

PROBLEMS AND TECHNICAL SOLUTIONS OF TRANSPORT LOGISTICS DEVELOPMENT IN UZBEKISTAN

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Abstract: Uzbekistan is one of the important transport and logistics centers in the Central Asian region, and its geographical location makes the country a crossroads of international trade routes. In recent years, a number of reforms have been implemented to modernize transport infrastructure, expand international transit corridors, and improve logistics efficiency. However, there are a number of problems that need to be addressed in this area, including the obsolescence of transport vehicles, the lack of multimodal logistics centers, and the slow pace of digitalization processes. This article analyzes the main problems in the transport and logistics system of Uzbekistan, technical solutions, and innovative approaches to their elimination.

Keywords: transport logistics, multimodal logistics, transport infrastructure, transit corridors, digitalization, artificial intelligence, blockchain technologies, green logistics, electric transport.

Introduction

Uzbekistan has a strategically important geographical location, located at the intersection of international transport corridors connecting East and West, North and South. This situation creates an opportunity for the country to occupy an important place in regional and international freight transport systems. In recent years, the state has paid great attention to the development of the transport and logistics sector, and a number of projects are being implemented to repair highways, build new railway lines, and establish multimodal logistics centers. Nevertheless, there are a number of problems that need to be solved in this area[2,3,5].

Materials and methods:

This study was conducted based on data from the Statistical Committee of the Republic of Uzbekistan and the Ministry of Transport, World Bank reports, analysis results of international logistics organizations, and scientific articles. According to data from the Statistical Committee of the Republic of Uzbekistan for 2023, the volume of freight transportation is increasing by an average of 8-10% per year[1]. Freight transportation by road accounts for 80% of the total volume, while rail accounts for 15%, and air and river transport account for only 5%. Transport and logistics costs account for approximately 10-12% of the country's GDP, which is a high indicator by international standards. According to World Bank reports, the obsolescence of vehicles is also a pressing problem, and in 2023 it was found that more than 60% of freight vehicles across the country were more than 10 years old[3]. There are only 5 large multimodal logistics centers across Uzbekistan, which cannot fully cover this need. The volume of cargo transportation on the Tashkent-Andijan highway is expected to increase by 30% in 2023. This will require the construction of new roads and railways.

In the Logistics Performance Index (LPI), published every two years by the World Bank, Uzbekistan ranked 88th out of 160 countries in 2023 with a score of 2.6. This is an 11-point increase from 99th place in 2018[2,8]. Countries with high LPI rankings include Singapore (4.3

points, 1st place), Finland (4.2 points, 2nd place) and Denmark (4.1 points, 3rd place). The Russian Federation also ranked 87th with a score of 2.6, and Albania ranked 89th with a score of 2.5[2,9]. Uzbekistan's improvement in LPI is due to major infrastructure reforms and improvements in the quality of logistics services implemented in the country. However, the aggravation of the global geopolitical situation is negatively affecting the transport sector, leading to increased transportation times and costs on the European route[10].

Currently, work is being carried out in Uzbekistan on the basis of a number of government resolutions to further digitalize and automate the transport and logistics sector and the customs system, but there are some problems in these areas: For example, the complexity of customs procedures and the fact that most of the formalities are still carried out in paper form lead to excessive time and costs, which increases transport costs by up to 15%[3]. More than 70% of freight transportation in the country is still carried out using traditional management methods. The lack of electronic logistics systems in international freight transportation, i.e. the level of use of blockchain technologies does not exceed 5%.

Technical and innovative solutions

The analysis showed that the following technical solutions are of great importance for the development of the transport and logistics sector in Uzbekistan:

- in the field of road infrastructure modernization, increasing the efficiency of freight transportation through the construction of new highways and railways, repair and expansion of existing ones;
- Through digitization and automation, blockchain technologies, artificial intelligence-based cargo distribution, and automated customs systems, cargo transportation time can be reduced by 20%;
- reduce transportation costs through the use of electric vehicles and the introduction of environmentally friendly fuels in order to develop green logistics;
- To expand international cooperation, develop transport corridors with European and Asian countries, and expand participation in the "One Belt, One Road" project.

Conclusion and recommendations

For the development of the transport and logistics sector in Uzbekistan, it is important to accelerate the use of modern technologies and digitalization processes. It is also possible to increase the efficiency of the sector by modernizing infrastructure, simplifying legislation, and introducing ecological logistics systems. In the future, the country's logistics potential will be further increased by strengthening international cooperation and diversifying the transport system.

References

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