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MACROECONOMIC AND INTEGRATIVE ASPECTS OF THE FORMATION AND DEVELOPMENT OF TRANSPORT AND LOGISTICS SYSTEMS

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Annotation:

The article is devoted to topical problems of the development of transport and logistics systems associated with macroeconomic and integrative factors. To ensure the optimal functioning of the national economy, it is necessary to take into account the trends and dynamics of possible changes in macroeconomic proportions, which represent a gradual change in quantitative relationships between different sectors of the national economy. The author describes that the management of material flows at the regional, national or international level is one of the main directions of the macroeconomic policy of any state. Thus, it becomes obvious that transport is not just one of the elements of logistics, but the main means by which logistics, regardless of its scale, is pragmatically expressed in the existing reality.

The article summarizes the scientific and practical experience of the functioning of logistics systems in foreign countries.

The article presents the main achievements in the development of the transport and logistics system of Uzbekistan, large-scale structural and institutional transformations in transport, the indicators of the provision of the country's regions with public roads and railways are calculated, the dynamics of the main indicators of the development of the transport sector in the system of macroeconomic coordinates are given. The dynamic growth of the economy leads to a significant increase in the volume of goods movement and, accordingly, cargo flows, both domestic and international, including transit. But in conditions of insufficient development of the transport and logistics infrastructure, the productivity and efficiency of the country's transport complex, as a rule, decreases.

The author has analyzed the shortcomings and problem areas that exist in the industry at the present time. There is a low level of multimodal transportation, logistics, customs, forwarding and other services. There is a lack of coordination between customs services of countries and no integrated information systems for cargo tracking. Some customs posts at international checkpoints are poorly equipped with the necessary devices and equipment.

Keywords: transport, transport and logistics system, macroeconomic balance, logistics center, freight transport, foreign trade, international transport.

Introduction

Macroeconomic proportions are constantly changing under the influence of many factors. In modern conditions, changes in proportions in the national economy can be influenced by the following factors: first, the impact of scientific and technological progress on raising the technical level of production, on changes in the ratio between various spheres and sectors in the economy; second, the outstripping development of the basic (structure-determining) branches of the national economy; third, an increase in the share of the non-productive sphere in the national economy; fourth, the accelerated development of the processing industries in the national economy in comparison with the extractive industries; fifth, expanding the country's participation in the international division of labor, increasing export volumes, increasing the country's foreign trade turnover; sixth, national or global economic crises, economic sanctions and trade wars between countries can have a significant impact on intersectoral proportions.

Consequently, macroeconomic equilibrium affects the efficiency of the functioning of the national economy. The government of the country should study the conditions for maintaining the general macroeconomic equilibrium and use the data of the analysis to form an effective economic policy. To ensure the optimal functioning of the national economy, it is necessary to take into account the trends and dynamics of possible changes in macroeconomic proportions, which represent a gradual change in quantitative relationships between different sectors of the national economy.

Ensuring the macroeconomic equilibrium of the national economy is a rather large problem of social production, which is significant both for the formation of the most important directions of economic policy, and for achieving balance and proportionality of the economic processes of production and consumption, supply and demand, total costs and results of production.

The elements of the transportation process form a single transport system, which is one of the most important subsystems of macrological systems. Material management at the regional, national or international level is one of the main directions of macroeconomic policy of any state. Even in underdeveloped countries, where we are not talking about the creation of micro-logistic systems, the state begins to address the issues of economic development with the creation of a certain model of the macrological system, the main components of which are transport, communications, infrastructure facilities for the promotion of material flows. No economy can develop progressively if an effective functional model of the transport system has not been created [1].

Transport is a prerequisite for all production. In any production process, an important role is played by the movement of the object of labor

and the means of production necessary for this, and labor power. Thus, it becomes obvious that transport is not just one of the elements of logistics, but the main means by which logistics, regardless of its scale, is pragmatically expressed in the existing reality. By its nature, the emergence of transport and logistics processes in the market is characterized by a high degree of uncertainty. Shippers resort to the services of transport structures when there is a need to move specific types and volumes of commodity resources in space. At the same time, from the point of view of controllability of macro and micro-logistic processes, it is assumed that these specific transportation should be planned in the same way as the production of products.

Literature review

Ideas about the relationship and mutual influence of transport and the economy have been encountered in the literature since the second half of the 1920s [2]. Since that time, many scientific studies have been carried out, proving the indisputable existence of a dynamic connection between the state of the national economy and the development of the country's transport system.

The relationship between the dynamics of road transport freight turnover and the growth of Russia's GDP was investigated by L.V. Eichler. and Zotkina M.A. Scientists have come to the conclusion that the transportation of goods reflects the state of the dynamics of the development of the entire economy in terms of material and material flows through all modes of transport, and transport itself is an important factor influencing the formation of GDP. At the same time, the change in the macroeconomic indicators of the national economy is primary in relation to the demand for transport, since in dynamics there is a lagging reaction of the freight turnover of road transport to changes in the GDP growth rate [3,4].

Randall Eberts researched in his work four factors that are “important in examining the relationship between transportation and economic development: (a) relevant type of transportation investment, (b) data necessary to analyze the economic effect of the investment, (c) appropriate methodology to analyze the economic effect, and (d) the proper dissemination of the results and education of professionals as to the economic effects of transportation investment” [5].

Another researcher of the influence of investments in transport infrastructure, T. Lakshmanan from Boston University (USA), presented a different scheme that links investments in freight transport infrastructure with economic benefits. He notes that the improvement of transport infrastructure and everything that contributes to the formation and development of the transport services market leads to a decrease in the cost of transporting goods and an increase in opportunities for access to various commodity markets. The growth of export opportunities leads to an increase in production, sales, restructuring of the production line of companies, the creation of new supply chains, and a decrease in production costs. Reducing the cost of transporting

goods, in his opinion, leads to greater accessibility to markets, expands the labor market [6].

Other aspects of the impact of investments in the transport sector and infrastructure were considered by a number of researchers from their scientific works [7, 8, 9].

The theory and practice of the basic principles of operational research and how they are applied in logistics, what technologies and software are used for product planning, material and inventory management, transportation and distribution, workflow, maintenance, environmental protection, and health and safety, were studied in a number of foreign books [10, 11, 12, 13, 14].

The paper of Harald Minken and Bjørn Gjerde Johansen formulates an Economic Order Quantity (EOQ) model of the simplest possible supply chain where goods of a certain kind are shipped and transported from a point of production, say, to a sales outlet. Demand is of course the number of units requested by consumers at the outlet per unit of time. They assume it to be produced by a stationary stochastic process. But even though each demand realisation is a random variable, by the law of large numbers we treat annual demand as constant. Lead time is the time from when a new shipment is ordered until commodities are available on shelf. It too is a stochastic variable, for instance because of unreliable transport, which makes demand during lead time even more uncertain [15].

Method

The research methodology is based on systemic approaches to the study of problems using statistical, technical-economic and heuristic methods and techniques for analyzing the development of the transport system of Uzbekistan. A review and generalization of world schools for the development of transport and logistics is carried out, an analysis of systemic problems and shortcomings of the transport and logistics system is made.

Results

Despite the stable growth of GDP, exports and imports, the share of investments in the transport sector in GDP is clearly decreasing, which cannot but affect the development of the transport industries (Table 1).

In 2019, the share of transportation and storage spheres in GDP, calculated by the author on the basis of data from the State Statistics Committee of the Republic (Table 1), was 6.1%, including railways - 0.73%, road transport - 3.25%, air transport - 0.4%, pipeline - 1.1%, and the share of transport and storage in fixed assets (at replacement cost) - 10%, in investments in fixed assets - 5.8%, in the number of employees - 4.8%.

Table 1. The main indicators of the development of the transport sector in the system of macroeconomic coordinates

Indicators	Unit rev.	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Gross added. transportation and storage cost	billio n soun s	6090	7852	9871	12173	14052	15671	16694	19656	23611	28384
<i>The same in% of GDP</i>		9,4	9,2	9,3	9,5	8,9	8,2	7,6	7,3	6,5	6,1
Investments in transport. sector	billio n soun s	3529	2851	3385	4353	4199	3739	5785	6369	8487	11337
<i>The same in% of GDP</i>		5,66	3,62	3,3	3,60	2,9	2,18	2,9	2,11	2,08	2,21
Fixed assets of the transportation and storage sector, at the end of the year	billio n soun s	13613	17368	21973	26108	33150	35525	42380	51580	70014	83375
The same in% to total. the amount of basic funds		15,8	16,9	17,8	17,7	18,4	17,4	16,6	16,7	9,9	10,0
Employed in the field of transportation and storage	thous and peopl e	509,9	528,7	549,1	570,2	592,1	614,7	638,2	654,9	645,2	646,1
<i>The same in% of the total number of employed</i>		4,4	4,4	4,5	4,6	4,6	4,7	4,8	4,8	4,9	4,8
Transport services	billio n soun s	10524	13572	16499	20562	23781	26817	30618	36217	44159	54474
<i>The same in% of the total amount of services</i>		38,8	44,2	37,2	36,5	35	34,1	31,5	30,5	29,3	28,1
Freight transported	hillion tons	763	827	859	930	1000	1070	1132	1146	1243	1319
Freight turnover	bln tkm	60,4	62,6	66,4	65,8	66,2	65,8	65,3	66,9	71,3	72,9
Passengers carried	millio n peopl e	4072	4501	4763	4910	5170	5380	5560	5679	5951	6109
в т.ч. на индив. автотранспорте		2798	3029	3249	3498	3713	3935	4191	4254	4337	4441
Passenger turnover	bln pass-km	83,8	92,4	100,2	106,9	113,2	120,1	126	130	135,3	140,9

Source: State Committee of the Republic of Uzbekistan on Statistics

For Uzbekistan, which is remote from international sea routes by territories of two or more states, the cost of transporting export and import cargo is becoming a critically important factor of competitiveness.

The sustainable functioning of transport throughout the country is a guarantee of the unity of the economic space, the free movement of people, goods and services, the development of competition and freedom of entrepreneurship, the improvement of conditions and living standards of the population, ensuring the integrity and national security, integration into the world economic space. The indicators of the provision of the country's regions with motor roads and public communication networks as of the beginning of 2019 are shown in Table 2.

In 2010 - 2019, the operational length of public railways increased by 508 km and at the beginning of 2020 amounted to 4,735.1 km. The total length of the road network of the republic is 184 thousand km, of which 42 695 km are public roads with hard surface.

Table 2. Indicators of the provision of regions with a public transport network (as of early 2020)

Regions	Territory, thousand sq. Km	Length of public transport network, km			Average density of the transport network, in km per 1000 sq. Km of territory		
		railway, ** ($L_{ЖД}$)	auto-roads, * (L_A)	integral transport networks ($L_{ИИТ} = L_{ЖД} + 0,1L_A$)	railway ($L_{ЖД}/S$)	auto-roads (L_A/S)	integral transport networks ($L_{ИИТ}/S$)
The Republic of Uzbekistan	448,97	4735,1	42695	9004,6	10,5	95,1	19,9
Karakalpakstan	166,59	885,3	4213	1306,6	5,3	25,3	8,1
Andijan	4,30	155,8	2463	402,1	36,2	572,8	93,4
Bukhara	40,32	499,2	4012	900,4	12,4	99,5	22,2
Jizzakh	21,21	274,5	2601	534,6	12,9	122,6	24,9
Kashkadarya	28,57	492,7	3427	835,4	17,2	120,0	29,2
Navoi	110,99	512,4	4006	913	4,6	36,1	7,7
Namangan	7,44	226,7	3377	564,4	30,5	453,9	73,1
Samarkand	16,77	282,9	4097	692,6	16,9	244,3	41,2
Surkhandarya	20,1	425,6	2843	709,9	21,2	141,4	34,4
Syrdarya	4,28	160,9	1450	305,9	37,6	338,8	71,4
Tashkent region, (incl. Tashkent city)	15,59	390,9	3965	787,4	25,1	254,3	50,5
Fergana	6,76	228,6	4031				
Khorezm	6,05	199,6	2210	631,7	33,8	596,3	93,0

*Calculated by the author based on the data of the State Statistics Committee of the Republic of Uzbekistan

An active policy of developing transport corridors has expanded and diversified the schemes of international transport routes for the export and import of goods. So, in 2019, the country's foreign trade turnover amounted to \$ 42.2 billion and increased by 1.9 times compared to 2010, including the volume of exports - \$ 17.9 billion, an increase of 37.5%, imports - \$ 24.3

billion, an increase of 2.6 times. China remains the main foreign trade partner of Uzbekistan, its share in the total trade turnover is (2019) 18.1%. Among the main foreign trade partners of Uzbekistan are also the Russian Federation (15.7%), Kazakhstan (8.0%), South Korea (6.5%) and Turkey (6.0%). As for trade with the EU countries, today Uzbekistan's foreign trade cargo transportation with these states is mainly carried out in the directions of the ports of Riga, Liepaja, Ventspils (Latvia) in transit through Kazakhstan and Russia.

During the years of independence, large-scale structural and institutional transformations in transport have been carried out in the republic. State programs for the denationalization and privatization of transport facilities are gradually being implemented, and a consistent transition from direct administrative management to state regulation of market entities continues. By now, the legal framework for transport activities in market conditions has been basically created. The Republic of Uzbekistan is one of the participants in international integration and a full-fledged subject of global economic processes. Major projects were implemented for the construction of railways on the directions Uchkuduk - Nukus, Tashguzar - Boysun - Kumkurgan, Angren - Pap through the Kamchik pass, which provided direct access from previously isolated regions by rail to the central part of the country.

For the first time in the Central Asian region, high-speed communications were put into operation on the directions Tashkent - Samarkand, Tashkent - Karshi and Tashkent - Bukhara. A new airport was built in Tashkent, the existing airports, which received international status, were expanded and reconstructed, incl. in Nukus, Samarkand, Namangan, Fergana, Bukhara, Karshi, Navoi, Urgench, Termez. The backbone network of main highways and national sections of international transport corridors are gradually being formed; hard-surface roads have been built to each settlement in the regions. New gas pipelines have been built and the existing gas pipelines are being reconstructed on the Uzbekistan-China route. In April 2019. The fleet of the Uzbekistan Airways National Air Carrier was replenished with two new Boeing-787 Dreamliners, for which their own service and repair base and hangars have already been prepared. In 2016. the opening of the largest modern International Logistic Center "Tashkent" with a total area of 184 thousand square meters took place [16]. All this demonstrates consistent growth and positive dynamics in the development of the transport and logistics industry of the republic.

At the same time, in order to improve the position of Uzbekistan in the world rankings on logistics, it is of particular relevance to study the experience of other states, primarily developed countries, in the regulation and financing of industries that ensure the vital activity of the transport and logistics system. Currently, the industry has a number of shortcomings and problem areas. There is a low level of multimodal transportation, logistics, customs, forwarding and other services. Logistic service is mainly represented

by 2 PL services, while in order to be competitive in the modern market of transport and logistics services, it is necessary to provide 4 PL 5 PL services. The share of container traffic in Uzbekistan is significantly lower than in developed countries. This is partly due to the high cost-benefit indexed transport tariffs.

Currently, the region's railways are unproductive, the tariff policy in force here is not aimed at supporting small and medium-sized companies - shippers and exporters of goods. Thus, within the framework of bilateral intergovernmental agreements on international road transport (IAP), various legal regimes are defined for transport between pairs of individual countries. They provide for passage only through certain checkpoints, restriction of the delivery route and freedom of transit (due to the procedures for issuing transit permits, limiting their number, etc.), quotas for transportation (trade barrier / WTO requirement), bureaucratic procedures for approval and issuance permits (physical presence and volume of documentation). Representative of the MAP Association of Tajikistan L. Kislyakova drew attention to the fact that there is no agreement between Tajikistan and Uzbekistan at all, and the existing "non-permissive" agreements signed between the countries do not stipulate the issues of transportation to / from third countries. They are aimed at improving the political climate, not at increasing transport efficiency. And the presence of several bilateral agreements at once significantly complicates the procedure for compliance with their regulatory and legal requirements [17]. As for transport, the brake here is the different level of participation of the Central Asian countries. Most of the agreements and conventions do not work, their norms are not applied (mechanisms for implementing the provisions of these international acts have not been worked out).

The countries of Central Asia carry out rail transportation on the basis of the Agreement on International Rail Freight Traffic (SMGS). But here there are a number of weak points: a through waybill is rarely used and door-to-door services are underdeveloped (for example, 3 waybills are required on the route of Lianyungangst. Dostyk, Tashkent), there is no intermodal service. The rules of service and registration have not been harmonized, which is why there are large downtime of wagons and vehicles. The relationship between shippers and participants in the freight market, as well as issues of technical support (block trains, platforms for transporting containers, etc.), have not been fully settled.

The existing practice of cross-border customs control differs from the standards and requirements. There is a lack of coordination between customs services of countries and no integrated information systems for cargo tracking. Some customs posts at international checkpoints are poorly equipped with the necessary devices and equipment. The changes taking place in the field of customs regulation, etc. are not brought to the attention of the participants of the international road transport market in a timely manner.

The world experience of developed countries shows that when using logistic systems, transport costs are reduced by 7 - 20%, the costs of handling

and storage of material resources and finished products are reduced by 15 - 30%, total logistics costs - by 12 - 35 %, and also the turnover of material resources is accelerated by 20 - 40%, therefore, stocks of material resources and finished products are reduced by 50 - 200% [18]. In the world, there is a steady tendency to improve the technology of freight transportation associated with the concentration of traffic flows and the growth of container traffic along intermodal transport corridors, which should become the basis of a single global transport network of the XXI century, the creation and functioning of which is one of the main tasks of the Eurasian transport policy. In Western and Central Europe, where communications are more developed in comparison with the countries of East Asia, the formation of the basic system of transport corridors has already been largely completed.

For the acceptance and processing of goods transported in intermodal communication and providing an appropriate level of service, it is of paramount importance, along with the development of transport communications with appropriate facilities, the creation of multimodal terminal complexes and transport and logistics centers in large transport hubs along the MTK route, functioning on the basis of advanced logistic technologies and ensuring the integration of commodity, information, service and financial flows. The fundamental elements of the logistics infrastructure of the MTC are multimodal logistics centers operating on a corporate basis, providing coordinated interaction of all types of transport and other participants in the transport and logistics process, considered as strategic points of economic growth. According to experts, in the first quarter of the XXI century in the largest transport hubs of the world there will be about 70 ILCs of the international level, which will be interconnected by intermodal transport corridors with the connection of regional logistics systems to them, providing through forwarders and carriers an exit to each shipper and consignee. Such a scheme for organizing the delivery of goods will provide an increase in the efficiency of the transport and distribution process by more than 30-40% [19].

In the countries of Central Asia, there is a great potential for mutually beneficial trade, and, accordingly, international transport. In this region, large investment projects are underway for the construction of industrial, energy, transport and road facilities in order to further increase its total transit capacity. Participation in the construction of international transit corridors on the routes Uzbekistan - Kyrgyzstan - China, Mazar-i-Sharif - Herat and further to Pakistan and India will make it possible to use Uzbekistan's transit potential more widely.

Objective factors restraining regional trade (lack of access to international maritime communications, a high share of transport costs in the price of goods, limited finished commodity nomenclature with high added value) force the countries of Central Asia to pay great attention to the development of transport, infrastructure and logistics. To effectively solve these and eliminate many other logistics problems, it is advisable for

Uzbekistan to join agreements and conventions in the field of transport, in particular, to the International Convention on the Harmonization of Conditions for Conducting Control of Goods at Borders (development of standard customs control schemes, etc.), carry out its practical implementation, as well as complete the procedure for the introduction of an international vehicle weighing certificate provided for by the CIS Agreement (Cholpon-Ata, April 16, 2004). In addition, the relevance of the issues of integration into the international insurance system of the owners of the Green Card insurance policy is increasing, unification of tariffs and coordination of the policy of providing access to railway infrastructure and rolling stock for mutual use, coordination of a single transport document. At the same time, experts recommend to the customs services of the region to apply selective control based on risk management, introduce a method of preliminary informing of clients and implement the "green corridor", "single window" systems, and adopt a unified customs transit procedure [17].

Currently, new elements of logistics support for trade and transport of goods are emerging in the country. Measures are being taken to establish a mechanism for the effective use of information technologies, modern systems for organizing transportation and the formation of diversified transport infrastructure complexes and HUBs in the regions. However, the pace of implementation of modern methods and technical means of logistics in the practice of organizing and managing cargo flows is still insufficient. Now there is a steady demand for expanding the range of services for organizing transportation along the entire logistics chain, i.e. "From door to door", covering, along with the transport process, also operations for customs clearance, packaging, packaging, storage of goods, etc. In this regard, there was a need for the institutional development of the entire logistics system of the country, improving the quality of services provided in the field of agricultural logistics, industrial, sales, purchasing, transport, warehouse, commercial, information, marketing and other types of logistics.

One of the main types of exports of the country is fruit and vegetable products, its annual production is 17 million tons, of which more than 4 million tons are exported to the USA, the countries of the European Union, Russia, Brazil, Vietnam, Indonesia, Macedonia, Malaysia, Mongolia, Saudi Arabia, Thailand, China, Japan and other countries. Over the past 10 years, the export of fruit and vegetable products has increased fivefold. In view of the growing demand for the export of fruit and vegetable products, the country is experiencing a shortage of transport capacities, which is a chance for transport and logistics companies to gain a foothold in the Uzbek market [20].

In general, by the end of 2020, it is planned to build 17 logistics centers in the republic, specializing in the processing, storage and transportation of fruits and vegetables, most of which have already been put into operation. Construction of logistics centers is carried out at the expense of Uzulgurzhisavdoinvest JSC's own funds and loans from commercial banks. Such centers will improve the possibilities for timely and high-quality primary

processing of fruits, industrial processing, create more acceptable conditions for storing agricultural products and establish their quick and convenient export. For storage of purchased products at the enterprises of the association there are 116 thousand square meters. m of uncooled area and 75 thousand tons of refrigerated storage tanks. Over the past 10 years, the export of fruits and vegetables has increased fivefold. By the end of 2020, it is planned to increase the production of fruits and vegetables to 32 million tons per year [20].

The new transport and logistics center "Orient Logistics Center" is being built on the territory of JSC "Uztemiryulcontainer". For its construction, a territory with a total area of 16 hectares was allocated for a container terminal - 20 thousand square meters, closed storage facilities - 25 thousand square meters. The complex will introduce an automated warehouse management system. In addition, the buildings of the service center, customs control and administration are planned on the territory. The center will provide services for sorting railway wagons, loading and unloading goods, storage, registration, and marking. The new logistics center will receive up to 3 million tons of cargo per year [21]. As part of the first phase of the project, the construction of a new container terminal was completed. The full launch of the site was carried out in October this year, which will make it possible to process container traffic arriving by rail and road in the amount of more than 120,000 conventional containers per year.

Currently, on the basis of the Navoi airport, a modern intermodal logistics center has been operating since 2009, which is one of the largest logistics centers for servicing road and rail transport in Uzbekistan. It serves mainly international air cargo (consolidation and bundling of cargo). The terminal's capacities can handle up to 22 containers with storage of 60 containers and handling up to 1,500 tons in storage areas. Along with this, the Angren Logistics Center operates on the territory of the Angren SIZ, which includes the cities of Angren and Akhangaran, Tashkent region.

Conclusion

The problems of transit and logistics of foreign trade are complex, they have always been and remain complex, their solutions require, as a rule, greater competence, high costs and enormous efforts. So, for example, there is an urgent need to solve the problem of rearranging the bodies of wagons and containers due to the different gauge of 1520 and 1435 mm at cross-border stations, because the presence of different standards of the railway gauge leads to financial, temporary and other losses during transportation along international transit corridors. One of the ways to solve this problem is to install equipment for automatic transfer of the axles of bogies of wheel pairs of cars to another gauge at butt stations.

In 2018, the Logistics Performance Index (LPI) published by the World Bank ranked Uzbekistan only 99th, having received the lowest score out of 6 considered criteria for the criterion "Efficiency and speed of

customs". Therefore, it is of particular relevance for Uzbekistan to study the experience of other states, primarily developed countries, in the regulation and financing of the transport and logistics industry, in simplifying customs procedures, and improving service.

To solve these and similar problems, it is necessary to combine the efforts of different countries, both at the interstate level and within each country - the state and their private entrepreneurs. At the same time, it is necessary to take into account the fact that the development of logistics services is impossible without training and improving the professional knowledge of entrepreneurs, as well as teachers of educational institutions.

In 2019, in accordance with the decree of the Cabinet of Ministers of the Republic of Uzbekistan, the Center for Studying the Problems of Transport and Logistics Development under the Ministry of Transport was created, the main task of which is to study the problems of the development of the transport and logistics system, use the transport potential of the republic, develop proposals for eliminating problems in the field of transport [22]. In addition, in order to carry out continuous education of transport and logistics specialists, it is recommended to create a Scientific Center for Transport Logistics on the basis of the Tashkent State University of Transport.

The development of a unified macrological system of Uzbekistan and the formation on its basis of integrated transport and logistics systems will ensure the implementation of the country's transit potential in the global system of Euro-Asian international transport corridors and will be accompanied by a significant multiplier effect, which will manifest itself in other sectors of the economy, in the development of regional markets for goods and services, and ultimately, in an increase in the gross regional product (GRP) and gross domestic product (GDP) of the country.

References

1. Panova I.V. The role of logistics in the formation of traffic flow. Topical issues of economic sciences. M. 2010. Issue 11-2. S. 70-75.
2. Yasin E. Today the Russian economy in the context of the past and the future. Access mode: liberal.ru.
3. Eichler L.V., Zotkina M.V. Organizational and economic aspects of the modernization of the control system of the freight motor transport complex. Access mode: be5.biz ›ekonomika1 / r2012 / 2004.htm (date of access 17.02.2017).
4. Eichler L.V. Theoretical comprehension of integration processes in transport // Economy, 19.09. 2012 Access mode: <http://journals.tsu.ru>: (Date of treatment 05.02.2017).
5. Randall Eberts. Understanding the Impact of Transportation on Economic Development. Transportation in the New Millennium. Washington: Transportation Research Board, 2000.
6. Lakshmanan T., Andersen W. Transportation Infrastructure, Freight Services Sector and Economic Growth. Center for Transportation Studies. Boston University. 2000.

7. Anna Nagurney, Shivani Shukla, Ladimer S.Nagurney, Sara Saberi. A game theory model for freight service provision security investments for high-value cargo. *Economics of Transportation*. Volume 16, December 2018, Pages 21-28.
8. Johanna Jussila Hammes, Svante Mandell. Local government co-financing of the central government's transport infrastructure investment. *Economics of Transportation*. Volume 18, June 2019, Pages 40-49.
9. Indra Degree Karimah, Muhammad Halley Yudhistira. Does small-scale port investment affect local economic activity? Evidence from small-port development in Indonesia. *Economics of Transportation*. Volume 23, September 2020, 100180.
10. Donald J. Bowersox. *Logistical Excellence*. Imprint: Digital Press, 1991. P. 260.
11. Jean-Michel Réveillac. *Optimization Tools for Logistics*. Imprint: ISTE Press – Elsevier, 2015. P.466.
12. Reza Farahani, Shabnam Rezapour, Laleh Kardar. *Logistics Operations and Management. Concepts and Models*. Imprint: Elsevier, 2011. P.486.
13. MD Sarder. *Logistics Transportation Systems*. Imprint: Elsevier, 2020. P.388.
14. Anthony Pagano, Matthew Liotine. *Technology in Supply Chain Management and Logistics*. Imprint: Elsevier, 2019. P. 220.
15. Harald Minken, Bjørn Gjerde Johansen. A logistics cost function with explicit transport costs. *Economics of Transportation*. Volume 19, 2019, Pages 1-13.
16. Transport and logistics in Uzbekistan. <http://iteca.uz/trans/rus/ForExhibitors/industry.php>
17. Abdunazarova G. Realities and prospects for the development of transport and logistics. *NTV newspaper* / 2017 / № 5 / Regional cooperation.
18. Sergeev V.I. *Logistics in Business: A Textbook*. - M.: INFRA-M, 2001.
19. Reser S.M., Prokofieva T.A., Goncharenko S.S. *International transport corridors: Problems of formation and development*. - M.: VMNITI RAN. 2010. 432 p.
20. Gulyamov S.S., Shermukhamedov A.T. Development of logistics centers in Uzbekistan // *Potential of modern science*, no. 1 (27). - 2017. S. 73-78.
21. <https://m.uz.sputniknews.ru/economy/20190209/10766237/Latviya-postroit-v-Uzbekistane-transportno-logisticheskii-tsentr.html>
22. Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated April 12, 2019 No. 305.
23. Madrahimovich, R. N., & Bulturbayevich, M. B. (2019). Advantages of vertical integrated enterprises (under light industry enterprises). *Test Engineering and Management*, 81(11–12), 1596–1606. <http://testmagazine.biz/index.php/testmagazine/article/view/222/194>

24. Bulturbayevich, M. B., & Sharipdjanovna, S. G. (2020). Improving the efficiency of management of vertical integrated industrial enterprises. *Test Engineering and Management*, 83, 5429–5440. <http://testmagzine.biz/index.php/testmagzine/article/view/4483/3817>
25. Mullabayev Baxtiyarjon Bulturbayevich, Mirzabdullayeva Gulnora, Inamova Guligavkhar. (2020). Analysis of Macroeconomic Indicators and Forecast of Scenarios of the Republic of Uzbekistan. *International Journal of Advanced Science and Technology*, 29(11s), 04 - 12. Retrieved from <http://sersc.org/journals/index.php/IJAST/article/view/19921>
26. Mullabayev Baxtiyarjon Bulturbayevich, Inamova Guligavkhar, Umarova Gulchekhra. (2020). Issues Of Development Of Light Industry Enterprises Through Modern Management Mechanisms And Forecasting Of Corporate Structures On The Basis Of Vertical Integration Processes. *International Journal of Advanced Science and Technology*, 29(11s), 1975-1986. Retrieved from <http://sersc.org/journals/index.php/IJAST/article/view/21866>
27. Mahmudov Nosir Mahmudovich, Dadaboev Tulkinjon Yusupjonovich “Development of Integrated Horticulture based on Investments (In the Case of Uzbekistan)” *International Journal of Recent Technology and Engineering (IJRTE)* ISSN: 2277-3878, Volume-8, Issue-3S, October 2019 DOI: 10.35940/ijrte.C1088.1083S19
28. Bayhonov, B.T., & Qorabayev, Sh. A (2019). Econometric Modeling of Investment Assessment on Investment Capacity Distribution by key Capital (Republic of Uzbekistan). *Test Engineering and Management*, 81(11–12), 1567–1580. <http://testmagzine.biz/index.php/testmagzine/article/view/220/192>