

## Particularities of formation of transport-transit cargo-traffic in the Republic of Kazakhstan

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**Abstract.** Conceptual nature of formation of transportation and logistics systems is clarified. Objective preconditions for formation of transportation and logistics systems in Kazakhstan on the base of theoretical and methodological base, practical foreign experience were found. Transit potential of the Republic of Kazakhstan was analyzed with the purpose of finding problems and opportunities of use of transportation and logistics systems in modern world-wide configuration of cargo-traffic. Complex analysis of current state of railway transport which is most perspective for creation of transportation and logistics systems in the Republic of Kazakhstan is performed.

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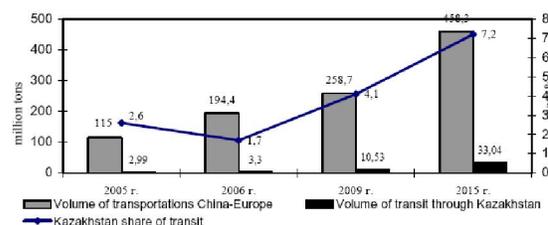
### Introduction

Today the most important task for Kazakhstan is positioning in the world market as transcontinental transport link for interaction of European, Asian-Pacific and South-Asia economic systems. By now trade relations which generate world transport streams have settled more or less completely. Recently such trends in development of world economy as accelerating growth of world trade in comparison with world production, strengthening of China and Asian-Oceanian countries, continuous transfer of industrial enterprises from Europe and North America to Asian countries and full load of seaports allow to forecast the concentration of main financial and products flows in the triangle USA – Europe – South-East Asia and China. In these conditions, in order to achieve best results in using of world cargo-traffic, transport system of Kazakhstan demands urgent organization of transportation and logistics systems to provide quality services of added value.

**Main part.** By WTO's estimates present-time sales turnover between Asia and Europe exceeds 2 billion US dollars annually, while the share of transport costs amounts to 200 billion dollars. By 2015 experts predict threefold increase in world trade, which will lead to multifold increase in demand for logistic services [1-5], See Figure 1.

The concept of development of the world arteries network which pass through Kazakhstan is based on 3 prioritized directions: Russia, Europe and Baltic countries; China, Japan, countries of South-East Asia; countries of Central Asia and Trans-Caucasian Region, Persian Gulf and Turkey. Each of these directions has already formed its own transport corridors consisting of main traffic arteries with

appropriate equipping for different kinds of transport which provide transportation of world cargos in direction of their maximal concentration, connecting different countries and therefore performing functions of world significance [6].



**Figure 1 Forecast of cargo flow increase in direction China-Europe. Source: TEO CEZ Khorgos-Easten gates**

Railway transport has greatest potential for development of transit potential and increase in the level of its utilization.

- North corridor of Trans-Asian Railway (TAR): Western Europe - China, Korean peninsula and Japan through Russia and Kazakhstan (at the section Dostyk-Aktogai-Sayak-Mointy-Astana-Petropavlovsk) (Presnogorsk);
- South corridor of TAR: South-East Europe - China and South-East Asia through Turkey, Iran, the countries of Central Asia and Kazakhstan (at the section Dostyk-Aktogai-Almaty-Shu-Arys-Saryagash);
- TRACECA: Eastern Europe – Central Asia through Black Sea, Caucasus and Caspian Sea (at the section Dostyk-Amaty-Actau);
- North-South: Northern Europe - Persian Gulf countries through Russia and Iran with participation

of Kazakhstan at some sections: sea-port Aktau - Urals regions of Russia and Aktau - Atyrau.

Railway station Dostyk (international border point Dostyk-Alashankou) on China-Kazakh border is of special significance for transportation of world cargo by Trans-Asian Railway. Here and in the cities Astana, Almaty, Aktau the government is planning to create regional transportation and logistics centers in the framework of realization of transportation and logistics cluster.

The government is also planning to open second world border railway pass and build railway line Khorgos-Saryozek, which is continuation of the railroad Tszinhe-Khorgos built by China. It will facilitate further growth of transit transportation from China and quick development of free trade zone at the border point near Khorgos.

Already existing network of world automobile transport corridors will be broadened. There are already existing alternatives to railroad: the federal highway E40, which for the next 7-10 years will be able to attract heavy cargo traffic. But both federal highways and regional roads are the roads of low quality in this region which is determined by severe climate. In order to create corridor it is important to develop routes Tashkent -Astrakhan-Moscow and Almaty-Astana-Ekaterinburg with length more than 1500 km. The Ministry of transport and communications of the Republic of Kazakhstan is going to realize investment projects: trans-European highway E40, Dostyk-Almaty-Astana-Moscow, Urumchi-Kyrgyzstan-Iran and in this case the corridor can provide higher level of service, first of all, because of short or medium distances, which will allow to develop trade on adjacent territories inside Kazakhstan, and create transportation and logistics centers' network servicing transit of cargo traffic in direction of Iran and Russia [7].

Transit is usually viewed as export of transport or infrastructural services. So, in European Union third countries cargo transportation brings profit to numerous service companies, fuel-stations, owners of private roads, hotels and catering system, auto-service companies, railway companies. Totally thousands of economic entities exist at the expense of transit, pay taxes into budget of their countries. Poland, Hungary, Holland, Czech Republic made transit one of the significant parts of their economy long time ago, significant part of their employees work in this sphere. Besides market return transit also suggests official fees, for example, for pumping of some quantity of oil and gas through every 100 km of territory. But its main return is concentrated in private sector. In the framework of many transport and customs unions, including those which are formed at the territory of former Soviet Union, cargo-

in-transit does not suggest any fees to be paid at the customs in case of on-surface transportation - the state gets enough in the form of taxes from service and transport companies. Precondition for development and efficient use of transit potential of Kazakhstan is new cargo traffic between China and Europe which is facilitated by:

- Single transport strategy in China (Big jump) and the Program of accelerated development of western provinces of PRC "Go West". This program suggests realization of big transport infrastructure projects including construction of new railroad tracks to the zone of free trade "Khorgos" on Kazakh-China border (in particular, Tszinhe-Khorgos with volume of transportation for the first years of use over 6 million tons annually) and 5 strategic automobile roads East-West (including Lyanyungan - Khorgos, Shanghai - Hefei - Sian - Khorgos).

- perspectives of development of transport corridor "N.E.W. corridor" in direction of USA - PRC, which originates from a port of Boston (USA), then goes by sea to Norwegian port Narwick and passing through the territory of Northway, Sweden, Finland, Russia by the route of North corridor of Trans-Asian railway (Petropavlovsk-Dostyk), which is alternative to south sea corridor through Suez Channel;

- realization of new auto-transport initiative "New Eurasian Auto-Transport Initiative (NELTI) by the means of organization of trouble-free container automobile transportation on the route China-Kazakhstan-Europe. In the framework of this project transportation and logistics center Vachta will be built, throughput rate of border automobile-transport point will be increased, assembling of heavy-weight trucks in Kazakhstan and leasing of modern trucks will be organized [8].

In order to make money on transit a state with beneficial geographical location just needs to have extensive infrastructure, good roads, provide stable legislative climate and comfort tax rules. The unified tariff policy in regard to the countries through which transit corridor goes is also important. But in spite of seeming simplicity of the ways and directions, land and sea transit does not go by all offered routes.

The key advantage of transit corridors passing through the territory of Kazakhstan is significant reduction of distances. In trade the speed of delivery is very important. Very often in order to provide export deliveries companies use borrowed money. The more time the cargo is on its journey, the more money company has to pay for loan interests. Of course if we compare the price of delivery by sea-ways and by land through the territory of Kazakhstan at present moment delivery by land will be a bit more expensive. But this is compensated by quick delivery,

and this influences product-turnover rate and reduction of borrowing cost incurred for the money attracted for financing of external trade operations. Finally it will influence product's price greatly.

However, undeveloped transport infrastructure, absence of the market of logistic services, low level of management in the companies of home cargo-owners, non-transparent mechanism of transport process management, high costs for storage and re-handling, other problems in the system of goods transportation eliminate all our competitive advantage, besides that there is high risk - one thing is when you entrust a container to a carrier with world name and capitalization of several billion dollars and quite the other - to send the cargo into uncertainty. Also it will be more good for cargo owner to incur costs associated with credits and wait for long delivery, but to have time guarantees which will allow him to forecast the rate of production of goods and use borrowed money for storage of goods.

About 6 million high-capacity containers run between EU countries and Asian-Pacific countries every year, and as we have already mentioned, most part of this cargo traffic - 98% - is transported by foreign sea-fleet through foreign ports. And remaining 2% of cargos must be shared between several corridors: Kazakh and Northern corridor (Russia) and, opened in 60s, Southern corridor (Singapore-Bangladesh-India-Pakistan-Iran-Turkey). Today this route is in low demand, but there are other ways bypassing instable Iraq through transport arteries of Iran, Caspian and Black Sea ports to Turkey. For example, at present time PRC is thinking about building of transport ways in order to broaden access to Central Asia, Caucasus and European markets, bypassing territory of Kazakhstan. China develops projects of railway connection through Kyrgyzstan by Osh valley to Fergana (Uzbekistan), then to Caspian sea (China-Kyrgyz railway - CKR) and through Iran to South, or to Caucasus (second variant of Silk way). When CKR is built transit route through the Central corridor of Trans-Asian railway will not include Kazakhstan section - Druzhba-Chengeldy. Transit potential of the territory of Kazakhstan is ignored because of political and economic preferences of a number and adjacent to Central Asia states and leading countries. For example, Russia and Kyrgyzstan would like to load their own capacities, and China and Uzbekistan want to reduce transit dependency on Kazakhstan [9].

Route known as North corridor of Trans-Asian railway begins in South China port Lianyungan and goes through railway tracks of PRC, Russia and other CIS countries to Europe. Total length of the route – 11,6 thousand kilometers – is

2 times shorter than sea way. (Table 1), Using Chinese transport network it is possible to reach group of “Asian tigers” –Japan, Korea, Taiwan, Singapore and the whole region of South Asia.

**Table 1. Length and delivery time on the Europe-Asia route (average speed on the route is 900-950 km/day).**

№	Routes	Length, km	Delivery time, days	
			Without accounting of resetting of re-load through TAR	with accounting of resetting of re-load
5.	Rotterdam-Lianyungan	13000	17,8	19,8
through TAR				
6.	Rotterdam-Lianyungan	11600	14,8	16,8
Through Suez Channel				
7.	Rotterdam-Lianyungan	23000	35,0	35,0

Source: Statistics Agency of the Republic of Kazakhstan

Side by side with this through-route Kazakhstan also provides transit carriers with through-routes in directions “north-south” and “west-east” (Europe – Caucasus – China, TRACECA) through transport networks of adjacent countries of Central Asia and Zakavkazie. The route from southern Chinese ports to the port of Rotterdam in Holland goes through Kazakhstan, Uzbekistan, Turkmenistan and then – through Caspiy, Azerbaijan, Georgia and Black Sea ports of Europe. It reduces the traffic distance in comparison with Trans-Siberian Railway for 2500 km. In Kazakhstan through cargo streams from the South (China) and from Iran can be re-oriented to the North, Siberia or to North-West, in direction of European part of Russia. All these transit streams can not bypass Kazakhstan, especially in direction North-South. In addition Kazakhstan has advantage in transit of gas and oil. Pipeline of Kazakhstan is used as the only possible variant of transportation of oil and gas from Turkmenistan to Russia and from Russia to China. Here the most important Kazakhstan’s advantage is not only diversity of existing routes but overlapping of transit opportunities of different transport areas [10].

Kazakhstan transport corridors mainly compete with Russian route through Trans-Siberian railway which operates for many decades and, apart from new Kazakhstan routes, it has already been used by foreign companies. Russian route has one more advantage: more aggressive strategy of Russia and unreasonably high tariffs in Kazakhstan.

Transit perspectives of some route depend not only on its economic attractiveness but on external political factors as well.

In 1980-1992 Trans-Siberian railway competed not only with foreign owners of Far East freight conference but with Russian ships of Baltic and Black Sea ship companies which transported containers between ports of Western Europe and South-East Asia. Soviet ships transported 75-80 000 heavy-weight containers with transit cargos annually. Besides that Trans-Siberian railway's turnover was 50-55 000 containers per year. Governments of western countries did not like such activity of the USSR in the sphere of transit transportations and in 1982 Holland, France, Belgium, Germany and Great Britain established Hard Core Group to compete with Soviet carriers. Companies of this group were engaged in predatory pricing. As a result interest in Trans-Siberian gradually reduced. It seemed that this old story is connected with present time but even today Russian authorities are not able to use potential of Trans-Siberian in full. In spite of global growth of transit cargo streams volume of cargo transported through Trans-Siberian continues to decrease [11].

This story is interested for Kazakhstan in terms of evaluation of external economic factors which are able to influence transit, in particular, interests of global players. Recently, in opinion of representatives of shipping companies sea transportation become cheaper due to fierce competition between ship companies. In order to make customers choose the route of Trans Asian Railway now it is important to reduce time of delivery. When this time is critically important customers choose land way. If its price could compete with offers of marine carriers then Kazakhstan would get stable stream of transit cargo.

Thus, there exist serious external factors which influence transit perspectives of Kazakhstan and these factors are hard to settle. But our internal starting positions must be considered first.

**Conclusion.** Kazakhstan will have to build modern transport network almost from scratch. Federal highways, as a rule, can not be used for transit transportation. They must be reconstructed in full, extended, their covering must be changed completely. Special industrial projects are being implemented in the country for a number of years aimed for reconstruction of railways, automobile roads, airports. Only for the last 5 years over 11 000 of automobile roads were build and reconstructed. Today Kazakhstan invites big concession companies to investment into a number of strategic railway and automobile roads, but this is an indicator of very low starting level of Kazakhstan infrastructure.

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**Inference.** Globalization and growth of world commerce on the base of MRT determine creation of harmonious system of international transport corridors. In such situation beneficial geographic location of Kazakhstan is objective precondition for effective integration of the Republic into global logistical system.

And since development of the economy based on export of oil and gas and products of mining industry in conditions of non-stable prices will have negative effects it is necessary to find alternative ways to activize development in other industries in order to guarantee sustainable growth even when demand for commodities falls.

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