

OVERVIEW STUDY OF IRANIAN AND PAKISTANI PORTS FOR THE LOGISTICS SYSTEM OF UZBEKISTAN AND THEIR FURTHER USE

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Abstract: the article analyzes the potential of Iranian and Pakistani ports for further use by Uzbekistan, in particular, new potential southern transport corridors connecting the countries of Central Asia and South Asia are considered. The material characterizes the importance of the study of southern transport corridors, given the current unstable situation in the political arena of the world community. The prospects of Uzbekistan's cooperation with Iran and Pakistan are also analyzed in order to emphasize the importance of bilateral cooperation in order to support the economies of these countries.

Keywords: logistics, transit, freight turnover of railways, railway system of Uzbekistan, Chabahar port, Karachi port, Pakistan, Iran, Uzbekistan, Mazari-Sharif-Kabul-Peshawar, LNG

Introduction

Today, one of the topical topics in the field of the world economy is logistics, which allows you to transport goods and services to other countries in order to maximize profits and maintain mutual economic relations [1]. To ensure stability in the export of their goods, States ensure security and control over the transport routes adjacent to their territories. Insufficient vigilance and security of transport routes can lead to large losses of subjects of economic relations, as a result of which not only the supply side, but also consumers will suffer from the lack or high price of certain goods on the regional market. A special role in the transportation of goods is played by seaports, which allow goods to be transported quickly and safely.

Ports of such countries as China, Korea, Singapore, Taiwan, which connect the Pacific and Indian Oceans and are a key logistics hub in this region, are very popular in East Asia. In the South Asian region there are ports of Pakistan, Bangladesh, Sri Lanka and India, serving as a bridge between Central and South Asia. The main purpose of this article is to determine the potential of Iranian and Pakistani ports for further use by the Central Asian countries, in particular the Republic of Uzbekistan.

1.1 The concept of logistics

One of the key aspects of increasing trade and economic relations between the subjects of the world economy is an efficiently built logistics system. According to a number of foreign scientists, logistics is a mechanism that ensures the passage of material and related information flows from the point of purchase of raw materials, the exporting country, to the point of final consumption, the importing country. The word "logistics" comes from ancient Greek: log — thinking; logismos — calculation, reasoning; logistikas — logic of thinking. These terms in the French meaning, for

example, are compared with military affairs, that is, with the problems of military communications [1].

General A. H. Jomini (1779-1869) in his work: "Summary of the Art of War", published in 1837 in Paris, in the sixth chapter, entitled: "On Logistics or the Practical Art of moving armies, On Logistics or the Practical Art of Moving Armies", refers to logistics processes such as: location and the supply of warehouses, the planning and implementation of marches, the preparation of roads, the organization of vehicles and the supply of troops. He points out that Napoleon's defeat in the Russian campaign was directly related to an imperfect supply system, underestimation of the role of transport and insufficient organization of bases and sanitary services [2]. From a military point of view, the term "logistics" Jomini understood organizational and planned activities of the general staff aimed at the leadership and command of the army.

An important approach is to study the theory and practice of logistics Kurganov [3]. In his opinion, "The basic law of logistics is to save the total costs associated with the movement of material flow." Logistics is the management of material, information, financial, human and other flows based on their optimization. There are also other interpretations of this term, for example, logistics is an integral management tool that contributes to the achievement of strategic, tactical or operational goals of a business organization through effective management of material and (or) service, as well as related flows (financial, information, etc.) [4].

Convenient logistics allows you to minimize transportation costs and time, which effectively turns out to be for consumers of a particular market. Given the fact that not all countries have a convenient geographical location with the possibility of having seaports that provide the cheapest transportation of goods, they are forced to use the territory of neighboring countries to transport goods to third countries. Today, many countries establish diplomatic and economic relations, which contributes to the further development and cooperation of these countries in the field of economics. Thanks to this, the transport system is developing, new roads and railways are being built to transport goods in the shortest possible time.

1.2 Logistics system of Uzbekistan

After a difficult economic adaptation in the 90s, the newly independent states of Central Asia began to invest more in the transport system in order to expand their railway networks and improve railway communication with neighboring states. Uzbekistan is geographically separated by two or more states from international sea routes, so the costs of transporting goods during export –import operations are very significant. Transport plays a key role in the free movement of people, goods, and services, and is also an important factor in the development of competition and entrepreneurship, ensuring integrity and national security [5]. Table 1 shows the main new railways of Uzbekistan in the period 1991-2020.

Table 1 Investments in cross-border railways of Uzbekistan.

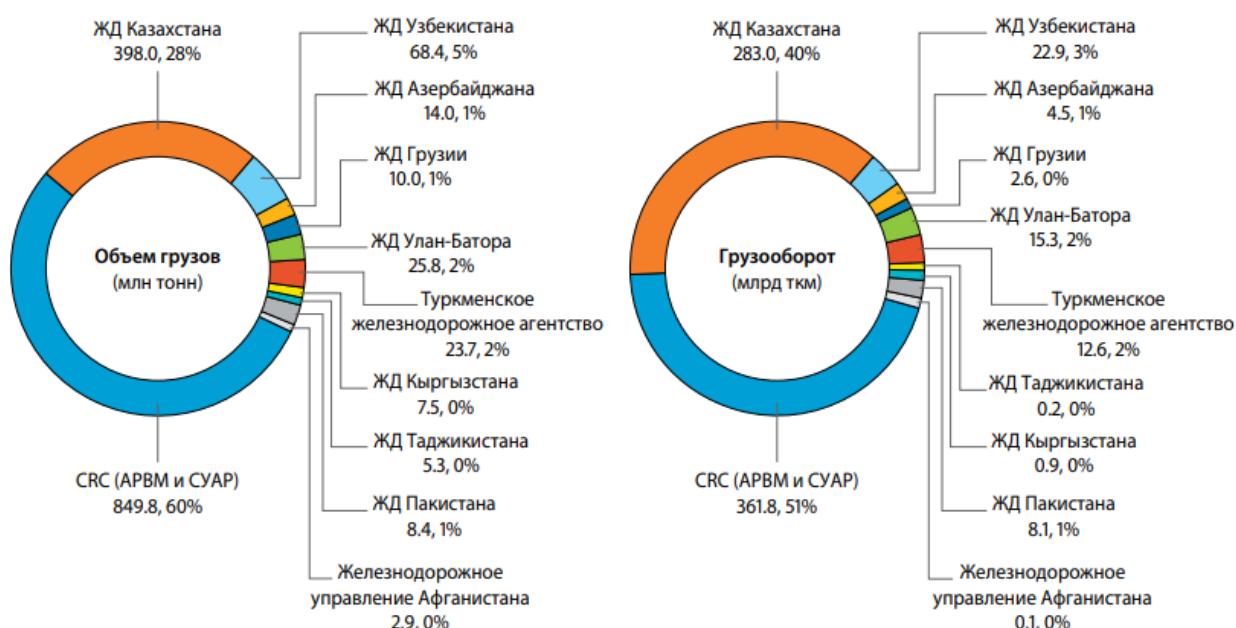
Country	Project	Goal	Year of completion
Uzbekistan	Road and railway bridge over the Amu Darya River	Railway bridge between Uzbekistan and Afghanistan	2001

Navoi-Uchkuduk Sultanuizdag-Nukus	New connection with the North-Western railway corridor without the need to travel through Turkmenistan	2001
Jizzakh-Yangier-Farhad	Direct communication between Jizzakh and Tashkent	2004
Tashguzar-Baysun Kumkurgan	A new connection south of the northwest corridor between Karshi and Termez, eliminating the need to pass through Turkmenistan	2007
Angren-Pap	New communication with the Ferghana Valley, including a 19-kilometer tunnel through the Kamchik Pass, bypassing the roundabout route through Tajikistan	2016
Navoi-Bukhara- MiskinNukusb	The new central section of the northwest corridor, which is shorter than the Navoi-Uchkuduk-Sultanuizdag-Nukus route	2017
Mazar-I-Sharif-Kabul- Peshawar	Railway bridge between Uzbekistan and Afghanistan	2026

Source: Overview Study of Ports and Logistics in the CAREC Countries. Creative Commons Attribution 3.0 IGO License (CC BY 3.0 IGO)

Figure 1 compares the volume of cargo transportation and cargo turnover of the CAREC (Central Asian Regional Economic Cooperation) member countries in 2018. The main countries with railways that account for 93% of cargo flow and 94% of cargo turnover are the PRC (ARVM and SUAR), Kazakhstan and Uzbekistan.

Figure 1. Freight flow and freight turnover of CAREC railways, 2018



Source: THE STATE OF RAILWAYS IN THE CAREC COUNTRIES AND OPPORTUNITIES FOR INVESTMENT, COMMERCIALIZATION AND REFORM¹

The volume of transit cargo transported (by road and rail) on the territory of the Republic of Uzbekistan in January-September 2022 amounted to 5,452.2 thousand tons. 5,277.4 thousand tons were transported by rail (96.8% of the total cargo volume), 174.8 thousand tons (3.2%) by road. In January-September 2022, the number of wagons that crossed the territory of the country amounted to 92,231 units, at the same time, the number of motor transport reached 11,296 units [6].

Transportation of goods by means of transport

	January-June 2022	in % to January-June of the previous year	
		2021	2020
<i>Transported goods by transport, million tons</i>	666,1	100,6	114,7
<i>railway</i>	35,8	101,9	103,5
<i>automotive</i>	598,2	100,5	114,9
<i>by air, thousand tons</i>	8,2	274,2	117,2
<i>pipeline</i>	32,1	100,5	125,6

Socio-economic situation Source: <https://stat.uz/ru/>

Cargo turnover by type of transport

	January-June 2022 г.	in % to January-June of the previous year	
		2021 г.	2020 г.
<i>Cargo turnover of transport, million tons-km</i>	36 234,7	102,9	114,1
<i>railway</i>	12 188,9	101,8	103,1
<i>automotive</i>	9 212,0	107,6	108,6
<i>By air</i>	163,6	143,4	141,2
<i>pipeline</i>	14 679,2	100,9	126,9

Socio-economic situation Source: <https://stat.uz/ru/>

In terms of cargo transportation, road transport prevails among all types of transport (598.2 million tons). 35.8 million tons of cargo were transported by rail. 32.1 million tons of gas were pumped by pipeline. The lowest indicator for cargo transportation was noted for air transport – 8.2 thousand tons. A significant part of the total volume of cargo transportation is occupied by road transport – 89.8%, the share of transportation by other modes of transport accounts for 10.2%.

¹ https://www.carecprogram.org/uploads/Situation-of-Railways-in-CAREC_RUS_4th_WEB

In January-September 2022, 4,284,2 thousand tons of oil cargo were shipped by rail, and, compared with January-September 2021, this figure increased by 8.5%. For information: the share of oil cargo in the total volume of cargo shipped by rail was 7.8% (Stat.uz, 2022). In January-December 2022, 6,444,6 thousand tons of construction cargo were shipped by mainline public railway transport. This is 837.0 thousand tons more, compared to the volume of shipped goods for the corresponding period of 2021 (Stat.uz, 2023).

For Uzbekistan, the main trading partners in 2021 are the Russian Federation (17.9 percent), China (17.7 percent), Kazakhstan (9.3 percent), Turkey (8.1 percent), the Republic of Korea (4.5 percent), Kyrgyzstan (2.3 percent) and Turkmenistan (2.1 percent) and other countries (Stat.uz, 2022). Given the fact that Western sanctions against Russia in 2022 may indirectly affect Uzbekistan, especially foreign trade turnover between the EU countries and a number of Latin American countries, Uzbekistan should strive to access new southern transport corridors to diversify the country's export policy. The use of the southern transport corridors will allow Uzbekistan to access the world seaports of Pakistan, Iran and India, which also contributes to the further expansion of economic cooperation with the countries of the Arab world.

2.1 Prospects of cooperation between Uzbekistan and Iran

The Islamic Republic of Iran has begun to revise its economy in the face of severe Western sanctions and, more than ever, attaches importance to its neighbors in its foreign policy. The US attempts to isolate Iran have removed part of the economic opportunities of the developing countries of Central Asia from their economic agenda and negatively affected the development processes in Central Asia. The Islamic Republic of Iran gives priority to the approach of "mutual cooperation within the framework of a good-neighborly policy", which entails closer relations between officials and the population of neighboring and neighboring countries in all areas, as stated by the leader of the Islamic Republic of Iran, the President, and the Minister of Foreign Affairs have repeatedly stressed the importance of such a priority. The capacities of the Iranian ports of the Persian Gulf, the Oman and the Caspian Seas, as well as the country's capabilities in the field of rail and land transport give a great advantage in trade between the two countries.

The trade turnover between the countries in 2021 amounted to \$430.8 million (exports - \$176.6 million, imports - \$254.2 million). An important factor is the 3-fold increase in the number of joint ventures (355 units) by Iranian investments. Today, Iran occupies one of the main places in the trade of certain goods and services, for example, in January-April 2022 Uzbekistan imported the largest volume of apples (15.2 thousand tons), 503 tons of tangerines, 2.4 thousand tons of oranges, 5.6 thousand tons of potatoes from Iran in 11 months; for 11 months of 2022, \$75 million of textile products were exported, in January-November 2022, 1.6 thousand tons of masha were exported to this country (Stat.uz, 2022).

In December 2017, President of the Republic of Uzbekistan Shavkat Mirziyoyev issued a decree on expanding the country's external transport capabilities (Weitz, 2018: 7). The decree highlights the routes Uzbekistan-Turkmenistan-Iran-Oman, China-Kyrgyzstan-Uzbekistan and trans-Afghan corridors. It should be noted that the three trans-Afghan corridors begin with a railway line from the border Termez to Mazar-I-

Sharif in northern Afghanistan. In the future, it is planned that the route will go from Mazar-I-Sharif to Herat, and from Herat the railway will branch into three corridors. One goes to Bandar Abbas, the second to Chabahar, and the third to Bazargan provides access to the Black Sea. Thus, the Islamic Republic of Iran can provide the widest transportation opportunities for Uzbekistan's products.

The next priority is to connect the railway as a China-Kazakhstan-Turkmenistan-Iran corridor as part of the implementation of a new Silk Road route called the "New Eurasian Land Bridge", which connects the coastal regions of China through the Central Asian countries with the European Union [7].

2.2 Prospects of cooperation between Uzbekistan and Pakistan

The trade turnover between Uzbekistan and Pakistan in 2021 was \$181.5 million (exports – \$130.0 million, 71.6%; imports – \$51.5 million, 28.4%). The main structure of trade is:

- Food, beverages – imports \$26.5 million, exports \$62.93 million;
- Non-food raw materials (except fuel) - import \$0.02 million, export \$3.29 million;
- Fuel, lubricating oils, similar products – export \$0.02 million;
- Chemicals – import \$20.19 million, export \$0.71 million;
- Industrial goods – import \$0.80 million, export \$59.20 million (Stat.uz, 2021).

Pakistan is an important strategic partner of Uzbekistan and is among the top 5 countries in the export of fruits and vegetables (51.5 thousand tons in January-November 2022),

Just a month after in February 2021. Tashkent has signed a Mazar-I-Sharif-Kabul-Peshawar Roadmap with Pakistan and Afghanistan for the construction of a 600 km railway connecting the seaports of Pakistan, Uzbek officials are actively working with neighbors from Central and South Asia to organize a high-level conference of transport infrastructure between the regions, it is expected that construction will last for 5 years old.



According to experts, the full use of the Afghan transport infrastructure will make it possible to reduce the export of goods from Uzbekistan to Pakistan from 35 days to

10-15 days, which will also significantly affect the cost of production by reducing the price of transportation.

In addition, projects for laying high-voltage power lines "Surkhan - Puli-Khumri" and CASA-1000 are being implemented in the direction of the new railway line. The track of the road will be 1520 mm with a transition to the track of 1676 mm at the Afghan-Pakistani border.

3.1 Chabahar Port

The port of Chabahar is located in the southeastern part of Iran, north of the Sea of Oman and the Indian Ocean and is the closest route to the international oceans for Central Asian countries that do not have access to the sea. The types of vessels regularly entering CHABAHAHAR include fishing (37%), cargo (17%), general cargo (9%), oil chemical tankers (5%), buoy laying vessels (1%). The maximum length of vessels entering this port is 305 meters. The maximum draft is 13.4 meters [8].

There are two ports in Chabahar — Shahid Kalantari and Shahid Beheshti — each with five berths. India Ports Global, a division of the Ministry of Shipping for investment in the project, is cooperating with a joint venture of the Jawaharlal Nehru Port Fund and the Kandla Port Fund from Gujarat to build two container berths with a length of 640 meters and three multi—cargo berths, to invest \$ 85 million.

From the point of view of its position, the port of Chabahar has geopolitical, geo-economic and geostrategic potential. The port is an important object in international trade relations between Asian countries and can play the role of a transport gateway, as well as a central trade hub between the countries of Central Asia, India, Pakistan, Afghanistan, Russia and Europe. Railway and transport links with the port are designed to better connect Central Asia to international cargo transportation [9].

As the Chabahar port is being developed and managed by India, Iran is also becoming a military ally of India. Chabahar can be used if China decides to take the positions of its fleet, placing ships in the port of Gwadar to calculate its superiority in the Indian Ocean, the Persian Gulf and the Middle East. The port of Chabahar will be useful to India in countering the Chinese presence in the Arabian Sea, which China is trying to secure by helping Pakistan develop the port of Gwadar. Gwadar Port is less than 400 km from Chabahar by road and 100 km by sea. The Zaranj-Delaram road, built by India in 2009, can give access to the Afghan Garland highway, opening access to four major cities of Afghanistan - Herat, Kandahar, Kabul and Mazar-I-Sharif, which in turn contributes to the development of the roadmap to the southern part of Uzbekistan.

It should be noted that on January 23-26, 2022, the Uzbek delegation paid an official working visit to the Islamic Republic of Iran and visited the port of Chabahar. The Memorandum of Understanding between Uzbekistan Temir Yullari JSC and Chabahar Port was signed on January 25 last year. Parties in the field of transit, logistics and cargo transportation using existing international multimodal transport routes [10].

3.2 Port of Karachi

The port of Karachi is one of the largest ports in South Asia and the busiest port in Pakistan. This port is considered the economic center of Pakistan, through which about sixty percent of the country's cargo passes. The port of Karachi is a deep natural port with a shipping channel 11.5 km long and an approach channel 12.2 meters deep. The port has 30 berths for handling dry cargo and 3 berths for handling bulk cargo,

including a private modern container terminal – Karachi International Container Terminal (KICT). The port handles about 26 million tons of cargo per year, including 14 million tons of bulk and 12 million tons of dry cargo [12]. Currently, the port of Karachi is visited by about 1,600 ships annually, and the berth occupancy is about 45%, which indicates that the port has sufficient capacity to handle more cargo. The main reason for the importance of Karachi is its proximity to the Strait of Hormuz and the Suez Canal.

The port covers an area of 1,000 acres, which connects to an industrial area of 11,000 acres and is located in the Indus Delta areas. You can access it by going to the industrial area of Korangi, which is located a little away from the city. [11] In addition to raw materials for steel, the import of oils, rice, cement, fertilizers, containers, mineral oils, coal, even LNG (liquefied natural gas), etc. all this is managed in the port with the help of advanced terminals that support the economy.

The most important feature of this port is that it is the only port that processes LNG in Pakistan and therefore serves as the country's main energy center in the list of industries of the port of Karachi. LNG processing is a very important infrastructure, as it allows you to transport different types of fuel, being independent of homogeneous raw materials or fuel. If we compare it with Germany, which was completely dependent on Russian gas imports until 2022, suffered significant losses and gas shortages after the imposition of sanctions against Russia, since there were no other sources of imports in such volume (Nord Stream). After the outbreak of the war in Ukraine, the German government announced the construction of an LNG terminal in the city of Wilhelmshaven, which was planned to be built by the end of 2022, since Germany is almost the only country that does not have the infrastructure to transport liquefied gas, despite the fact that it is a developed country. On December 17, 2022, the first LNG terminal was opened, capable of providing 50,000 households [13]. This indicates that the existing infrastructure for LNG transportation provides great opportunities not only for Pakistan itself, but also for the countries transporting cargo through this port, and in the future can contribute to the development of the economies of Central Asian countries.

Pakistan and Uzbekistan are to sign a transit trade agreement on July 15, 2021, according to which all trade of the latter will be transferred from the Iranian port of Bandar Abbas to the seaports of Pakistan. In this regard, Prime Minister Imran Khan took part in the Pakistani-Uzbek business forum "Reunification of the Silk Road" on July 15-16, 2021. On the sidelines, Pakistan and Uzbekistan signed an Agreement between Uzbekistan and Pakistan on Transit Trade (AUPTT). Pakistan expects to receive a potential \$90 billion after the conclusion of an agreement that will provide all Central Asian states with access to Pakistani seaports, in particular to the ports of Karachi and Gwadar. The agreement between Uzbekistan and Pakistan was agreed and finalized, covering trade and transit of goods by road and rail, as well as customs procedures, mainly modeled on APTTA, which was a comprehensive and time-tested agreement and improved mechanisms.

Conclusion

Summing up the above, it can be concluded that at the present stage of economic development, Uzbekistan has a good railway infrastructure both within the state and abroad. The friendly relationship between the Central Asian countries provides an

opportunity for Uzbekistan to implement its economic policy within the framework of increasing regional influence. To date, joint railway projects are being implemented, Surkhan–Puli-Khumri, Mazar-I-Sharif-Kabul-Peshawar, Uzbekistan-Turkmenistan-Iran-Oman, China-Kyrgyzstan-Uzbekistan, which contribute to the development of cooperation between Uzbekistan, Turkmenistan, Iran, India, Pakistan, Kyrgyzstan and China.

Given the current unstable political situation between the countries of the West and the Russian Federation, the sanctions imposed against the Russian Federation and Uzbekistan's dependence on imports of Russian products pushes the Uzbek economy to diversify the export direction, as well as the search for new alternative southern transport routes to access the sea route for transporting goods, which is the cheapest means of transport.

From the point of view of the prospects of trade cooperation between Uzbekistan and Iran and Pakistan, the use of seaports can provide, as well as increase Uzbek exports to the Iranian and Pakistani markets. Of course, new markets are opening up for Uzbekistan in the Persian Gulf, as well as the market of African countries. Using seaports, Uzbekistan can transport food and perishable products faster and cheaper, as well as transportation of non-ferrous metals, cotton, gold, etc.

Iranian and Pakistani ports will act as a new lever for the economic development of the Republic of Uzbekistan and further support for the safe transportation of goods and services.

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