

## DEVELOPMENT OF INTERNATIONAL MULTIMODAL TRANSPORTATION IN THE DIRECTION OF BELARUS-CHINA

*E. SHURMAN, P. LAPKOVSKAYA*

Belarusian National Technical University, Minsk, Belarus

*Belarus trade relations with China are currently growing. The development of relations with China is a priority direction of the foreign policy of the Republic of Belarus. However, the development of foreign trade relations between the Republic of Belarus and China is impossible without transport services that ensure the promotion of goods between trading partners.*

The People's Republic of China is one of the dynamically developing countries of the world, which is of interest to Belarus as an extensive market for manufactured products, raw materials and materials. In turn, China provides the Belarusian economy with relatively cheap equipment, as well as mass-consumption goods. Thanks to this, economic cooperation with China is actively developing [1].

Belarus' participation in the implementation of the "One Belt and One Road" project (the Silk Road Economic Belt and the Maritime Silk Road of the XXI century) contributes to the development of relations between Belarus and China. The initiative was launched by China in 2013 with the aim of building a trade and logistics infrastructure connecting Asia with Europe and Africa. The Republic of Belarus, despite its small scale, is an active participant in the implementation of this global investment project.

Within the framework of the project, economic corridors are being actively formed: the China-Pakistan Economic Corridor, the China – Mongolia – Russia economic corridor and the New Eurasian Continental Bridge [2]. For the Republic of Belarus, the new Eurasian Continental Bridge is of particular interest, since its development will allow obtaining economic benefits from the increase in transit flows from China to the EU and back.

However, the development of foreign trade relations between the Republic of Belarus and China is impossible without transport services that ensure the promotion of goods between trading partners.

Multimodal transportation is transportation that is carried out by different modes of transport, but within the framework of a single contract. The type of transport does not matter — it can be rail, water, road, and so on. Multimodal international transport is used in such cases: there is no direct single mode of transport communication between the sender and the recipient of the cargo; direct single mode of transport communication is not suitable for the consignee due to the high price or long delivery time [3].

Intermodal transportation is transportation that is carried out by different modes of transport, and the customer may involve several companies for transportation. The type of transport in the case of intermodal transport can also be any, and the responsibility is evenly distributed among all participants.

The advantages of multimodal transport are reflected in their features. One of the most significant advantages is:

1. They can be used when there is no direct single-mode communication between the shipper and the recipient.
2. Reduction of risks and costs due to the fact that the customer places an order in one company. The client does not have to fill out a large number of documents. This allows you to save time and effort, solve the issue as quickly and efficiently as possible.
3. Reduced waiting time for cargo. The logistics company will independently involve reliable, proven contractors in the execution of the order. Thanks to the well-coordinated work, they will deliver the cargo to the destination on time, without delay.
4. Security. The client does not risk anything by entrusting the execution of the order to a reliable company. The full responsibility of the transport operator for the safety of delivery.

The Republic of Belarus implements a multi-vector foreign economic policy and actively participates in international integration processes. Belarus is an export-oriented state with a well-developed manufacturing sector and agriculture. 61% of the products produced are exported. Belarus maintains trade relations with more than 200 countries around the world [4].

The commodity structure of Belarusian exports includes more than 1000 commodity items. The most important export items are oil and refined products, potash and nitrogen fertilizers, metal products, trucks and cars, tractors, tires, dairy and meat products, furniture.

By the end of 2020, according to Belstat, the foreign trade turnover of goods of the Republic of Belarus amounted to 61,659.3 million US dollars (by the end of 2019 – 72,278.4), including exports – 29,040.5 million

dollars, imports-32,618. 8 million dollars. If compared with the level of 2019, based on current prices, the turnover of foreign trade in goods amounted to 85.1%. Exports – 88.1%, imports-82.6%. According to the results of 2020, compared to 2019, exports of goods in physical terms decreased by 0.4%. Imports decreased by 9.5%. Average export prices decreased by 11.5%, while import prices decreased by 8.7% [5].

Currently, the Republic of Belarus and the People's Republic of China have reached a high level of cooperation. China is the main political, trade and economic partner of Belarus in Asia (Table 1).

China is one of the most important trade and economic partners of the Republic of Belarus. The dynamics of the development of bilateral trade can be judged by the fact that in general, in the twenty-five years since the establishment of diplomatic relations, the mutual trade turnover has grown almost 100 times: from 34 million US dollars in 1992 to more than 3.5 billion US dollars [6].

Table 1. – Volume of trade in goods and services of the Republic of Belarus with China (in thousands of US dollars)

Year	Trade turnover	Export	Import	Balance sheet
2015	4 168 963	1 257 378	2 911 585	- 1 654 207
2016	3 586 178	800 533	2 785 645	- 1 985 112
2017	3 866 266	740 011	3 126 255	- 2 386 244
2018	4 394 055	905 890	3 488 165	- 2 582 275
2019	5 299 768	1 033 590	4 266 178	- 3 232 588

Source: Belarusian-Chinese Government Cooperation Committee

The table shows that the annual turnover in foreign trade in goods and services of the Republic of Belarus and China tends to grow. However, foreign trade in goods and services has a negative balance, mainly caused by the growth of higher volumes of imports over exports in bilateral relations. In the sphere of trade and economic cooperation, there is a consistent growth in the volume of mutual trade in goods and services. At the end of 2019, the trade turnover of Belarus and China amounted to 5.3 billion US dollars, reaching a historic high, the growth rate – 120.6%. The growth rate of exports is 114%, imports-122.3% [6].

In order to stabilize the growth of exports of goods, measures were taken to reduce the traditionally high share of potassium by increasing the share of agricultural products and woodworking (table 2) [6].

Table 2. – Positions of Belarusian export and import to / from China

The largest positions of Belarusian exports to China		The largest positions of Belarusian imports from China	
Product name:	Export amount:	Product name:	Export amount:
Potash fertilizers	\$ 246 million	Communication equipment and its parts	\$267,1 million
Polyamides	\$ 45,3 million	Parts and accessories for cars and tractors	\$110,5 million
Articles made of stone or other mineral substances	\$ 7,8 million	Metal structures made of ferrous metals	\$59 million
Data carriers	\$ 5,5 million	Fabrics made of synthetic complex threads	\$55,3 million
Flax-raw or processed flax.	\$ 5,4 million	Frozen vegetables	\$34,1 million
Electronic integrated circuits.	\$ 3,4 million	Illuminating equipment	\$33,5 million
Raw timber.	\$ 3,1 million	Pipe fittings	\$29,4 million
Leather, additionally treated after tanning	\$ 3 million	Televisions, monitors, projectors	\$28,8 million
Milk whey.	\$ 3 million	Antibiotics	\$28 million
Unkempt wool	\$ 2,9 million	Shoes	\$23,1 million

Currently, 97 Belarusian agricultural producers are accredited in China, including: 55 dairy products, 17 frozen beef, 9 frozen chicken meat, 7 processed fish products, 4 sugar beet pulp and mink skins, and 1 peat. The Chinese side is considering applications for the admission of Belarusian canned meat, chilled beef and offal, as well as accreditation for 9 new producers, including: dairy feed additives – 6, dairy products – 2, dairy baby food – 1, consultations are being held on lifting the ban on the import of Belarusian pork [6].

## Economics

In order to promote the export of "sensitive" (difficult to access) goods to China, such as canned meat, honey, other food products, alcoholic beverages, cosmetics, baby dry food, medical products, etc., to reduce the number of intermediaries and increase added value, the Embassy is actively working with Belarusian regulators and exporters on the use of preferential policies for cross-border e-commerce in China (benefits for customs payments, certification, accreditation and labeling) [6].

When transporting goods from Belarus to China, a variety of routes are used, which are determined depend on using transport. Taking into account that the main method of cargo delivery to China and back to the Republic of Belarus is container transportation, the following types of transport are used: road, rail, sea and air transport.

In practice, when determining the route, a combination of several modes of transport is used:

- marine-automobile;
- marine-railway-automobile;
- sea-rail;
- air-road;
- air-railway;
- air-railway-automobile.

When using sea transport, cargo transportation is carried out through the seaports of China: Shanghai, Ningbo Hong Kong Yantian Qingdao Xingang [1]. All transportation can be carried out not only from any port in China, but also from any inland Chinese city with delivery to the seaport. A comparison of the types of international transport carried out to China is made (Table 3).

Table 3. – Comparative analysis of types of international transport in the direction of Belarus-China

Type of cargo transportation	Description	Type of cargo	Advantages	Disadvantages	Timing	Cost
1	2	3	4	5	6	7
Air mail	This option is also suitable for the delivery of light and small-sized cargo		As fast as possible	Expensive. 3-7\$ for delivery of each kilogram of cargo	3-7 days after placing the order	Calculated individually
Cargo delivery by sea	The cargo is placed in a container and sent to the customer by sea	Furniture, appliances, cars, clothing, shoes, and other bulky or heavy goods	Not a high price. cargo is securely packed, continuity in operation, high competitiveness of land transport	Not much speed, depending on the natural geo. and klim. conditions, dependence on loading/unloading capacities	40-45 days	\$ 50-150 for 1 cubic meter about \$ 2100 for a small container 20 feet long
Railway transport	When delivered from the north, east and north-east of China, where the Harbin Railway passes	Large loads of heavy weight or serious shipments of goods	Large traffic volumes/load capacity, independent of climatic conditions, developed railway network. The possibility of laying tracks almost everywhere.	Irrationality of transportation for small cargo and short distance, the presence of cargo transshipment	18-25 days, about a month.	\$ 70-350 per cubic meter

The ending of table 1

1	2	3	4	5	6	7
Air carriage	The aircraft is suitable for the transport of perishable goods		High speed of delivery, clear delivery times, cargo delivery in all directions, delivery of perishable goods, high safety in transit, low insurance costs, the possibility of delivery in emergency situations	The need for special equipped platforms, weather dependence, size/weight restrictions	2-4 days	If the product is less than \$100 thousand, the volume is >5 cubic meters and the weight is <1 ton, and the income from it will not bring profit at the level of 200-300%, then it is more profitable to transport the product from China by sea.
Automobile transport	Suitable for transporting food, non-food and agricultural goods.		Easy to track cargo location, flexible transportation, high compatibility with other modes of transport,	Easy to track cargo location, flexible transportation, high compatibility with other modes of transport,	About 14 days	It consists of the costs of transportation, customs declaration and additional services

Based on the results of the analysis, we can conclude that:

- it is better to transport bulky and heavy items by rail.
- expensive shipments of goods are more convenient to deliver by sea in containers, and on arrival at the port-by rail/road.
- for small goods, air or road transport is better.

Thus, we can draw the following conclusions about the problems that exist in the organization of international multimodal cargo transportation to China:

1. Uneven infrastructure. On the east coast of China, logistics is well developed. The central mainland can not boast of a well-established infrastructure. In the central part, there are few loading / unloading areas, modern warehouses equipped with the necessary equipment, and there is no system for tracking cargo along the selected route.

2. High taxes on cargo transportation. According to the decree of the Government of the People's Republic of China, cargo transportation is subject to high interest rates on taxes and leases. To save money, transport companies load trucks as much as possible. This leads to downtime of cars that are loaded for weeks. Delivery times are delayed, and the goods themselves may be damaged during reloading.

3. Low qualification of the staff. China is a technically advanced country. But not all sectors of the economy have enough highly qualified personnel. Often, logistics companies employ inexperienced specialists who do not speak foreign languages.

4. Unified licensing. For cargo transportation in China, you need to get a single license (permission from several departments) and pay taxes. Cargo carriers will face the problem of uncoordinated work of transport institutions. The Ministry of Railway Transport does not belong to the Ministry of Transport. These structures work separately.

5. Local logistics. The activities of transport companies in China are often limited to one location. Therefore, it is rarely possible to transport cargo across the entire territory of the People's Republic of China using the services of one company. We have to build a logistics chain and cooperate with several contractors at once.

International cooperation in the field of logistics will increase the volume and improve the quality of logistics services in the Republic of Belarus. This cooperation can be developed within the framework of a strategic partnership between Belarusian and foreign participants in logistics activities, including in the implementation of the "One Belt and One Road" initiative.

## REFERENCES

1. Контейнерные перевозки грузов между Республикой Беларусь и Китаем [Электронный ресурс]: Транспорт, грузоперевозки. – 2012. – Режим доступа: <https://www.bibliofond.ru/view.aspx?id=564755>.
2. «Один пояс, один путь»: полный текст речи Си Цзиньпина // Иностранные СМИ [Электронный ресурс]. – Режим доступа: <http://inosmi.ru/politic/20170519/239391693.html/> (дата обращения: 10.04.2021).
3. Дмитрий Скляренко. Мультимодальные перевозки грузов: что это такое и как их использовать в своих интересах [Электронный ресурс]: Международные грузоперевозки. – Электрон.текст.дан. – 2017. – Режим доступа: <https://vedinform.com/freight/container/multimodal.html>.
4. Министерство иностранных дел Республики Беларусь Источник [Электронный ресурс]: Внешняя торговля / Общая информация. – Минск, 2021. – Режим доступа: <https://mfa.gov.by/trade> <https://mfa.gov.by/trade/>.
5. Редакция Myfin.by [Электронный ресурс]: Экспорт. – Минск, 2021. – Режим доступа: <https://myfin.by/wiki/term/eksport>.
6. Министерства иностранных дел Республики Беларусь/Белорусско-Китайский межправительственный комитет по сотрудничеству [Электронный ресурс]: Торгово-экономические отношения. – Минск, 2020. – Режим доступа: [http://belaruschina.by/ru/belarus\\_china/relations/present/torgovo-ekonomicheskie-otnosheniya.html](http://belaruschina.by/ru/belarus_china/relations/present/torgovo-ekonomicheskie-otnosheniya.html).