
FRANCE AND SPAIN EXPORT TO CHINA: PROSPECTS FOR EXPANSION OF THE RAIL FREIGHT TRANSIT



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— FRANCE

France

France is one of the ten largest economies in the world by nominal gross domestic product (GDP) and is the second largest economy in the European Union (EU) after Germany. The country has a developed services sector and a large industrial base thanks to the nuclear and space industries. Transport communication with other countries is carried out by sea, however, more recently, more focus has been placed on railway transport.

Overview of the current economic situation in France. Export dynamics

Currently, the service sector is the main driver of the French economy: it accounts for more than 70% of GDP¹. In addition, France is one of the world leaders in the automotive, aerospace and railway industries, as well as in the production of cosmetics and luxury goods.

At the end of 2019, the GDP growth rate in France slowed down to 1.3% (to 2.89 trillion USD) after 1.7% in 2018 ². This was due to domestic factors, such as strikes against pension reform, which led to a recession in Q4 2019. Due to the outbreak of COVID-19, according to forecasts, the country's GDP will decrease by more than 9.2% in 2020, before it recovers and grows by 6.4% in 2021. In January and February 2020, economic activity began to recover gradually after the strikes, but in March it decreased again due to quarantine measures. It is expected that the effects of the pandemic will manifest themselves more in Q2 2020, when GDP will fall by 20%³. The French economy will decrease dramatically in H1 2020, but will begin to recover in Q3. Due to weak global demand, French exports are projected to decline in 2020.

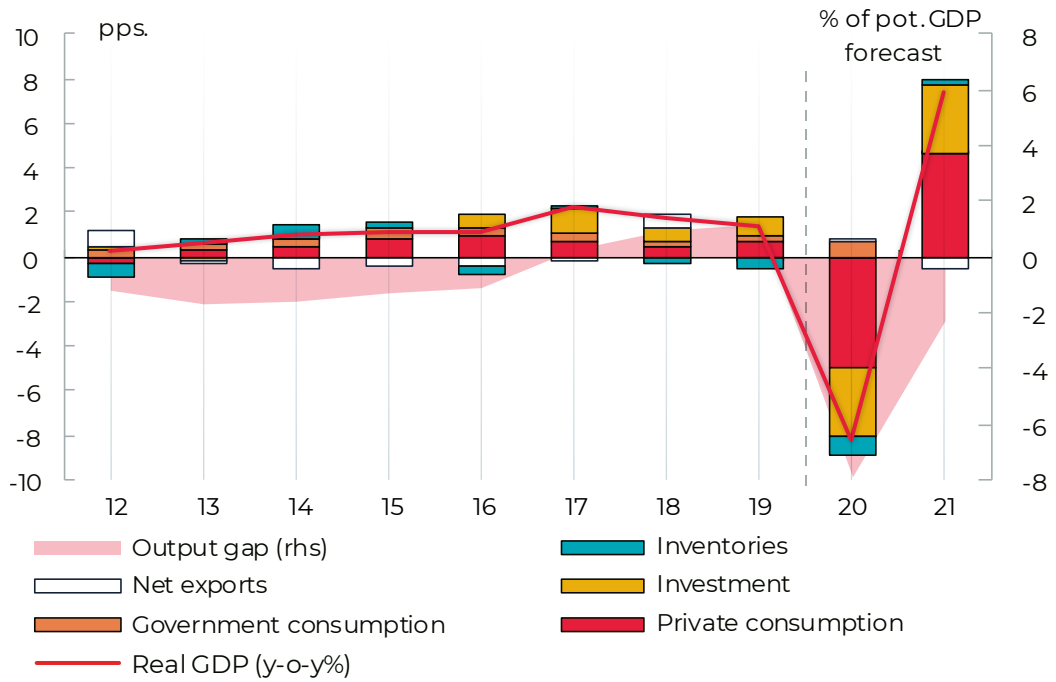
1 Source: <https://www.focus-economics.com/countries/france>

2 Source: <https://tradingeconomics.com/france/gdp>

3 Source: Point de Conjoncture, 27 May 2020

Figure 1.

GDP GROWTH DYNAMICS, ITS COMPONENTS; PRODUCTION DECLINE ⁴

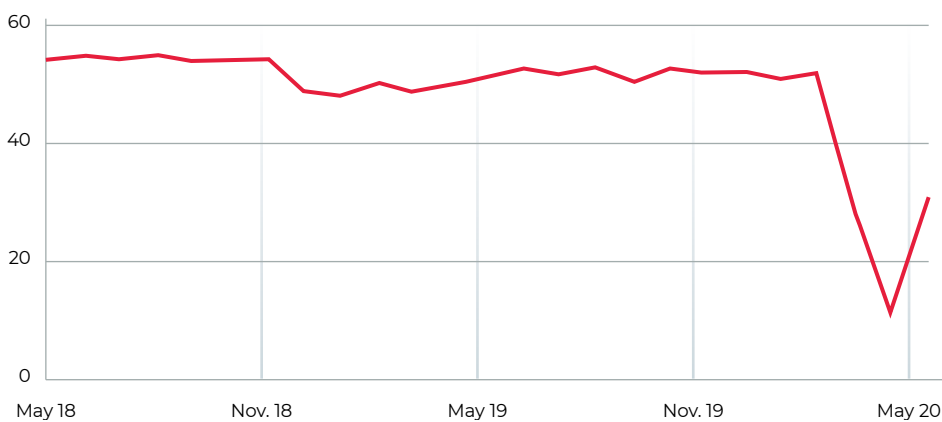


Source: European Commission

The dynamics of the Procurement Managers Index is one of the indicators of France's exposure to the crisis caused by the COVID-19 pandemic. Given the seasonality factor in May 2020, the index increased to 30, after the April result of 11.1, which became a record low over the past 22 years. Nevertheless, despite the growth, the index remained below a threshold of 50.

Figure 2.

DYNAMICS OF THE PROCUREMENT MANAGERS INDEX IN FRANCE, % VS. THE PREVIOUS MONTH



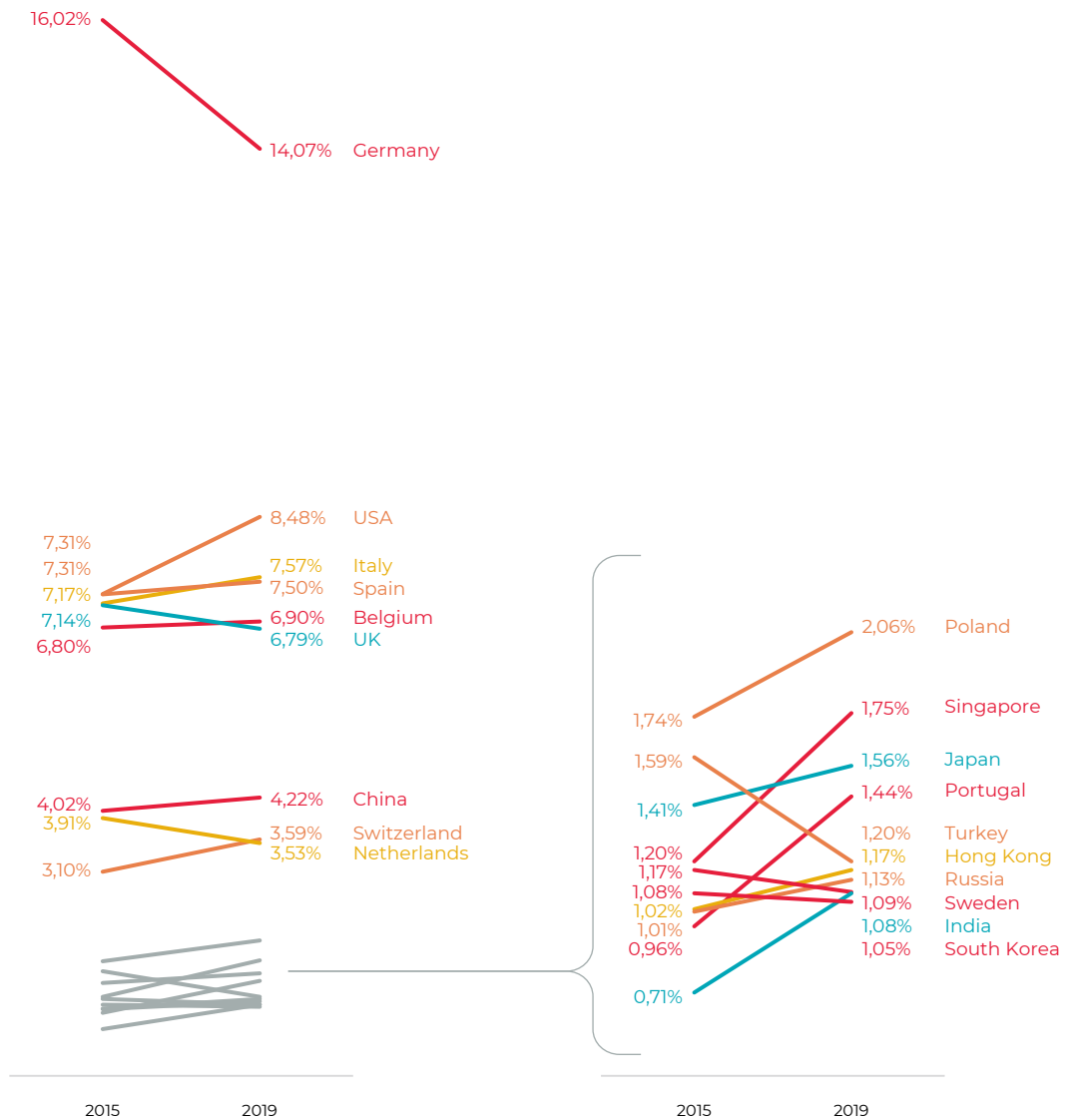
Source: IHS Markit

⁴ The output gap characterizes the difference between the actual GDP and the potential GDP.

Most of the French exports goes to European countries, namely Germany, Italy, Spain, Belgium, and the UK: these countries together accounted for 42.83% in 2019. Outside the EU, the United States is the largest destination for French exports: in 2019, this country accounted for 8.48% of France's total export, or \$ 47.1 billion. . China is the seventh largest importer of French goods in 2019.

Figure 3.

GEOGRAPHICAL STRUCTURE OF EXPORT - FRANCE



Source: International Trade Center (ITC)

At the end of 2019, the export of aircraft (including space vehicles) and automobiles accounted for more than 20% of the total value of French exports, while over the past five years, the country has managed to increase the export of these goods by 10.75%. Exports of medicines and cosmetics, perfumes and eau de toilette amounted to 7.65% of total exports in the same year. Among agricultural and food products, the main list includes grape wines (2.02% of the total value of French exports); wheat and meslin, bread, malt extract (1.89%). France has shown the largest increase in exports over the past five years in terms of goods such as bags and suitcases (57.97%); cruise and sightseeing ships, ferries, cargo ships, barges,

yachts, boats, canoes (137.52%); radar equipment, radio navigation and radio remote control equipment (72.95%); gold (51.71%); coffee (74.78%). Thus, the dynamics of French exports over the past five years allows us to conclude that the demand for French goods from the third countries remains unchanged.

Table 1.

THE MAIN GOODS IN THE STRUCTURE OF FRANCE'S EXPORTS TO THIRD COUNTRIES

Name of goods	Share in 2015	Share in 2019	Change in 2015-2019
Other aircraft; spacecraft, parts thereof; turbojet engines	13.86%	13.66%	10.75%
Automobiles and other motor vehicles; parts thereof	6.64%	6.91%	16.96%
Medicines	4.74%	4.82%	14.15%
Cosmetics; perfume and eau de toilette	2.34%	2.83%	36.08%
Electronic integrated circuits; electrical equipment for electrical circuits	2.58%	2.55%	10.62%
Oil and petroleum products derived from bituminous rocks; oil gases	2.26%	2.10%	4.12%
Grape wines	1.90%	2.02%	19.38%
Wheat and meslin, barley; bread, flour confectionery, wafers; malt extract	1.93%	1.89%	10.03%
Bags and suitcases	1.13%	1.59%	57.97%

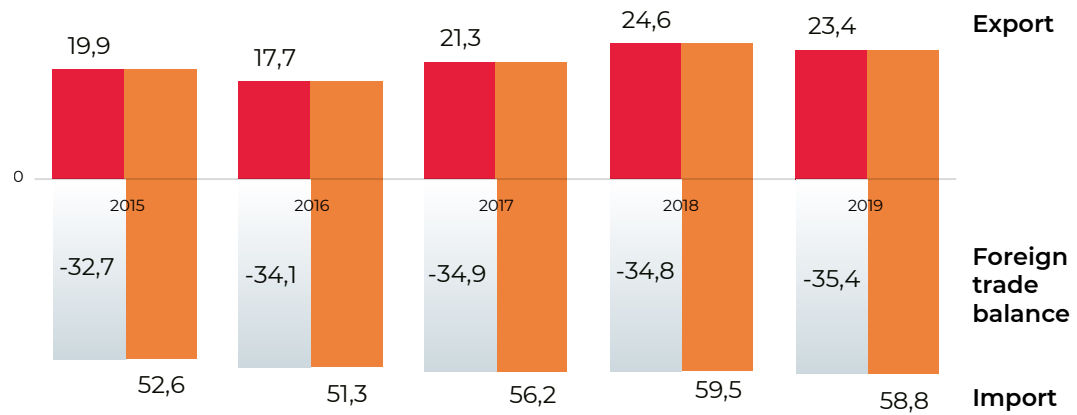
Source: calculated by ITI according to ITC

France's exports to China by rail

China is the seventh largest importer of French goods. According to ITC, in 2019, the total France's exports to China amounted to \$ 23.44 billion, which is 17.65% more than five years ago. Despite the general growth trend, the export dynamics cannot be characterized as stably positive. During 2015–2019, two declines were recorded: in 2016 - by 11.12% and in 2019 - by 4.84%. A positive trend has also developed in the dynamics of imports, but the curve describing the dynamics of imports is more flat: over five years, the volume of imports from China increased by 11.8%. Nevertheless, the balance of France's foreign trade with China continues to be negative, in particular at the level of \$ 35.36 billion in 2019.

Figure 4.

DYNAMICS OF THE VOLUME OF FOREIGN TRADE OF FRANCE WITH CHINA, BILLION USD USA



Source: drawn by ITI according to ITC

The product mix of France’s exports to China is diverse: it includes both high-tech products and low-value-added products. Export of aircraft, cosmetics and medicines, turbojet engines, grape wines and alcohol tinctures in total makes up about half of the total France’s exports to China. Over the past five years, China’s demand (more than doubled) for cosmetics and medicines has increased significantly; as has for pork and edible offal; bags and suitcases; malt extract, prepared foods made from flour; finished binders for the production of foundry molds; jewelry and nuclear reactors.

Table 2.

THE MAIN GOODS IN THE STRUCTURE OF FRANCE'S EXPORTS TO CHINA

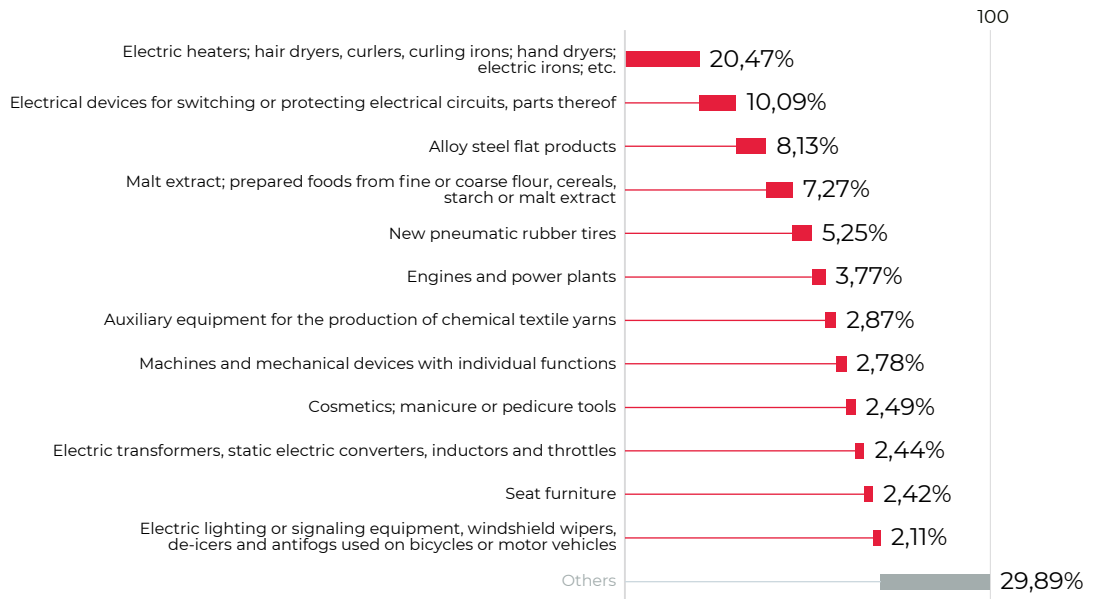
Name of goods	Share in 2015	Share in 2019	Change in 2015-2019
Other aircraft; spacecraft, parts thereof	29.45%	28.12%	12.33%
Cosmetics and medicines	4.56%	9.46%	144.16%
Turbojet and turboprop engines, gas turbines	6.62%	7.47%	32.61%
Grape wines, must; ethyl alcohol, alcohol	4.89%	4.80%	15.62%
Human blood; animal blood; immune serums, blood fractions	1.39%	1.64%	38.24%
Fresh pork; cattle offal	0.92%	1.63%	108.05%
Barley, wheat and meslin	4.38%	1.63%	-56.17%
Bags and suitcases	0.84%	1.62%	126.37%
Raw or processed flax	1.04%	1.43%	61.97%
Malt extract; prepared foods from fine or coarse flour, cereals, starch or malt extract	0.64%	1.43%	163.54%
Devices and equipment for physical or chemical analysis; medical devices and equipment	0.89%	1.21%	59.62%
Mechanical devices, computers, data transfer machines	1.05%	1.20%	34.02%
Centrifuges and pumps	0.98%	0.99%	19.40%
Taps, valves, gates and similar fittings for pipelines, boilers or similar containers	1.02%	0.96%	10.71%
Milk and cream, whey	0.71%	0.92%	51.22%
Finished binders for the production of foundry molds or foundry cores	0.21%	0.44%	150.49%
Jewelry	0.17%	0.42%	181.52%
Nuclear reactors	0.19%	0.41%	161.31%

Source: calculated by ITI according to ITC

The bulk of the freight from France to China is transported by sea. In particular, in 2019, goods worth \$ 8.48 billion were transported by sea, or 49.11% of the value of France's exports to China, which is 5.71% more than in 2015. According to Eurostat, the largest increase (almost 61-fold) in exports to China was observed for rail transport. According to the data for 2019, rail transport from France to China mainly transports electric equipment, steel, engines and power plants, tires, furniture and cosmetics. Malt extract and prepared foods from flour, cereals, starch and malt extract are the food products transported by rail. It should be noted that these goods were not transported by rail in 2015: most were exported to China by sea.

Figure 5.

COMMODITY STRUCTURE OF FRANCE’S EXPORTS TO CHINA, TRANSPORTED BY RAIL, 2019

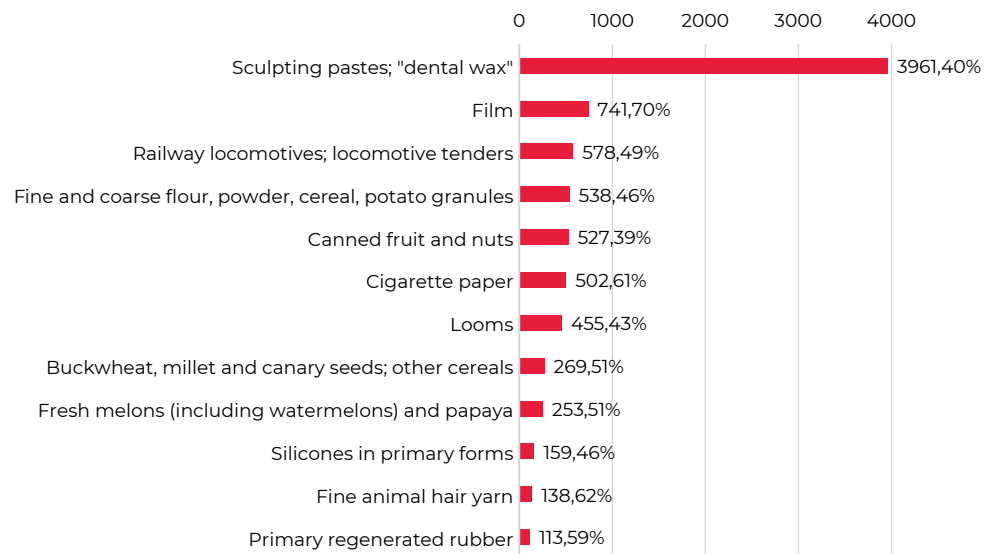


Source: drawn by ITI according to Eurostat

However, France has not yet exported some goods to China. The most potential in terms of the possibility of transportation by rail in a container is the looms, due to the high added value, as well as sculpting paste, flour and related products, canned fruit and nuts due to the high level of demand in China.

Figure 6.

THE LIST OF GOODS FOR WHICH FRANCE HAS THE POTENTIAL TO START EXPORT DELIVERIES TO CHINA BY RAIL ⁵



Source: drawn by ITI according to ITC

Planned changes in railway infrastructure in France

Rail transport in France is characterized by a clear predominance of passenger traffic. Four railway corridors pass through the country, which should integrate the upgraded national transport infrastructure into a unified trans-European network⁶:

- Mediterranean corridor: from the Spanish border in Perpignan to the Italian border through Lyon and Marseille;
- Atlantic corridor: from the Spanish border in Hendaye to the German border in Strasbourg and branches to Mannheim via Bordeaux, Paris and Metz;
- Northern Mediterranean corridor: from the borders of the United Kingdom (English Channel) to Lille and the border with Belgium, and further from Luxembourg to the south to Marseille via Dijon and Lyon;
- Rhine – Danube corridor: from Strasbourg to the eastern part of Europe ⁷.

⁵ This list is not exhaustive.

⁶ Source: https://ec.europa.eu/transport/modes/rail/ertms/countries/france_en

⁷ Source: <https://www.gudok.ru/newspaper/?ID=1001576>

France has a railway connection with China. Since 2016, a freight train has been running between the cities of Lyon and Wuhan in central China, operated by the Chinese operator Wuhan Asia-Europe Logistics⁸. Trains are loaded at Venissier, which is 16 kilometers away from Lyon.

Figure 7.

THE MAIN CORRIDORS OF THE EUROPEAN TEN-T NETWORK⁹



Source: Railway Gazette

The French national railway company, SNCF-Réseau, operates nearly 30,000 km of railways in France, 2,600 km of which are high-speed¹⁰. SNCF predicted that in 2020, major railways will increase traffic volumes, but the COVID-19 crisis affected these ambitions significantly. The French National Institute of Statistics (INSEE) estimated the economic losses of SNCF Réseau and the operator of electricity transmission systems RTE as of the end of May 2020 at 21%. However, the SNCF rail freight network has gradually resumed its activities since late April. While rail traffic declined significantly during the first month of lockdown, an average of about

8 Source: <https://www.railfreight.com/beltandroad/2019/05/01/rail-freight-service-lyon-china-upgraded-for-agriculture/>

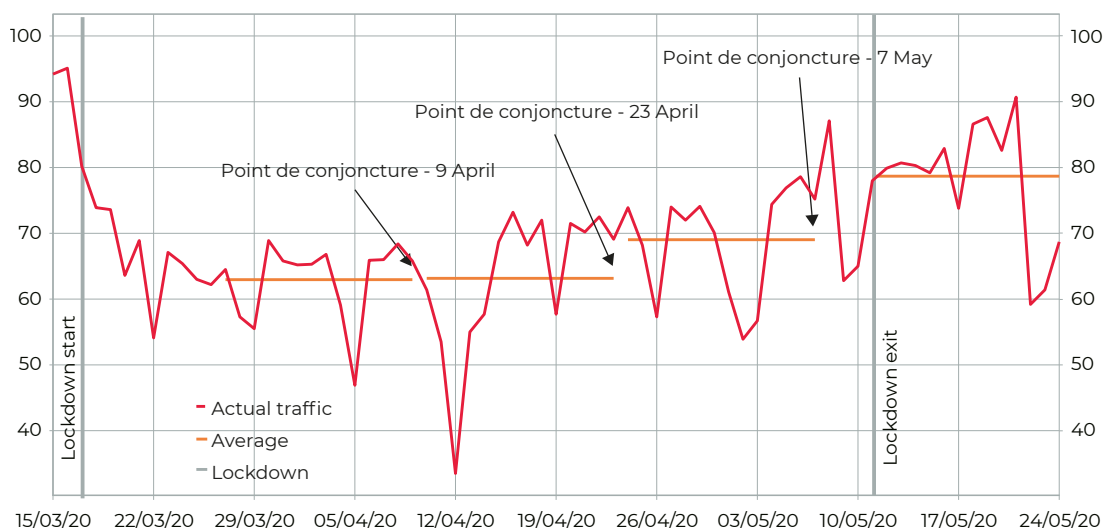
9 Legend: 1. Baltic Adriatic Corridor; 2. North Sea - Baltic; 3. Mediterranean Corridor; 4. Middle East Corridor; 5. Scandinavian-Mediterranean Corridor; 6. Rhine-Alpine Corridor; 7. Atlantic Corridor; 8. North Sea - the Mediterranean Sea; 9. Rhine-Danube Corridor

10 Source: <https://www.sncf-reseau.com/fr/reseau>

63% of trains were operated; in the last two weeks of May, their number increased to 69%. As of the end of April, freight train traffic increased significantly and as of May 11, 2020 reached 78% of the initial traffic. The increase in rail freight in France indicates a gradual recovery in economic activity in Europe ¹¹.

Figure 8.

RAIL FREIGHT VOLUME VIA SNCF NETWORK



Source: INSEE

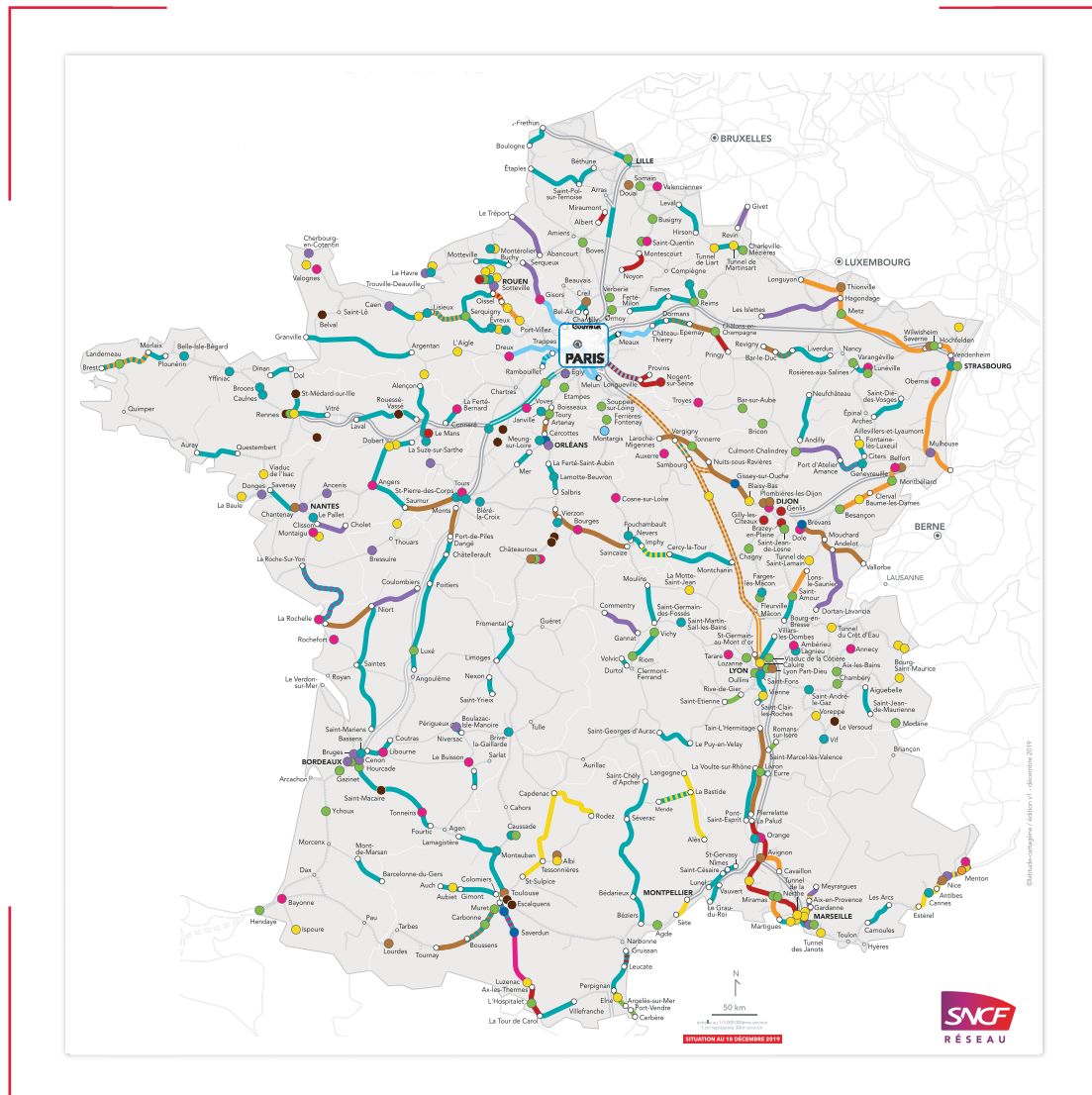
For the French railway industry, this year is the year of planned changes, the implementation of which might stimulate the country's economy, subject to a relatively rapid recovery in global consumer demand. Over 1,650 projects are planned to be implemented, and 6.2 billion EUR will be invested in the railway network, about 1,050 km of lines will be updated, and 500 railroad switches – will be replaced ¹². It is noteworthy that the plans include the construction or modernization of lines through plants. For example, in the city of Saintes, through which the railway line will pass, there are production sites of companies such as JV Mechanics (mechanical and composite parts for aeronautics, space and defense), E.A.S Productions (electronics), Meubles Michel Production (furniture). In the city of Le Puy-en-Velay, there is a tire factory of the French company Michelin. In the city of Laval, there are bedding factories, foundries; the city is the headquarters of Lactalis. The city of Carquefou is famous for Seita (Imperial Tobacco Group), as well as Brissonneau et Lotz (locomotive company). Le Mans is a major manufacturer of racing cars.

¹¹ .Source: Point de Conjoncture, 27 May 2020

¹² Source: <https://www.sncf-reseau.com/fr/entreprise/newsroom/actualite/cartes-principaux-chantiers-2020>

Figure 9.

CONSTRUCTION OF RAILWAY LINES PASSING THROUGH PRODUCTION SITES (BLUE COLOR)¹³



Source: SNCF

13 Source: https://www.sncf-reseau.com/sites/default/files/2019-12/Carthe%20nationale%20des%20chantiers_2020_584x410_%20FRANCE_v3.pdf

— **SPAIN**

Spain

Spain is the fifth largest economy in the EU by the end of 2019, which makes it attractive to study in the context of expanding East – West trade. Spain is a southern European country with a developed shipping industry. To achieve the goal of the study, it is interesting to analyze the possibilities for expanding the country's exports to China through alternative modes of transport, in particular rail transport.

Overview of the current economic situation in Spain. Export dynamics

Spain is a stable developing country with an annual GDP growth of about 3.7% over the past five years and with a total growth over the same period of 15.57%. According to Eurostat, in 2019, Spain's nominal GDP was \$ 1.39 trillion, which is almost two times less than the GDP of France, and almost three times less than the GDP of the leading EU economy – Germany. The Ministry of Economy and Digital Transformation of Spain predicts a drop in nominal GDP in 2020 by 10.1% and economic recovery in 2021 by 8.7%¹⁴.

Spain has a developed services sector, which in 2019 accounted for 67.7% of GDP, and which employs 76% of the active population¹⁵. The tourism industry is crucial for the country's economy, being the main source of income for Spain. Agriculture accounts for about 2.8% of Spain's GDP, 4% of the workforce is employed in this area. Spain is one of the world's largest producers of olive oil and the third largest producer of wine in the world. The country is also one of the largest producers of oranges and strawberries. The main crops are wheat, sugar beets, barley, tomatoes, olives, citrus fruits, grapes and cork trees. In Spain, pigs and cattle are commonly bred.

The industrial sector accounts for 20% of GDP, of which manufacturing accounts for 11% of the country's GDP. The industrial sector is dominated by textile production, metallurgy, the production of naval equipment and mechanical engineering. Relatively new sectors of the economy, such as electronics, information technology and telecommunications, provide high potential for further growth.

April 2020 turned out to be a test for the Spanish economy due to the quarantine imposed by the Spanish authorities and the high number of people infected with the novel coronavirus infection. The seasonally adjusted industrial production index dropped by 33.6% in April compared with the same month of the previous year¹⁶. The pandemic had the greatest impact on the automotive industry: in April, production dropped by 92% year-on-year. The closure of many stores has reduced consumer demand. As a result of these circumstances, the clothing, leather and footwear industries, as well as furniture production, were severely affected: decrease amounted to more than 70%. Despite the fact that demand for food products did not significantly decrease, food production also declined (7.3% year on year compared with 3.6% in March 2020). Pharmaceutical production showed the smallest decline in the entire industry on a year-on-year basis (-0.4%).

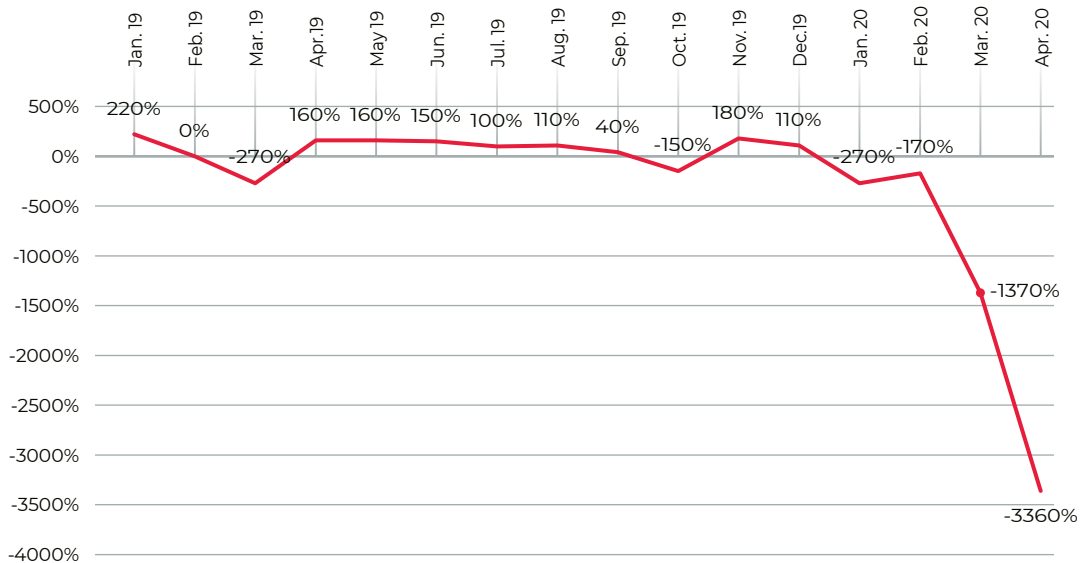
14 Source: http://www.thespanisheconomy.com/stfls/tse/ficheros/2014/200430_Escenario_Macroeconomico_en.pdf

15 Source: <https://www.nordeatrade.com/en/explore-new-market/spain/economical-context>

16 Source: https://www.ine.es/en/daco/daco42/daco422/ipi0420_en.pdf

Figure 10.

**DYNAMICS OF THE INDUSTRIAL PRODUCTION INDEX,
% VS. THE PREVIOUS YEAR**



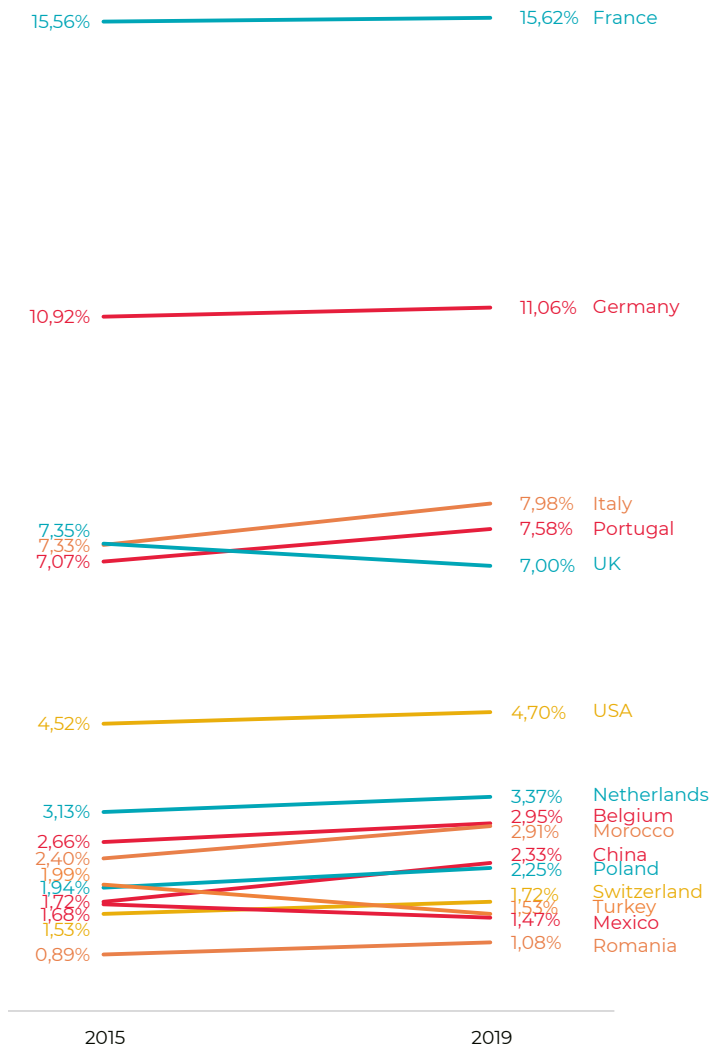
Source: drawn by ITI according to Instituto Nacional de Estadística

In addition to industrial production, export activity also suffers. According to forecasts, the volume of exports of goods and services in 2020 will fall by 27.1% compared with 2019. Last year, the volume of exports of Spain increased by 1.8% compared to 2018 and amounted to \$ 0.34 trillion. Spain has a deficit in the balance of foreign trade, which decreased by 5.49% in 2019 ¹⁷. The bulk of Spain's exports accounts for EU member states: France, Germany, Italy, Portugal and the UK alone accounted for about 50% of the exports in 2019. Other countries, the USA, Morocco, China, and Mexico are present in the main geographical structure of exports. At the same time, the largest increase among all the countries that form the basis of the geographical structure of exports was demonstrated by China: the volume of exports over the past five years increased by 59.20%.

¹⁷ Source: http://www.thespanisheconomy.com/stfls/tse/ficheros/2013/agosto/200221_SPANISH_EXTERNAL_SECTOR.pdf

Figure 11.

GEOGRAPHICAL STRUCTURE OF EXPORT - SPAIN



Source: drawn by ITI according to ITC

The main export items of Spain to third countries are automobiles and aircraft, food, beverages, chemical products and machinery. The largest share accounts for the export of cars, parts thereof and trucks (15.91% of the total value of exports in 2019). It should be noted that the fourth largest share falls on the export of fruit, vegetables, nuts and lettuce. The biggest contribution to the increase in the country's export over the past five years was made by a 17-fold increase in the supply of paving slabs, cladding plates and ceramic cubes to third countries; motor cars, platforms (3-fold); goods for entertainment (5-fold). In general, in 2015–2019, Spain managed to increase exports for all commodity items, with the exception of tractor exports.

Table 3.

THE MAIN GOODS IN THE STRUCTURE OF SPAIN'S EXPORTS TO THIRD COUNTRIES

Name of goods	Share in 2015	Share in 2019	Change in 2015-2019
Passenger cars, parts thereof; freight transport	17.50%	15.91%	9.35%
Oil and oil products; biodiesel, lubricant products, coke, bitumen	4.46%	6.15%	66.10%
Women's and men's clothing, knitwear	2.83%	3.09%	31.14%
Fruit and vegetables, nuts, lettuce	3.48%	2.98%	2.95%
Medicines	3.03%	2.93%	16.44%
Aircraft; spacecraft, parts thereof	1.62%	2.11%	56.27%
Fresh pork	1.10%	1.61%	75.07%
Internal combustion engines and parts thereof, turbojet and turboprop	1.75%	1.52%	4.40%
Primary chemicals	1.52%	1.35%	7.02%
Electrical equipment for electrical circuits; electric transformers, inductors; electric generators	1.19%	1.29%	30.85%
Grape wines, liqueurs, alcohol tinctures	1.33%	1.24%	12.44%
Ores and copper concentrates, zinc, copper	0.98%	1.15%	41.87%
Plastic products	1.07%	1.11%	25.14%
Perfume and eau de toilette, cosmetics	0.80%	1.10%	64.67%
Tires; bearings and speed variators	1.10%	1.07%	17.53%
Olive oil	1.09%	1.03%	13.58%
Paving slabs, tiles; ceramic cubes	0.07%	0.99%	1636.39%

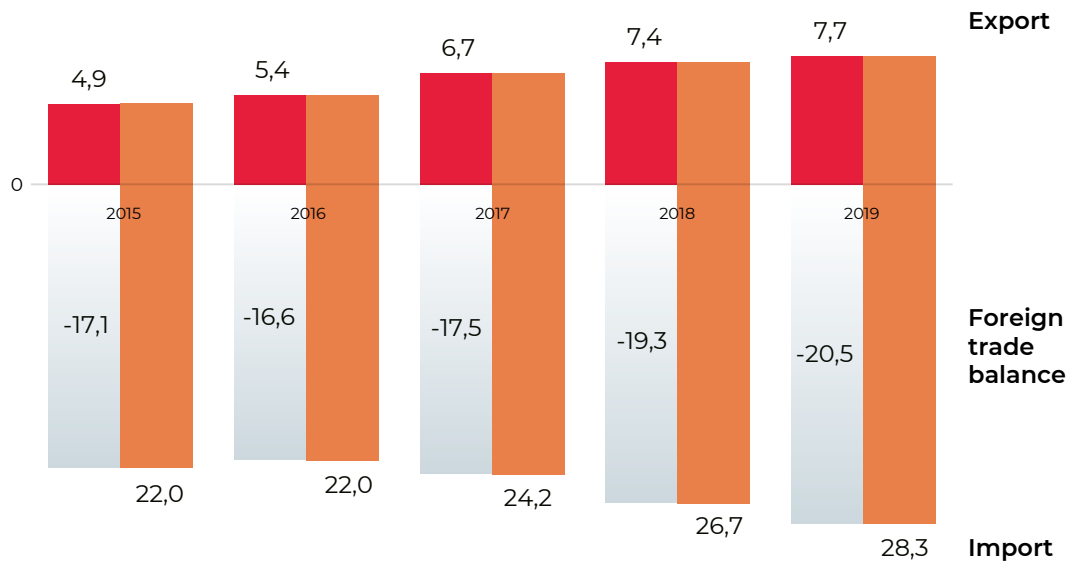
Source: calculated by ITI according to ITC

Spain's exports to China by rail

Trade relations between China and Spain are asymmetric: the trade balance of Spain in trade with China is stably negative and makes up more than 50% of Spain's total trade deficit, or \$ 20.52 billion. However, Spain's export to China over the past five years has grown by 59.20% to \$ 7.73 billion compared with an increase in imports of 28.56%. This may justify the assumption that Spain has a large export potential in trade with China, which can be opened up through increased supply chain efficiency, including through the redistribution of export flows among the fastest, most affordable, and most reliable modes of transport.

Figure 12.

DYNAMICS OF THE VOLUME OF FOREIGN TRADE OF SPAIN WITH CHINA, BILLION USD USA



Source: drawn by ITI according to ITC

The structure of Spain's exports to China differs from the commodity structure of exports to third countries primarily in the fact that among the goods constituting about 70% there are no vehicles, aircraft or engines (internal combustion, turbojet and turboprops), which in the structure of exports to third countries together account for 19.54% of total exports. China also imports Spanish fruit and vegetables (excluding citrus fruits) in small quantities despite the fact that Spain is a major exporter of these products: a mere 0.02% of total exports to China. More than 30% of exports to China in aggregate cover fresh pork and pork fat; copper, zinc, lead ores, concentrates and scrap. The range of transportation of exported goods does not prevent Spain from exporting perishable goods to China, such as fresh pork, milk and cream, in large volumes. During the analyzed period, Spain managed to significantly expand the export of certain items, such as fresh pork (5-fold), cosmetics (more than 35-fold), frozen fish (almost 3-fold), citrus fruits (12-fold), milk and cream (almost 12-fold).

Table 4.

THE MAIN GOODS IN THE STRUCTURE OF SPAIN'S EXPORTS TO CHINA

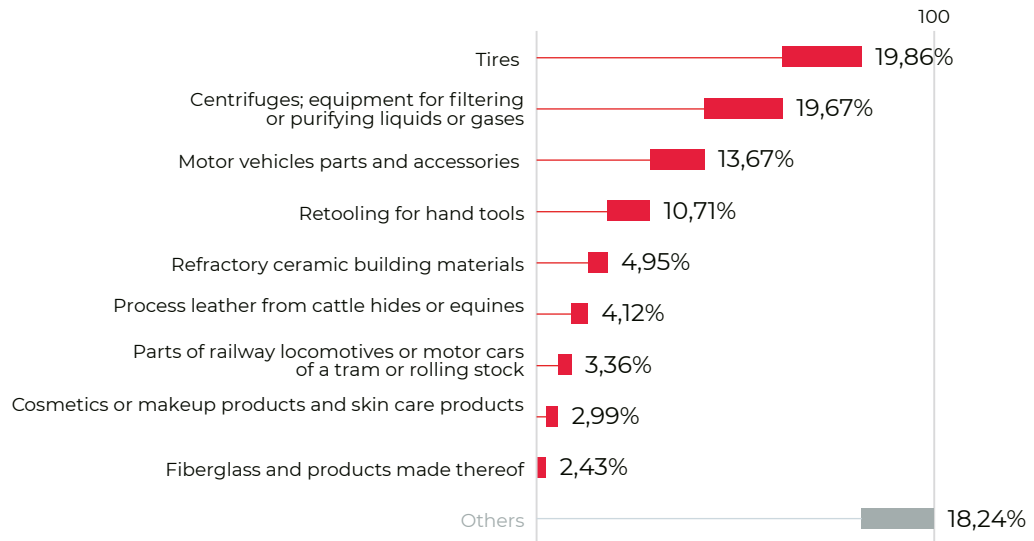
Name of goods	Share in 2015	Share in 2019	Change in 2015-2019
Fresh pork and pork fat	5.20%	16.61%	408.73%
Copper, zinc, lead ores, concentrates and scrap	9.04%	16.20%	185.41%
Edible offal; animal intestines and stomachs	2.88%	5.38%	197.46%
Motor vehicles parts and accessories	4.59%	4.55%	58.03%
Clothing, knitwear, shoes	5.03%	4.47%	41.50%
Primary chemicals	3.73%	3.68%	57.06%
Medicines	2.85%	2.31%	29.13%
Grape wines	2.59%	1.89%	16.08%
Olive oil	2.66%	1.60%	-4.52%
Cosmetics	0.05%	1.23%	3480.84%
Human and animal blood, immune serums	2.46%	1.08%	-29.75%
Measuring or monitoring devices, machines with individual functions	1.16%	1.07%	47.06%
Frozen fish	0.54%	0.94%	174.47%
Oil and oil products	0.14%	0.91%	940.86%
Feed products (rutabaga, chard, clover, etc.)	0.84%	0.87%	64.41%
Ferrous pipes, tubes and profiles	0.56%	0.81%	130.73%
Citrus fruits	0.09%	0.65%	1110.80%
Electrical equipment for switching or protecting electrical circuits	0.53%	0.58%	72.81%
Milk and cream	0.07%	0.50%	1076.07%
Paving slabs, tiles; ceramic cubes	0.04%	0.50%	2024.77%

Source: calculated by ITI according to ITC

Spain has a developed maritime transport industry, which is reflected in the structure of Spain's exports to China by modes of transport: over 80% of the cost volume and about 99% of the physical volume are transported by sea. Rail transport accounts for less than one percent of Spain's value of exports to China. However, in 2015–2019, the volume of goods transported by rail to China increased almost 12-fold. Upstream products are mainly transported from Spain to China by rail. In 2019, nine product groups accounted for 81.76% of the value of exports to China by rail, and according to Eurostat, these goods were not transported to China by rail in 2015.

Figure 13.

COMMODITY STRUCTURE OF SPAIN’S EXPORTS TO CHINA, TRANSPORTED BY RAIL, 2019

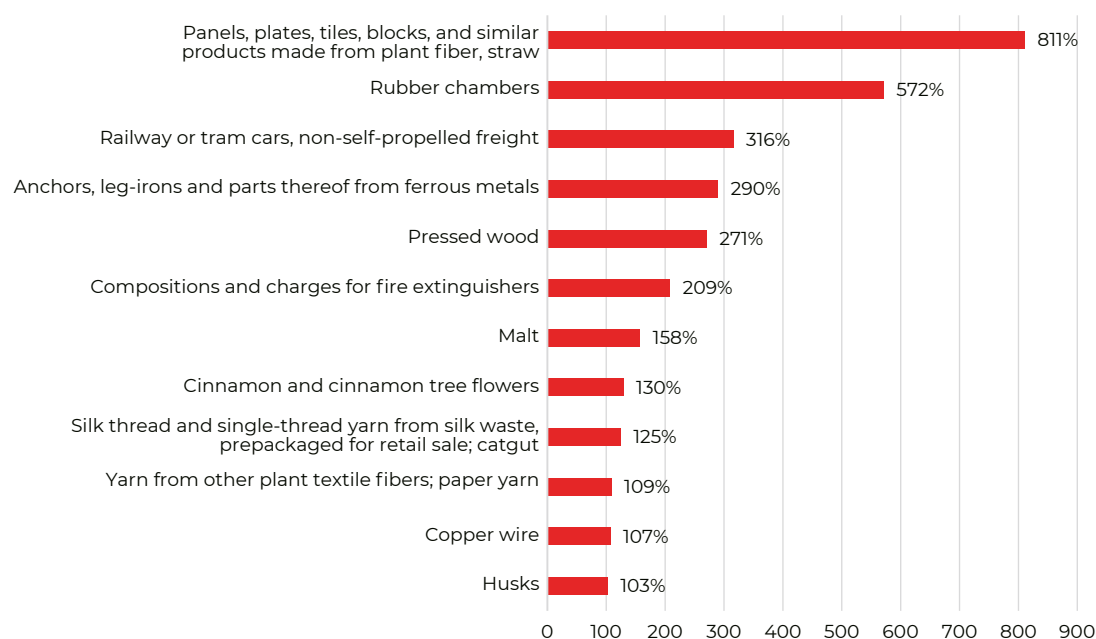


Source: drawn by ITI according to ITC

In addition to goods that are already transported by rail and which are successfully exported by Spain, there are goods that are not delivered or exported in small volumes to China, but China has a demand for them. This potential is represented by goods such as anchors, cinnamon, railway cars, rubber chambers, copper wire, malt, etc. Spain is a large supplier of agricultural products, but the potential for development is small, since there is usually relatively low demand for such goods in China, possibly due to some preferences or due to a developed manufacturing sector that can cover domestic demand.

Figure 14.

THE LIST OF GOODS FOR WHICH SPAIN HAS THE POTENTIAL TO START EXPORT DELIVERIES TO CHINA BY RAIL ¹⁸



Source: drawn by ITI according to ITC

The export structure of Spain to third countries is generally characterized by a tendency to rail container transportation, as the country mainly specializes in the production and export of goods with high added value, the sale of which can cover higher transport costs (compared with freight tariffs) for shipment by rail. In turn, the delivery of perishable goods by rail from Spain to China is a more attractive alternative to air transport, which is currently facing restrictions due to the pandemic.

Rail transportation in Spain

The transport infrastructure of Spain is characterized by an extensive network of roads and railways, while the country has the second largest network of high-speed railways in the world. The geographical position of Spain makes it an important component of the flow of goods between Europe, Africa and America. Spain has established railway transport links with China, in particular along the main route of the Belt and Road Initiative, Yiwu - Madrid, which passes through Kazakhstan, Russia, Belarus, Poland, Germany, France. This route includes about 13,052 km of lines ¹⁹.

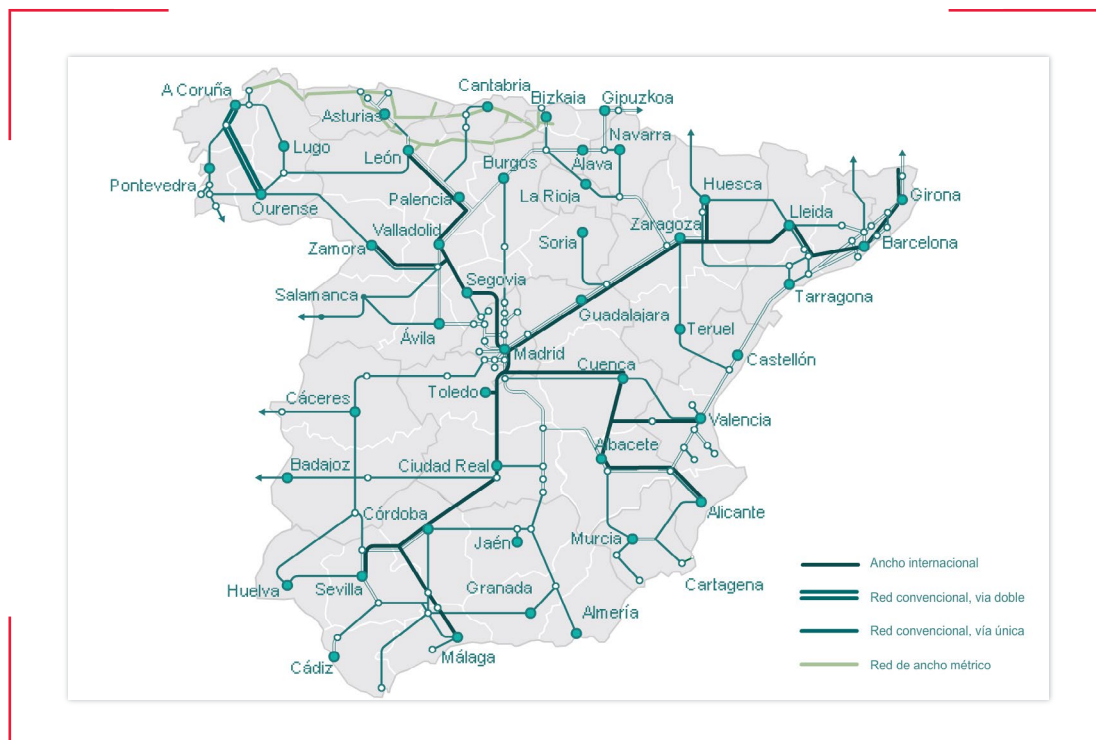
Trans-European transport corridors are integrated into the national railway network, which is managed by the national infrastructure operator ADIF. It serves about 13,300 km ²⁰ of railways.

¹⁸ This list is not exhaustive.

¹⁹ Source: https://www.antena3.com/noticias/economia/llega-china-segundo-tren-mercante-madridyiwu-objetivo-ser-mensual_20150621571e37356584a8abb58280d4.html

²⁰ Source: https://ec.europa.eu/transport/modes/rail/ertms/countries/spain_en

Figure 15.

ADIF RAILWAY INFRASTRUCTURE FOR CARGO TRANSPORTATION IN SPAIN ²¹Source: ADIF²²

The main transport operator using the infrastructure of the national operator ADIF is the state-owned company RenfeOperadora. In terms of cargo transportation, the company's activity is based on multimodal transportation in transport containers due to a wide fleet of 3,200 cars and more than 800 containers. According to the plan for May 2020 ²³, trains departed from Barcelona to Bilbao (a mining city), Seville (the city's industry includes the production of auto components, FASA-Renault; beer, Heineken; the aviation industry, EADS; etc.), San Roque (a large industrial center with Abelló Linde, Alstom, CEPSA, Endesa, Enel, E.ON, Repsol, etc.), Vigo (industrial areas, developed automobile industry, represented by Vigo PSA Factory, large commercial port), Zaragoza (Bosch, Siemens, Balay, Lacasa, Rivasam Intercontinental SA, La Zaragozana, Opel España SA, Adidas España SA, Industrias Celulosa Aragonesa SA and Torraspapel SA, LeciTrailer, Schmitz Cargobull, Schindler, etc.) Murcia (agriculture, beverage production, chemical industry).

Renfe also provides transportation services for materials related to the metallurgical industry: rolls, pipes, steel, rails, etc. To transport these goods, the company has more than 3,000 cars and operates more than 300 weekly trains that can carry 750 tons each. Along with this, wood, paper, bulk goods or liquids (fuel, chemical products) are transported. Renfe has two terminals: Ariz²⁴ in Basauri and Lutxana²⁵ in Baracaldo.

21 Legend: 1. European gauge (1,435 mm); 2. Double track line; 3. Single track line; 4. Narrow gauge line (1,000 mm)

22 Additional information: http://www.adif.es/AdifWeb/instalacionesMapa.jsp?i=en_US (the interactive map shows all the railway terminals located in a specific territorial-administrative unit of Spain)

23 Source: https://www.renfe.com/empresa/mercancias/intermodal/pdf/GUIA_SIM_MAYO_2020.pdf

24 Source: <https://www.renfe.com/empresa/mercancias/img/Ficha%20Terminal%20de%20ARIZ.pdf>

25 Source: <https://www.renfe.com/empresa/mercancias/img/Ficha%20Terminal%20de%20LUTXANA.pdf>

Transfesa, a subsidiary of Deutsche Bahn, is another key rail operator in both the European transport market and the Spanish market. In early April 2020, the company launched a new refrigerated express train from Spain to the UK²⁶. Two new routes run from Valencia and Murcia to the UK, the trip takes 72 hours. Routes of railway transport operators pass mainly via large industrial centers and seaports.

In general, the railway infrastructure in Spain is actively developing, primarily constituting the main competition for road transport. In the near future, it is planned to implement some projects in this industry. It is planned to implement a project to resume the operation of the Pau-Canfranc-Zaragoza railway line, which currently represents a bottleneck in the mountainous region between Spain and France from a technical and geographical point of view²⁷. The project start date is April 2019, and the end date is the end of 2023.

26 Source: <https://www.railfreight.com/railfreight/2020/04/08/new-fresh-route-between-spain-and-uk-launched/>

27 Source: https://ec.europa.eu/inea/sites/inea/files/cefpub/cef_transport_2019_ap_call_brochure.pdf#page=39

CONCLUSION

Conclusion

France and Spain are attractive places for a study in the context of the development of rail freight within the West – East corridor due to their wide industrial base and rapidly developing railway infrastructure. Countries have a favorable geographical location and access to the sea, which allows them to combine and develop both multimodal transport, with the participation of rail transport, and other types of transport separately.

The COVID-19 pandemic affected the economies of both countries causing a drop in output. First of all, the automotive industry of France and Spain suffered. However, countries have yet to pass the lower point of recession in Q2 2020, and the consequences for France will be more tangible, as the country has already faced a new crisis with some domestic economic problems.

At this stage, France exports to China electrical equipment, electrical equipment for electrical circuits, flat steel, malt extract, tires and pneumatic rubber tires, etc. by rail. An analysis of the commodity structure of France's exports to China and China's imports showed that France has the potential in such goods as looms, sculpting pastes, film, flour, canned fruit and nuts, tissue paper, melons, etc. However, France also has the potential that needs to be disclosed by increasing the very volume of exports of already transported goods. This may be facilitated by the implementation of plans for the modernization of railway infrastructure in 2020. In particular, lines connecting industrial regions with the existing transport lines will be built and modernized in the country.

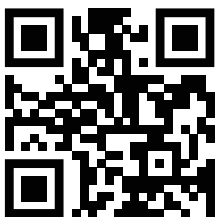
Spain, unlike France, has a stable established communication with China, primarily along the route Yiwu– Madrid, which acquired strategic importance during the pandemic of the novel coronavirus infection, as it ensured transportation of personal protective equipment and medicines that were subsequently distributed all over Europe. Spain's export potential is based on products such as panels, tiles, blocks of plant fiber; rubber chambers; pressed wood; railway cars; malt, etc. It should be noted that these are mainly not high-tech products, which makes it inappropriate to send these goods to China by means of transport with high transportation tariffs. Currently, the products railways transport to China include mainly tires, parts of motor vehicles; centrifuges and equipment for cleaning liquids or gases; processed cattle hide and leather, etc.

Spain has a high-speed rail internal network and a large number of border crossings with neighboring countries. The country is a link in the trade between Europe and Africa, Europe and America. Due to the high frequency of railway lines and large trading ports, Spain can develop both multimodal transportation and railway transportation with the participation of other countries, via France, Germany, Poland, Italy, etc.

Thus, France and Spain have rich export potential in the context of trade with China, which can be disclosed by starting the supply of certain goods, as well as expanding the volume of already exported goods. In turn, shippers, manufacturers and countries as a whole can increase exports to China through diversification of supply chains, in particular the transition to rail transport.

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