



HISTORY OF RAILWAY TRANSPORT DEVELOPMENT IN OUR COUNTRY AND FOREIGN EXPERIENCES

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<https://doi.org/10.5281/zenodo.7042554>

ARTICLE INFO

Received: 27th August 2022

Accepted: 30th August 2022

Online: 02nd September 2022

KEY WORDS

railway system, Inclusive, industry, modernization plan, invention, privatization, reform, development, electrification, company, inventor, operator, project, digital railway, freight, passenger transportation

ABSTRACT

In this article, the role and importance of the country's railway transport in the development of the national economy, the history of its development, foreign experiences in this regard, as well as the factors that influenced the creation, formation and development of this transport network, the development of the country's railway transport suggestions and recommendations regarding the prospects are given.

There are no inventions in the world that did not make the problems of people easier, and one of such inventions is undoubtedly the invention of the railway.

In 1515, Matthäus Lang's first railway model Reisszug was installed at the Hohensalzburg Fortress in Austria.

As a result of people's independent scientific research, the "atmospheric engine" was invented by the English inventor Thomas Newcomen, and later, the Scottish inventor James Watt improved the steam engine in 1769. As a result of these inventions, it became possible to transport large loads. This spurred the rapid development of the industry of Western European countries.

These steam engines required a lot of fuel consumption, many scientists were determined to solve this problem, and Scottish inventor Robert Davidson was

able to do it. In 1837, he created the first electric locomotive in the world. This, in turn, created the ground for fundamental changes in Anguilla's industry in the 19th century.

The number of people in the world is increasing day by day, and this leads to an increase in the number of motor vehicles on the roads, causing congestion, increasing the share of CO₂ gases in the atmosphere, and increasing the number of car accidents.

In order to find a cheap, safe and convenient solution to the above problem, developed countries have already done a lot of work, that is, they achieved this problem through the development of railway transport.

In particular, we will consider the solution of this problem in the case of Great Britain.



Great Britain began to prepare in advance to solve the above problems in the railway system. This project was to expand the railway system and reduce the financial costs of the British railways until 1962. In addition to these, it was necessary to improve the traffic on the roads, increase the volume of cargo transportation, and provide more passenger transportation.

The modernization plan failed to successfully redefine what the purpose of the railways was. Britain's railways remained subject to the Rail and Canal Traffic Acts, which made it possible to transport almost any train, regardless of quantity (large or small), between any two stations on the network. imposed the obligation to ensure the transportation of cargo according to the established and announced tariffs. This legislation was created by the 19th century to prevent the railways from abusing their monopoly as the only viable long-distance transport provider for much of the country, but the growth of road transport made the railways very disadvantaged. had put him in a situation. Shipping operators had no legal restrictions and could refuse uneconomic work.

The fact that the British economy was an inclusive economy by the 19th century, which in turn ensured the sustainability of the above railway reforms.

For example, in the years 1923-1947, the British railway system was managed by four big companies, which in turn created a competitive environment and served as an impetus for the growth of companies. In addition to this, a decision called "Transport Act" was passed in 1962, but this decision could not make a breakthrough in the existing railway sector. By 1995, the privatization of the

railway system was able to make a radical change, that is, the cost of passenger transportation in the railway system increased. During this period, the High speed 1 and West Coast Main Line projects were launched. But the Coronavirus epidemic that started in 2019 had a significant impact on the British railway system.

Great Britain's railway system has developed to an enviable level today, the railway system has been fully digitized, which in turn has led to a reduction in the movement time between locomotives, an increase in the volume of passenger traffic, and a decrease in road costs. Let's look at the example of numbers.

A series of decisions and proposals like this gradually solved the problems of the British railway and turned it into the most modern digital railway system in the world today.

This, in turn, can be the right answer to the low quality of cargo transportation in developing countries, high fuel consumption, dangerous urban traffic environment, low speed of locomotives, passenger transportation costs, and low income from this sector. "we will see.

On average, 21,000 services are provided per day, which is 3 times more than before the privatization process. After the privatization process, investors will invest 1 billion pounds per year to solve the problems in the road sector, which will eliminate the existing problems. It is expressed by the fact that Great Britain has the best railways in the world.

At the same time, 1.7 billion people are transported by railway annually, and more than 600,000 people are employed in the network and related sectors. This indicator is 1.7% of the employed population in Great Britain, which is a very large



indicator. From this, 11 billion pounds of taxes are paid annually.

This is the basis of the state economy, which solves the problems in Great Britain.

During the years of our country's independence, the railway system was very weak. As we have discussed above, we could solve the following problems by developing the railway industry in our country.

- repair of old railway lines and wagons, carriages;
- installation of modern high-speed locomotives between historical cities in our country;
- introducing new railway lines and supplying them with electricity
- to increase the productivity of cargo and passenger transportation through digitalization of the system

Bold steps were taken to solve the problems listed above.

Based on the decree of the President of the Republic of Uzbekistan No. PF-982, on November 7, 1994, the state-joint-stock railway company "Uzbekitsohn Temir Yollari" was established.

This decree of the President required the transformation of the existing railway network into a unified system and the fundamental reform of the personnel system in the field. As a continuation of these works, according to the decision of our First President in 2001 and the state program of railway transport reform of the Cabinet of Ministers, the state unitary enterprise "Uzbekistan Railways" was transformed into an open joint-stock company with a full state share.

The task of this decision is to modernize the single obsolete railway transport network and develop the existing industry, to update the outdated railway transport

equipment, to create a joint repair line, to supply railways to the world market. It served as a program to solve problems such as the development of exit corridors through the road network, transit cargo transportation means.

In addition to these, the enterprises engaged in the transportation of goods and passengers and various service companies, etc., which are working inefficiently, were organized in different organizational and legal forms and development works were carried out to operate on the basis of competition.

The implemented changes are aimed at improving the management of the old system, implementing corporate management methods of the most advanced foreign countries, increasing the scope of services offered by the railway industry, improving their quality, attracting foreign investments, increasing net income and the main led to a certain increase in capital investments.

During the years of independence, great works were carried out on the formation of a new railway (highway) in Uzbekistan, paying special attention to the expansion of the old railway system. Construction of the Navoi-Uchkuduq-Sultonovaistog-Nukus railways in the Kyzylkum deserts, construction of a combined rail-road bridge across Amudarya, Tashguzar-Boysun-Kumkurgan railway in difficult mountain conditions. The construction of the road is one of the big steps aimed at expanding the railway lines in our country.

After gaining independence, special attention is being paid to the modernization of outdated railway systems, including 2 large investment projects were implemented with the help



of loans from the Asian Development Bank, and roads were restored on the Tashkent-Samarkand-Bukhara section, Keles - Laying of optical fiber communication lines with a length of more than 600 km was completed in the Bukhara section. Electrification of the Tokmachi-Angren railway line has been completed. The construction of the New Yangiyer-Jizzakh and Yangiyer-Farhod railway lines has been completed.

The society is implementing a number of projects for the renewal of locomotive fleets, passenger and freight cars. The serial production of passenger and freight wagons has been mastered at the enterprises of JSC "Uzbekistan Railways". These are, in particular, compartment wagons equipped with an air-cooling device, the most popular types of cargo wagons - closed, tankers for oil products, semi-wagons, etc.

The problem of modernization of freight and passenger wagons was solved by obtaining the appropriate licenses and certificates, the wagons meet the standards and the requirements of the 1520 mm rail gauge, and the quality management system in industrial enterprises meets ISO 9001-2000. control over the ability to give has been strengthened.

It is one of the problems that require a lot of work and a lot of money to reduce fuel consumption and emissions of gases in the railway system around the world. Electrification of the railways in our country was started in 1971 to solve this problem. One of the last works done with the help of foreign investments and own funds of "Uzbekistan Railways" JSC was the electrification of the Toqimachi railway station. After the electrification of this

section, the length of electrified sections reached 1601 km.

Thus, by using foreign experience in the field, SCADA remote control system, communication system, traction substations, microprocessor centralization system, axis and telecommunication electronic computing systems were introduced. The power supply system was built taking into account the speed of trains up to 160 km per hour.

In the field of railways, he gained enough experience by working together with the Chinese state to reduce the distance of trains in mountain and sub-mountain regions.

In particular, the purpose of building the Angren-Pop electrified railway line is not only to create the possibility of freight and passenger transportation between the regions of the Fergana Valley and other regions of our country, but also China - Central Asia - Europe was supposed to be the most important link of the new international transit railway corridor. A 19.2-kilometer tunnel was built in the section of the Angren-Pop railway, which is 123.1 kilometers long, passing through Kamchik Pass. During these construction processes, Chinese experts admired the potential of Uzbek railway workers, and Uzbeks praised the skill of the Chinese. The great victory of labor was achieved ahead of schedule due to the hard work and cooperation of both parties.

More than 413 thousand 162 passengers were served and 7395.6 thousand tons of cargo were transported through this tunnel. Also, 1718 new jobs were created.

Due to the large number of historical monuments in our country, millions of tourists visit our country every year, and



they needed safe and high-speed locomotives. Therefore, in July 2009, between "Uzbekistan temir yollari" JSC and "Talgo" company, the railway An agreement on cooperation in the field was signed.

On the basis of this Memorandum, the parties agreed to cooperate in projects and joint researches for the establishment of high-speed railway passenger transport in the Republic of Uzbekistan, as well as the purchase of high-speed passenger train "Talgo". The new high-speed train was named Afrosiyab in honor of the ancient city located in the Samarkand region.

From October 8, 2011, "Afrosiyob" (Spanish company Talgo) high-speed train Tashkent-Samarkand-Tashkent was launched with message number 161/162.

This high-speed train was initially installed between Tashkent and Samarkand, and later it began to be installed in other cities. High-speed "Afrosiyab" train covers 344 km railway distance in two hours and fifteen minutes. The maximum speed is 250 kilometers per hour.

The modern look is given to the train, first of all, by its aerodynamic design, which is optimized for impact pressure waves and side winds. The electric train is 157 m long and 4 m high. All salons are equipped with soft, comfortable reclining seats and a built-in table, as well as a video monitor. All areas of the train are non-smoking areas.

In the railway sector, the problem of building bridges to connect two regions was not only solved by engaging the Japanese company, but also gained a lot of experience from them.

New Tashguzar-Boysun-Kumkurgan railway line is the first line built in the

mountainous area. The natural border of Kashkadarya and Surkhondarya regions is crossed by a 1800 m high mountain. The length of roads on a slope of 10-18.5% is approximately 64 km, on a slope of 5-10 % it is approximately 35 km. 37 bridges, galleries and tunnels were built on the new railway construction route.

The bridge construction zones are represented by Hisar mountain ranges with a strong relief. Near the Akrvat Pass, the highway passes through the valleys of Chashmai-hafizan, Akrvat, Sho'rab, Sherabad Darya. Mountain slopes mainly have a steepness of 1.3-1, river valleys - abrupt changes of high peaks and very steep mountain slopes have a slope of 18.5‰.

It should be noted that the construction of long metal bridges was carried out for the first time in the country. The experience of metal production and installation in our country was related to only one example before, and that is the bridge over the Amudarya.

The construction of metal bridges on the new lines was mastered with the help of technologies of Japanese companies, which have sufficient experience for quality control and compliance with the construction schedule.

In conclusion, we can say that after our country gained independence, special attention was paid to the railway sector.

In particular, problems in the industry were studied and the experience of advanced countries such as Japan, China, Great Britain was used to solve them.

Continuous application of new innovations to the system serves as an impetus for further development of this field.



In our opinion, in order to further increase the knowledge of personnel in the railway sector in our country, we believe

that it is necessary to improve their qualifications abroad.