

Organization of Transportation between the Republic of Kazakhstan and China using the Cargo Method

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Abstract: *This article reveals in the features of the organization process of cargo transportation within the international trade between two countries - the Republic of Kazakhstan and China. An extended analysis of the organization of import and export transportation using the cargo method is thoroughly carried out provided a list of advantages and disadvantages of cargo transportation. The results of the analysis demonstrate the economic importance of transportation using the cargo method and provide a list of recommendations for improving the transportation system.*

Keywords: cargo transportation, logistics, China, Kazakhstan, international trade analysis

1. Introduction

Since the establishment of diplomatic relations between China and Kazakhstan in 1992, bilateral trade has developed rapidly, and the two sides have always maintained close cooperation on issues of world economic multipolarity and energy. On September 7, 2013, China silk President Xi Jinping delivered an important speech at Kazakh, Steiner, Zal and bayev University, and proposed to build the Silk Road Economic Belt together. In order to make Eurasian countries have closer economic ties, deeper mutual cooperation and broader development space, we can use innovative cooperation models to jointly build the "Silk Road Economic Belt", which is a great cause for the benefit of the people of all countries along the way. Kazakhstan is China's most important trade partner in Central Asia. In recent years, trade between the two countries has developed rapidly, with an average annual growth rate of 25%. As of September 2014, Kazakhstan's exports to China accounted for 13% of its total exports, only lower than Italy's. Kazakhstan's imports to China accounted for 27% of its total imports, ranking first. China is Kazakhstan's largest trading partner, the second largest export market and the first largest source of import for Kazakhstan.

The scale of China Kazakhstan trade is closely related to the highly complementary economic structure of the two countries. The factor endowment of a country determines the comparative advantage of its industry, and further determines the trade structure of a country and its trading

partners. As a direct reflection of the trade situation of the two countries, the trade structure of China and Kazakhstan not only reflects the economic and trade relations, trade terms and the distribution of trade interests between the two countries, but also reflects their respective positions in the international division of labor. By studying the trade structure of the two countries, we can understand the comparative advantages between China and Kazakhstan, so as to make a scientific forecast for the trade prospects of the two countries, help the two countries to transform their comparative advantages into competitive advantages, and then improve economic efficiency.

The silk road stretches for 4000 miles (6437 kilometers), and its name comes from profitable Chinese silk trade. It began in the Han Dynasty (206-220 B.C.), when Alexander the great established the Greek Kingdom (323-63 B.C.), and its trade network extended from the Mediterranean to the Chinese border of modern Afghanistan and Tajikistan. Trades on the Silk Road were a significant factor in the development of the civilizations of China, the Indian subcontinent, Persia, Europe and Arabia, that opened long-distance political and economic interactions between the civilizations [2]. Although silk is a major trade item in China, there are also many other commodities traded, as well as religions, fusion philosophy and various technologies, and diseases spreading along the silk road. In addition to economic and trade, the silk road is also a means of cultural trade between different civilizations [3].

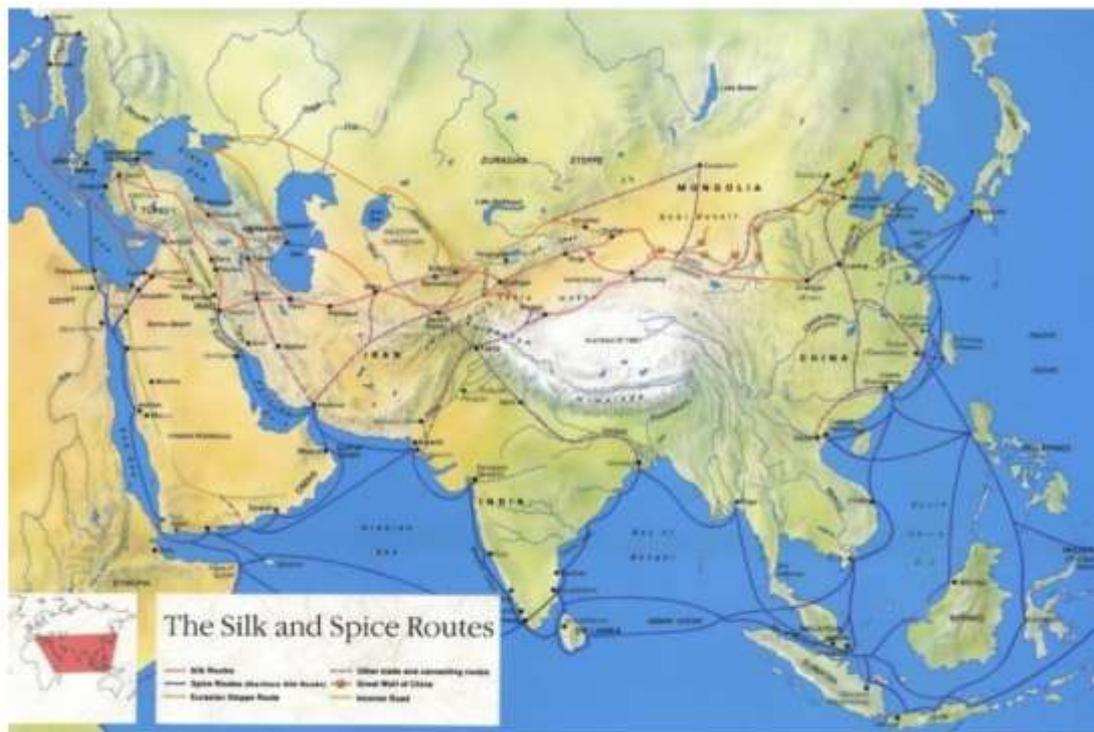


Figure 1-1: The map of the Silk Road

The silk road was no longer a silk transport route around 1400bc. The disappearance of the Silk Road after the demise of the Mongols was one of the main factors that prompted Europeans to seek other ways to reach the prosperous Chinese Empire. Anyone who can establish direct trade relations with Asia will get huge profits. Some routes of the Great Silk Road still existed till the beginning of the 20th century, such as Southern route, which linked Kazakhstan, China, Pakistan and India [6].

Kazakhstan, as the largest border trade partner of Xinjiang in China, is located in the hinterland of European industry. The neighboring countries and regions are as follows: in the East, Xinjiang Uygur Autonomous Region of China (from north to south, respectively, Habahe County and Jimunai County in Altai region, and in Tacheng region, and bulsaik County, Emin County, Tacheng County, Yumin county and tori County, Bortala Prefecture Leshihe Wenquan County, Huocheng County, Chabuchar county and Zhaosu County in Ili region) [7; 8].

To the south are Kyrgyzstan, Uzbekistan and Turkmenistan, bordering the Russian Federation from the west to the northeast. The total length of the border is 12842 km, of which the border with Xinjiang is 1538 km and the total land area is 2 million 717 thousand and 300 km².

After the establishment of diplomatic relations between China and Kazakhstan, the economic and trade relations between the two countries have continued to develop. In 1992, the bilateral trade volume between China and Kazakhstan was only 369.1 million US dollars, and in 2000, the bilateral trade volume between China and Kazakhstan was 1.557 billion US dollars. After entering the new century, bilateral trade between China and Kazakhstan has developed rapidly [9].

According to China's Ministry of Commerce, In 2003, the bilateral trade volume between China and Kazakhstan was US \$3.29 billion, a year-on-year increase of 68.1%, including US \$1.57 billion of Chinese exports, a year-on-year increase of 160.90% and US \$1.72 billion of imports, a year-on-year increase of 27%. In 2006, the bilateral trade volume between China and Kazakhstan was US \$8.36 billion, a year-on-year increase of 22.8%, including US \$4.751 billion of Chinese exports, a year-on-year increase of 21.9%, and US \$3.607 billion of imports, a year-on-year increase of 24. In 2008, the bilateral trade volume between China and Kazakhstan was US \$13.88 billion, a year-on-year increase of 66%, including US \$7.45 billion in exports, a year-on-year increase of 56.7%, and US \$6.43 billion in imports, a year-on-year increase of 78.2%; in 2008, the bilateral trade volume between China and Kazakhstan was US \$17.55 billion, a year-on-year increase of 26.5%, including US \$9.82 billion in exports, a year-on-year increase of 31.9%, and US \$7.73 billion in imports, a year-on-year increase of 20.2. Kazakhstan is China's second largest trading partner in the CIS countries, second only to Russia. China is also one of Kazakhstan's important trading partners [10].

The currently operated trans Asian Railway (TARM) international transport corridor passes through Kazakhstan in the following directions [11]:

- Dostyk-Aktogay-Sayak-Mointy-Astana-Petropavlovsk (Presnogorkovskaya)
- Dostyk/Horgos-Aktogay/Zhetygen-Almaty-Shu-Arys-Saryagash and on.

Especially in the territory of the Republic, there are six railways, six highways and four air corridors, which are defined and recognized by the international community. At the end of 2012, due to the opening of altynkol Horgos, the second border railway crossing point, goods from China,

Japan, South Korea and Southeast Asia are likely to be transported to CIS countries and Europe through additional routes; the part of that on the territory of Kazakhstan is Altynkol-Almaty-Arys-Kandyagash-Aksaraiskaya (Ozinki). Thus, Dostyk-Alashankou and Altynkol-Horgos crossings, located on the border with China, are currently functioning as parts of the Trans-Asian land transport corridors and service the Europe-China-Southeast Asia, Central Asia-China-Southeast Asia cargo flows [12].

According to, the strategic objectives of transit transport potential include:

- Give priority to the development of comprehensive transportation and communication facilities that can fully meet the needs of the economy and people for transportation services;
- The formation of state-of-the-art transport systems helps to effectively implement the country's transit possibilities and minimize transport costs.

Based on these objectives, the strategic priorities for the development of transit transport potential are:

- Create competitive international transportation corridor;
- Increasing Kazakhstan's transit potential through the effective use of flexible tariff policies and through improving the quality of transport and providing a comprehensive package of services for the transport of goods;
- Through the introduction of new resource-saving technology, the development of a safe and user-friendly transportation system, from the perspective of the environment to make better use of transportation;
- Attract investment to develop alternative routes, further develop infrastructure and adopt new management system based on information technology;
- Strengthen Kazakhstan's position in the international arena through bilateral and multilateral agreements in the field of transport [13].

At present, the border trade between Xinjiang and Kazakhstan is mainly border small trade, border people's mutual trade, tourism and shopping trade, and other forms coexist. Among them, border small trade accounts for 66% of the total border trade of new Kazakhstan, border people's mutual market accounts for about 4%, border tourism accounts for about 1%, and other forms account for 29% [14].

Subject relations of China and the Republic of Kazakhstan are actively discussed, especially in the context of political and transport relations, with the economic aspects often paid special attention. At the same time, China Kazakhstan economic cooperation plays an important role in the development of Central Asia. At present, most of the research projects and reports of Kazakhstan researchers are about Kazakhstan's transit corridors, especially between Kazakhstan and China, as well as international transportation in Central Asia.

The main purpose is to study economic relations and trade between Kazakhstan and China, especially Cargo transportation.

The main objectives of the study are:

- To explore the current trade situation between China & Kazakhstan;
- To analyze the key features of transportation using the cargo method;
- To study the problems of international transportation using the cargo method;
- To develop a list of recommendations for improving the quality of international transportation using the cargo method.

Liberalization of foreign economic activity, participation of the country in various organizations of economic cooperation, improvement of the world market situation for the main Kazakh export goods - play a huge role in the development of foreign trade of the Republic of Kazakhstan.

In the rating of global competitiveness 2018-2019, compiled by the WEF (World Economic Forum) analytical group, the Republic of Kazakhstan ranks 53rd. The rating is based on the competitiveness and sustainable functioning of enterprises. The main goal of the strategy "Kazakhstan - 2050" is to build a competitive, balanced, diversified industrial complex, the implementation of which directly depends on the efficiency of the country's economy as a whole.

Most of the shipments in general, to ensure the main trading activity in the Republic of Kazakhstan from China is carried out using the Cargo method.

The Republic of Kazakhstan has fairly close ties with China. First, it is necessary to assess the dynamics of trade between countries. According to official data, the trade turnover between Kazakhstan and China in January-December 2017 amounted to \$ 10.5 billion, including exports - \$ 5.8 billion and imports - \$ 4.7 billion. Comparing 2017 to the same period in 2016, the volume of mutual trade increased by 32.9% or \$ 2.6 billion. Exports rose 37.1% or \$ 1.6 billion, while imports rose 28.0% or \$ 1.0 billion. The trade balance is positive and amounts to \$ 1.1 billion. During the period under review, China ranked 2nd among the trading partners of Kazakhstan with a share of 13.43%, while in the last period the country took 3rd place (12.71%). Exports from Kazakhstan to China in January-December 2017 increased by 37.1% and amounted to \$ 5.8 billion (for the same period in 2016 - \$ 4.2 billion), of which 65.1% are non-primary goods exports.

According to official data, the trade turnover between Kazakhstan and China in January-December 2018 amounted to \$ 11.7 billion, including exports - \$ 6.3 billion and imports - \$ 5.4 billion. During the comparison the positions of the previous period to the same period in 2017, the volume of mutual trade increased by 11.4% or \$ 1.2 billion. Exports grew by 8.8% or \$ 509.5 million, while imports grew by 14.7% or \$ 689.2 million. The trade balance is positive and amounts to \$ 923.3 million.

During the period under review, China ranked third among the trading partners of Kazakhstan with a share of 12.38%, while in the last period the country took second place (13.43%).

Exports from Kazakhstan to China in January-December 2018 increased by 8.8% and amounted to \$ 6.3 billion (for the same period in 2017 - \$ 5.8 billion), of which 55.8% are non-primary goods exports.

During the period under review, China took 2nd place among consumers of Kazakhstani goods with a share of 10.32%, in the last period the country also took 2nd place (11.95%).

The growth of exports from Kazakhstan to China is justified by an increase in the supply of goods such as: natural gas - an increase of 8.4 rubles. or by \$ 944.3 million (from 127.9 to \$ 1,072.2 million), copper and copper cathodes - by 22.8% or by \$ 249.7 million (from 1,095.9 to \$ 1,345.6 \$ million), wheat - by 74.8% or \$ 42.3 million (from \$ 56.6 to \$ 99.0 million), coke and petroleum bitumen - an increase of 2.3 rubles. or by \$ 26.2 million (from \$ 19.6 to \$ 45.8 million), cold-rolled flat products of unalloyed steel - an increase of 2.5 rubles. or by \$ 16.4 million (from \$ 10.8 to \$ 27.2 million).

At the same time, there is a decrease in export goods, such as: uranium - by \$ 348.2 million (from 1,026.1 to \$ 677.9 million), unprocessed zinc - by \$ 165.9 million (from 332.9 to 166, \$ 9 million), copper ores and concentrates - by \$ 94.5 million (from \$ 929.4 to \$ 834.9 million), ferroalloys - by \$ 74.6 million (from \$ 866.8 to \$ 792.3 million), unprocessed lead - by \$ 41.3 million (from \$ 46.8 to \$ 5.5 million).

The main export goods from Kazakhstan to China are: copper and copper cathodes, natural gas, copper ores and concentrates, crude oil, ferroalloys. These goods account for 77.3% of exports from Kazakhstan to China.

Industrial goods (except for oil and oil products) prevail in the structure of exports from Kazakhstan to China with a share of 82.8% or \$ 5.2 billion. Next comes oil - 13.2% or \$ 829.5 million, agricultural products - 4.0% or \$ 253.3 million. and oil products - 0.0% or \$ 2.5 mln.

Imports to Kazakhstan from China in January-December 2018 increased by 14.7% and amounted to \$ 5.4 billion (for the same period in 2017 - \$ 4.7 billion).

At the end of 12 months in 2018, China ranked 2nd among the main suppliers of goods in Kazakhstan with a share of 16.15%, in the last period the country also took 2nd place (15.86%).

The growth of imports to Kazakhstan from China is justified by an increase in the supply of such goods as: telephones - by 33.3% or by \$ 155.1 million (from \$ 465.4 to \$ 620.5 million), diodes, transistors and similar semiconductor devices - growth of 7.2 rubles. or by \$ 74.1 million (from \$ 12.0 to \$ 86.1 million), road and construction equipment - by 99.1% or by \$ 72.4 million (from \$ 73.1 to \$ 145.5 million), computers - by 32.5% or \$ 65.9 million (from \$ 203.0 to \$ 268.9 million), equipment for sorting and crushing soil - an increase of 2.2 rubles. or by \$ 40.2 million (from \$ 34.7 to \$ 74.9 million).

At the same time, there is a decrease in imported goods, such as: insulated wires, cables - by \$ 31.5 million (from \$

72.2 to \$ 40.7 million), other shoes with soles and uppers made of rubber or plastic - by 30, \$ 3 million (from \$ 122.4 to \$ 92.1 million), pipeline fittings - by \$ 27.5 million (from \$ 104.8 to \$ 77.3 million), consoles, panels, tables for electrical equipment - by \$ 26, \$ 4 million (from \$ 64.4 to \$ 38.0 million), metal-rolling mills and rolls for them - by \$ 23.5 million (from \$ 31.1 to \$ 7.6 million).

The main import goods to Kazakhstan from China are: telephones, computers, road and construction equipment, uranium, pipes, tubes and seamless profiles of ferrous metals. These goods account for 23.2% of imports to Kazakhstan from China.

Industrial goods (except for oil and oil products) prevail in the structure of imports to Kazakhstan from China with a share of 96.9% or \$ 5.2 billion. Next come agricultural products - 3.1% or \$ 165.6 million, petroleum products - 0.0% or \$ 2.0 million.

Exports from Kazakhstan to China in January-December 2019 increased by 26.9% and amounted to \$ 8.0 billion (for the same period in 2018 - \$ 6.3 billion), of which 51.0% are non-primary goods exports.

During the period under review, China ranked 2nd among consumers of Kazakhstani goods with a share of 13.78%, in the last period the country also took 2nd place (10.32%).

The growth of exports from Kazakhstan to China is justified by an increase in the supply of such goods as: natural gas - by 49.8% or by \$ 534.1 million (from \$ 1,072.2 to \$ 1,606.3 million), unprocessed zinc - an increase of 3, 4p. or by \$ 395.7 million (from \$ 166.9 to \$ 562.6 million), crude oil - by 42.2% or by \$ 349.7 million (from \$ 829.5 to \$ 1,179.2 million), ores and concentrates of precious metals - an increase of 35.3 rubles. or by \$ 246.1 million (from \$ 7.2 to \$ 253.2 million), copper and copper cathodes - by 15.2% or by \$ 204.0 million (from \$ 1,345.6 to \$ 1,549.6 million).

At the same time, there is a decrease in export goods, such as: uranium - by \$ 209.6 million (from 677.9 to \$ 468.3 million), copper ores and concentrates - by \$ 96.3 million (from 834.9 to 738, \$ 6 million), ferroalloys - by \$ 59.7 million (from \$ 792.3 to \$ 732.6 million), cold-rolled flat rolled products of unalloyed steel - by \$ 16.4 million (from \$ 27.2 to \$ 10.8 million), textile materials impregnated or coated with plastics - by \$ 12.3 million (from \$ 31.7 to \$ 19.4 million).

The main export goods from Kazakhstan to China are: natural gas, copper and copper cathodes, crude oil, copper ores and concentrates, ferroalloys. These goods account for 72.5% of exports from Kazakhstan to China.

Industrial goods (except for oil and oil products) prevail in the structure of exports from Kazakhstan to China with a share of 80.5% or \$ 6.4 billion. Next comes oil - 14.7% or \$ 1.2 billion, agricultural products - 4.8% or \$ 382.9 million. and oil products - 0.0% or \$ 702.5 thous.

Imports to Kazakhstan from China in January-December 2019 increased by 26.1% and amounted to \$ 6.8 billion (for the same period in 2018 - \$ 5.4 billion).

At the end of 12 months. In 2019, China took 2nd place among the main suppliers of goods in Kazakhstan with a share of 17.10%, in the last period the country also took 2nd place (16.15%).

The growth of imports to Kazakhstan from China is justified by an increase in the supply of goods such as: other goods - an increase of 513.5 rubles. or by \$ 481.8 million (from \$ 0.9 to \$ 482.8 million), pipes and tubes welded from ferrous metals - an increase of 42.1 rubles. or by \$ 128.6 million (from \$ 3.1 to \$ 131.7 million), diodes, transistors and similar semiconductor devices - by 88.3% or by \$ 76.0 million (from \$ 86.1 to \$ 162.1 million), toys and puzzles - by 88.3% or \$ 73.9 million (from \$ 83.8 to \$ 157.7 million), shoe parts - an increase of 2.8 rubles or by \$ 62.7 million (from \$ 34.2 to \$ 96.9 million).

At the same time, there is a decrease in imported goods, such as: telephones - by \$ 132.2 million (from \$ 620.5 to \$ 488.3 million), uranium - by \$ 74.7 million (from 107.2 to 32.5 \$ million), aircraft - by \$ 30.1 million (from \$ 31.1 to \$ 1.1 million), metal structures made of ferrous metals - by \$ 26.1 million (from \$ 79.4 to \$ 53.3 million), centrifuges, equipment and devices for filtering liquids or gases - by \$ 25.5 million (from \$ 66.0 to \$ 40.5 million).

The main imports from China to Kazakhstan are: telephones, other goods, computers, road and construction equipment, diodes, transistors and similar semiconductor devices. These goods account for 23.4% of imports to Kazakhstan from China.

Industrial goods (except for oil and oil products) prevail in the structure of imports to Kazakhstan from China with a share of 97.1% or \$ 6.6 billion. Next come agricultural products - 2.8% or \$ 191.3 million, petroleum products - 0.0% or \$ 2.3 million. and oil - 0.0% or \$ 0.0 thous.

According to official data, the trade turnover between Kazakhstan and China in January-June 2020 amounted to \$ 7.3 billion, including exports - \$ 4.8 billion and imports - \$ 2.5 billion. In comparison with the same period in 2019, the volume of mutual trade increased by 5.1% or \$ 356.2 million. Exports increased by 20.0%, or \$ 804.9 million, while imports decreased by 15.2%, or \$ 448.8 million. The trade balance is positive and amounts to \$ 2.3 billion.

During the period under review, China took 2nd place among the trading partners of Kazakhstan with a share of 17.27%, in the last period the country also took 2nd place (15.13%).

Exports from Kazakhstan to China in January-June 2020 increased by 20.0% and amounted to \$ 4.8 billion (for the same period in 2019 - \$ 4.0 billion), of which 46.8% are non-primary goods exports.

During the period under review, China ranked 1st among consumers of Kazakhstani goods with a share of 18.60%, while in the last period the country took 2nd place (14.08%).

The growth of exports from Kazakhstan to China is justified by an increase in the supply of such goods as: crude oil - by 58.5% or by \$ 356.7 million (from \$ 609.2 to \$ 965.9

million), copper ores and concentrates - by 41, 8% or \$ 169.2 million (from \$ 404.7 to \$ 573.8 million), uranium - by 51.3% or \$ 119.4 million (from \$ 233.0 to \$ 352.4 million), copper and copper cathodes - by 14.4% or \$ 104.7 million (from \$ 727.8 to \$ 832.5 million), hot-rolled flat products of unalloyed steel - an increase of 35.2 rubles. or by \$ 57.9 million (from \$ 1.7 to \$ 59.6 million).

At the same time, there is a decrease in export goods, such as: unprocessed zinc - by \$ 82.6 million (from 304.1 to 221.5 million), ferroalloys - by \$ 22.2 million (from 381.3 to 359.1 \$ million), wheat - by \$ 19.5 million (from \$ 41.3 to \$ 21.8 million), textile materials impregnated or coated with plastics - by \$ 19.4 million (from \$ 19.4 to \$ 0.0 million) , ores and concentrates of precious metals - by \$ 17.8 million (from \$ 120.5 to \$ 102.7 million).

At the end of 6 months in 2020, China took 2nd place among the main suppliers of goods in Kazakhstan with a share of 15.18%, in the last period the country also took 2nd place (16.85%).

The decrease in imports to Kazakhstan from China is justified by a decrease in the supply of such goods as: other goods - by \$ 153.5 million (from \$ 153.5 to \$ 0.0 million), pipes and tubes welded from ferrous metals - by \$ 74.9 million (from \$ 81.0 to \$ 6.0 million), diodes, transistors and similar semiconductor devices - by \$ 56.7 million (from \$ 105.6 to \$ 49.0 million), road and construction equipment - by 47.9 \$ million (from \$ 94.7 to \$ 46.8 million), toys and puzzles - \$ 38.8 million (from \$ 69.5 to \$ 30.8 million).

At the same time, there is an increase in imported goods, such as: telephones - by 43.1% or \$ 63.7 million (from \$ 147.8 to \$ 211.5 million), uranium - an increase of 2.9 rubles. or by \$ 62.5 million (from \$ 32.5 to \$ 95.0 million), computers - by 60.1% or by \$ 55.3 million (from \$ 92.1 to \$ 147.4 million), bodies for cars - an increase of 3.2 rubles. or by \$ 41.1 million (from \$ 18.7 to \$ 59.8 million), knitted or other textile finished products - an increase of 4.5 rubles. or by \$ 19.1 million (from \$ 5.5 to \$ 24.6 million).

The main imports from China to Kazakhstan are: telephones, computers, uranium, other shoes with soles and uppers made of rubber or plastic, car bodies. These goods account for 23.0% of imports to Kazakhstan from China.

Industrial goods (except for oil and oil products) prevail in the structure of imports to Kazakhstan from China with a share of 96.8% or \$ 2.4 billion. The next are agricultural products - 3.1% or \$ 78.4 million, oil products - 0.0% or \$ 675.9 thousand and oil - 0.0% or \$ 0.0 thousand (table 1).

Table 1: Share of China in the trade of the Republic of Kazakhstan in 2018 - 2020 (6 months)

	2018 (6 months)	2019 (6 months)	2020 (6 months)	2018	2019	2020
Turnover	13.43%	12.38%	15.13%	2	3	2
Export	11.95%	10.32%	13.78%	2	2	2
Import	15.86%	16.15%	17.10%	2	2	2

*Source: State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan

According to official data, the trade turnover between Kazakhstan and China in January-December 2019 amounted to \$ 14.8 billion, including exports - \$ 8.0 billion and imports - \$ 6.8 billion. Compared to the same period in 2018, the volume of mutual trade increased by 26.5% or by \$ 3.1 billion. Exports rose 26.9%, or \$ 1.7 billion, while imports grew 26.1%, or \$ 1.4 billion. The trade balance is positive and amounts to \$ 1.2 billion.

During the period under review, China took 2nd place among the trading partners of Kazakhstan with a share of 15.13%, while in the last period the country took 3rd place (12.38%).

Next, consider in Table 2 the structure of export of goods from Kazakhstan to China by the degree of processing.

Table 2: Structure of export of goods from Kazakhstan to China by degree of processing

	2018(6 months)	2019(6 months)	2020 (6 months)	2018	2019	2020 s
		\$ million			Rate (%)	
Export everything	6 307.5	8 003.9	4 838.5	+8.8%	+26.9%	+20.0%
1. Raw materials	2 793.6	3 921.8	2 575.2	+37.8%	+40.4%	+26.0%
2. Non-commodity goods	3 516.7	4 085.3	2 264.0	-6.8%	+16.2%	+13.7%
2.1. Energy Products	137.5	75.2	36.8	+71.0%	-45.3%	-8.6%
2.2. Low degree of redistribution	2 501.7	3 289.0	1 682.3	+1.1%	+31.5%	+5.9%
2.3. Average redistribution	144.7	203.5	173.4	+61.2%	+40.6%	+81.1%
2.4. High degree of redistribution	732.8	517.6	371.6	-35.1%	-29.4%	+39.6%

*Source: State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan

Next, we will consider the structure of exports from China to the Republic of Kazakhstan (it is presented in more detail in Table 3).

Table 3 - Structure of exports from China to the Republic of Kazakhstan

Export everything	2018(6 months)	2019(6 months)	2020 (6 months)	2018	2019	2020
1. Raw materials	100%	100%	100%	2	2	2
2. Non-commodity goods	35.0%	44.3%	49.0%	5	6	2
2.1. Energy Products	65.1%	55.8%	51.0%	-	-	-
2.2. Low degree of redistribution	1.4%	2.2%	0.9%	6	5	9
2.3. Average redistribution	42.7%	39.7%	41.1%	1	1	1
2.4. High degree of redistribution	1.5%	2.3%	2.5%	8	4	4
Export everything	19.5%	11.6%	6.5%	1	2	2

*Source: State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan

Table 3 shows that the largest share of exports to China from Kazakhstan is still non-commodities.

The main export goods from Kazakhstan to China are: crude oil, natural gas, copper and copper cathodes, copper ores and concentrates, ferroalloys. These goods account for 74.0% of exports from Kazakhstan to China.

Industrial goods (except for oil and oil products) prevail in the structure of exports from Kazakhstan to China with a share of 76.0% or \$ 3.7 billion. Next comes oil - 20.0% or \$ 965.9 million, agricultural products - 4.0% or \$ 195.3 million. and oil products - 0.0% or \$ 259.4 thousands.

The structure of imports from the Republic of Kazakhstan to China will be presented in Table 4.

Table 4: Structure of imports of goods in Kazakhstan from China

	2018(6 months)	2019(6 months)	2020 (6 mec.)	2019	2020	Growth
	\$ million	\$ million	\$ million	share	share	2019/2018
TOTAL imports to Kazakhstan from China	4 695.0	5 384.2	6 788.6	100%	100%	+26.1%
Of them:						
Agricultural commodities	162.4	165.6	191.3	3.1%	2.8%	+15.5%
Industrial goods (except oil and oil products)	4 529.2	5 216.6	6 595.1	96.9%	97.1%	+26.4%
Oil	0.0	0.0	0.0	-	0.0%	-
Petroleum products	3.3	2.0	2.3	0.0%	0.0%	+15.7%

*Source: State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan

Imports to Kazakhstan from China in January-June 2020 decreased by 15.2% and amounted to \$ 2.5 billion (for the same period in 2019 - \$ 3.0 billion).

Next, it is necessary to analyze how transportation is carried out in international trade between the Republic of

Kazakhstan and China, and how many of them are carried out by the cargo method.

The main export goods from the Republic of Kazakhstan to China are presented in Table 5.

Table 5: Main export goods from the Republic of Kazakhstan to China

Products	6 months 2018 \$ million	6 months 2019 \$ million	6 months. 2020 \$ million	6 months 2019 share	6 months 2020 share	Growth 2020/2019
TOTAL export from Kazakhstan to China	2 750.9	4 033.6	4 838.5	100.0%	100.0%	+ 20.0%
1. Crude oil (code 2709 TNVED)	284.7	609.2	965.9	15.1%	20.0%	+ 58.5%
2.natural gas (code 2711 TNVED)	409.7	849.8	851.2	21.1%	17.6%	+ 0.2%
3.copper and copper cathodes (code 7403 TNVED)	679.0	727.8	832.5	18.0%	17.2%	+ 14.4%
4.copper ores and concentrates (code 2603 TNVED)	410.7	404.7	573.8	10.0%	11.9%	+ 41.8%
5.ferroalloys (code 7202 TNVED)	383.1	381.3	359.1	9.5%	7.4%	-5.8%
6.uranium (code 2844 TNVED)	217.5	233.0	352.4	5.8%	7.3%	+ 51.3%
7.Untreated zinc (code 7901 TNVED)	111.9	304.1	221.5	7.5%	4.6%	-27.2%
8.Ores and concentrates of precious metals (code 2616 TNVED)	4.6	120.5	102.7	3.0%	2.1%	-14.8%
9.Hot-rolled flat rolled products of non-alloy steel (code 7208 TNVED)	0.396	1.7	59.6	0.0%	1.2%	increased by 352%
10.Cyclic hydrocarbons (code 2902 TNVED)	0.000	32.4	54.3	0.8%	1.1%	+ 67.4%
11.semi-finished products from unalloyed steel (code 7207 TNVED)	0.000	6.4	48.0	0.2%	1.0%	grew by 750 %
12.oxides and hydroxides of aluminum (code 2818 TNVED)	0.000	9.5	39.4	0.2%	0.8%	grew by 410 %.
13.flax seeds (code 1204 TNVED)	0.000	0.000	33.5	0.0%	0.7%	new
14. iron ores and concentrates (code 2601 TNVED)	23.5	31.9	31.9	0.8%	0.7%	+ 0.1%
15.Rapeseed oil (code 1514 TNVED)	9.4	22.5	25.5	0.6%	0.5%	+ 12.9%

*Source: State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan

The growth of exports from Kazakhstan to China is justified by an increase in the supply of such goods as: crude oil - by 58.5% or by \$ 356.7 million (from \$ 609.2 to \$ 965.9 million), copper ores and concentrates - by 41, 8% or \$ 169.2 million (from \$ 404.7 to \$ 573.8 million), uranium - by 51.3% or \$ 119.4 million (from \$ 233.0 to \$ 352.4 million), copper and copper cathodes - by 14.4% or \$ 104.7 million (from \$ 727.8 to \$ 832.5 million), hot-rolled flat products of unalloyed steel - an increase of 35.2 rubles. or by \$ 57.9 million (from \$ 1.7 to \$ 59.6 million).

At the same time, there is a decrease in export goods, such as: unprocessed zinc - by \$ 82.6 million (from 304.1 to \$ 221.5 million), ferroalloys - by \$ 22.2 million (from 381.3 to 359.1 \$ million), wheat - by \$ 19.5 million (from \$ 41.3 to \$ 21.8 million), textile materials impregnated or coated with plastics - by \$ 19.4 million (from \$ 19.4 to \$ 0.0 million), ores and concentrates of precious metals - by \$ 17.8 million (from \$ 120.5 to \$ 102.7 million).

The main transportation of exported goods from Kazakhstan to China using the cargo method is presented in Table 6.

Table 6: Main transportation of exported goods from Kazakhstan to China using the cargo method

Products	6 months 2018 \$ million	6 months 2019 \$ million	6 months 2020 \$ million	Growth 2020/2019
TOTAL RK imports from China	71%	73%	75%	+2.74
1. Crude oil (code 2709 TNVED)	43%	48%	49%	+2.08
2.natural gas (code 2711 TNVED)	84%	83%	87%	+4.82
3.copper and copper cathodes (code 7403 TNVED)	71%	78%	79%	+1.28
4.copper ores and concentrates (code 2603 TNVED)	53%	55%	59%	+7.27
5.ferroalloys (code 7202 TNVED)	48%	49%	53%	+8.16
6.uranium (code 2844 TNVED)	85%	88%	83%	-5.68
7.Untreated zinc (code 7901 TNVED)	72%	74%	76%	+2.70
8.Ores and concentrates of precious metals (code 2616 TNVED)	43%	47%	49%	+4.26
9.Hot-rolled flat rolled products of non-alloy steel (code 7208 TNVED)	56%	58%	62%	+6.90
10.Cyclic hydrocarbons (code 2902 TNVED)	24%	28%	29%	+3.57
11.semi-finished products from unalloyed steel (code 7207 TNVED)	32%	35%	37%	+5.71
12.oxides and hydroxides of aluminum (code 2818 TNVED)	49%	41%	44%	+7.32
13.flax seeds (code 1204 TNVED)	64%	67%	66%	-1.49
14. iron ores and concentrates (code 2601 TNVED)	26%	24%	25%	+4.17
15.Rapeseed oil (code 1514 TNVED)	45%	51%	58%	+13.73

*Source: State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan

In accordance with the above analysis, more than 75% of transportation in the case of exports between China and the Republic of Kazakhstan is carried out from the perspective

of the cargo method. The main import goods of the Republic of Kazakhstan from China are presented in Table 7.

Table 7: Main import goods of the Republic of Kazakhstan from China

Products	6 months	6 months	6 months	6 months	6 months	Growth
	2018	2019	2020	2019	2020	
	\$ million	\$ million	\$ million	share	share	2020/2019
TOTAL RK imports from China	2 477.7	2 954.8	2 506.1	100.0%	100.0%	-15.2%
1.telephones (code 8517 TNVED)	230.2	147.8	211.5	5.0%	8.4%	+ 43.1%
2.computers (code 8471 TNVED)	120.6	92.1	147.4	3.1%	5.9%	+ 60.1%
3.uranium (code 2844 TNVED)	53.3	32.5	95.0	1.1%	3.8%	grew by 290%
4.other footwear with soles and upper made of rubber or plastic (code 6402 TNVED)	27.0	67.1	63.8	2.3%	2.5%	-4.9%
5.car bodies (code 8707 TNVED)	4.2	18.7	59.8	0.6%	2.4%	grew by 320%
6. Installations for air conditioning (code 8415 TNVED)	45.2	48.7	52.7	1.6%	2.1%	+ 8.2%
7.pipes. tubes and seamless profiles of ferrous metals (code 7304 TNVED)	58.7	55.3	51.2	1.9%	2.0%	-7.5%
8.diodes. transistors and similar semiconductor devices (code 8541 TNVED)	30.9	105.6	49.0	3.6%	2.0%	-53.6%
9.road and construction equipment (code 8429 TNVED)	81.4	94.7	46.8	3.2%	1.9%	-50.6%
10.Tires (code 4011 TNVED)	37.4	41.6	39.6	1.4%	1.6%	-4.9%
11.Polyacetals and other simple polyesters. epoxy resins (code 3907 TNVED)	38.1	46.1	37.6	1.6%	1.5%	-18.5%
12.insecticides. herbicides (code 3808 TNVED)	26.4	29.4	36.8	1.0%	1.5%	+ 25.1%
13.parts and accessories for cars and tractors (code 8708 TNVED)	26.3	44.1	32.3	1.5%	1.3%	-26.7%
14.toys and puzzles (code 9503 TNVED)	39.3	69.5	30.8	2.4%	1.2%	-55.8%
15.Other ferrous metal products (code 7326 TNVED)	40.5	30.5	29.9	1.0%	1.2%	-1.8%
16.Equipment for sorting and crushing soil (code 8474 TNVED)	28.0	34.1	25.9	1.2%	1.0%	-24.0%
17. fittings for pipelines (code 8481 TNVED)	41.9	27.5	25.0	0.9%	1.0%	-9.1%
18.Finished products. knitted or other textile (code 6307 TNVED)	2.0	5.5	24.6	0.2%	1.0%	grew by 450%
19.Equipment for heat treatment of materials (code 8419 TNVED)	23.5	11.1	24.5	0.4%	1.0%	grew by 220%
20.metal structures made of ferrous metals (code 7308 TNVED)	29.5	15.1	24.4	0.5%	1.0%	+ 61.7%

*Source: State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan

The decrease in imports to Kazakhstan from China is justified by a decrease in the supply of such goods as: other goods - by \$ 153.5 million (from \$ 153.5 to \$ 0.0 million), pipes and tubes welded from ferrous metals - by \$ 74.9 million (from \$ 81.0 to \$ 6.0 million), diodes, transistors and similar semiconductor devices - by \$ 56.7 million (from \$ 105.6 to \$ 49.0 million), road and construction equipment - by 47.9 \$ million (from \$ 94.7 to \$ 46.8 million), toys and puzzles - \$ 38.8 million (from \$ 69.5 to \$ 30.8 million).

At the same time, there is an increase in imported goods, such as: telephones - by 43.1% or \$ 63.7 million (from \$

147.8 to \$ 211.5 million), uranium - an increase of 2.9 rubles. or by \$ 62.5 million (from \$ 32.5 to \$ 95.0 million), computers - by 60.1% or by \$ 55.3 million (from \$ 92.1 to \$ 147.4 million), bodies for cars - an increase of 3.2 rubles. or by \$ 41.1 million (from \$ 18.7 to \$ 59.8 million), knitted or other textile finished products - an increase of 4.5 rubles. or by \$ 19.1 million (from \$ 5.5 to \$ 24.6 million).

The main transportation of imported goods from Kazakhstan to China using the cargo method is presented in Table 8.

Table 8: Main transportation of imported goods from Kazakhstan to China using the cargo method

Products	6 months	6 months	6 months	Growth
	2018	2019	2020	
				2020/2019
TOTAL RK imports from China	78%	72%	77%	6.94
1.telephones (code 8517 TNVED)	63%	67%	61%	-8.96
2.computers (code 8471 TNVED)	84%	83%	87%	4.82
3.uranium (code 2844 TNVED)	61%	68%	69%	1.47
4.other footwear with soles and upper made of rubber or plastic (code 6402 TNVED)	73%	75%	79%	5.33
5.car bodies (code 8707 TNVED)	58%	59%	56%	-5.08
6. Installations for air conditioning (code 8415 TNVED)	45%	48%	43%	-10.42
7.pipes, tubes and seamless profiles of ferrous metals (code 7304 TNVED)	72%	74%	76%	2.70
8.diodes, transistors and similar semiconductor devices (code 8541 TNVED)	53%	57%	59%	3.51
9.road and construction equipment (code 8429 TNVED)	44%	47%	41%	-12.77
10.Tires (code 4011 TNVED)	24%	28%	29%	3.57
11.Polyacetals and other simple polyesters, epoxy resins (code 3907 TNVED)	51%	53%	57%	7.55
12.insecticides, herbicides (code 3808 TNVED)	89%	81%	84%	3.70
13.parts and accessories for cars and tractors (code 8708 TNVED)	64%	67%	62%	-7.46
14.toys and puzzles (code 9503 TNVED)	36%	34%	35%	2.94
15.Other ferrous metal products (code 7326 TNVED)	58%	52%	57%	9.62
16.Equipment for sorting and crushing soil (code 8474 TNVED)	73%	78%	79%	1.28
17. fittings for pipelines (code 8481 TNVED)	34%	33%	37%	12.12

18.Finished products, knitted or other textile (code 6307 TNVED)	41%	48%	49%	2.08
19.Equipment for heat treatment of materials (code 8419 TNVED)	53%	55%	59%	7.27
20.metal structures made of ferrous metals (code 7308 TNVED)	88%	89%	83%	-6.74

*Source: State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan

In accordance to the analysis, over than 70% of import in 2018-2020 are also produced using the cargo method.

Thus, we can safely say that the cargo method is quite popular, which is associated with a number of key advantages of this method, they will be analyzed in more detail in the SWOT analysis

Considering the effectiveness of using the cargo method in organizing transportation, we settled on the use of two methods:

- 1) Questioning of carriers, in order to find out the advantages and disadvantages of organizing transportation using the cargo method;
- 2) Construction of the subsequent SWOT - analysis of the efficiency of transportation using the cargo method.

Considering the cargo method and its effectiveness on the example of the Kazakh side, we analyzed the data from a survey of 25 largest Kazakhstani companies related to business with China.

They were asked 15 questions regarding the quality of transportation using the cargo method, in order to further conduct a swat - analysis of the quality of transportation using the cargo method. With regard to cargo transportation, five questions were asked within the each of the question - groups.

Then it is necessary to make the detailed analysis of the questionnaire. It will be thoroughly represented at the next following tables.

Table 9: Respondent’s profile analysis

Company’s name	Trade partnership with China companies(years)	The number of completed cargo deliveries of goods from China to Kazakhstan (thousands)
1 Anvar LLP	Over 10	Over 200
2 Atrium LLP	7-9	50-70
3 Abdimanap LLP	7-9	50-70
4 Dina LLP	7-9	50-70
5 Leader LLP	7-9	50-70
6 Keryenplus LLP	7-9	50-70
7 Tilebay - Baba LLP	7-9	50-70
8 Flexy solutions LLP	7-9	50-70
9 Proservice vostok LLP	7-9	50-70
10 Integration Astyk LLP	7-9	50-70
11 Arena S LLP	Over 10	Over 80
12 Prima Distribution LLP	Over 10	Over 80
13 Dream Market LLP	Over 10	Over 200
14 Common Market Corporation LLP	Over 10	Over 200
15 Eicos LLP	Over 10	Over 200
16 Alina Trade LLP	Over 10	Over 80
17 Tulpar LLP	Over 10	Over 80
18 Kenjehan LLP	Over 10	Over 80
19 BBS TRADE LLP	Over 10	Over 80
20 Dastur Commerce LLP	Over 10	Over 80
21 BL-TRADING LLP	5-7	50-70
22 Milad LLP	5-7	50-70
23 IMC SAUDA LLP	5-7	50-70
24 Elby LLP	5-7	50-70
25 Eurasia Trading Company LLP	5-7	50-70

*Profile description

Then it is necessary to analyze the questionnaire parts, with the approval level ranking from 1 (the lowest level) to 5 (the

highest level). Reliability of cargo transportation will be represented within the table 10.

Table 10: Reliability of cargo transportation

Questions	Agree	Disagree
1.1 Do you consider the cargo transportation reliable?	3.51	1.49
1.2 Do you think it is optimal to transport cargo using the Cargo method using the services of a single supplier?	3.24	1.76
1.3 Do you find it optimal to transport cargo using the Cargo method using the services of several suppliers?	3.49	1.51
1.4 Do you consider the use of cargo transportation fully legal?	1.46	3.54
1.5 Do you consider Chinese carriers to be reliable in terms of transportation?	3.41	1.59
Grand mean	3.02	1.98

*Using Likert scale

In accordance with the five-step Likert scale, it can be noted that most of the respondents are totally agree and satisfied with the quality of Reliability of cargo transportation (3.02), but the only thing is that most of them consider that cargo transportation tends to be considered as not fully legal. It is in accordance to the fact that in the most of the in most cases, cargo transportation is not accompanied by the provision of any documents. The cost of transportation services using the cargo method will be thoroughly represented in the next table 11.

Table 11: The cost of transportation services

Questions	Agree	Disagree
2.1 Do you consider transportation using the kart method to be optimal in terms of price?	3.41	1.59
2.2 Do you consider the cargo method to be comparatively optimal in terms of quality?	3.31	1.69
2.3 Do you consider the cargo method to be the lowest in terms of the level of delivery risk?	3.53	1.47
2.4 Are you interested in the intricacies of interaction with intermediary companies in the organization of transportation?	3.77	1.23
2.5 Do you consider it possible to use "gray" transportation schemes (without documentary confirmation) when carrying out transportation using the cargo method?	3.71	1.29
Grand mean	3.55	1.45

*Using Likert scale

In accordance with the five-step Likert scale, it can be noted that most of the respondents are totally agree with the cost of transportation services (they appreciate them as not very high and comfortable) - 3.55 Likert Scale. But the bad thing is that many of the respondents can use for themselves undocumented transportation, which increases the level of

risk for both parties to the transaction and creates the problem of unaccounted income.

The Likert scale analysis for route and quality of transportation will be thoroughly represented in the next table 12.

Table 12: Route and quality of transportation

Questions	Agree	Disagree
3.1 Do you consider transportation using the cargo method the most optimal along the route of the cargo?	3.29	1.71
3.2 Do you think that when transporting using the cargo method the goods are transported using the highest quality packaging?	1.21	3.79
3.3 Do you think that all the necessary documents are provided when transporting goods by cargo?	3.44	1.56
3.4 Do you think that the speed of customs depends on the optimal route using the cargo method?	3.33	1.67
3.5 Do you think that the cargo transportation method allows you to obtain a higher quality of transportation compared to using other methods?	3.16	1.84
Grand mean	2.29	2.71

*Using Likert scale

In accordance with the five-step Likert scale, it can be noted that most of the respondents really appreciate the route and quality of transportation as high, except of the quality packaging they noted it as low - 1.21.

Based on the results of the analysis, the SWOT analysis can be draw up regarding the use of the cargo method in the transportation of goods between the Republic of Kazakhstan and China (table 13).

Table 13: SWOT analysis about the using of the cargo method in the transportation of goods between the Republic of Kazakhstan and China

Strengths	Opportunities
1. Short terms. 2. Various types of delivery from China by type of transport. 3. There is not always a need for documentation. 4. The customer does not have to deal with packing lists, certificates and other necessary formalities. 5. At the customs office, only the place that actually takes the cargo is paid.	1. Minimization of the level of risk. 2. Possibility of organizing transportation in a more "transparent" format. 3. Possibility to improve transportation safety. 4. Possibility of technical tracking of the quality of transportation.
Weaknesses	Threats
1. Not enough information about carriers. 2. Poor quality of service. 3. The possibility of deception and the presence of "gray" schemes.	1. Possibility of criminalization of transportation. 2. Relatively high level of risk of non-delivery of goods. 3. Rising prices for transportation.

2. Conclusions

In accordance to the analysis, over than 70% of import and exported goods in 2018-2020 are also transported using the cargo method.

The most advantage of cargo transportation is short terms. There are various types of delivery from China by type of transport - auto, air, railway, sea. Companies that specialize in cargo can use all modes of transport, combining them if necessary.

When using operational modes of transport and selecting a short route, the "gray" cargo can indeed arrive faster than the

"white" cargo in a group age vehicle. Therefore, those who need the goods "already yesterday" often try to resort to the gray method. Most often, these are representatives of small and medium-sized businesses who are engaged in the wholesale or retail sale of copies of branded clothing, shoes, cosmetics and electronics.

Despite the obvious advantages, there are a large number of schemes involving the use of unscrupulous carriers, which, even with low prices, may result in a collapse of cargo flows, that is, the cargo will not reach the addressee. The conclusion is that it is necessary to collect as much information as possible about your carrier; it is not enough to work with him several times, it is also important to

introduce universal compulsory cargo insurance and use technical capabilities to minimize risks and improve the quality of transactions.

In the process of using cargo transportation, the governments of the Republic of Kazakhstan and China should focus on the following key areas:

- Minimization of the risk of cargo transportation by increasing the technical capabilities of cargo tracking;
- Simplification of the procedure for customs declaration using electronic commerce;
- Minimization of the risk of unfair transportation. There is an objective need to create a separate database of suppliers of goods and carriers;
- The need for compulsory cargo insurance;
- Introduction of the possibility of receiving value added tax in offset under a simplified taxation scheme;
- Simplification of the terms of customs clearance of cargo and simplification of the tax control procedure.

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