

Trends and Concepts of Development of The Logistic System of Kazakhstan

Aisha Muratovna Musabekova¹, Paweł Drożdżel¹, Lucia Madleňáková²

¹ Faculty of Mechanical Engineering, Lublin University of Technology, Lublin, 20-618, Poland

² Faculty of Operation and Economics of Transport and Communications, University of Zilina, Zilina, 01026, Slovakia

Abstract The world integration tendency goes on the way of creation of the integrated macrologistic systems, including transport and logistic systems of the country, logistic centers, terminal complexes and other links of the logistic system. The logistics has already gone far beyond the national borders of the states. The interstate and transnational macrologistic systems, designed to facilitate traffic of information, goods, equity, and people through borders are rapidly growing. Paper focuses on the analysis and trends of development of the logistics system of Kazakhstan.

Keywords development logistic network, logistic system, Kazakhstan

JEL L90, L98

1. Introduction

The logistics became the practical instrument of business long ago. Receipt of 20-30% of gross national product of the leading industrialized countries is connected with logistic systems. As international experience shows, reducing for 1% of logistic expenses is equivalent to increase in sales volume of the firm almost by 10% [1].

In 2016, Kazakhstan is celebrating its 25th Year of Independence. During those 25 years of Independence, Kazakhstan has reached its position among the top 50 most developed countries in the world by implementing 2030 - Strategy ahead of schedule. Today, Kazakhstan is ambitiously aiming to become one of the top 30 most developed countries by 2050. At the turn of a new stage of social and economic upgrade of Kazakhstan, dynamic development and effective functioning of an infrastructure complex are one of the crucial components for achievement of high and steady rates of economic growth.

2. Analysis of current situation

The Global Competitiveness Index (GCI) of the World Economic Forum (WEF) is the generally accepted assessment of the competitiveness of states. 12 factors of the competitiveness, thoroughly characterizing the competitiveness of the countries worldwide with different economic development levels, are taken from 114 estimated indexes. During the years of independence, in the rating of the competitive countries across the world, Kazakhstan moved ahead and achieved considerable results. The

dynamic development of Kazakhstan is shown by the results of GCI rating. So, between 2009 and 2010, according to the rating Kazakhstan ranked 72nd, and in the period from 2015 to 2016, Kazakhstan was given the 42nd place among 140 countries with mean score of 4.5 (Fig.1). According to the GCI rating, Poland (the 41nd place) and Italy (the 43rd place) became the adjacencies of Kazakhstan. The states sharing borders with Kazakhstan, Russia holds the 45th place and China – the 28th place of the GCI rating. Rate of competitiveness does not so much reflect direct comparison of the countries in absolute physical and economic parameters, but to a greater extent, it gives an assessment to the grade of high-quality changes, the available tendencies, and the nature of development. This issue is also urgent in the infrastructure complex, which is the basis of transport and logistic systems of the countries.

The logistics is a peculiar catalyst of an industrial development, and its upgrading is of great significance for any country. This process is that mainstay, on which interstate integration is built.

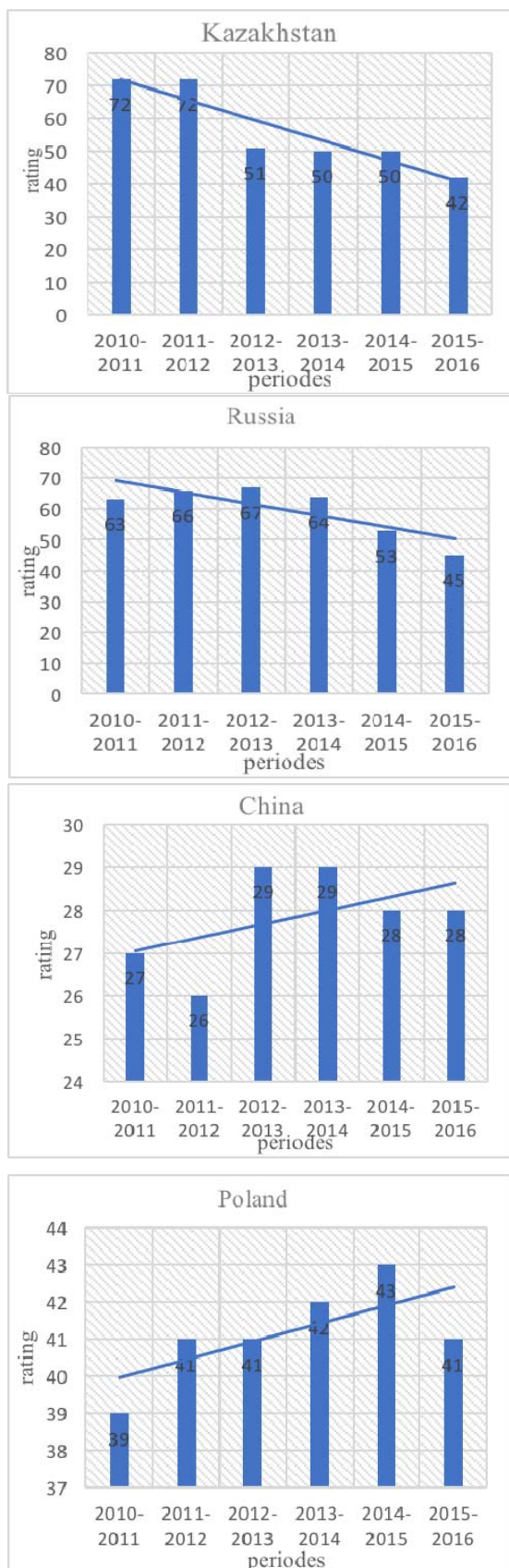


Figure 1. Dynamics of the change of GCI for the period from 2010 to 2016 (data of WEF)

The huge territory with low density of population (Table1), long distances of transportation and remoteness from the high seas borders make a transport and logistic

issue one of the most urgent points of Kazakhstan. The main priorities of a transport and logistic system are providing Kazakhstan with uninterrupted, shortest and inexpensive transport routes with adjacent countries and international economic centers as well as the full use of the transit capacity of the country. The location of Kazakhstan in the center of the Eurasian continent predetermines its geopolitical role as the transit bridge between Europe and Asia, as well as between the adjacent states with which it has overland borders, such as Russia, Kyrgyzstan, Uzbekistan, China, Turkmenistan, and water borders – Iran. Kazakhstan holds the important place in the international transport and communication system and forms the territory, through which three main transit routes pass:

- Europe – Russia – China, the countries of Southeast Asia (SEA);
- Europe – China (through the countries of Organization for Economic Cooperation and Development- OECD);
- Russia – Central Asia

Table 1. Basic statistics about territory selected countries

Indexes		Kazakhstan	Russia	China	Uzbekistan	Kyrgyzstan	Poland
Territory	mil. km ²	2725	17098	9598	0,447	0,199	0,313
	World rank	9th	1st	3th	57th	87th	70th
Population	bln people	0,0177	0,143	1,362	0,03	0,0055	0,039
	World rank	62th	9th	1st	43th	110th	33th
	% of world population	0,24	2,03	19,3	0,42	0,08	0,54
Density	inhabitants per km ²	6,51	8,56	139	71	28,5	123
	World rank	184th	18th	56th	104th	148th	65th
Length of borders with Kazakhstan (km)		-	7513	1782	2300	1050	-

In light of this, the development of trade and economic relations of the countries of Southwest, South and Southeast Asia with the CIS countries (first of all, with partner countries in EEU) and Europe becomes the most important factor of the development of export-import and transit potential of Kazakhstan. In general, connecting traffic in the directions Southeast and East Asia–Europe is estimated approximately at 330 - 400 billion dollars of the USA, at the same time, according to experts, to 20% of this traffic can pass through the territory of Kazakhstan [1].

3. Results and Discussions

At the 25th plenary session of the Council of Foreign Investors (May, 2012), the president of Kazakhstan

announced the launch of the project "Kazakhstan — New Silk Road", the creation of effective transport and logistic corridors on the territory of the country. Transit related aspirations of the authorities of Kazakhstan coincide with the Chinese vision of the region. Synchronization of transport drafts of programs "Nurly Zhol" and "New Silk Road Economic Belt" was discussed by heads of two states during the visit of the president of Kazakhstan to China. Infrastructure "five-year plan" of "Nurly Zhol" (calculated for the period from 2015 to 2019) will allow increasing amounts of transportations of transit freight through Kazakhstan twice by 2020. The cargo carriage volume between China and Europe will reach 170 million tons [2]. Cargo delivery speed is the main benefit of an overland route. The container train, going from Zhengzhou (China) to Hamburg (Germany), covers the distance of 10 500 km in 13-14 days. By sea, the Chinese goods reach the European markets in 40-60 days. Kazakhstan is developing transit corridors on its territory along two routes:

- "northern" one provides an exit to Russia and further to the European markets,
- "southern" — or trans-caspian — goes along the corridor TRACECA through Aktau port with an exit to Azerbaijan, further to Georgia and Turkey.

Upgrade of a traffic circuit within the program "Nurly Zhol" is carried out in several directions.

3.1. The development of a highway service

The program includes 11 projects of a road industry. In general, more than 7, 000 km of roads connecting Astana with the large logistic centers in Almaty, Ust-Kamenogorsk and Atyrau will have been reconstructed and constructed by 2020. The same highways will connect regional transport hubs in such cities as Aktau, Pavlodar, Kostanay, Semey, Aktobe, Atyrau, which are key points of freight distribution on the Russian and Central Asiatic markets (Fig. 2).



Figure 2. Scheme of the transport and logistic system of Kazakhstan

The largest project in the road branch is the international transit road corridor "Western Europe –Western China", the final points of which are St. Petersburg (Russia) and Lianyungang (China). Actually, it is "A New Silk Road" from China to Europe. The total length of the route makes 8, 445 km, and the length of the Kazakhstani section of the highway (Horgoz–Border of Russia) is 2, 787km. In 2017,

Kazakhstan completely finishes the construction of its highway section.

3.2. The development of a railway service

In the Soviet period, traffic with China was performed through the border railway station Dostyk (the former station Friendship). The length of the railway lines from station Dostyk till Almaty is 773 km. In 2012, the independent Kazakhstan put into operation Zhetygen — Korgas line, which is 293 km long. It provides the transit capacity of the country and reduces distance from China to the southern regions of Kazakhstan and to the countries of Central Asia by 480 km. Cargo transportation time from China to the southern regions of the country and transit time to Central Asia is reduced on average by 1.5 – 2.5 days. In 2020, the predicted annual cargo turnover of the section will be 15 million tons [3]. In 2016, in Western Kazakhstan region, the construction of a railway spur Borzhakta – Ersay has been finished. The railway spur is an infrastructure basis of the ferry complex "Kuryk" on the Caspian Sea.

The construction of Kazakhstan's section of the railway line, connecting Kazakhstan, Turkmenistan and Iran, is completed. Railway transit, which is offered today by Kazakhstan and Turkmenistan, can also stimulate expansion of commercial ties between Russia and Iran, namely it can promote implementation of the Russian-Iranian trade agreement on supply of the Iranian oil in exchange for the Russian grain, equipment and other manufactured goods.

3.3. The development of the port infrastructure

Upgrading of the only Aktau seaport of the country situated on the Caspian Sea is an important part of the infrastructure program "Nurly Zhol". The cargo turnover of the port in 10 months of 2016 is over 4 million tons. Main transshipment freight includes grain, oil, steel products, ferry freights. Currently in Aktau, a number of projects on upgrade and expansion of transshipment capacities is being implemented that by 2020 port capacity is increased to 19 million tons. Aktau seaport is a strategic point in the "southern" route which makes a detour of Russia [4,5].

The construction of a dry port in Horgoz (Kazakhstan-Chinese border) is nearing completion.

The seaport in Aktau and the dry port in Horgoz are developed together with one of the largest world port operators DP World.

In the spring of 2016, the construction of a new ferry complex "Kuryk", having capacity in 4 million tons of freights per year has been started on the bank of the Caspian Sea. The new project is aimed at the development of transportations in the Transcaspian International Transport Route (TITR). In Kazakhstan, under the jurisdiction of the national company JSC "Kazakhstan Temir Zholy" (JSC NC KTZh), a new organization "National Center of Development of Transport Logistics" is created. The Center is a partner in the field of transport and logistic researches, as well as the coordinator of business initiatives and projects in the field of transport logistics. Functions of the development of transport and logistic system and rendering a full range of

logistic services are assigned to the newly created organization [5]. Perspective activities of the new Center are planned, the main of which are:

- informational and analytical support;
- maintenance, development of practical recommendations for decision making, concerning transport policy.

Besides, the Center for logistics holds profile conferences and business forums for specialists of an industry, carries out advanced training of specialists, and creates the single information portal on transport logistics as well as reference books for logistic operators in Kazakhstan. In 2014, railway authorities of Belarus, Russia and Kazakhstan created the United Transport and Logistic Company. It is “one of the first integration projects in the sphere of transport logistics within the Eurasian cooperation (EEU)” [6,7].

4. Conclusions

Ultimate goal of the Logistic Strategy is to ensure progressive development of transport, communications and logistic complex in line with economic strategy of the state.

The Strategy implementation is expected to ensure bringing of the national transport system to a higher level, and forming of an optimum transport network. Financing of the infrastructure on the self-sufficiency principles will allow accommodating resources for its further sustainable development and maintenance at a high technical level.

Kazakhstan has an accurately formulated strategy both in economic, and in the geopolitical plan: cooperation with as wide as possible range of partners and with the maximum benefit for all parties. “Forget the concept of “the Big Game” — it became outdated; Kazakhstan follows the philosophy of “Big benefit” for all — “for Russia, China, the USA, Europe, India, Iran, Turkey, and naturally for Kazakhstan”,

the Minister of Foreign Affairs of Kazakhstan Idrissov emphasized, addressing diplomats and journalists in Horgoz [8]. Kazakhstan, lying between promptly developing China and Russia with its largest natural resource stocks in the world, as well as in the context of " The Silk Road" connecting Europe and the countries of Central, Southern and South-eastern Asia, intends to use its transit potential as much as possible.

REFERENCES

- [1] Mamin A. U.: Main trends and strategic lines of development of transport and logistic centers in the Republic of Kazakhstan. Vestnik of KazATC. 2013, No. 6, Page 8-12.
- [2] Letter of Nursultan Nazarbayev, the president of the Republic of Kazakhstan, to the people of the country "Nyrly Zhol – a way to the future". Electronic resource: <http://www.akorda.kz>
- [3] Transport strategy of the Republic of Kazakhstan till 2015. Authorized by the decree of the president of the Republic of Kazakhstan of April 11, 2006. No. 86.
- [4] Makhambetov A.: Waiting for big breakthrough. Trans-Logistics Kazakhstan. 2013, No. 2, Page 4-8.
- [5] Yuryeva M.: Chinese vector. Trans-Logistics Kazakhstan. – 2013, No. 3, Page 4-8.
- [6] Bekmagambetov M.M.: Ways of increase and effective use of transit and transport capacity of Kazakhstan. Almaty, 2009. Page 20.
- [7] Guseva L.: Strategic objective of Kazakhstan – development of transit potential. KAZENERGY, 2007, No. 2-3, Page 78-81.
- [8] Ibraimova Sh. A.: Development of transcontinental infrastructure of the Republic of Kazakhstan. Electronic recourse: <http://www.economy.kz>.