INTERNATIONAL MULTIDISCIPLINARY JOURNAL FOR RESEARCH & DEVELOPMENT
SJIF 2019: 5.222 2020: 5.552 2021: 5.637 2022:5.479 2023:6.563 2024: 7,805
eISSN :2394-6334 https://www.ijmrd.in/index.php/imjrd Volume 12, issue 05 (2025)

THE ROLE AND PROSPECTS OF RAILWAY TRANSPORT IN THE LOGISTICS SYSTEM OF UZBEKISTAN

Djabbarbergenova Aygul
Teacher of the Aral Sea Medical and Transport Technical college
Kosbergenova Sabina
Teacher of the Aral Sea Medical and Transport Technical college

Annotation: This article analyzes the economic and logistical significance of Uzbekistan's railway system, the current state of transport infrastructure, and its development prospects. It highlights the advantages of railway transport in freight movement, the ongoing digitalization processes, and the country's role in international transport corridors and transit potential. The study also addresses existing challenges in the sector and proposes practical solutions. Using statistical data and modern approaches, the article sheds light on the future of Uzbekistan's railway sector.
Keywords: Uzbekistan railways, transport system, logistics, digitalization, transit potential, international corridors, freight transportation, railway infrastructure, innovations, economic development.

РОЛЬ И ПЕРСПЕКТИВЫ ЖЕЛЕЗНОДОРОЖНОГО ТРАНСПОРТА В ЛОГИСТИЧЕСКОЙ СИСТЕМЕ УЗБЕКИСТАНА

Аннотация: В данной статье анализируются экономическое и логистическое значение железнодорожной системы Узбекистана, текущее состояние транспортной инфраструктуры и перспективы её развития. Особое внимание уделяется преимуществам железнодорожного транспорта в грузоперевозках, процессам цифровизации и роли страны в международных транспортных коридорах и её транзитному потенциалу. Также рассматриваются существующие проблемы в отрасли и предлагаются практические решения. На основе статистических данных и современных подходов статья освещает будущее железнодорожного сектора Узбекистана.
Ключевые слова:
Железные дороги Узбекистана, транспортная система, логистика, цифровизация, транзитный потенциал, международные коридоры, грузоперевозки, железнодорожная инфраструктура, инновации, экономическое развитие.

Introduction

In today's era of globalization, transport and logistics systems are among the key factors of economic development in every country. In particular, Uzbekistan, being located in a geographically favorable position, serves as a critical transit hub connecting Central Asia with East and West, North and South. In the country, railway transport ranks first in terms of freight volume. As a country situated at the strategic heart of Central Asia, Uzbekistan pays special attention to the development of its transport and logistics system. Especially, railway transport is one of the main sectors in freight transportation and plays an important role not only in the national economy but also in developing international trade relations. Within the framework of transport policy launched after 2020, new projects such as the "Trans-Afghan" corridor and the "China–Kyrgyzstan–Uzbekistan" railway have gained significant relevance.

Railway transport holds a central position in Uzbekistan's economic life. Currently, over 60% of the country's total freight is transported by rail. This mode of transport has significant advantages in delivering large volumes of goods over long distances in a cost-effective and safe manner. In 2021, a total of 72 million tons of cargo were transported by rail in Uzbekistan, which is a 1.9% increase compared to 2020. These figures indicate the key role of railway transport in freight delivery. The joint-stock company "Uzbekistan Railways" manages over 7,400 kilometers of railway lines across the country, of which more than 2,500 kilometers are electrified. These lines are used to transport products such as cotton fiber, mineral fertilizers, construction materials, gas condensate, metallurgy and chemical products, and foodstuffs. Railway transport plays an essential role not only in the domestic market but also in maintaining a balance in export-import operations.

Railway transport stands out in the logistics system with several features. First, it allows for the simultaneous transportation of large volumes of freight over long distances. This is particularly advantageous for accessing international trade markets.

Second, railway transport is considered environmentally friendly. Compared to road transport, it emits fewer harmful gases, which aligns with principles of sustainable development.

The third aspect is cost-effectiveness. The cost of transporting one ton of cargo per kilometer by rail is 2–3 times cheaper than by road transport. Moreover, the development of multimodal transport systems increases the advantage of railways. For instance, cargo can be delivered from Tashkent to the Baku port by rail, and from there, shipped by sea to Turkey and European countries. This system improves the efficiency of the logistics chain and reduces delivery time. In recent years, digital technologies have been widely implemented in the railway system. The joint-stock company "Uzbekistan Railways" is actively working on digitalizing the main communication networks.

Currently, 60% of the main railway lines have been digitized. To increase data transmission speeds up to 1.25 Gbps, a corporate data transmission network has been established based on fiber-optic lines. Additionally, the "Express-Cargo" information system monitors cargo arriving by railway to the plant from the Ohangaron UTY station to enable prompt decision-making in production processes. The advantages of this system include quick monitoring and analysis of incoming cargo and wagons, generating reports on delays of leased wagons, and reducing penalties for idle wagons. Furthermore, a system for optimizing the delivery of sand-gravel mixture from the "Sharxiya" quarry to the waste collection facility of the Copper Processing Plant allows for real-time analysis and control of deliveries. The RMS (Railway Monitoring System) is designed for digitizing the technical fleet and enabling the electronic submission of applications for railway and tractor equipment, reducing the need for paper documentation across plant divisions.

International Transport Corridors and Transit Potential. International transport corridors connecting Central Asia to other regions are actively developing via Uzbekistan's railway network. One such project is the China–Kyrgyzstan–Uzbekistan railway. Through this project, Chinese goods are planned to be transported through Uzbekistan to Iranian and Turkish ports and then to Europe. Another significant initiative is the "Trans-Afghan" corridor, which links Uzbekistan with the Pakistani ports of Karachi and Gwadar. This will open new maritime routes for Uzbek exports and reduce transport costs. Uzbekistan is also gaining access to sea ports via the "Lapis Lazuli Corridor" through Turkmenistan and Iran. This development is turning Uzbekistan into a regional logistics hub. Through its expanding transit potential, more than 15 million tons of cargo are currently transported annually via Uzbekistan's railway network. According to plans, this figure is expected to reach 30 million tons by 2030.

Problems and Suggestions. Several challenges in the railway sector reduce the efficiency of transport processes. The main issues include the physical wear and tear of railway wagons, service interruptions during annual maintenance, and the need for new locomotives and signaling systems. Additionally, cargo delays at border control points on certain international corridors slow down logistics processes and extend delivery times. To eliminate these problems, the following suggestions are proposed:

-Attract private investments into railway infrastructure;
-Liberalize tariff policies and create favorable conditions for export-import operators;
-Build modern storage warehouses and container terminals at each logistics center;
-Establish a unified digital platform-based transport monitoring system.

Conclusion.

The role of railway transport in Uzbekistan's logistics system is of strategic importance. By modernizing infrastructure, introducing digital technologies, and expanding international cooperation, the country can further strengthen its transit potential. This will not only contribute to economic growth but also reinforce regional integration.

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