material, economic analysis of statistical data, and the development of a hypothesis. The article presents a statistical analysis of the development of transport in the EEC countries by such indicators as the volume of passenger and cargo transportation, cargo turnover and passenger turnover, the gross product of the industry.

All this made it possible to analyze and develop recommendations on the directions and methods of state support of transport in the EAEU countries in the conditions of the pandemic crisis and the post-pandemic period.

## 3. Results

The impact of the coronavirus pandemic on the transport industry is now being considered in various publications. So, Jaekel B. And Muley D., noting the response measures to contain the spread of COVID-19, which varied from country to country from complete lockdown to partial restrictions, pointed out that restrictive measures have led to a reduction in traffic volumes and that policy measures play a key role in regulating restrictions on movement.

Navien B.R. and Gurtoo A. It is believed that the first victim of the Covid-19 pandemic is the public transport sector. During the peak of the coronavirus, the number of public transport users worldwide decreased by 95% (Naveen, Gurtoo, 2022).

Dudek E. And Pietrzak M. Aviation is considered to be the transport industry most affected by the COVID–19 pandemic and the parallel economic crisis. They see a way out in proper crisis management in accordance with the principles of sustainable development (Dudek, Pietrzak, 2022).

Kim M. and Sohn J. (2022) also write about the impact of the 2019 coronavirus disease pandemic (COVID–19) on the aviation industry. The authors note a significant reduction in air traffic as a result of the spread of infection. Airlines have used various means to overcome the decline in passenger numbers, such as switching to domestic routes, expanding cargo transportation, as well as mergers and acquisitions.

Kurowski M. and Huk K. (2020), analyzing the transportation market in Poland and Slovakia, indicate a significant decrease in demand for transport services in both countries and smaller fluctuations in the supply of transport services during the pandemic.

Andarova (2016) and Kalabina (2021), analyzing the Russian transport sector in the conditions of coronavirus, determine the trends of further development of the industry: the departure of weak companies, the use of new transport technologies, the redistribution of freight traffic to rail transport, the development of transport services focused on the domestic market.

Anzorova (2021), Kariyeva (2020), Vasilyeva (2019) writes about the impact of losses as a result of the pandemic in the volume of passenger and cargo transportation within the republic and abroad on the growth rates of the economy of countries, as well as the costs in the tourism sector and the development of aviation.

Transport is the most important branch of the economy. In the EAEU countries in 2019, 7499.6 thousand people were employed in this industry, which was 8.47 % of the total number of employed. However, as a result of the pandemic, the number of people employed in transport decreased by 2.1%, which amounted to 8.43 % of the total number of people employed (Table 1).

Table 1. Number of people employed in transport and warehousing in the EAEU countries (thousand people).

	EAEU: total employed	EAEU: employed in transport and warehousing	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia
2019	88568.1	7499.6	54.4	293.3	637.9	200.0	6314
2020	87150.2	7343.5	48.1	287.1	617.5	192.8	6198

The gross product of the EAEU transport industry in 2020 was 5.9 % of GDP. Although compared to 2019, this share decreased by 0.4%. This, as well as the share of transport in the GDP of the Union countries, is reflected in Table 2. The largest share of transport in the country's GDP in 2020 can be observed in Kazakhstan – 7.1 %, although compared to 2019 it decreased by 0.9 %. The largest reduction occurred in Armenia and Kyrgyzstan, where, however, the share in the country's GDP is the lowest (Niyazbekova et al., 2021), (Mottaeva et al, 2020).

Table 2. Share of gross output of the transport industry in the total GDP of the EAEU countries (%).

	EAEU	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia
2019	6.3	3.2	5.7	8.0	4.0	6.1
2020	5.9	2.2	5.1	7.1	3.0	5.8

The crisis of the transport industry during the pandemic period is reflected by such indicators as the volume of cargo and passenger transportation, cargo turnover and passenger turnover by means of transport, as well as gross product. According to Table 3, it can be seen that in 2020, compared with 2019, cargo transportation in the EAEU as a whole decreased by 6.1%. Pipeline transport turned out to be the most affected area, although the lockdown affected it to a lesser extent. Road transport also suffered significantly – traffic volumes decreased by 6.4%. Among the EAEU countries, transportation by rail, road and air transport decreased the most in Kyrgyzstan. Especially for air transport – by 66.7%. Armenia is the only country in the EAEU that came out with a plus.

Table 3. Dynamics of cargo transportation by mode of transport in 2020 (as a percentage by 2019).

	EAEU	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia
Transportation of goods by all types of transport. From it:	93.9	100.7	93.2	93.4	78.4	94.3
Pipeline	91.7	101.8	94.0	91.4	104.4	91.5
Railway	97.4	99.6	85.9	101.3	89.9	97.3
Automotive	93.6	100.9	98.8	92.6	77.4	94.1
Air	101.6	77.3	112.1	90.8	33.3	101.9

The turnover of goods in general across the EAEU countries in 2020 decreased by 4.8% compared to 2019 (Table 4). Pipeline transport also suffered the most, with a reduction of 7.9%, and road transport – a reduction of 5.1%. Among the EAEU countries, Kyrgyzstan has suffered the greatest damage. Armenia was the least affected.

Table 4. Dynamics of cargo turnover by means of transport in 2020 (as a percentage by 2019).

	EAEU	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia
Cargo turnover by all types of transport. From it:	95.2	98.5	94.1	96.6	82.1	95.1
Pipeline	92.1	101.7	96.0	91.5	106.4	92.0
Railway	98.4	97.5	88.0	104.5	107.8	97.8
Automotive	94.9	90.2	100.9	88.0	67.4	98.6
Air	96.6	в 2.3р.	в 1.6р.	67.2	84.7	96.2

A more difficult situation has developed in the field of passenger transportation. According to the EAEU, the reduction occurred by 44.3%. Air and road transport were particularly affected (Imangozhina et al., 2019), (Karpenko et al. 2019), (Osmanov, 2015), (Zharikov et al., 2016), (Blokhina et al. 2016), (Pravikov et al, 2018). Passenger transportation decreased the most in Kazakhstan (a decrease of 64.8%) and Armenia (by 64.1%), a smaller drop is observed in Russia (by 28.6%) and Belarus (by 18.6%) (Table 5). The largest reduction occurred in Kyrgyzstan (by 80%) in rail transport.

Table 5. Dynamics of passenger traffic by mode of transport in 2020 (as a percentage by 2019).

	EAEU	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia
Transportation of passengers by all types of transport. From it:	55.7	35.9	81.4	35.2	57.5	71.4
Railway	72.6	71.4	75.3	52.0	20.0	72.7
Automotive	54.1	33.3	83.7	35.1	57.4	71.4
Air	54.0	24.6	41.7	63.7	37.5	54.0

Passenger turnover by all modes of transport in the EAEU as a whole decreased even more – by 49.1 % (Table 6). At the same time, the biggest drop is observed in Armenia (by 68.5 %) and Kazakhstan (by 63.3%). By means of transport, the greatest damage was caused by the coronavirus passenger traffic on railway transport in Kyrgyzstan. A drop of 81.7 %.

Table 6. Dynamics of passenger turnover by mode of transport in 2020 (as a percentage by 2019).

	EAEU	Armenia	Belarus	Kazakhstan	Kyrgyzstan	Russia
Transportation of passengers by all types of transport. From it:	50.9	31.5	66.3	36.7	59.0	54.8
Railway	57.8	38.7	59.6	48.8	18.3	58.7

Automotive	53.3	30.1	75.9	35.0	63.5	70.9
Air	47.5	34.0	47.8	49.2	30.1	47.5

All this could not but affect the gross output of the industry. If in 2020, in comparison with 2019, the GDP of the NPP as a whole decreased from 1,956,415 million US dollars to 1,738,258 million, or by almost 11%, then the gross output of transport and warehousing decreased from \$122,655 million to \$102,591 million, or by almost 16%. In Armenia, the production of gross transport and warehousing products decreased by 36%, in Belarus – by 16%, in Kazakhstan – by 17 %, in Kyrgyzstan – by 34 %, in Russia – by 16%. The biggest drop in the industry occurred in Armenia and Kazakhstan.

In addition, the costs of enterprises in connection with the pandemic have increased: disinfection, distancing, dissemination of information, use of digital technologies, etc.

In these conditions, there is an increasing need to increase state support for the industry.

In April 2020, the International Union of Road Transport and the International Federation of Transport Workers appealed to the governments of all countries to support the transport industry in the conditions of COVID–19: "States and international organizations should assign the highest priority to support the continuity and strength of supply chains" twice.

Developed countries primarily began to support transport, as well as many other sectors of the economy. So in the United States, in March 2020, the Law on Support in the Fight against Coronavirus, Assistance and Economic Security was adopted. 58 billion dollars were allocated for the aviation industry alone. Assistance was provided in the form of loans and guarantees for loans for passenger airlines and for the payment of benefits to industry workers. Airlines were also banned from forcibly firing employees.

In China was abolished tolls for all kinds of transport, provided financial support to small and medium-sized businesses affected by the outbreak of COVID–19, as well as companies the transportation of essential goods, reduced by 10% tariffs on the takeoff and landing of aircraft at the airport first and second classes, canceled, Parking fees and a reduced allowance of aviation fuel by 8%.

The European Union has introduced "green corridors" for cargo transport at the borders of the EU, exempted airlines from the obligation to use at least 80% of the slots allocated to them at airports, temporarily postponed periodic checks on road, rail, inland waterway transport and at sea.

In the EAEU, state support for the transport sector is also carried out. Thus, in Russia, preferential loans are allocated at the federal level to replenish working capital. More than 23 billion rubles were allocated from the reserve fund of the Government of the Russian Federation as emergency assistance to airlines to pay for the work of crews, employees, for settlements on airport services and leasing payments. New rules for subsidizing the industry have been approved, including partial compensation for the costs of maintaining employment and remuneration. Interest-free deferral of payments under rolling stock lease agreements was provided for railway transport.

In Kazakhstan, such measures as concessional lending, subsidies, grants, and deferrals on tax payments are used to support businesses in the conditions of a pandemic. Measures have been introduced to support the transport sector specifically: subsidizing the coupon interest rate on carrier bonds; cancellation of a 10-fold fee for cargo storage when idle for more than 48 hours from the date of notification; cancellation of customs inspection of container trains in transit; covering part of airline costs for airport services; exemption of airports from paying land tax; exemption from VAT on imports of aircraft parts; exemption of maintenance and other aviation services from VAT for non-residents.

In Armenia, measures to support enterprises in the context of the pandemic were aimed at reducing the risks of lack of liquidity in the framework of co-financing and refinancing loans, as well as subsidizing interest rates. Loans were provided on preferential terms to pay salaries, equipment, taxes, duties and utilities. The state helps transport companies in the tourism sector to repay 75 % of the debt on current loans related to interest payments. Subsidies are provided for the payment of wages to employees

In Belarus, state measures were aimed at supporting the most affected industries by postponing and installment payments, rental holidays and the ability of municipal authorities to reduce property tax, providing tax benefits, simplifying public procurement procedures, providing state-guaranteed loans, subsidies that help keep workers' wages at the same level.

Kyrgyzstan has also introduced a number of standard measures to support enterprises, including the transport industry. These are: provision of preferential loans, grants, debt relief, reduction of taxes and rents.

Thus, in all the EAEU countries, states are implementing certain measures to support the industries most affected by the pandemic. However, not all countries have targeted support for the transport industry.

#### **4. Discussion**

An analysis of available publications on the impact of the coronavirus pandemic on the development of the transport industry has shown that all authors agree that transport is one of the most affected sectors of the economy. The reasons for the crisis in the industry are related to the closure of state borders, the introduction of restrictions on the movement of people and goods, the rupture of supply chains, a decrease in demand and purchasing power. As a result of the pandemic, freight and passenger transportation decreased, the profitability of the industry fell, weak enterprises began to go bankrupt. In order to get out of the crisis with the least losses, transport companies are changing the directions and forms of transportation, resorting to state support measures, using risk management methods. The impact of the pandemic on the transport industry practically exceeds the negative effect that the country's economy as a whole will experience. As the epidemic has spread to new countries, the established supply chains of goods and the movement of goods flows are increasingly disrupted, there is a multiplicative effect of crisis phenomena in the economy in terms of their impact on transport performance (a 1% decrease in GDP leads to a 3% drop in the trucking market).

In addition, a lot of people are traditionally involved in cargo transportation, starting with the preparation of cargo, its packaging and loading and ending with the paperwork and support. The pandemic has affected their employment and income. The incomes of cargo owners have also decreased.

The scale of the negative consequences of the pandemic depends on the type of transport and the integration of the state into the global transport and logistics system, the cardinal restriction of transport activity has become the reverse side of measures to contain infection. The most affected area was aviation, since the transportation of goods by aircraft is very expensive, so airlines are mainly engaged in the transportation of people. And the introduction of restrictive measures by governments and the closure of borders to combat the spread of coronavirus infection has had a negative economic effect on airlines, incomparable with other modes of transport. In order to achieve a balanced and effective restart of the industry, a global approach is needed, based on an assessment of measures to reduce the risks of recovery of the industry with the need to unblock the economy and provide passenger air travel opportunities.

The impact of the pandemic on the world economy is comparable to the consequences of the Second World War, and if the pandemic drags on, international companies will have to build new production chains, and this is associated with high costs. Along with falling revenues, the industry faces the risk of non-payments, the threat of forced large-scale cuts in production personnel, and airports will be on the verge of bankruptcy due to the inability to pay wages, taxes and debt service under credit agreements.

Thus, the pandemic has actualized the issues of the need to transform the transport sector. It is necessary to optimize the business processes of public administration in this industry, in particular in the field of decision-making on authorization in regulatory rules, prohibitions by the Ministry of Agriculture, actions of customs authorities, procurement of spare parts, etc.

An integral attribute of the public administration system in this area is access and transparency of data. Since any decision-making should be carried out on an evidence-based basis with an analysis of risks and an assessment of the benefits of state regulation. The transport industry in almost all the EAEU countries, in particular in Kazakhstan, is conservative, with limited access to a high-quality database. In modern conditions, the most urgent issue is the need to transform this industry segment towards digitalization of the main business processes in management, openness and flexibility of the transport sector of the economy.

#### **5. Conclusion**

The coronavirus pandemic has had a significant negative impact on the transport industry of the EAEU countries. The gross product of the industry for 2020 decreased by 16%. Cargo and passenger turnover, the volume of

transportation of goods and passengers have been significantly reduced. Under these conditions, many countries of the world have begun to actively support the industry, since its shutdown may further worsen the crisis situation.

The EAEU countries should use in their practice the experience of developed countries and mutual experience in supporting the transport industry in the context of a global pandemic. It can be expressed in the provision of preferential loans with deferred payments until the post–retirement period and simplification of the procedure for obtaining loans, restructuring of existing credit debt of transport companies to financial institutions, reduction of interest rates for loans for fleet renewal, cancellation of taxes on public transport for a certain period, compensation of tax deductions, rent and fuel costs, extension of tax payment terms, provision of direct subsidies for transport entities, reduction of insurance premiums, extending the validity of expired certificates and licenses, obtaining preferential holidays on lease payments.

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