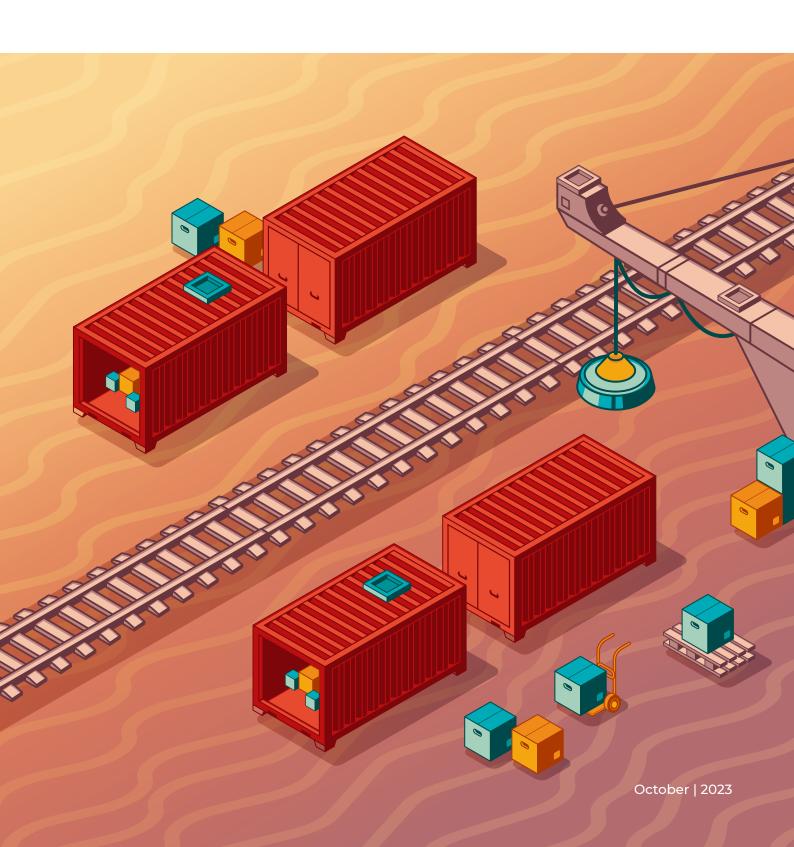


RAIL CONTAINER TRANSPORTATION IN THE FIRST HALF OF 2023



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INTRODUCTION. FROM ADAPTATION TO TRANSFORMATION

The first half of 2023 has served as an important stage, reflecting the adaptation of the Eurasian railway route to new realities. The general results of the reporting period show an increase in the volume of transported cargo. In total, in the first half of 2023, 350.7 thousand TEUs travelled along the route, more than during the same period last year. These indicators reflect the work done to maintain the stability of the Eurasian railway route and adapt to external shocks.

While overall stability has remained, the detailed data presented in this report demonstrates a fundamental transformation that has occurred over the past year.

Firstly, the external operating environment of the Eurasian railway route has changed dramatically. The international political situation and the EU countries' sanctions and restrictions against Belarus and Russia have become a serious challenge. Even despite the absence of direct restrictions on the operation of the transit route, indirect pressure on shippers associated with restrictions on the range of goods, increased political risks have led to an extremely cautious attitude among shippers towards the transportation of goods through the EAEU.

Secondly, international political changes have been influenced by external conditions that have affected other modes of transport. The fall in the cost of sea freight has deprived rail freight of its important cost advantage, affecting shippers' choice of a delivery method. In the absence of international political risks, this would not have played such a significant role, but now this factor is aggravated by sanctions pressure from the EU.

Under these conditions, the Eurasian railway route is undergoing a fundamental transformation associated with the replacement of lost transit volumes with cargo moving via the China-EAEU-China route. The reorientation of Russia's trade and economic relations towards the East provides opportunities for the development of the route in this direction.

Thus, Eurasian transit remains the most important axis of the route's operation, accounting for about a third of all transported volumes. However, cargo is beginning to play an increasingly important role in China-EAEU-China traffic, where the well-established infrastructure and developed operational activities of the Eurasian railway route are fully utilized.

SUMMARY

- 1. The Eurasian railway transit route is the leading transport artery for rail container transit between China and Europe. In the first half of 2023, the Eurasian route accounted for 95.9% of all the transported TEUs, according to border crossing statistics.
- 2. At the end of the first half of the year, the total volume of cargo transported along the Eurasian railway route across all segments amounted to 350.7 thousand TEUs, which is 12.6% more than the figures for the same period in 2022. At the same time, transit transportation via the China-Europe-China route accounted for 114.1 thousand TEUs, which is 32.5% of all transported cargo. The drop in transit volumes was replaced by exportimport traffic between China and the EAEU countries.
- 3. The average number of train departures per day has increased: from 14 in 2022 to 16.8 this year. Train load also increased to 124 TEU. Thus, despite external market pressure, the main indicators turned out to be higher than the level of the first half of 2022, which indicates the stress resistance of the route.
- **4.** The change in the structure of transportation on the Eurasian railway route influenced the increase in the average transit time from border to border from 6.31 to 7.72 days. The average speed of container trains decreased from 864km to 707 km per day.
- **5.** During the first half of 2023, the range of transported goods changed. Mechanical equipment, electrical devices and automotive equipment accounted for 48% of cargo, which is 10 percentage points more than a year earlier.
- 6. The increase in the volume of transported cargo caused a tendency towards full capacity utilization. The share of empty containers passing along the route was 3%, which is at the same level as last year. In the most difficult direction from a balancing point of view, from Europe to China, the share of empty containers amounted to 6.14%, which is 11.06 percentage points lower than the figures for the first half of 2022.
- 7. The core points of departure and destination on the transit route are in the regions of Germany and Western and Central China. The main routes in the eastern direction were Mannheim Xi'an, Duisburg Yiwu and Hamburg Zhengzhou. In the western direction these are Xi'an Małaszewicze, Chengdu Małaszewicze and Chongqing Małaszewicze. Similar traffic volumes were achieved with the EAEU countries on the routes Xi'an Elektrougli, Chongqing Elektrougli, and Chengdu Kolyadichi.
- 8. In the near future, the main negative impact on trans-Eurasian cargo transportation will be the tendency towards recession in the global economy, coupled with the slowdown of the leading economies at both ends of the route China and Germany. The unstable political background and high inflation in the EU also do not have a positive impact on Eurasian logistics.

- **9.** EU trade with China shows signs of deterioration. Despite the fact that the EU-27's negative trade balance with China fell to 126.5 billion euros, this was accompanied by a decrease in EU imports totaling 20.7 billion euros.
- 10. The Eurasian railway route maintains ultra-low volatility in its container transportation rates. In June 2023, this figure was \$2,944 per FEU, which is comparable to \$2,987 per FEU in June 2022. Price stability is an important competitive characteristic against the backdrop of a reduction in the cost of sea freight to \$1,576 per FEU in June 2023.
- 11. European institutions continue to make progress towards reducing CO₂ emissions from maritime and air transport. Maritime transport will be included in the European emissions trading system from 2024. Compensation schemes in air transport (CORSIA) are also planned to be extended to all departures from all countries of the European Economic Area. Against this background, environmental friendliness will become increasingly important in rail transport.

TRADE AND THE STATE OF THE FREIGHT MARKET

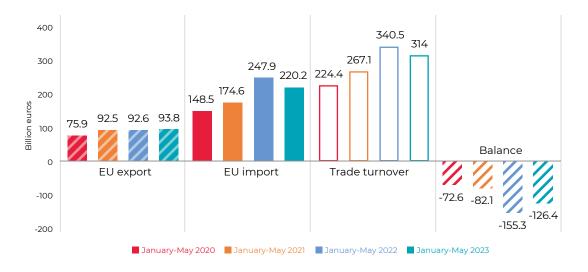
The downward trend in trade turnover between the EU and China

The exchange of goods between China and the European Union is one of the key components of global trade and serves as the basis for the efficient operation of railway routes linking Eurasia.

During the first half of 2023, there was a trend towards a reduction in trade turnover between partners, from 340.5 billion euros in the first half of 2022 to 314 billion euros for the same period in 2023. The main factor behind this change was the reformatting of economic relations between China and the EU against the background of the narrowing growth rates of their economies.

In the first half of 2023, trade between the EU and China decreased 7.8% compared to the same period last year. At the same time, EU exports remained at the same level (93.8 billion euros in 2023), while EU imports from China decreased by 11.2% to 220.2 billion euros. Against this background, the negative trade balance for the EU decreased from 155.3 billion euros in the first half of 2022 to 126.4 billion euros in favor of China.

DYNAMICS OF EU-27 TRADE WITH CHINA



Source: Authors' calculations based on Eurostat data

Among the reasons for the reduction in trade turnover are international political tensions and a slowdown in the economic growth of partners. Tension in relations between the United States and China, associated with Washington's measures to prevent the transfer of key technologies to China and to reduce American investment in high-tech industries in China, have also affects the EU's relations with China. Despite the preferential nature of relations between the two partners, the general trends in international political relations between Western countries and China will continue to influence Chinese-European trade.

The slowdown in economic growth in China and the near-zero growth rate of EU GDP are both significant. At the end of the second quarter of 2023, the annual growth rate of the Chinese economy was 6.3%, which is lower than analysts' forecasts. China's economy is slowing from quarter to quarter. Concerns arise about China's real estate market, which could cause a wave of developer bankruptcies and start a domino effect throughout the economy.

This situation has a negative impact on Eurasian rail freight transportation. The fall in Chinese exports directly affects the load on freight rail traffic. Even under the conditions of sanctions restrictions against Russia and Belarus, the fall in trade turnover between China and the EU will be a long-term fundamental factor limiting the prospects for growth in the volume of cargo transported along the Eurasian route.

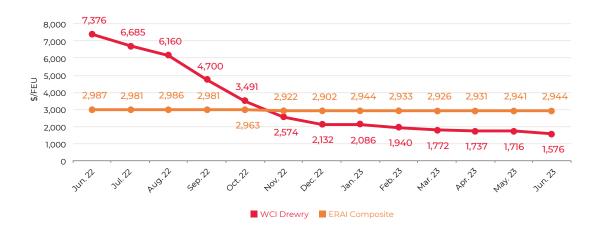
Systematic rate reduction in deep sea shipping continues

Sea and partly air cargo transportation are traditional competitors to rail transport. The period of the coronavirus crisis has revealed the competitive advantages of railway cargo transportation — reliability and predictability against the backdrop of coronavirus restrictions and logistics disruptions in sea and air transport. Longterm efforts to develop the Eurasian railway route and the favorable environment in 2020–2021 ensured an accelerated flow of shippers "on the rails."

In October 2022, there was a reverse transition of the cost advantage from rail to sea transport. The sea freight index between China and Europe in the period from January to June 2023 fell from \$2,086 to \$1,576 per FEU, although back in June 2022 its value was \$7,376 per container.

Against this background, the indicators of the ERAI railway container transportation index for the same period showed ultra-low volatility: from \$2,987 per FEU in June 2022 to \$2,944 in June 2023. Thus, against the backdrop of new international upheavals, the railway has confirmed its title as the most stable mode of transport, especially over the long term. For the Eurasian railway route, such changes mean a return of the global market to what predominated before 2020.

ERAI COMPOSITE AND WCI DREWRY DYNAMICS



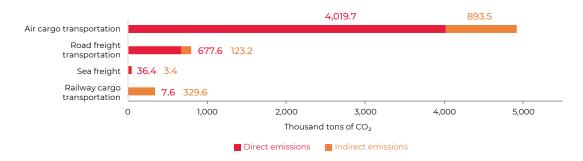
Source: ERAI index

Thanks to the normalization of transportation after the coronavirus crisis, air transportation has also been marked by an increase in indicators, coupled with a decrease in their cost. Thus, according to the Baltic Exchange Air Freight Index (BAI), the cost of air transportation continues to decline in all directions, including Hong Kong — Europe. If in December 2021 a peak value of \$8 per kilogram of cargo was reached, then by January 2023 this figure was \$4.96/kg, and in June 2023 it was at \$3.73/kg. Due to its speed of cargo delivery, air transport remains a popular method for delivering perishable and valuable goods, such as microchips.

The downside to the fast speed of airplanes is the significant carbon footprint they leave behind, which is a barrier to the transition to carbon neutrality. Shipping has a lower environmental impact, but it also contributes to greenhouse gas emissions. In this regard, the European Union is taking measures to reduce the impact of maritime transport on the climate. In particular, in July 2023, the European Commission proposed the concept of reducing greenhouse gas emissions, providing for a reduction in emissions from ships by 2050. In January 2024, the EU emissions trading system will be extended to large ships (5,000 tonnage and above) entering EU ports, regardless of the flag they fly.

According to the <u>ERAI CO₂ Emissions</u>, rail transport has the least direct environmental impact. The total accumulated effect from railway transportation in the period from January to June 2023 amounted to 329.6 thousand tons of CO₂, where direct emissions accounted for only 7.6 thousand tons. At the same time, maritime transport would produce 39.8 thousand tons of emissions (36.4 thousand tons direct), automobile transport would produce 800.8 thousand tons of emissions (677.6 thousand tons direct), and air transportation would create a record 4,913.2 thousand tons of emissions (where direct emissions would have amounted to 4,019.7 thousand tons) during transportation during the same period.

EMISSIONS FROM THE TRANSPORTATION OF GOODS ALONG THE EURASIAN RAILWAY ROUTE COMPARED WITH OTHER MODES OF TRANSPORT (JANUARY-JUNE 2023)*



Source: ERAI index

Thus, Eurasian railway container transportation, thanks to the almost-universal use of electric traction on the railway, has an environmental advantage over other modes of transport. This property is most organically combined with the European Union's desire for decarbonization and increased energy efficiency. The environmental factor continues to favor rail transport, especially in the context of several countries' efforts to decarbonize their economies. At the same time, rail transportation has additional potential to reduce the impact on the environment if the energy efficiency of the accompanying infrastructure is improved.

^{*} Data for other modes of transport are calculated using similar parameters. Source: ERAI index.

STATE OF THE EURASIAN RAILWAY ROUTE IN THE FIRST HALF OF 2023

Key transportation indicators

At the end of the first half of 2023, the total volume of cargo transported along the Eurasian railway route across all segments amounted to 350.7 thousand TEUs, which is 44.2 thousand TEUs more than for the same period in 2022. It is characteristic that transit transportation in the China-Europe-China route accounted for 114.1 thousand TEUs, which is 32.5% of all transported cargo. Thus, a restructuring of transportation took place, where the drop in China-Europe-China transit volumes was replaced by increased imports to Russia from China and exports from Russia and the EAEU countries to China.

TOTAL TRAFFIC VOLUME AND TRAIN LOAD



Source: authors' calculations

The main reason for such a serious change in the structure of transportation was sanctions pressure from the EU due to the conflict in Ukraine. The eleventh package of EU sanctions against Russia, adopted in June, expanded the list of goods prohibited for transit through the territory of the Russian Federation.

Despite the fact that these restrictions primarily affect dual-use goods and road freight transportation, railways are also affected by these restrictions. Firstly, shippers overestimate the risks of using land routes through the EAEU and often, under pressure or preemptively, refuse to consider Eurasian transit transportation.

Secondly, individual countries tend to accept greater restrictions on cross-border transport through the EAEU for political reasons. For example, in August, Lithuania, Latvia and Poland proposed an initiative to close off some of their border crossings with Belarus, including railway crossings.

Along with the reduction in overall transit indicators, there was a drop in indicators in certain directions. Transportation in the China-Europe direction fell to slightly more than half (51.25%) what it had been: from 143.9 thousand TEUs in the first half of 2022 to 73.7 thousand in the first half of 2023. In the opposite Europe-China direction, a similar trend is observed: from 77.3 thousand TEUs in the first half of 2022 to 40.3 thousand TEUs during the first half of 2023.

This disparity between indicators is caused by several factors. First of all, it is necessary to note the drop in the cost of sea transportation, as well as the improvement of the situation with container sea interchange, which attracted part of the cargo flow to this type of transport; in the first half of 2022, it was more profitable to transport freight by rail. Secondly, there is the impact of sanctions restrictions that negatively affect the interaction between the railways of the EU countries and the EAEU. At the same time, foreign shippers, starting in the spring of 2022, are actively searching for alternative transit routes that do not pass through the territory of Russia and Belarus.

CHINA-EUROPE-CHINA TRANSIT



Source: authors' calculations

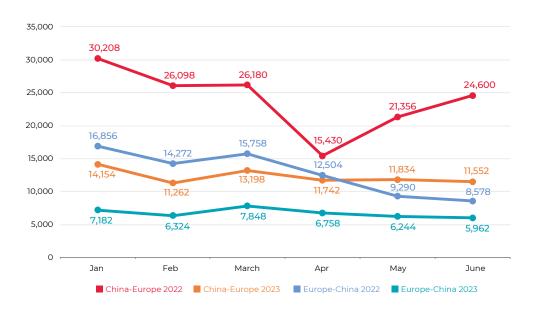
A detailed comparison of indicators about the China-Europe-China route allows us to identify several trends. In the first quarter of 2022 and 2023, there is a recurring decline in traffic volumes in both directions, which is associated with the celebration of the Chinese New Year.

In the second quarter of the corresponding years, there is a discrepancy in trends. Thus, in April 2022, relative to the previous month, there was a sharp drop in indicators both in the China — Europe direction (by 41.1%), and via the Europe — China route (by 20.6%), which is a result of the political instability that arose at that time. Such volatility is associated with the characteristic caution of shippers at that time, regarding the transportation of their goods through the territories of Russia and Belarus, which were caught under the "sanctions storm" of the European Union.

A similar political situation can also explain the multi-directionality of indicators from April to June 2022: while Chinese shippers recovered the 59.4% drop by June 2022, transportation from Europe to China continued a smooth decline in volumes, by 31.4% during that period.

Against this background, the relative stability of the indicators in 2023 is characteristic: a decrease of 1.6% in volumes from April to June in China-Europe transportation and a reduction of 11.8% in the volume of cargo sent from Europe to China. By 2023, the transportation market had adapted to political upheavals, and competition between modes of transport has become decisive.

VOLUME OF TRANSIT TRAFFIC IN CHINA-EUROPE-CHINA TRANSPORTATION IN THE FIRST HALF OF 2022-2023 BY DIRECTION



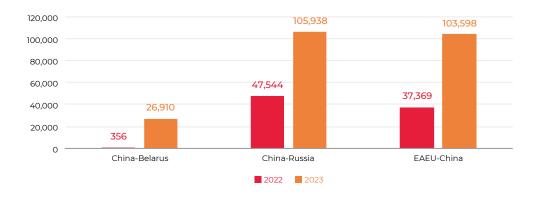
Source: authors' calculations

Simultaneously with the significant drop in China-Europe-China traffic in the first half of 2023, there was an increase in import-export traffic between China and the EAEU countries, both in aggregate and separately, in the Eurasian railway space, relative to the same period in 2022. According to UTLC ERA's data, the highest growth rates in transportation through the Eurasian corridor are observed along the EAEU — China (+177.2%), as well as China — Russia (+122.3%) route. An absolute increase in the China-Belarus direction is also visible (+26.6 thousand TEUs).

The main reason for this rapid growth of intra-Eurasian railway transportation is changes in trade and the replacement of European goods with Chinese ones on the EAEU market, primarily the Russian one. In addition, China has increased its manufacturing and export capabilities as a result of its complete shift away from its zero-tolerance policy last year. On the other hand, due to the disruption of Russia's ties with the EU, which was its main foreign trade partner until 2022, there was a need for an urgent diversification of foreign trade relations. The concept of Russia's turn to the East gave additional impetus.

China has become the most natural choice for Russian consumers and exporters. The Republic of Belarus also traditionally has friendly ties with China, which invests in its economy and has established a number of production facilities in the country (for example, the localized assembly of Chinese cars or the Great Stone industrial park near Minsk).

IMPORT-EXPORT TRANSPORTATION WITH EAEU COUNTRIES IN THE FIRST HALF OF THE YEAR



Source: authors' calculations

The changes taking place in the economies of the two economic locomotives of trans-Eurasian trade — China and Germany — are also objective. After forty years of continuous growth, the Chinese economy may be entering an era of gradual stagnation. Thus, according to the forecast of the International Monetary Fund (IMF), China's annual economic growth in the coming years will be less than 4%, which is half the rate which prevailed over the past four decades. China risks missing the target of doubling its GDP by 2035, a target set by Xi Jinping in 2020.

Things are not going well in the German economy either, where at the end of May 2023 the Federal Statistics Agency <u>noted</u> a decrease in the country's GDP between January and March 2023 of 0.3% compared to the last quarter of 2022. Such data leads to the conclusion that there is an increase in demand for the diversification of Eurasian container rail transportation routes.

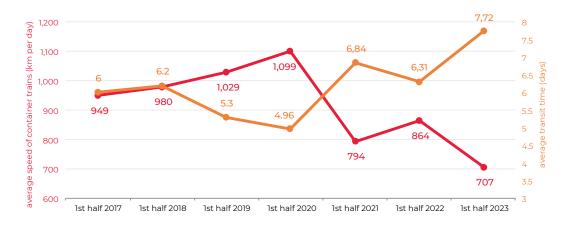
Technological indicators of Eurasian railway freight transportation

The number of combined trains sent in the first half of 2023 was 3,041, which is the maximum for the entire period of observation and significantly higher than the levels of the first half of 2022, when 2,539 trains passed along the route. The increase in traffic volumes has naturally led to an increase in the average number of trains per day, from 14 to 16.8. This figure is also a record for recent years.

This increase in indicators, which happened despite the external pressure on the Eurasian transit railway transportation market, demonstrates the stress resistance inherent in the railway system, which became possible thanks to the long-term efforts and commitment of market players to the development of Eurasian railway transit routes.

As a result of the increase in traffic volumes, coupled with the reconfiguration of routes, the average transit time from border to border for China-Europe-China transit trains increased again; it amounted to 7.72 days. The average speed dropped to 707 kilometers per day. A year earlier, this figure was at 6.31 days, and the speed was 864 kilometers per day. This drop in indicators is due to external stress, as well as changes associated with the replacement of transit routes with import-export ones.

SPEED AND TRANSIT TIME ON THE ROUTE



Source: authors' calculations

Thus, external factors, namely changes in the cost of transportation in other modes of transport and international political risks, have become key factors in the restructuring of Eurasian railway transportation. Despite the turbulence, record figures for the total number of trains and their load in the first half of 2023 indicate that Eurasian railway transportation has successfully coped with the task of adapting to work in new conditions.

Continued trend towards full capacity utilization

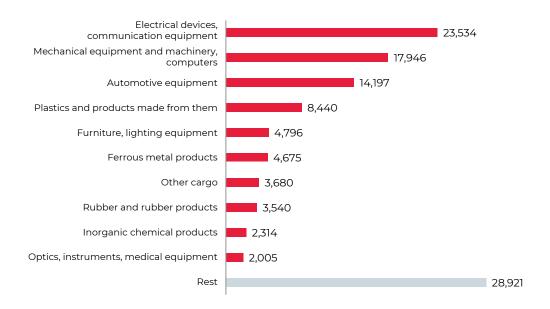
In the first half of 2023, goods belonging to 85 categories of the Commodity Nomenclature of Foreign Economic Activity at the two-digit level passed along the Eurasian route, compared to 90 categories last year. The current reduction in the cargo mix is caused by the transition of some cargo to other methods of transportation, as well as significant changes in the profile of shippers along the Eurasian railway route.

According to <u>ERAI</u>, three traditional groups of cargo traveling along the Eurasian railway route (electrical devices, communication equipment; mechanical equipment and machinery, computers; automotive equipment) together accounted for 49% of transit in the first half of 2023, which is 10 p.p. more than a year earlier. These categories have served as the basis of the product range since the advent of Eurasian railway transit services, due to the economic specialization of the regions of Western and Central China, as well as the German economy.

The transportation of plastics and products made from them (7.4% of cargo traffic), and furniture and lighting equipment (4.21%) remains important. A significant share was the transportation of products made of ferrous metals (4.1%), and rubber and rubber products (3.1%).

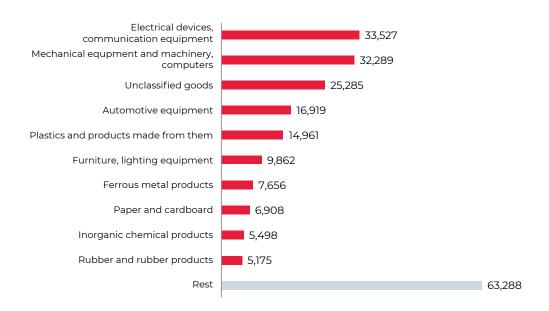
The growth in indicators in the first half of 2023 occurred in 11 items. Among them, a noticeable increase in indicators was demonstrated by nickel (+638.89%), perfumes, cosmetics and toiletries (+271.37%), hides and skins (+225%), oils and fats (+153.33%), and fur (+70%). The reduction in the share of toys and sports equipment, finished textiles, and other chemical products demonstrates the transition of goods with the lowest added value to maritime transport as it is now the least expensive. The decrease in the European market's consumption of Chinese chemical products indicates the adaptation of this sector of European production to new realities, where the main damage was caused by rising energy prices.

NOMENCLATURE 1ST HALF OF 2023, TEU



Source: authors' calculations based on the ERAI index

NOMENCLATURE 1ST HALF OF 2022, TEU



Source: authors' calculations based on the ERAI index

UTLC data show that the transition of Eurasian container rail transportation from transit to import-export operations did not affect the trend towards full capacity utilization. The share of empty containers passing along the route was 3%, which is lower than last year. In total, during the operation of the Eurasian railway transit route, the share of empty containers decreased from 23% in 2017 to the current 3%, which is a consequence of the ongoing work to improve the efficiency of the route and attract shippers to railway cargo transportation.

RATIO OF EMPTY AND LADEN CONTAINERS



Source: authors' calculations

In the first half of 2023, the situation with balancing between eastbound cargo and westbound cargo improved. When sending cargo from Europe to China, the share of empty containers decreased to 6.14%, which is 11.05 percentage points lower than last year and is the absolute minimum for the entire period of operation of the Eurasian railway route. For the westbound cargo, traveling from China to Europe, this problem has not been acute since 2019, when the share of empty containers reached 1.8% and continued to decline. As a result, by the end of the first half of 2023, only 0.09% of westbound containers were empty during transport.

At the same time, it should be noted that the problem of balancing container loading is a familiar one for the transport industry and is caused by objective economic factors in the form of the production and consumer specifics of the economic relations between Europe and China. A decrease in Chinese exports to the EU while the volume of imports from Europe is maintained creates the preconditions for stabilizing the balance between directions with a continued preponderance in favor of goods from China to the West.

SHARE OF EMPTY CONTAINERS BY DESTINATION



Source: authors' calculations

Transformation of the geography of cargo transportation

In the first half of 2023, the diversification of cargo departure and arrival points continued. The top ten traditionally include points connecting China and Europe, such as Xi'an — Małaszewicze (25.6 thousand TEUs), Chengdu — Małaszewicze (14.5 thousand TEUs), and Chongqing — Małaszewicze (9.0 thousand TEUs). In the opposite direction, the following routes should be noted: Mannheim — Xi'an (7.2 thousand TEUs) and Duisburg — Yiwu (6.6 thousand TEUs).

According to UTLC data, routes connecting China with Russia and Belarus are also coming to the fore, such as Xi'an — Elektrougli (18.0 thousand TEUs), Chongqing — Elektrougli (7.8 thousand TEUs), Chongqing — Bely Rast (5.1 thousand TEUs), as well as Xi'an — Bely Rast (4.5 thousand TEUs), Chengdu — Kolyadichi (5.1 thousand TEUs).

Table 1.

TOP TEN ROUTES BY VOLUME OF CARGO TRANSPORTED IN THE FIRST HALF OF 2023

China — Europe		Europe — China		China — EAEU	
Direction	Volume in thousand TEUs	Direction	Volume in thousand TEUs	Direction	Volume in thousand TEUs
Xi'an- Małaszewicze	25.6	Mannheim-Xi'an	7.2	Xi'an-Electrogli	18.1
Chengdu- Małaszewicze	14.5	Duisburg-Iwu	6.6	Chongqing- Electrougli	7.9
Chongqing- Małaszewicze	9.0	Hamburg-Zhengzhou	3.9	Chengdu-Kolyadichi	5.9
lwu- Małaszewicze	3.6	Hamburg-Xi'an	3.8	Chongqing-Bely Rast	5.1
Zhengzhou-Liège	3.3	Bremerhaven- Chongqing	3.7	Xi'an Bely Rast	4.6

Source: author's calculations

This distribution clearly emphasizes the nature of the changes that have occurred in Eurasian container rail transport. Compared to the first half of 2022, the leading Europe-bound westward routes have undergone almost no changes. The main departure points are Xi'an, Chongqing, Chengdu, and Zhengzhou. The departure points for China-bound eastward routes are usually cities such as Hamburg, Duisburg, Mannheim and Bremerhaven. Terminals on the territory of the EAEU demonstrated great growth, including Elektrougli (Moscow region), Kolyadichi (Minsk region) and Bely Rast (Moscow region).

Position of the Eurasian railway corridor and alternative routes

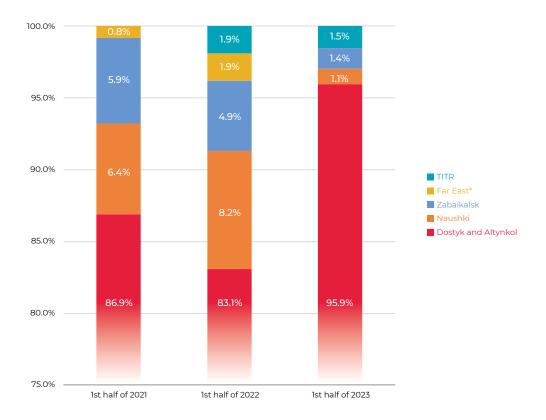
The Eurasian railway transit route is the main transport artery for China — Europe — China rail transit container traffic. During the first half of 2023, the Eurasian route accounted for 95.9% of the volume of transported cargo according to border crossing statistics, which is 12.8 percentage points higher than in the same period last year.

The route through the territory of the EAEU countries — Belarus, Kazakhstan and Russia — retains its leading position despite the progressive development of the infrastructure of trans-Siberian routes with entry points at the border crossings of Naushki (Mongolia), Zabaikalsk (northern China) and points in the Russian Far East (Grodekovo, Vladivostok, Nakhodka, Kamyshovaya).

According to data for the first half of this year, in China — Europe — China transit, the share of the route through Naushki decreased from 8.4% to 1.1%, the share of Zabaikalsk decreased from 5% to 1.4%, and the volume of container transit through the ports of the Russian Far East fell to zero. This state of affairs is due to a complete restructuring of Russian import logistics. External pressure from European countries, including the creation of difficulties importing goods into Russia, and the departure of international carriers from Russia, coupled with the beginning of an economic policy of turning to the East, aroused interest among Russian companies in eastern ports and railway terminals. At the same time, the infrastructure of the Far East was overstressed, and the profile of activity largely changed from transit to imports.

Amid the search by shippers for alternative continental methods of delivering goods, the Trans-Caspian route through Kazakhstan, Azerbaijan and Georgia has received some development. Despite the efforts of state authorities, this route cannot yet constitute a competitive alternative to the Eurasian railway corridor, and its share in the trans-Eurasian container railway transportation market is about 1.5%. The main disadvantage of this route is the need to change the mode of transport to cross the Caspian Sea.

SHARE OF MAIN ROUTES OF TRANSIT RAIL CONTAINER TRANSPORT CHINA-EUROPE-CHINA AT BORDER CROSSINGS



Source: authors' calculations

The Eurasian railway route has managed to increase its share in trans-Eurasian railway transit traffic due to its inherent competitive advantages. It should be noted that despite the existing difficulties, trans-Eurasian continental railway routes are predominantly complementary. The ongoing development of their infrastructure, coupled with increased operational excellence, can provide additional competitive advantages for all market players and countries along the way.

^{*} Grodekovo, Vladivostok, Nakhodka, Kamyshovaya

OUTLOOK FOR THE SECOND HALF OF 2023

The first half of 2023 clearly demonstrated how the transport and logistics market is being transformed under the influence of external factors. The nature of these changes, caused both by the objective economic indicators of the countries engaging in transportation and by the international political situation, indicates a high level of adaptability and constant demand for rail transportation.

The second half of 2023 will reveal whether it is possible for the trends that have already begun to continue, and whether opportunities to increase transportation will be realized.

Eurasian cargo transportation can be supported by the interaction of countries at the EAEU level, the process of digitalization in transport, as well as interaction with China. The future of Eurasian railway transit depends on the coherence of the partners' actions.

In the context of the reorganization of transport, alternative routes are being developed, for example, the Trans-Caspian International Transport Route (TITR), which has found its niche in trans-Eurasian transport, but is not a full-fledged alternative to the route through the EAEU countries.

It is also important to develop meridional routes in addition to existing latitudinal routes. In the coming years, the main attention will be focused on the development of the North-South ITC. In May 2023, an agreement was concluded between Russia and Iran on the construction of the Rasht-Astara railway section, designed to overcome a bottleneck in the Iranian railway infrastructure that is preventing the development of the route. Harmonization of the North-South ITC with the Eurasian railway route can create new routes for Eurasian transit using the territory of the EAEU member states.

In addition, railways maintain a competitive advantage related to environmental friendliness. Despite the downward trend in trade and economic ties between the EU and the EAEU states, the environmental agenda remains important not only for Europe, but also for China. At the same time, for the latter, the topic of decarbonization will become increasingly important, which could mean new benefits for the Eurasian railway route.

Despite external difficulties, the Eurasian railway route has proven its relevance. Its ability to adapt quickly and consistently has played a key role in the resilience of the Eurasian railway route in the face of external "storms". The second half of 2023 will show how railway transport is able to develop new areas of its activity amid changed realities.