

# Factors of Development of International Transport Corridors in the Republic of Kazakhstan

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**Abstract.** Over 80% of world trade is carried by maritime transport. However, 32 developing countries of the world do not have direct access to open water.

These landlocked developing countries (LLDCs), more specifically: Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan, Azerbaijan, Afghanistan, Armenia, Mongolia, Tajikistan, and the other 23 countries further away from Central Asia, are in a difficult position because their imports and exports must transit through neighboring coastal states to reach seaports. The lack of seaports of their means that such countries cannot fully control their "gateway" to world trade and have significant access to it. The territory of LLDCs is also a platform for the delivery of goods from other countries through transport corridors.

Transport corridors in this case are coordinated transport networks that provide such access and can facilitate faster, more continuous, and efficient transit as well as increased regional connectivity. The use of the concept of corridors is gaining momentum every year around the world to ensure seamless and efficient transport and logistics connectivity between landlocked countries and their coastal neighbors.

In this article, the authors conducted a study of development factors, shortcomings, and recommendations to improve the functioning of international transport corridors on the example of the TITR within the country, giving a comparison.

**Keywords:** logistics, international corridors, infrastructure, transport, supply chain management

**JEL codes:** L90, L98

## 1 Introduction

The fact of privileged location of the Republic of Kazakhstan (hereinafter Kazakhstan) in the heart of the Eurasian continent can be considered a classic, as well as the use of transport corridors between the

People's Republic of China (hereinafter China) and Europe on the territory of this country.

Since the beginning of the establishment of our state's independence, tremendous strategic work has been done to return the territory of present-day Kazakhstan to the status of a transit leader from the times of the existence of the Great Silk Road. Now, in modern and industrial realities, there is no longer one transit corridor, but eleven international corridors, of which five are listed as railways and six as automobile corridors. Today the corridors connect trade routes between Eurasian states and regions: China, Central Asia, the Russian Federation (hereinafter Russia), Europe, and many others.

Important information was outlined by Kassym-Jomart Tokayev in his address in September 2020, saying that this industry is highly competitive. In our local case, in the Central Asian region, several alternative projects have emerged during the pandemic, capable of reducing the transit potential of Kazakhstan. In turn, the competitiveness of the country should grow through breakthrough infrastructure projects, attracting countries and companies, and increasing the level of service and speed of transit routes [1].

To identify factors for the further development of transport routes of Kazakhstan on the example of the Trans-Caspian International Transport Route (TITR), it is proposed to analyze its infrastructure component and capabilities, economic dependence, foreign indicators of the effectiveness of international transport corridors with a focus on the problems of Kazakhstan and recommendations for their solutions. Also, taking into account the fact of universality and priority development in the global scale of container transportation, the work will consider reports on transit traffic and evaluation of their further use, taking into account current economic and political conditions.

## **2 Literature review**

The topic under study is a hot topic and many scientists from around the world are conducting many different studies. For example, scientists from the University of Tokyo conducted a review of intercontinental container rail networks and services to/from China, which are being promoted as part of China's Silk Road Economic Belt policy. The initial data used to develop the model were then presented. After demonstrating the results calculated from the developed model, the model was applied to the Eurasian continental region to model the potential impact of policies related to China's Belt and Road initiative, such as the China-Europe Rail Express and the Trans-Caspian International Transport Route, on the competitiveness of land transport in container shipments between China and western countries in the Eurasian continent, including Europe, the South Caucasus, and Iran. To consider the

competition between maritime container transport and land transport across the continent, the model was modified to include cargoes for which maritime transport is not used [2].

An article by scholars from the Nikola Vaptsarov Naval Academy examines the geopolitical and geoeconomic aspects of new Eurasian economic corridors and their implications for Bulgaria. In the process of creating long-term energy and commercial projects and constant debates in Europe, under the influence of the changing regional and international political and economic environment, and after the second forum in May 2017, the development of the most global project in Chinese history, One Belt, One Road (OBOR), continues. This major initiative will lead to the expansion of Chinese economic influence in Europe. Related geostrategic and political opportunities for Bulgaria should be considered and implemented in the context of the union and by participating in the EU commercial and energy policy by basic European political principles, such as diversification, anti-monopoly policy, etc.

Currently, there is no official EU political statement on this project. Of interest to Europe and Bulgaria are the Northern and Central Trans-Eurasian Economic Corridors, as well as the South Caucasus perspective and the Trans-Caspian transport corridor, including the Black Sea along the route China-Azerbaijan-Georgia-Black Sea. Whether transport corridors reaching Azerbaijan and Georgia can reach Bulgarian shores is a question that requires a conceptual revision of the country's economic priorities in the current political environment. If such a scenario can be realized in the long run, this possibility should be strategically and politically considered [2]. Scientists Kotenko A.G., Sattorov S.B., Nehoroshkov V.P., and Timuhin K.M. published results of scientific works on "Model for forecasting the dynamics and growth of the throughput of the Central Asian transport corridor lines", where they defined the importance of international corridors in Central Asia, providing data on the importance of rail transport in the state economy and efficiency of projects in the development of railroads. Using the approximation method in their research the scientists made forecast throughput growth dynamics on the line in question. A forecasting model corresponding to the nature of changes in the trend of the freight traffic under study was developed [4].

### **3 Methodology**

Transportation helps to create the conditions for the formation and functioning of the local and national markets. Because of this fact, if a country has or is transitioning to a market economy, the establishment, optimization, and structuring of the transport system come forward in importance. Under

market conditions, the importance of transport can also be conditioned by two factors: firstly, the market implies the exchange of material goods or services, and secondly, the very efficiency of production (enterprise) depends on transport. Consequently, we can conclude that the functioning of the market, or rather its successful operation, is impossible without the well-established activities of transport. Therefore, transport should be an influential part of the market system and the economic base of the state.

The methodology of the research part of the work is to consider statistical data from open and official sources, comparisons, and conclusions. It is worth mentioning that transport, playing such a role, also consists of a set of institutions, just to ensure a well-established and permanent solution to the tasks of implementing the turnover between market participants (producers, sellers, and buyers), leveling the gap between time and space about production and consumption.

From the above, we are convinced of the significant role of transport in the economy and its growth. Transport should be described as a sensitive gauge of the national and global economy. Despite the costliness of its work, determining the loading of the production facility influences the formation of the country's GDP.

To analyze the role of transportation in the country's economic activity in numbers, the following methods can be applied: the ratio of freight turnover (tons-km, hereinafter km) and GDP, the elasticity of demand for transportation about income per capita and others (hereinafter other). At the same time, the results of the cargo turnover to GDP ratio method differ contrastively (from less to more respectively) when taking data from industrialized countries, middle-developed countries, and Eastern European states, which denotes the requirement of equal economic growth of large transportation in less developed countries than in highly developed ones. The explanation is that transport activity in individual countries may be determined primarily by the specifics of production (for example, in developing countries the transport-intensive production of raw materials prevails), the size of the country, as well as the level of development of transport infrastructure.

In this context, of course, the determining role of the state in the development of the transport system of the country, as transport is a materially energy-intensive link with a long investment cycle, as well as a high level of wear and tear [5].

Any state transport system consists of transport infrastructure, the main driving element of which, as indicated above, primarily transport. The potential of using a particular type of transport lies in its technical and operational properties.

Various types of corridors can be found in studies and policy documents. For example, such as development corridors, economic corridors, (multimodal) transport corridors, transport corridors by modes of transport (rail, road, sea, and air), transit corridors, trade corridors, logistics corridors, major corridors, and support networks, etc.

Leadership and corridor management are critical success factors. Management itself is about doing the right thing and focuses on high-level decision-making, primarily defining strategic directions and focusing on doing the right thing and focusing on the day-to-day administration and implementation of management systems.

Transport corridors are included in national strategies and plans, indicating that they are supported by the government. The first and most important point is to identify a specific central objective for the development (creation) of the corridor. The central objective can be divided into various sub-objectives, but first and foremost, the objective should answer the question "what do the stakeholders want to achieve in developing the transport corridor?"

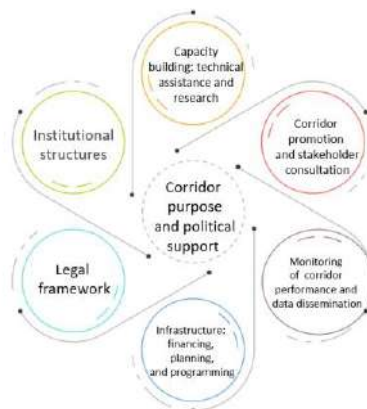


Figure 1 - Conceptual framework for corridor management and regulation (source [6])

There are two main types of legal agreements used in corridors between countries, strategic partners, and institutions:

- Memorandum of Cooperation. This document expresses a willingness and intention to cooperate but is not binding. In this cooperation, there are no consequences for noncompliance, unless otherwise specified;
- Treaty. The content of the treaty is legally binding, and in most cases, governments and finance ministries commit to funding the development and operation of the corridor.

One of the major challenges facing the smooth operation of an international corridor is the fact that countries apply different legal and regulatory regimes.

Legal harmonization is very important to facilitate trade and transport processes and improve the efficiency of the logistics system. Many non-tariff barriers to trade create obstacles to smooth international transport, such as different and incompatible systems of licenses, certificates, quotas, procedures, inspections, and various technical standards.

Therefore, the harmonization of legislation between the parties to the agreement is an important component. Harmonization of technical standards and mutual recognition of each other's certificates, licenses, and inspections is a prerequisite for the sustainable functioning of the corridor. To facilitate this process of legal harmonization, various organizations such as the United Nations (UN)? United Nations Economic Commission for Europe (UNECE), the Economic and Social Commission for Asia and the Pacific (ESCAP), and the United Nations Conference on Trade and Development (UNCTAD) have developed international standards for trade and transport and launched international conventions that member states can join and transpose the content of these conventions into national legislation.

Institutional structures within the corridor system refer to (mostly) one organization that acts as the "secretariat" of the corridor. Behind this organization are other stakeholders, such as the government and the private sector.

#### **4 Results and Discussion**

According to the official resource of the Transport Committee of the MIDR, there are currently eleven international transit corridors passing through the territory of the Republic, five of which are road corridors and six are rail corridors.

The railway system of Kazakhstan consists of nine main railway networks and has 16 points of connection with the railway networks of neighboring countries, 11 of which are connected with the railway network of Russia, two with China, and one with Kyrgyzstan, Uzbekistan, and Turkmenistan, respectively.

Most transport corridors have a "North-South" direction since most rail lines were built during the Soviet Union, which implies interdependence between the railway systems of Kazakhstan and Russia.

The country's railway network contains several international transport routes formally included in the system of Euro-Asian land corridors. The China-Kazakhstan transport corridor from the Lianyungang seaport (east coast of China) through the Dostyk-Alashankou border crossing and

Kazakhstan, which has access to the Russian road network, occupies a special place. Improvement of railway infrastructure in the corridors is a real step in gradually increasing the competitiveness of Kazakhstan's transport system on Euro-Asian international transport routes.

Currently, Kazakhstan's rail system is part of five international transport corridors that facilitate the delivery of goods between Asia and Europe. For a detailed presentation, please refer to Table 1.

Table 1 - Railway transcontinental routes passing through Kazakhstan

International rail routes	Description	Characteristics	Additional Information
1	2	3	4
Northern Corridor of the Trans-Asian Railway (in other sources, Central Eurasian Corridor)	From Lianyungang through Central and Northwest China, Kazakhstan, and Russia to Western Europe. Within Kazakhstan, the corridor runs along the Dostyk - Nur-Sultan - Petropavlovsk route.	The total distance is 11516 km, 89% of which are double track and 29% are electrified.	China and Kazakhstan use different rail gauges, which is a disadvantage of the route, since containerized cargo, and not only that, has to be reloaded with cranes.
Southern Corridor of the Trans-Asian Railway	From Lianyungang and passes through Dostyk (or Alashankou), Almaty, Tashkent, Iranian territory, and Turkey before reaching the Mediterranean and Black Sea ports. The Kazakhstan section of the corridor is Dostyk-Saryagash.	The total distance is 10989 km, 10% of which is double-track, and 46% is electrified.	The different gauge requires overloading at two points. The Iranian part is single-track and not electrified. In Turkey, trains have to cross Lake Van by ferry.
North-South Corridor	It is an outlet for Central Asia and Russia to the Middle East, South Asia, and the Indian Ocean. Kazakhstan, Turkmenistan, and Iran have invested in the development of this corridor.	The total distance is 7200 km.	The route is an alternative to the standard North-South route, which predominantly runs along waterways.
Central or Central Asian corridor	The corridor section in Kazakhstan runs along the route "Saryagash - Arys - Kandagach - Ozinki".	The length of the Kazakhstani corridor is 2,085 km.	-

<p>Transport Corridor Europe-Caucasus-Asia (or Transport Corridor Europe-Caucasus-Asia - TRACECA) This corridor is most appropriately called the Trans-Caspian International Transport Route (TMTM) (or central)</p>	<p>It connects Eastern Europe with Central Asia through the Black Sea, the Caucasus, and the Caspian Sea (Dostyk - Almaty - Aktau, including Zhezkazgan - Beineu, Akhalkalaki (Georgia) - Kars (Turkey)).</p>	<p>The total distance is 5,106 km.</p>	<p>Cargo is transported mainly from West to East, with mostly empty wagons moving in the opposite direction. This negatively affects the efficiency of the Caspian and Black Sea ferry lines.</p>
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Most of these international transport corridors were actually and initially formed due to historical, economic, and political development factors. That is, the historical development of the corridors was based on already perfect freight traffic, which reflected the need to create common transport routes for a more harmonious and streamlined passage.

According to the Asian Development Bank (ADB), there is a \$26 trillion infrastructure financing need in Central Asia between now and 2030. To address this need, various regional and subregional initiatives are aimed at improving transport connectivity in Asia. These include, among others, the Association of Southeast Asian Nations (ASEAN) Connectivity initiative, the Central Asia Regional Economic Cooperation (CAREC) program, and the Central Asia Regional Economic Cooperation (CAREC) program. The Central Asia Regional Economic Cooperation (CAREC) Program, the Greater Mekong Sub-Region (GMS) Cooperation Program, the South Asia Sub-regional Economic Cooperation (SASEC Program), and, of course, the BRI Initiative [7].

Accordingly, the Central Asia Regional Economic Cooperation (CAREC) Program, established by the Asian Development Bank (ADB) in 1996 and a partnership of 11 countries, stands out in this context with the main goal of promoting development through cooperation to increase economic growth and reduce poverty. The goal is realized through transport, trade, and energy activities (concentrating mainly on road and rail transport).

Partner countries include Afghanistan, Azerbaijan, China, Georgia, Kazakhstan, Kyrgyzstan, Mongolia, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan, as well as 6 financial institutions such as the Asian Development Bank itself, the European Bank for Reconstruction and Development, the



International Monetary Fund, the United Nations Development Programme, and the World Bank.

In 2017, the CAREC Program to 2030 was published, which also presented a new structure, which can be seen in Figure 2.

Also, it shows the current rail map of the Central Asia Regional Economic Cooperation Program. Here it should also be noted that it reflects six active transit corridors, among which are those that pass through the territory of Kazakhstan and have been described earlier.

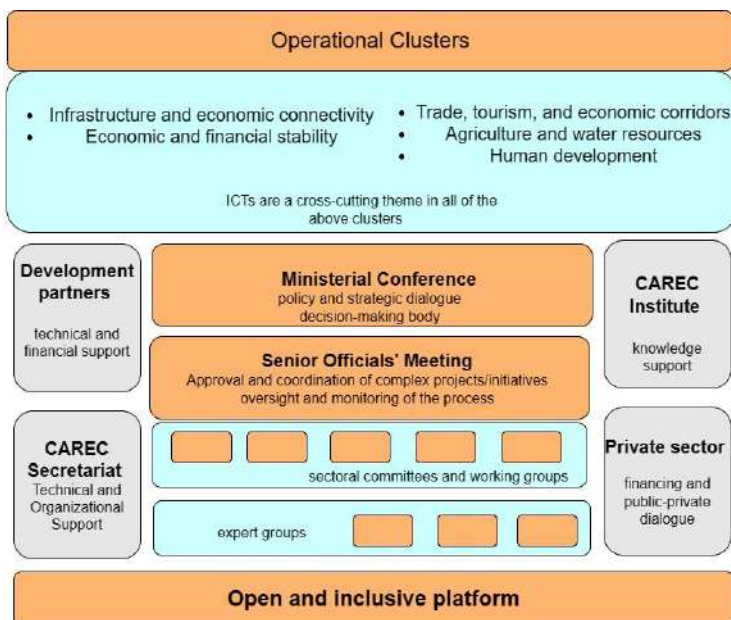


Figure 2 - Institutional Structure of CAREC 2030 [8]

In 1993, based on the initiative of the Brussels Conference, the International Cooperation Program for the Development of the International Transport Corridor Europe-Caucasus-Asia (TRACECA) was launched with the participation of ministers of trade and transport of eight countries (Armenia, Azerbaijan, Georgia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan). After that, the conference endorsed the Brussels Declaration and launched the TRACECA Program (road, rail, sea transport) towards technical assistance financed by the European Union to develop a corridor from Europe, across the Black Sea, the Caucasus, and the Caspian Sea to Central Asia, with the formation of cargo, flows from Western and Central Europe and in Central and South-East Asia, and with the objectives:

- to support the political and economic independence of the republics by enhancing their ability to access European and world markets through alternative transportation routes;
- strengthening and encouraging further regional cooperation among the partner states;
- increasing the use of TRACECA as a catalyst to attract the support of international financial institutions (IFIs) and private investors;
- linking TRACECA to the Trans-European Transport Network (TEN-T) and reducing barriers to the flow of goods along the route;
- liberalization of foreign trade.

And already in 1998, the 12 participating countries signed the "Basic Multilateral Agreement on International Transport for Development of the Corridor Europe-Caucasus-Asia" (MLA TRACECA, based on which the Intergovernmental Commission TRACECA meets), providing a strong impetus for development, which officially involved the European Commission in the Program through the Agreement. In this structure, the executive body of the TRACECA IGC is the Permanent Secretariat.

The TRACECA program is funded by the European Commission, the Directorate General for External Relations of the European Union, Europe and the Newly Independent States, the Common Foreign and Security Policy of the European Union (CFSP), and others.

To date, TRACECA membership, according to the list on the official website of the Program, covers 13 countries: Armenia, Azerbaijan, Bulgaria, Georgia, Iran, Kazakhstan, Kyrgyzstan, Moldova, Romania, Tajikistan, Turkey, Ukraine, Uzbekistan. Turkmenistan is included as the 14th country through which TRACECA routes pass.

Over time, the countries of the Caspian region began to express discontent at a time when the discussion of ideas for the development of the transport corridor came from non-regional participants of TRACECA (an interregional program of the European Union), and also the focus on the trans-Caspian direction itself was not the main, given that the Program positioned itself as a bridge "Europe - Caucasus - Asia", the motive for which had more political character. Therefore, another initiative - the independent development of multimodal transport corridors by the Caspian countries (focusing on railways and maritime routes) became expedient.

Thus, in 2013, representatives of such countries as Kazakhstan (JSC National Company "Kazakhstan Temir Zholy"), Azerbaijan (CJSC "Azerbaijan Railways") and Georgia (JSC "Georgian Railway") put forward a project initiative Trans-Caspian International Transport Route (TITR), or

Middle Corridor) and the motive of this project was already different in that it was aimed specifically at the transport corridor. [24]

Within the framework of the second International Transport and Logistics Business Forum "New Silk Road" in the capital of Kazakhstan, an Agreement was signed on the establishment of the Coordinating Committee for the development of TTM and in 2014 the Coordinating Committee was established, the composition of which (and the permanent members, excluding LLC "Batumi Sea Port") included:

- Georgia (JSC Georgian Railway and LLC Batumi Sea Port);
- Kazakhstan (NC Aktau International Sea Trade Port JSC and NC Kazakhstan Temir Zholy JSC);
- Azerbaijan (Azerbaijan Railways CJSC, Azerbaijan Caspian Shipping Company CJSC, and Baku International Sea Trade Port CJSC).
- In 2016, the listed participants of the Committee made a decision and created the "International Association "Trans-Caspian International Transport Route" (IA "TITR") [9].

To reflect the bottlenecks of TMM, this paper chose the method of analyzing practical information provided by the director of a logistics company in Kazakhstan, which has been operating in the market for more than 20 years and also operates TMM in organizing its shipments.

Since TITR is a corridor with sea crossings, the problems of transportation along this route are most concentrated in the transshipment hubs, two of which are on the Kazakhstani side.

First of all, what should be highlighted is the unstable weather conditions of the Caspian Sea in the ports of Kazakhstan (and Azerbaijan), due to which a cargo ship needs to stand 2-3 days on the roads waiting for permission to enter the port, especially in the presence of wind and waves. The Northern Caspian Sea, where Aktau port is located, is frozen or partially blocked by ice during cold winters. Kuryk Port is further south and in a more enclosed natural port area, where the situation is easier. These facts boil down to the problem of a lack of icebreakers (it is difficult for ordinary merchant ships to pass frozen areas, which also takes time).

In addition, a significant problem is the lack of an official and predictable schedule for port shipments. In practice, a ferry comes to the ports of Aktau and Kuryk village 3-4 times a week on an unstable schedule. Due to the "floating" schedule, the client (freight forwarding company) cannot have a clear time plan for logistics operations, which he needs to rely on when carrying out and planning transportation.

Due to two factors: unstable weather conditions and the lack of a schedule of logistics operations, the implementation of transportation is doubly complicated.

The work is worsened by the lack of infrastructure in the ports of Aktau and Kuryk. Based on the practical experience of the company, such logistics operations as unloading and loading are noticeably slow, even though the loading of the ports is not more than 50% (according to some reports 20-30%). Here it should be emphasized that the ports do not cope with the implementation of procedures even with a completely small design capacity. For this reason, various vehicles (in particular, railway cars and trucks) need to be put on hold for unloading and loading.

The leading part of the infrastructure problem, partly addressed above in the context of the lack of schedule, is the lack of Kazakhstani ferries (Ro-Ro rail and road ferries). From this deficit flows the dependence on the logistics infrastructure of the neighboring states of Azerbaijan, Turkmenistan, or Iran. Dependence is reflected in the need for the Kazakh side to apply (telegram) to the neighboring ports of states with a request to serve a ferry, followed by waiting for the organization of delivery. Also, regarding infrastructure, there is a problem in the form of a lack of gantry cranes in the port of Kuryk for the transshipment of cargo from road transport to rail. In this situation, the companies have to bring cranes from Mangyshlak station through the next informal payments.

Maritime transport is important for the development of TITR. For the development of water transport in the Caspian region, it is necessary to create a powerful and relevant international transport and logistics hub based on the seaport of Aktau. The construction of the hub will allow the handling of both export and import cargoes, where intermodal transportation (road and sea transport) is also widely used.

Given the importance of export-import and transit traffic through seaports for the country, as well as KTZ's efforts to develop port infrastructure and attract cargo flows, and change the external situation with restrictions on cargo transportation through Russia, it is only natural that traffic through Caspian Sea ports will increase.

In this regard, the following recommendations for the development of TITR from the Kazakh side are offered:

- create attractive conditions for investment in the development of water transport;
- to continue investments in the ports and their vicinity to increase throughput capacity;

- increase the number of Ro-Ro ships, based on the capacity of the ports of Aktau and Kuryk, as well as cargo volumes;
- provide state support to national shipping companies;
- build a dry port in the port of Aktau to expand the volume of cargo in intermodal transportation;
- expand the range and improve the quality of forwarding and logistics services provided in sea (and river) ports;
- reduce the share of transportation costs in the cost of final products through the development of intermodal transportation involving maritime transport;
- develop freight traffic along river routes to the Caspian Sea between Russia and Kazakhstan;
- to increase the volume of transportation of bulk and containerized cargo along the Irtysh River between Russia and China;
- implement a set of measures to ensure regular navigation;
- develop a mechanism for public-private partnerships in water transport;
- consider the possibility of building a shipbuilding and ship repair plant in the port of Kuryk to meet the needs of the industry;
- provide full access to official information regarding transportation points along the route;
- to consider the diversification of the TITR partnership network with European countries;
- develop an annual reporting format that also relates to official information;
- adjust the harmonization of national strategy and institutional strategies for transit corridors in Kazakhstan;
- raise the level of qualification of workers;
- introduce corruption controls in the bottlenecks of cargo passage.

## **5 Conclusion**

One of the effective ways to increase the level of GDP and diversify the economy is, no matter how distant this fact may sound, the strategic management of transport corridors and, above all, their creation.

The position of the Republic of Kazakhstan, as was said at the beginning of the work, allows it to be a leader in the region and a country integrated into global processes, receiving transit profits into the state treasury.

The special geographical conditions of the country, the vastness of the territory, the lack of direct access to the sea, large reserves of raw materials, as well as insufficient development of the transport infrastructure determine the importance of developing the country's railway transport, which will inevitably affect the performance of the economy. Given the strategic goals of the President to turn Kazakhstan into a major regional transit hub, railroad transport, and its infrastructure will play a key role since most of the transit, export-import, and mass freight passing through Kazakhstan is transported by this type of transport. Since the country is landlocked, railroads bear the main burden of mass freight transportation. Railroads account for 47.2% of total freight turnover and 6.6% of total passenger turnover in the country [10].

In addition, the research on the subject of this paper revealed shortcomings in the institutional development of the transport industry regarding transport corridors that include the TITR. For example, there is no strategy for the national development of transport corridors and elementary official registers of transport corridors with their visualization at the government level.

Transparency and accountability of strategically important links in the TITR corridor are needed. In the current reality, the logistics data provided, which should potentially be aimed at an audience of not only industry professionals, but also small logistics enterprises, is completely incomplete and inappropriate, even though a small part of it is published on the official representative websites of the corridor links. One of the arguments, for example, is the fact of using a quarter of the production capacity on the Caspian Sea from the Kazakhstani side, the theoretical balance of which suggests that the port is not loaded enough and should potentially cope with cargo handling quite quickly. However, logistics companies interacting with transportation on the TITR remain dissatisfied with the time and conditions of the passage of this section, indicating infrastructure bottlenecks, personnel qualifications, and insufficient customer As has been repeatedly noted earlier, Kazakhstan has a favorable geographical location and has several prerequisites for becoming a leading interregional transit center, so the use of the country's transit potential is a powerful incentive for its socio-economic development. Strategic, institutional, and national studies of the problems and the development of their solutions with actual practical implementation are needed on a permanent and in-depth basis. Located in the center of the Eurasian continent, at the junction of major economic regions, as well as various civilizations and cultures, Kazakhstan should continue to actively integrate into the modern system of global political and economic interrelations. orientation. To solve such problems, proper capacity calculations must necessarily match the dynamics of freight traffic in the

actual and forecasted perspective absolutely and ideally in all links of the corridor to eliminate the fact of congestion [11].

As has been repeatedly noted earlier, Kazakhstan has a favorable geographical location and has several prerequisites for becoming a leading interregional transit center, so the use of the country's transit potential is a powerful incentive for its socio-economic development. Strategic, institutional, and national studies of the problems and the development of their solutions with actual practical implementation are needed on a permanent and in-depth basis. Located in the center of the Eurasian continent, at the junction of major economic regions, as well as various civilizations and cultures, Kazakhstan should continue to actively integrate into the modern system of global political and economic interrelations.

### References

1. Message of the President K-Zh. Tokayev to the citizens. 1 september 2020.

2. Shibasaki Ryuichi, Nishimura Kentaro, Tanabe Satoshi, Kato Hironori. Belt and Road Initiative: How does China's BRI encourage the use of international rail transport across the Eurasian continent? // Global Logistics Network Modelling and Policy: Quantification and Analysis for International Freight. – 2020. – P. 321 – 335

3. Mednikarov Boyan, Admiral Flotilla, Lutzkanova Siyana, Lutzkanova S., Yotsov Ivo. Overview of some political and economic aspects for Bulgaria in the context of the new Eurasian economic corridors // 18th Annual General Assembly of the International Association of Maritime Universities - Global Perspectives in MET: Towards Sustainable, Green and Integrated Maritime Transport, IAMU. - 2017. - Том 1. - Страницы 426 - 438

4. Kotenko A.G., Sattorov S.B., Nehoroshkov V.P., Timuhin K.M. «Model for forecasting the dynamics and growth of the throughput of the Central Asian transport corridor lines» // Journal of Physics: Conference Series. – 2021. – Volume 2131, Выпуск 329. – Номер статьи 032102

5. Begmagambetov M., Smirnova S. Transportnaia sistema Respubliki Kazahstan. Sovremennoe sostoianie i problemy razvitiia – Almaty: Print-S, 2016. – 354 s.

6. Learning Materials on Transport Corridors 2020 // <https://www.unescap.org/sites/default/files/Learning%20Material%20-%20Transport%20Corridors.pdf> (was available on 9<sup>th</sup> of May 2022).

7. Meeting Asia's Infrastructure Needs – Manila: 7 Asian Development Bank, 2017 – 131 p.

8. CAREC 2030: Connecting the Region for Collaborative and Sustainable Sustainable Development – Manila: Asian Development Bank, 2017 – 35 p.

9. Middle Corridor History // <https://middlecorridor.com/en/about-the-association/history-en> (was available on 9<sup>th</sup> of May 2022).

10. Logistics and Transport Competitiveness in Kazakhstan – Geneva: United Nations, 2019 – 183 p. // [https://unece.org/DAM/trans/publications/Report\\_-\\_Kazakhstan\\_as\\_a\\_transport\\_logistics\\_centre\\_Europe-Asia.pdf](https://unece.org/DAM/trans/publications/Report_-_Kazakhstan_as_a_transport_logistics_centre_Europe-Asia.pdf)(was available on 9<sup>th</sup> of May 2022).

11. Ahmedov D. SH., Eremin D. Ī., Jaksygulova D. G., Trepashko S. Īssledovanie avtomatizirovannyh sistem upravlenia mejdunarodnymi transportnymi koridorami // Vestnik Nacionalnoi inženernoi akademii Respubliki Kazahstan. – 2019. - №1 (71). – C. 45-52.