
DIVERSIFICATION OF EU EXPORTS TOWARDS THE US AND ITS IMPACT ON EXPORTS TO CHINA



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INTRODUCTION

The European Union, China and the United States play the largest role in international trade, in terms of supplying products and as markets, and their trade relations largely determine the configuration of cargo flows in the international transport system. The intensity of trade exchange between these three economic poles is determined by many factors — from markets to infrastructure, such as transport and logistics potential and the capacity of existing routes.

These links are grounded in the search for an optimal balance of geographic, political and economic factors. In addition, their long-term institutional interaction, supported by a wide range of bilateral international agreements, is also decisive. Characteristically, the two most sweeping treaties for interaction, namely the Comprehensive Investment Agreement (between the EU and China) and the Transatlantic Trade and Investment Partnership (between the EU and the USA), reached their final stages of development, but at the last stage they never entered into force.

We can speak, at present, about the significant intensity of trade and economic relations between Europe and its partners in the West and the Far East. In 2021, the total exports of EU countries to the United States amounted to almost 400 billion euros, while exports to China totaled 223.4 billion euros. By weight, the exports measured 73.8 million tons and 51.6 million tons, respectively.

The EU's trade with each of these partners has specific features. EU exports to the US and China have a different structure. The key components of trade with the United States are fuel and energy (35% of the volume) and agriculture (11%). The key components in trade cooperation with China are forestry industry products (39%), agriculture, and the food industry (25%). At the same time, in terms of value, products with a high degree of processing are in the lead (for example, pharmaceutical products, vehicles and components, electronics, etc.). It should also be noted that there are country differences in the volume of exports to the US and China.

Thus, this review is intended to reveal the nature of European exports and uncover what impact the growing volume of EU exports to the US have had on EU exports to China, and whether there is competition between these destinations for European exports.

EU ECONOMIC COOPERATION WITH THE US AND CHINA

Evolution and the institutional framework of trade and economic relations between the EU and China

The foundations of trade and political relations between the European Union and China were laid in the 1970s and 1990s. In 1975, diplomatic relations were established between the European Economic Community and the People's Republic of China, and negotiations began on a wide range of issues, from trade and the economy to technology and education. The efforts of the parties found practical expression in the conclusion of the Trade and Economic Agreement in 1978 and the Agreement on Trade and Cooperation in 1985. A new qualitative impetus to trade and economic cooperation was given by the conclusion of the Maastricht Treaty establishing the European Union (EU) in 1992 and the publication by the European Commission of two documents: "Towards a new Asia strategy" (1994) and "A long term policy for China-Europe relations" (1995).

A definite breakthrough in building dialogue was the publication of the European Commission's message "Building a Comprehensive Partnership with China" in 1998, followed by the Comprehensive Partnership Agreements in 2001, and then the Comprehensive Strategic Partnership in 2003.

2013 marked the publication of the EU-China 2020 Strategic Agenda for Cooperation, which in 2014 [allowed President Xi Jinping](#) of the People's Republic of China to announce the building of a China-EU partnership for peace, growth, reform and civilization. It recognized development as the driving force in relations, but also pointed out the importance of civilizational and global horizons in relations between China and the EU. On December 30, 2020, negotiations between the leaders of the EU and China took place via videoconference, ending the lengthy negotiations on the Comprehensive Investment Agreement (CAI), which replaced the 26 existing bilateral investment treaties between individual EU member states and the People's Republic of China.

Through the CAI, the EU seeks to establish new rules in trade and investment, in particular by removing barriers to European investment in China, ensuring access to the Chinese market and the openness of subsidies, and promoting the sustainable development of interaction between Europe and the Middle Kingdom. In other words, the CAI's guarantee that it will protect the rights and interests of foreign investors at the international level allows other stakeholders to work amid new conditions in China. From the EU's point of view, the CAI should have contributed to opening up the relatively closed Chinese market to European investment. However, this agreement has not yet been ratified or implemented.

Bilateral foreign direct investment (FDI) between China and the EU crossed the \$270 billion mark by 2020 (twenty-year cumulative total), with European investment in China outpacing Chinese investment in the EU, with the largest sector for FDI in both directions being the automotive industry. For comparison: in cooperation between China and the United States, the same figure amounted to \$460 billion.

Among European countries, Germany shows the greatest involvement in trade with China, given Germany's leading role in EU exports. The trade turnover between Germany and China reached \$235.1 billion in 2021, according to the General Administration of Customs of the People's Republic of China. According to the German Federal Statistical Office (Destatis), in February 2022, Germany's exports to China increased 6.4% to \$10.5 billion, and the Celestial Empire itself has been Germany's main foreign trade partner since 2015.

The People's Republic of China is actively developing the One Belt, One Road initiative, which is a flagship project in the field of foreign trade and transport and logistics activity with countries to the west, including in the field of rail transportation. According to the China State Railway Group Co Ltd., the number of China-Europe freight train runs grew by 22% year-on-year to reach 15,000 in 2021. They move along 73 routes, connecting China with 175 cities in 23 European countries.

All this made it possible to demonstrate record growth in trade turnover, increasing the volume of bilateral trade from \$2.4 billion (1975) to \$800 billion (2021). China became the largest trading partner of the European Union, leaving behind even the United States, which is also among the main trading partners.

From the EU's point of view, the main problem in trade with China is the imbalance of foreign trade. Imports from China far exceed exports to China. This fact presents a problem for balancing the flow of goods, including by rail.

Evolution and institutional basis of trade and economic relations between the EU and the USA

Relations between the European Union and the United States are no less deep and elaborate. After the creation of the European Union in the early 1990s, ideas were expressed about the need to develop transatlantic trade. In 1990, the Transatlantic Declaration on EC-US Relations was signed, declaring the need to create a free trade zone. Subsequent initiatives between the EU and the US were aimed at developing dialogue and creating common ground, which was reflected in the establishment of the Transatlantic Business Dialogue (TABD) in 1998, the creation of an advisory committee “Transatlantic Economic Partnership”, which transformed in 2007 into the Transatlantic Economic Council, whose members are representatives of the leading companies of the participating countries. The task of these formats was to develop proposals for the development of various forms of cooperation and the removal of barriers to trade.

Initially, it was expected that the agreement on the Transatlantic Trade and Investment Partnership (TTIP) would be signed by the end of 2014, but then the final stage was postponed several times, and in the fall of 2016, the signing of TTIP was curtailed. In April 2019, the Council of the EU declared the directives regarding TTIP negotiations “outdated and irrelevant.”

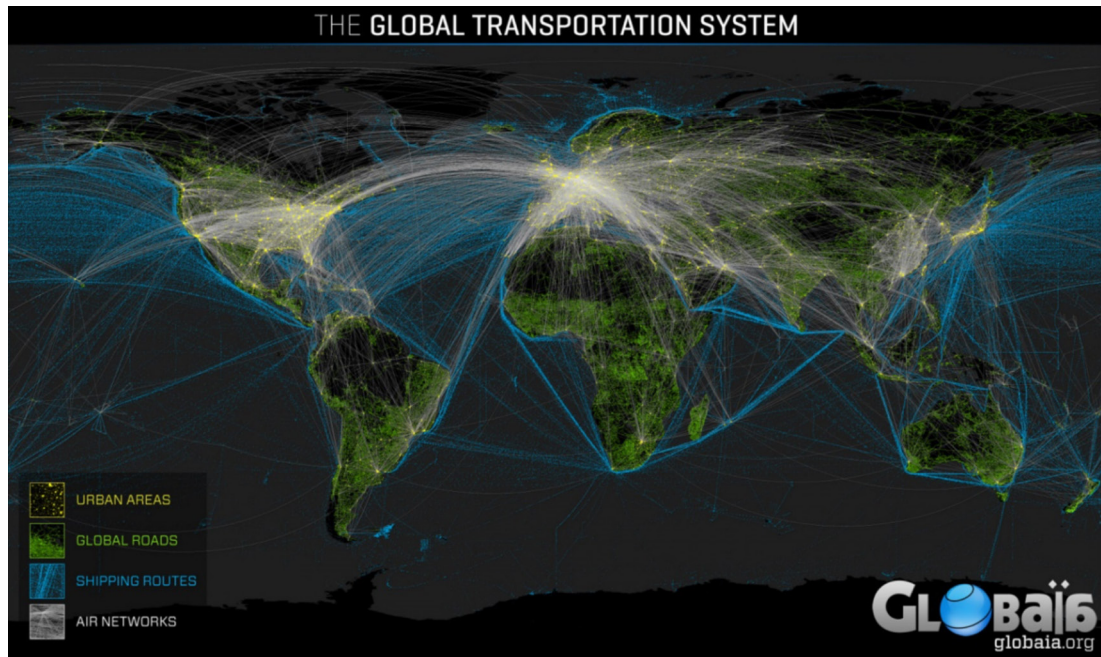
Nevertheless, the indicators of trade exchange between countries reveal their key influence on the entire world trading system. The United States and the European Union together account for about 60% of global GDP, a third of world trade in goods, and about 40% of world trade in services.

US-China rivalry further complicates EU relations with both countries. On the one hand, the Biden administration is focused on replacing Chinese products with its own; on the other hand, due to the multi-component nature of the European Union, there is no unanimous position of all member states on the form of economic interaction with China. For the most part, the EU's approach to China reflects the economic interests of the leading member countries — the “locomotives” of European integration. At the same time, small states may face opposition from China, as the case of Lithuania, which was hit by restrictive measures from the People's Republic of China in response to the opening of Taiwan's representative office in Vilnius, clearly showed.

In addition, on the issue of balancing between China and the United States, the European Union consistently took a position of “strategic autonomy,” which allowed it to be equidistant from both poles of attraction, diversifying the degree of interaction, with each of the parties depending on economic benefits in one area or another. On the other hand, an equidistant position does not allow the European Union to fully take part in the American confrontation with China, as this would deprive the EU of a number of advantages it gets from its current relations with China. Today, in the context of heightened international tension and a deteriorating economic environment, the European Union’s space for maneuvering is narrowing, and given the suspension of the ratification of the Comprehensive Investment Agreement, there is a possibility that the EU will move away from the strategy of equidistance and intensify interaction with the United States.

The legal and institutional framework noted above, as well as the history and logic of interaction between the three economies, have determined the current position of the countries in each other’s foreign trade and economy. The existing relations of interdependence between the EU and China, the EU and the US largely determine the horizon for future cooperation. Obviously, despite all the turbulence, EU trade with China will continue, even if it contravenes the political logic of rapprochement with the United States. At least until the disagreement reaches an extreme point. In this regard, it becomes necessary to consider the structural features and differences in the EU trade flows to the US and China in order to understand how these two export flows are complementary to each other or interchangeable.

CURRENT EXPORT FIGURES



Source: [Global Infrastructure Connectivity Alliance \(GICA\)](#)




























According to Eurostat, in June, the Eurozone foreign trade deficit amounted to 30.8 billion euros, exports decreased by 0.1% month-over-month and increased 20.1% year-over-year; meanwhile, imports increased by 1.3% month-over-month and 43.5% year-over-year. From a positive foreign trade balance of 30 billion euros per quarter, the eurozone shifted to a negative balance of 90 billion euros per quarter. In the EU as a whole, the foreign trade deficit increased to 41.4 billion euros per month and 123 billion euros in the second quarter of 2022. The total exports of the EU countries to the United States amounted to almost 400 billion euros, while exports to China totaled 223.4 billion euros. By weight, exports to these markets measured 73.8 million tons and 51.6 million tons, respectively.

If we compare the structure of EU exports to the USA and China at the aggregate (sectoral) level in physical terms, the fuel and raw material component (petroleum products, gypsum, iron ore, etc.) dominates in EU exports to the USA, while the timber industry dominates exports to China (roundwood, pulp, lumber, paper, cardboard, etc.) along with agriculture (grain, meat).

It should be noted that the European countries depend on the Chinese market for different things. In general, most European countries' exports to China do not exceed 10% of their non-European exports, with the exception of a few countries such as Germany, Slovakia, Finland, Denmark, Ireland and France. Such a distribution may be related to the peculiarities of the development and functioning of the economies of these countries, because they are known for their products in the automotive, forestry and chemical industries.

Table 1.

EU EXPORTS OF GOODS TO CHINA, 2021




























	£ million	% of China in extra EU exports	
Germany	104,655	16.5	
France	24,028	10.7	
Netherlands	15,906	7.3	
Italy	15,691	6.4	
Ireland	11,006	11.1	
Spain	8,659	7.1	
Belgium	8,029	5.2	
Sweden	6,654	9.0	
Denmark	5,963	11.9	
Austria	4,869	9.2	
Finland	3,639	12.0	
Poland	3,064	4.3	
Czechia	2,462	6.6	
Slovakia	2,185	12.8	
Hungary	1,643	6.2	
Bulgaria	1,116	9.8	
Romania	908	4.6	
Greece	712	3.9	
Portugal	686	3.8	
Slovenia	448	2.9	
Lithuania	228	1.6	
Luxembourg	224	8.3	
Estonia	195	3.2	
Latvia	162	2.5	
Croatia	89	1.5	
Malta	61	4.5	
Cyprus	52	2.2	

Source: Eurostat

At the same time, in trade with the United States, the reverse situation is true: the US accounts for less than 10% of the non-European exports of only a few countries. The record here belongs to Ireland — half of its exports go to the United States. The lowest results were shown by the countries of Eastern Europe and the eastern Mediterranean. Here, on the contrary, the geographic location of the export partners become determining factors.

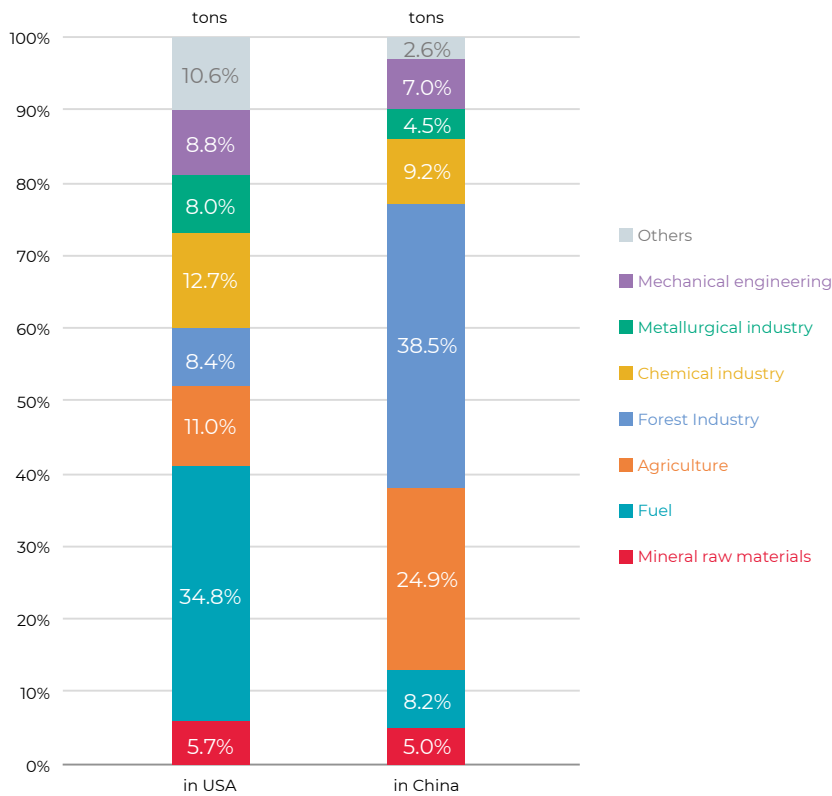
Table 2.

EU EXPORTS OF GOODS TO THE UNITED STATES, 2021

	€ million	% of the United States in extra EU exports	
Germany	122,724	19.4	
Ireland	49,584	49.9	
Italy	49,440	20.1	
France	35,105	15.6	
Netherlands	29,484	13.6	
Belgium	27,677	12.1	
Spain	14,760	5.2	
Sweden	13,534	18.2	
Austria	10,767	20.3	
Denmark	9,884	19.7	
Poland	7,630	10.6	
Finland	4,756	15.7	
Czechia	4,453	11.9	
Portugal	3,549	19.6	
Hungary	3,224	12.3	
Slovakia	2,747	16.1	
Lithuania	2,161	14.8	
Estonia	1,677	27.8	
Greece	1,607	8.7	
Romania	1,491	7.5	
Bulgaria	794	7.0	
Slovenia	776	4.9	
Croatia	595	9.9	
Latvia	379	6.0	
Luxembourg	376	13.9	
Malta	107	7.9	
Cyprus	76	3.2	

Source: Eurostat

STRUCTURE OF EU EXPORTS, TONS, 2021



Source: Eurostat

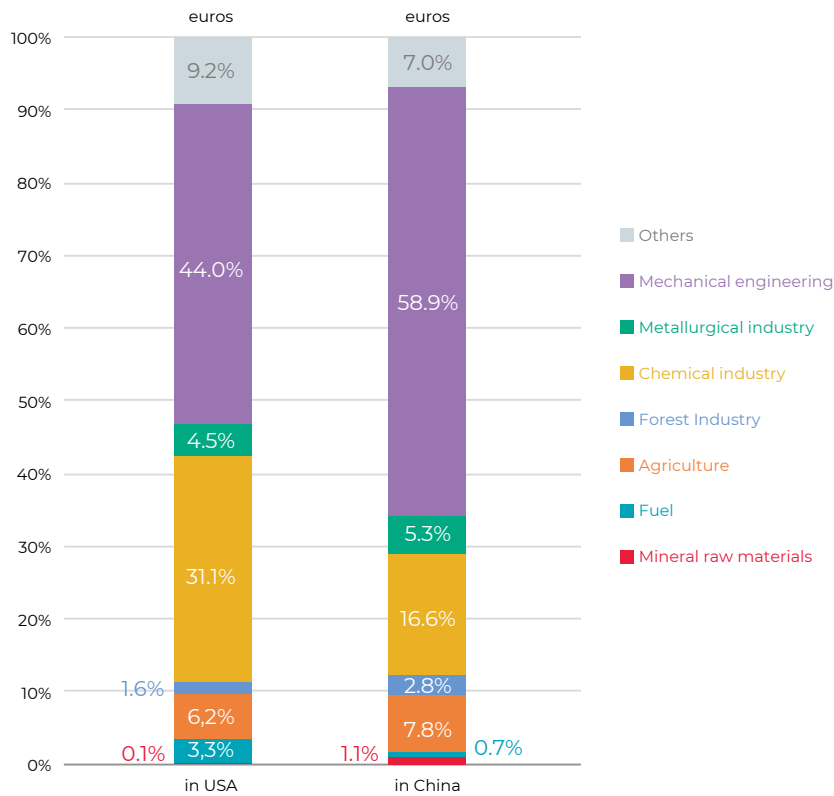
In physical terms, the export structures have much in common: the EU exports similar shares of raw materials and engineering products to both the US and China. The main difference lies in the nature of the raw materials: while fuel accounts for the largest share of exports to the US in terms of tonnage, the bulk of exports to China consist of forest industry products and agricultural produce. There can be several explanations for this state of affairs.

First, the United States economy is a major importer of fuel from around the world, including from European refineries. On the other hand, the large share of timber industry exports to China reflects the country’s demand for high-quality wood and wood products for the needs of the Chinese economy. According to the International Tropical Timber Organization (ITTO), imports of roundwood to China rose sharply in the first half of 2021, with Germany taking second place in terms of shipments to China, showing a growth of 95% to 6.43 million m3.

Secondly, it is obvious that, due to the development of European industry, modern industrial products bring in the most revenue, despite their physical volume being minuscule when compared to exported resources.

Thirdly, cooperation in the field of agriculture has long demonstrated steady growth. For example, [according to](#) Danish Agriculture & Food Council, at the end of 2021, the European Union exported 3,197,540 tons of pork and pork products to China. This is 45% more than in the previous 2020, when 2,223,770 tons were exported.

STRUCTURE OF EU EXPORTS, EUROS, 2021

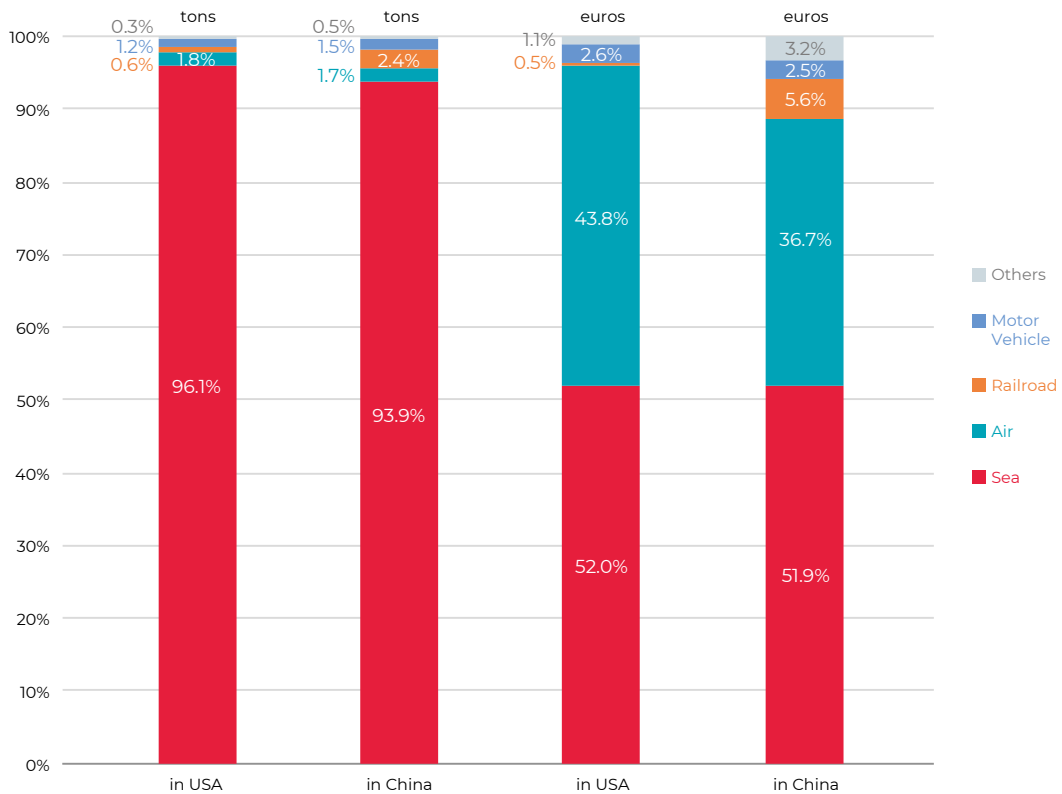


Source: Eurostat

Despite accounting for a significant proportion of the physical traffic of EU exports to the United States, mineral fuels and raw materials account for no more than 3% of all exports in terms of value. This is due to high-value goods in the range of exports, primarily from the chemical and engineering industries. European medicines, medical products, cars and auto parts are much more expensive than raw materials and oil products per unit weight. EU exports to China are also replete with highly processed goods, which explains the dominance in the structure of value exports of engineering industry products: cars and auto parts, electronics, aircraft, and various types of equipment.

The existing proportions of trade flows are reflected in the structures of exports by mode of transport, by which goods leave the EU countries.

STRUCTURE OF EU EXPORTS BY MODE OF TRANSPORT, 2021



Source: Eurostat

Eurostat data indicate that the bulk of the cargo flow is transported by sea, while air transit accounts for the lion’s share of exports in terms of cost and processing. It is noteworthy that the structure of EU exports to the US and China by mode of transport, both in physical and value terms, are quite similar: in physical terms, the share of maritime transport in exports to both the US and China is about 95%, and in value terms, 52%. The share of land transport is small in both cases: in value terms, rail accounts for no more than 6% of EU exports to China, and road transport accounts for 2%. In physical terms, the figures are 2% and 1%, respectively. The presence of insignificant volumes of overland exports from the EU to the USA can be explained by the fact that the statistics reflect only the first mode of transport in the supply chain; that is, the mode by which the goods leave the territory of the exporting EU country.

So, despite radically different geographic data, the structures of exports in the context of the modes of transport used are almost the same: European exports to China are almost as unlikely to be sent overland as European exports to the United States. If in the case of the United States this is due to natural causes, then in the case of China, it is logistical and infrastructural. Despite the growth in Europe-Asia rail traffic against the backdrop of the pandemic, the share of overland freight traffic remains low — in the range of 3-4%. At the same time, in value terms, this volume already accounts for at least 8% of EU exports to China. Thus, the complete refusal of European suppliers to send goods to China via Eurasian transit will have a tangible economic effect (if there is no timely reorientation of goods to other modes of transportation or other markets).

Analysis of export diversification opportunities from Europe

To assess the possibility of a potential “transfer” of European exports from the Chinese market to the US market, it is necessary to analyze the volumes of the main cargo flows in both directions. When comparing EU export nomenclatures to China and the US at the commodity level, a high degree of their correspondence was revealed: out of 1177 commodity items exported from the EU to China, 1166 are also supplied to the US market.

Consideration of the structure of physical EU exports to China in the context of commodity items and modes of transport gives an idea of the composition of the cargo flow and the degree of its dependence on land traffic between Europe and Asia. Comparing China’s shipments with US shipments shows the intersection of American and Chinese demand for European goods and the potential supply volumes that can be redirected from the Chinese market to the American one.

Table 3.

MAIN ITEMS OF EU CARGO TRAFFIC TO CHINA BY MODE OF TRANSPORT AND EXPORTS TO THE US IN PHYSICAL TERMS

HS	Item	Sea	Rwy	Auto	Avia	Others	Total in China, thousands tons	Total in USA, thousands tons
	All Articles	94%	2%	2%	2%	1%	51,662	73,146
4403	Roundwood	97%	1%	0%	1%	0%	13,189	9
1003	Barley	100%	0%	0%	0%	0%	3,602	50
4703	Sulphated cellulose	100%	0%	0%	0%	0%	2,225	387
2515	Marble and other construction limestone	100%	0%	0%	0%	0%	1,854	15
4407	lumber	99%	0%	0%	0%	0%	1,835	2,048
1001	Wheat	100%	0%	0%	0%	0%	1,819	8
0203	Pork	99%	0%	0%	0%	0%	1,722	85
2710	Oil products	98%	0%	0%	1%	0%	1,078	22,364
2603	Copper ores and concentrates	100%	0%	0%	0%	0%	847	-
8703	Cars	75%	21%	0%	0%	0%	822	1,249
0206	Offal of livestock	100%	0%	0%	0%	0%	749	6
0401	Fresh milk and cream	98%	1%	0%	0%	0%	743	1
8708	Auto parts	82%	10%	0%	6%	0%	717	692
2601	Iron ore	100%	0%	0%	0%	0%	698	918
4702	Soluble cellulose	88%	11%	0%	0%	0%	666	8
3901	Polyethylene	87%	7%	0%	0%	0%	566	128
4810	Coated paper and cardboard	84%	16%	0%	0%	0%	509	1,261
2711	Natural gas and other hydrocarbon gases	46%	0%	0%	0%	54%	473	150
7225	Wide alloyed sheet metal	95%	2%	0%	0%	0%	407	555
2203	Beer	96%	1%	0%	0%	0%	340	762
2703	Peat	88%	8%	0%	0%	0%	338	40
1214	Fodder plants	100%	0%	0%	0%	0%	325	1
3907	Polyacetals, polyesters, polycarbonates	75%	5%	0%	2%	0%	307	220
2306	Oilseed cake, other than soybeans	100%	0%	0%	0%	0%	306	2
4410	Chipboards	96%	3%	0%	0%	0%	296	281
1514	Rapeseed oil	100%	0%	0%	0%	0%	275	8
3105	Mixed fertilizers	96%	0%	0%	0%	0%	269	376
2713	Petroleum coke, bitumen and other refining residues	100%	0%	0%	0%	0%	267	521

Source: Eurostat

The export of logs and sawn timber accounts for a significant proportion of the cargo sent to China, in terms of tonnage (mainly coniferous species from Germany, the Czech Republic and Finland). Since 2020, European suppliers have occupied a dominant position in the Chinese market (about 30% in imports of softwood logs), ahead of the traditional timber exporters, Russia and North America. This has been influenced by a [combination of several factors](#): the continued demand for wood in China, a reduction in supplies from Russia and the US, and excess wood in Europe. Judging by the current situation, no further expansion of the EU's share of the Chinese market is foreseen: timber harvesting in Europe has peaked amid growing domestic demand, and the surplus has disappeared. Experts also fear [interruptions](#) in supplies to China due to the Russian-Ukrainian military conflict, but since almost the entire cargo flow of roundwood from the EU to China is transported by sea, this factor will not have a noticeable impact.

In general, the annual volume of products exported from the EU to China by land (by rail and road) is about two million tons. Although all of these products are already shipped in varying quantities from the EU to the US market, the possibility and likelihood of their "transfer" from the Chinese market to the US varies depending on the product category.

Of all the product groups supplied from the EU to China, passenger cars (21% of exports go by rail), as well as automotive components (10% of exports are sent by rail) have the greatest dependence on land transit. The total annual volume of automotive exports sent overland from the EU to China is about 309 thousand tons. The automotive industry is of paramount importance to the EU economy. The US remains the number one market for European passenger cars to this day, while the EU is the second-largest supplier for the US behind Japan. The likelihood of reorientation of this segment of automotive exports to the American market is determined both by market factors (price/quality ratio, competitiveness) and, in general, by the aspiration of European manufacturers to sell in this market, as well as their willingness to create or expand production lines which meet American safety standards.

Pulp and paper products are another export category partly supplied by land transport. The share of railway exports in the supply of dissolving pulp from the EU to China is 11%, and in the supply of coated paper and cardboard, this figure is 16%. The total annual volume of overland pulp and paper exports from the EU to China is about 200 thousand tons. Prospects for the reorientation of European pulp are low: US demand for this category of products is largely covered by suppliers from Brazil and Canada. For paper and paperboard, the situation is reversed: since the EU is the number one supplier to the US (mainly due to Finland, Sweden and Germany), a reversal of some exports from East to West is possible, but the emergence of surpluses in the European or even Eurasian markets is unlikely in the near future. The EU is both the largest producer and the largest consumer of paper and paperboard in the world, particularly the most high-quality and technologically sophisticated type — coated paper. Coated paper is widely used in printing houses, and coated cardboard is widely used in the production of various packaging. Due to the rather capacious domestic market, only a small proportion of products produced in the EU is exported — [about 22%](#). Against the backdrop of the departure of European and American paper producers from Russia, as well as interruptions in the supply of critical raw materials for its production, Russia is experiencing an acute shortage of paper; there are plans to resolve this issue through ["alternative supply channels."](#)

Practical Conclusions

Summing up, we can say that several patterns are revealed that allow us to answer the question posed at the beginning of the review about the possibility of reorienting European exports from the Chinese market to the American market.

First, the vast majority of European traffic to the US and China is by sea, with rail exports to China only increasing in recent years.

Secondly, the largest exports to the US and China by volume are different: while the main component of exports to the United States by tonnage is fuel (35%), then in trade with China, it accounts for only 8%. Meanwhile, the leading export by tonnage in trade with China is wood, which accounts for 39% of exports, but is listed in the American import basket as accounting for only 8% of the total volume. The export of European timber to China has significant potential for utilizing rail delivery routes: last year, out of 15.5 million tons of European timber, only 185,500 tons were transported by rail (1.4%).

Thirdly, among the export items that account for the largest volume of exports from Europe to China by rail are cars and spare parts for them, as well as products of the pulp and paper industry. Interestingly, according to [ACEA](#), the shares of car exports sent from the EU to the US (18.5%), the UK (18.4%) and China (15.4%) at the end of 2021 were distributed approximately equally. On the other hand, the demand for pulp in the United States is met by supplies from other countries in North and South America.

It should be borne in mind that the configuration of the automotive market started changing with the advent of the electric vehicle segment in the 2010s. Its rapid development has led to significant results: in 2010, [10% of all passenger cars](#) sold in the world were electric. The developments and plans of manufacturers in the EU today are ahead of competitors from the US and Japan, which creates the prerequisites for European electric cars to enjoy further expansion into the Chinese market.

Thus, objective data suggest that a major restructuring of European imports with the redirection of goods from China to the US is not possible at the moment, since these markets differ from each other both in terms of demand and in the ability to satisfy them, including due to transport specifics. The EU's long-term low-carbon strategy calls for a doubling of rail traffic, while the unrealized potential of exports to China and the need to balance trade flows are still significant reasons for maintaining an orientation towards the East.