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FOREIGN EXPERIENCE OF DETERMINING THE EFFICIENCY OF TRANSPORT-LOGISTICS SERVICES AND POSSIBILITIES OF ITS APPLICATION IN UZBEKISTAN

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Abstract: This article analyzes the foreign experience of determining the efficiency of transport and logistics services and the possibilities of its application in Uzbekistan. Also, in order to determine and calculate the ways and perspectives of the transport-logistics system development, efficiency improvement factors, opportunities, organizational and economic mechanisms, and the need to study exactly what factors affect these services and to what extent, and these factors can be grouped differently, and they are explained depending on the effectiveness of which of the market participants is being determined.

Key words: transport-logistics, loads, efficiency, influencing factors, increase-decrease, efficiency, evaluation, organizational-economic mechanism, region.

1. **ENTRY.** When analyzing the current state and prospects for the transport and logistics services sector in the country, it is necessary to compare the activities of enterprises and centers not only within the country, but also with foreign countries.

For comparative analysis, the selection of foreign countries is based on criteria such as geographical location, export-import partners, and leadership in the transport and logistics efficiency index. Based on this, the activities of the main export and import partners - China, the Russian Federation and Kazakhstan - will be analyzed. Belarus and Kazakhstan, partners in the CIS, will be analyzed based on geographical proximity. Germany, Singapore, and Australia were selected for analysis as leading countries in the transport and logistics efficiency index. Vietnam and Côte d'Ivoire will be analyzed to study their experience as countries that made a sudden leap in the transport and logistics efficiency index.

Countries are primarily analyzed based on indicators of general, economic, and specifically transport and logistics services.

Due to the lack of open sea corridors in Uzbekistan, the development of transport and logistics systems based on railway, air and road systems has been chosen for the import and export of domestic and foreign goods. The adopted "Uzbekistan-2030" Strategy[1] outlines priority goals and objectives for the modernization and reform of the republic's transport systems in a special paragraph 53 titled "Deepening the Integration of the Republic of Uzbekistan into Global Transport and Logistics Networks and Enhancing the Potential of the National Transport System."The solution of these goals and objectives necessitates conducting in-depth scientific research aimed at improving the ways and prospects for the development of transport and logistics services, factors, opportunities, and organizational and economic mechanisms for increasing their effectiveness.

2. LITERATURE REVIEW ON THE TOPIC. Foreign experience in determining the effectiveness of transport and logistics services and theoretical, methodological, and organizational issues of its application in Uzbekistan.

The problems of increasing efficiency have been studied by foreign scholars such as G. Dantzig,[3] J. Ramser,[4] Y.V. Lun,[5] and S.B. Lyovin.[6] Specifically, regarding the development of the transport and logistics sector, A. Kisun grouped the factors influencing the development of the transport and logistics

system sector.Y.S. Maslov studied the organization of management in the field of transport and logistics systems through digital technologies, while M.M. Kovalev, A.A. Koroleva, and A.A. Dutinas[7] studied the practice and prospects for the development of transport and logistics systems.John Johansen and Jan Stentoft Arlbjùrn in their research considered the issue of a comprehensive study of logistics and supply chain management.

The theoretical and methodological issues of the development of the transport and logistics sector in Uzbekistan are illuminated in the works of researchers such as R.G. Samatov,[8] Yusufkhanov,[9] and D.T. Akhmedov,[10] who provide opinions and recommendations on transport and logistics facilities and their management. The organizational and economic mechanisms for improving the efficiency of the transport and logistics system have not been thoroughly studied in the scientific research of the aforementioned scientists. The activities of transport and logistics centers in Uzbekistan and ways to increase their efficiency have not been sufficiently studied. There is also a need for a systematic and comprehensive study of the effectiveness of the transport and logistics system and its impact on the country's economy.

- **3. RESEARCH METHODOLOGY.** The research extensively utilized foreign experience in determining the effectiveness of transport and logistics services and the possibilities of its application in Uzbekistan, as well as methods of comparative thinking, induction and deduction, and abstraction
- **4. MAIN ANALYSIS AND CONCLUSIONS.** Australia. It is one of the developed countries in the world that gained independence in 1901. Ranked 6th in the world in terms of area, it has access to the Indian and Pacific Oceans. As of 2021, GDP is estimated at \$1.454 trillion. GDP growth rates increased by 5.9% in 2021 and by 2.7% in 2022. GDP per capita is \$56,412. Australia accounts for 2.1% of the global economy. It ranks 19th in the world in terms of exports and imports.

Australia is a highly developed post-industrial country, with an economy that can be described as "a double-velocity economy." Not all parts of the country are equally developed. Regions with developed mining, resource-based production, and service sectors contribute to the country's economic development. The country is the main exporter of agricultural products, wheat, and minerals. The major export markets of Austria are Japan, China, South Korea, India, and the United States. If we look at transport and logistics services, the country's exports of these services are up to 4 times higher than their imports. However, this trend decreased by 2021. Despite this, the export of transportation services exceeds imports and has a positive balance. The Australian freight and logistics services market is segmented by function: Freight transportation, forwarding, storage, value-added services, etc. Similarly, consumers are divided into segments: manufacturing and automotive, oil and gas, mining and quarry processing, agriculture, and others. Retail and wholesale segments, consumer goods, and pharmaceuticals are also separated.

According to research, the market for freight transportation and logistics services will grow by 5.85% by 2027. The country's cargo turnover in 2021 amounted to 800 billion tons. The railway is the leader among other vehicles, accounting for 52% of cargo turnover. The next place is occupied by automobile, water and air transport. The country is working on developing a national strategy to increase efficiency and productivity in this area. To this end, it has spent 70 billion over the past 10 years on upgrading transport infrastructure and plans to spend 75 billion for 2018-2027.110 billion Australian dollars have been invested in improving road transport infrastructure. The main issue is the operational and technological strengthening of the domestic railway transportation system. Thanks to the results of these efforts, they are achieving good results in international rankings.

Republic of Belarus. It gained independence in 1991 and ranks 114th in the world in terms of economy. A moderately industrialized country. Agriculture and mechanical engineering are the leading sectors in the economy. According to 2021 data, GDP is \$69.75 billion. GDP per capita is \$6,744. If we look at the share of sectors in the GDP structure, then agriculture is 8.1%, industry is 40.8%, and services are 51.1%. The main export and import partners are Russia, Ukraine, Germany, and Poland.

Compared to Uzbekistan, this country, which has a much smaller territory, population, and GDP, shows similar results with our country in international rankings. Therefore, our country has potential and it is necessary to realize it. Belarus is a country with a favorable geographical location, located at the intersection

¹ https://www.mordorintelligence.com/ru/industry-reports/freight-logistics-market-in-australia

of transport routes connecting Western Europe with the East.

It also connects them to the Black Sea and the Baltic Sea. As of 2021, the share of transport services in GDP is 5.1%. The export of transport services accounted for 43% of the total volume of exports and 41% of the foreign trade balance, amounting to \$4.4 billion. As of January 1, 2022, there are 61 logistics centers performing various functions.² Member of the International Convention on Electronic Shipping for International Freight Transport.

Vietnam. It gained independence in 1945 and is an agricultural country with a mixed economy based on an industrially developing economy. GDP is 1016 trillion US dollars. GDP per capita is 10,538 US dollars. The share of the service sector in GDP is 43.3%, industry - 38.3%, agriculture - 18.4%. The main export and import partners are the United States, China, Japan, and South Korea.

Transport and logistics services in the country began to develop in the 1990s. Currently, the volume of the country's logistics services market is 20-22 billion US dollars, which is 30% of GDP. In recent years, the growth in the logistics sector has averaged 16-20%. As a country that made a major leap in the LPI ranking, it showed steady growth rates. According to the data, more than 1,300 logistics firms operate in the country. The main volume of transportation in the country falls on the share of maritime transport. However, the freight of private sector representatives by sea is 18%. This indicates the need for reforms in this area. The government of the country adopted a law to increase the share of transport and logistics services in GDP by 8-10% and its position in the international ranking to 50.3 This can be considered an experience that can be used in Uzbekistan.

Germany.

This state union, whose historical origins date back to 843, existed as a full-fledged state after 1990. GDP is \$4,672 trillion. Germany is a developed post-industrial country, with services accounting for 78% of GDP. In Germany, as in Australia, the freight and logistics services market is segmented. According to the research results, the growth of the market for these services in the country is projected to increase by 3% by 2028. During the pandemic, the country experienced a significant decline. Because it was mainly based on the export of transport services, the volume of orders sharply decreased. But then he recovered. The development of the e-commerce market has paved the way for the further development of the logistics services market in the country. In Germany, road transport leads in the share of total cargo transported. 90% of domestic transportation was carried by the national transport service.

Germany is considered one of the countries where the first logistics centers of today's type emerged, and it is the home of the largest logistics centers. The activities of logistics centers are so well organized that companies use the services of logistics centers, despite having their own warehouses and transportation.

The largest logistics companies in the world are also owned by Germany. In terms of effectiveness, they also rank high in the international index, competing on an equal footing with Singapore.

Kazakhstan. Our neighbor, which is close to our country in many respects, is the largest country without direct access to the sea. Population: 19,854,083[2] According to 2022 data, GDP is US\$574.10 billion. The per capita GDP is \$30,876. It is the country with the largest economy in Central Asia. The manufacturing industry occupies a leading position in the country and accounts for one-third of GDP. The main export and import partners are China and Germany. The United States and Russia. Uzbekistan is the main export and import partner. If we observe the dynamics of transportation services exports and imports in the country in recent years, the volume of transportation services exports maintains a growth rate with small fluctuations. Imports are decreasing. The export of services is almost twice as much as the import of goods.

In Kazakhstan today, the share of logistics costs in the final product reaches a maximum of 25%. In other countries of the world, this share is 14% in China, 11% in the EU, and 10% in the USA and Canada. The global average is 11%. Moreover, the country's economy's capacity is five times lower than that of developed countries.⁵ It is necessary to apply the experience of using the "light principle" (light principle) of developing a new generation of logistics centers in our neighboring country, which has a higher result than

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² https://president.gov.by/ru/belarus/economics/osnovnye-otrasli/sfera-uslug/transport-i-logistika

³ https://vovworld.vn/ru-RU/vov

⁴ https://www.mordorintelligence.com/ru/industry-reports/germany-freight-logistics-market-study

⁵ https://kazlogistics.kz/ru/library/analyt

us in the logistics efficiency index.

People's Republic of China.GDP is 23,393 trillion US dollars. GDP per capita is \$16,709. The share of China's economy in the global economy has grown from 11.4% to 18% over the past 10 years. According to the World Bank, over the past 10 years, industry in the country's GDP has decreased from 46.9% to 4.7%. Agriculture has declined from 10.2 to 7.1%. The service sector grew from 42.9 to 52.2%. The logistics sector plays a significant role in China's service sector. Over the past 5 decades, this sector has been growing steadily. In 2022, revenue in the logistics sector increased by 4.7%. China's largest foreign trade container ports are located in three logistics clusters. Land ports are also well functioning in land transportation by rail. China also has social logic, the volume of which is growing. This is a type of activity that we do not have at all yet. If we pay attention to its description, we clearly understand its importance and necessity.

Social logistics - is a sequence of algorithms that regulate mutual social relations. He does not study the logistics of material objects and interests. In social logistics, the subject is an individual. It has a social character, and unlike economic logistics, the main goal is not profit, but quality of life. In general, to achieve concrete achievements in the space and time space necessary for society to function properly and ensure the corresponding quality of life, it is necessary to understand the art of managing the flow of material and related information.

The application of social logistics in China and digitization in Singapore, the use of development tasks in Russia is the best choice.

5. CONCLUSIONS AND PROPOSALS. Having studied foreign experience in determining the effectiveness of transport and logistics services and the possibilities of its application in Uzbekistan, as well as scientific research on the effectiveness of transport and logistics systems, we have proposed our own definition. The term "efficiency trilemma" is defined from the perspective of our own approach. When implementing transport and logistics services, the costs incurred by the enterprise are grouped and listed. Transportation security expresses the ability of people to use the transportation system to reach any point in the country and expresses the degree of connectivity of the territory. The availability of transportation means the availability of transportation services within the framework of the level of development of existing transportation infrastructure. This indicator consists of technological and monetary components. The first is the availability and readiness to transport goods in various conditions at any time. The second is the alternative pricing of transportation services.

LIST OF USED LITERATURE:

- 1. Approved by Decree of the President of the Republic of Uzbekistan dated September 11, 2023 No. DP-158
- 2. Ramser, J. H. 1959. The truck dispatching problem, Management Science 6(1): 80–91. Lai, K.-H.; Ngai, E. W. T.:
- 3. Cheng, T. C. E. 2004. An empirical study of supply chain performance in transport logistics, International Journal of Production Economics 87(3): 321–331. Lun, Y. H. V.; Lu, C.-S.;
- 4. Lai, K.-H. 2009. Introduction to the special issue on transport logistics and physical distribution, International Journal of Production Economics 122(1): 1–3. Wong, C. W. Y.; Lai, K.-H.; Ngai, E. W. T. 2009b. The role of supplier operational adaptation on the performance of ITenabled transport logistics under environmental uncertainty, International Journal of Production Economics 122(1): 47–55.
- 5. Kovalev. M.M, Koroleva A.A., Dutina A.A. Transportnaya logistika v Belorusi: sostoyaniye, perspektivi. MonografiY. Minsk, BGU- 2017, 328 str.
- 6. Samatov R.G., Axmedov D.T., Yusufxonov Z.Y. Perspektivi razvitiya effektivnosti logistiki, Yarashova V.K. Metodi povisheniya effektivnosti logistiki v mejdunarodnix reytingax,
- 7. Zokirkhan Yusufkhonov, Malik Ravshanov, Akmal Kamolov, and Elmira Kamalova. Improving the position of the logistics performance index of Uzbekistan. E3S Web of Conferences **264**, 05028 (2021),

- 8. Kodirov T.U., Yusufxonov Z.Y. U., & Axmedov D.T. U. (2021). Analiz faktorov, vliyayushix na reyting indeksa effektivnosti logistiki Respubliki Uzbekistan. Oriental renaissance: Innovative, educational, natural and social sciences, 1(6), 245-252.
- 9. https://logistika.uz/info/articles/1476
- 10. Gadjinkiy A.M Logitika uchebnik 21-izdaniye 2012 g, 195 str