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International Trade Analysis

Role of major economies and impact of COVID-19 pandemic

Thesis

Degree Programme Gateway to International Business



SEINÄJOKI UNIVERSITY OF APPLIED SCIENCES

Thesis abstract

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International trade, since its emergence and following its evolution over the last two centuries, has become one of the main driving forces of the globalisation process, connecting the economies of the main countries and regions of the world. In this work, we will carry out a descriptive analysis of the trade and services balance of the three main economies at world level: the United States, China and the EU-27 with the aim of better understanding their relevance in the development of trade between countries. Likewise, we will analyse the impact of the current COVID-19 pandemic on international trade, both in goods and services.

¹ Keywords: International Trade, Trade Balance, Balance of Services, COVID-19, Descriptive Analysis.

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Terms and Abbreviations

US	United States
US thousand \$	United States thousand dollars
EU 27	European Union 27
EU 28	European Union 28
UK	United Kingdom
WTO	World Trade Organization
GDP	Gross domestic product

1 INTRODUCTION

The year 2020 has become a turning point in terms of the development of the global economy. While 2019 was already reflecting a profound slowdown in the international economy, the COVID-19 pandemic has created a new scenario in which, in addition to the problems we had already been experiencing, we have to add those brought about by a crisis of global magnitude.

In this terrifying scenario, which shows us the B-side of an increasingly globalised world where people, goods and money move with virtually no restrictions, we are faced with an unprecedented problem in terms of the economy: the deterioration of the global supply chain. It should be noted at this point that the trade in services has not been affected in the same way as the trade in goods, with the stabilisation of the latter being the current priority and the main challenge for the most powerful economies.

As we have already said, 2019 showed the lowest growth rates in the last decade, with a -0,1% rate of change in world merchandise trade compared to the previous year. This slowdown in the growth of international merchandise trade is mainly explained by the increasing trade, social and political tensions that have taken place over 2018 around the world, reducing industrial investment in many of the countries with a more open external sector and thus, as production declined, reducing the volume of merchandise traffic in these countries. These are the consequences of the social wars in Latin America, the trade war between the United States and China or the uncertainty generated by Brexit on investors, among others.

In January 2020 the situation changed, as a solution to some of these global problems was found:

- United States and China reached a trade agreement to facilitate trade between the two countries.
- After extensive work by the British Parliament, the final terms for the UK's orderly exit from the EU 28 are agreed.

In October 2019, the WTO estimated growth of 2,7% for international merchandise trade, a figure that, in January, a priori, would be higher due to the improvement in the international trade outlook. However, we have appreciate how the positive impact of these measures were completely diluted in the new panorama created by the COVID-19 pandemic and how the major economies had to change their roadmaps to face the new challenges it posed.

Thus, in this descriptive analysis, for the sake of a better understanding of this new economic paradigm, we will look in detail at the role of the main world economies (United States of America, China and the EU 27) in the development of international trade, as well as the effect that the pandemic had on it and how they have tried to overcome it.

2 THEORETICAL FRAMEWORK

International trade, since its emergence several centuries ago, has been a key tool for connecting the productive capacities of different countries and, therefore, an indispensable element in the process of globalisation and economic growth. The study of this trade has been the objective of great economists who, throughout history, have dedicated themselves to demonstrating why it is beneficial for the development of the world economy, thus establishing its mechanisms of operation and its theoretical bases.

In this section, used as a theoretical framework for our analysis, we will explain the foundations on which the international trade framework we know today has been built. To do so, we will briefly describe the models on which current international trade has been formulated. We will therefore distinguish three categories into which we will group these models.

2.1 Traditional Trade Theory

This encompasses those models based on the explanation of trade as the cause of the differences between countries, assuming these differences to be a competitive advantage in a market of perfect competition.

- Adam Smith's theory of absolute advantage (late 18th century): Smith argued that, with free trade, each country could specialise in the production of those goods in which it had an absolute advantage and export those in which it had an absolute disadvantage.
- David Ricardo's theory of comparative advantage (early 19th century): David Ricardo completed the theory by adding that in the case of a country having an absolute disadvantage in the production of goods compared to another country, if the relative costs of both countries are different, exchange is possible and beneficial. In this case, the country with an absolute disadvantage should specialise in the production and export of the good whose absolute disadvantage is lower, thus gaining the comparative advantage.

- Heckscher-Ohlin (H-O) model (1919-1933): A country will export the good whose production intensively uses its relatively abundant factor, while it will import that good which intensively uses its relatively scarce factor.

2.2 New International Trade Theory

In a market of imperfect competition, it identifies alternative gains from trade to the existing differences between the productive capacities of each country. It therefore advocates an approach based on intra-industry trade and economies of scale for the optimisation of production.

- Paul Krugman's model of monopolistic competition (1979): Based on two fundamental hypotheses: the existence of internal economies of scale for firms and a sample of consumer preferences with respect to products. Thus, the fundamental benefits of trade under these assumptions are an increase in output with a better use of economies of scale and a decrease in the price paid by consumers due to increased competition.
- Reciprocal dumping model by J.A. Brander and Paul Krugman (1983): The model argues that, in the case of two monopolies in different countries, selling the same product, with the same costs and to an audience with the same preferences, dumping is the only way for trade to emerge. Both firms will choose to export their product and sell it cheaper in the other country rather than sell more in their own countries at the cost of lower prices and lower profits.

2.3 The Very New Models of International Trade

It adds to the previous models the importance of heterogeneity among firms, even among firms in the same industry.

- Model by R.E. Baldwin and R. Forslid (2006): They add the anti-variety effect to the model of trade liberalisation with heterogeneous firms. The authors argue that,

although free trade leads to welfare gains, the variety of products consumed in a country may decrease as a result of liberalisation.

- Comparative advantage model by Bernard, Reding and Schott (2007): Assume two countries, two industries and two firms. Each industry will be composed of several firms, each producing a single differentiated variety within its industry. Understanding that each country has different factor abundances and that each industry operates at different productivity, the authors argue that factors will eventually move to the more productive industries. In turn, the increase in exports of these industries will lead to an increase in demand and an increase in the price of inputs. Thus, firms and industries with lower productivity will have to exit the market for lack of comparative advantage.

Having said all of the above, we conclude our theoretical framework, by stating the theoretical foundations on which the functioning of contemporary international trade has been based.

3 PROBLEM AND METHODS TO SOLVE IT

3.1 Problem

The problem to be addressed in this thesis will be the lack of clarity regarding the trade situation of the major world powers, as well as the effects that the COVID-19 pandemic has had on their activity in international trade in goods and services.

3.2 Methods

To address the above-mentioned problem, we will use the descriptive analysis method to interpret the information available in the main world statistical databases and to produce graphs that show, in a simple way, those data that are most relevant for understanding the evolution of trade exchanges.

4 INTERNATIONAL TRADE TODAY AND COVID-19 EFFECTS

Over the last few decades, international trade has become the connecting tool between the different economies of the contemporary world. If we look back to the past, specifically to the 20th century, it was not until 1945 that the main economic powers, accumulators of wealth after the industrial revolution, decided to open their economies to the outside world. Thus, after decades of shaping a new economic and trade framework that would integrate the main contemporary economic blocs (European Union, CACM, the Pacific Alliance, etc.), a new network was created that united the production, labour and technology of countries all over the world and opened the doors to globalisation, defined as the "economic integration of national economies into a global economy, through increased international trade and flows of capital, communication, migration and (financial) interdependence of markets" (Daly, 1999)

Thus, over the last decades we have observed how this new trade network has served to connect different countries and cultures, as well as to foster the economic growth of these countries.



Figure 1. International Trade % of World GDP (World Bank, s.f.)

Figure 1 shows that already in the 1970s, international trade accounted for more than a quarter of world GDP (27,3%). This figure has been increasing over time due to the growing influence of trade on economic growth, marked by the increase in terms of both volume and value between different countries, representing the 56% of world GDP in 2019.

From a more current approach to international trade, despite the undeniable growth it has shown over the last few decades, macroeconomic databases, specifically the (World Trade Organization, s.f.) statistical database, indicate that international trade experienced a contraction compared to previous years in 2019, before COVID-19 pandemic starts. Thus, international merchandise trade in volume terms showed an annual variation of -3% in exports and -2,9% in imports, figures that translate into a decrease of 0,1% in the volume of world merchandise trade. On the other hand, trade in services were more reticent to this decrease, increasing its exports and imports in terms of value by 2% and 2.4% respectively, a figure which, although lower than the growth shown in previous years, has shown the inflexibility of trade in services in the face of the irregularities of the global market, providing them with an added value of which the main economies that trade with them are increasingly aware.

This slowdown in the growth of international trade can be explained by several reasons that must be considered in order to understand the current state of trade, especially in goods. Firstly, at this point we must point out that in 2019 the state of the economic cycle was one of maturity, which (almost necessarily) implies a slowdown in the economic indicators that show the highest growth. On the other hand, the fundamental reason in terms of the socio-economic outlook lies in the increasing trade, social and political tensions that have been taking place over the past year around the world, decreasing industrial investment in many of the countries with a more open external sector and, therefore, as production has decreased, the volume of goods traffic in these countries has decreased. These are the consequences of the social wars in Latin America, the trade war between the United States and China or the uncertainty generated by Brexit on investors, among others.

In January 2020 the situation changed, as a solution to some of these global problems was found:

- The United States and China reached a trade agreement to facilitate trade between the two countries.
- After extensive work by the British Parliament, the final terms for the UK's orderly exit from the EU-28 are agreed.

Despite this encouraging outlook for new growth in international trade, in March 2020, the COVID-19 pandemic arrived in the world from the Chinese city of Wuhan. This pandemic has been and continues to be a threat to both global health and the global economy. Without being an exception, international trade has seen its growth severely reduced, thus showing the B-side of a globalised world in which, everything is connected.

Thus, before going into the details of the trade activity of the three major world powers, we will first discuss the effects that the COVID-19 pandemic had on world trade in goods and services after its emergence.

4.1 Merchandise Trade

The COVID-19 pandemic has led to a decline in global merchandise trade. Export restrictions, reduced or frozen production in some cases, and reduced consumption of certain goods have resulted in a worldwide decline in trade between countries. While this type of trade had already recorded a decline (-0,1%) in global terms, pre-pandemic forecasts were favourable for a new period of growth, but these optimistic forecasts dissipated in the more immediate effects of the pandemic on the world economy.

Thus, the WTO's end-2020 forecasts for international merchandise trade growth showed the following results for the next two years (2021 and 2022):

	2015	2016	2017	2018	2019	2020	2021
Volumen del comercio mundial de mercancías^b	2,3	1,4	4,7	2,9	-0,1	-9,2	7,2
Exportaciones							
América del Norte	2,6	0,7	3,4	3,8	1,0	-14,7	10,7
América Central y del Sur	0,6	1,3	2,9	0,1	-2,2	-7,7	5,4
Europa	2,9	1,1	3,7	2,0	0,1	-11,7	8,2
Asia	1,3	2,3	6,7	3,7	0,9	-4,5	5,7
Otras regiones ^c	1,8	3,5	0,7	0,7	-2,9	-9,5	6,1
Importaciones							
América del Norte	5,2	0,3	4,4	5,2	-0,4	-8,7	6,7
América Central y del Sur	-7,6	-9,0	4,3	5,3	-2,1	-13,5	6,5
Europa	3,6	3,0	3,0	1,5	0,5	-10,3	8,7
Asia	2,1	2,2	8,4	4,9	-0,6	-4,4	6,2
Otras regiones ^c	-3,9	-4,5	3,4	0,3	1,5	-16,0	5,6
PIB real a tipos de cambio de mercado	2,8	2,4	3,1	2,8	2,2	-4,8	4,9
América del Norte	2,8	1,7	2,4	2,8	2,1	-4,4	3,9
América Central y del Sur	-0,8	-2,0	0,8	0,6	-0,2	-7,5	3,8
Europa	2,4	2,1	2,8	2,1	1,5	-7,3	5,2
Asia	4,3	4,2	4,8	4,1	3,9	-2,4	5,9
Otras regiones ^c	1,5	2,4	1,9	2,1	1,4	-5,5	3,5

Figure 2. WTO merchandise trade evolution forecast (World Trade Organization, s.f.)

These forecasts, as we have already mentioned, were provided by the (World Trade Organization, s.f.) at the end of 2020, the first year of the pandemic. Now, a little more than two years later, it will be interesting to contrast these data with the real evolution of international trade in goods during this period. Below are the updated forecasts of the evolution of international merchandise trade in October 2022 according to the WTO:

Comparing the two forecasts and focusing on the years in which the COVID-19 pandemic had the greatest impact (2020 and 2021), we note the following:

- By 2020, international merchandise trade was reduced in volume terms by 5,2% compared to the 9,2% forecast by the WTO at the end of 2020. This difference, which is quite significant, shows on the one hand the pessimistic nature of the forecasts made in the year of the pandemic's greatest impact, the effects of which in 2020 were immediate and devastating. On the other hand, this difference also reflects the capacity for reaction and recovery of world trade which, despite registering a significant fall, shows how the main world economies managed to mitigate the effects of the pandemic.

- With respect to the year 2021, in which the WTO was already forecasting in 2020 that world merchandise trade would show signs of improvement, a growth of 9,7% was recorded compared to the estimated 7,2%. It should be noted at this point that this difference between actual and estimated growth is partly justified by the growth in trade shown by Asia in 2021 (13.3 % in its exports and 11,11 % in its imports compared with the 6,2 % and 5,7 % forecast in 2020), the variations forecast for North America and Europe being greater than the actual ones.

This merely informative comparison between the WTO's projected and actual growth in international merchandise trade clearly shows us another of the most relevant facts in the pandemic: the heterogeneity of the pandemic's impact on the world's major economies.

Before starting our analysis of which types of goods have been most affected in terms of trade during the pandemic, it is worth noting that the second quarter of 2020 saw the largest drop in the history of world merchandise trade with a year-on-year change of -14,3%.



Figure 3. WTO merchandise exports and imports projections (World Trade Organization, s.f.)

4.2 Commercial Services Trade

For international trade in services, the data available are much less accurate than for goods. This is because there is no fixed price for most commercial services available on the market, so the impact of the pandemic on these is much less accurate.

Despite this, below is a graph that the WTO produced in the first quarter of 2020. In this graph, we can clearly see the trend in trade in services worldwide.

Despite this, below is a graph that the WTO produced in the first quarter of 2020. In this graph, we can clearly see the trend in trade in services worldwide.

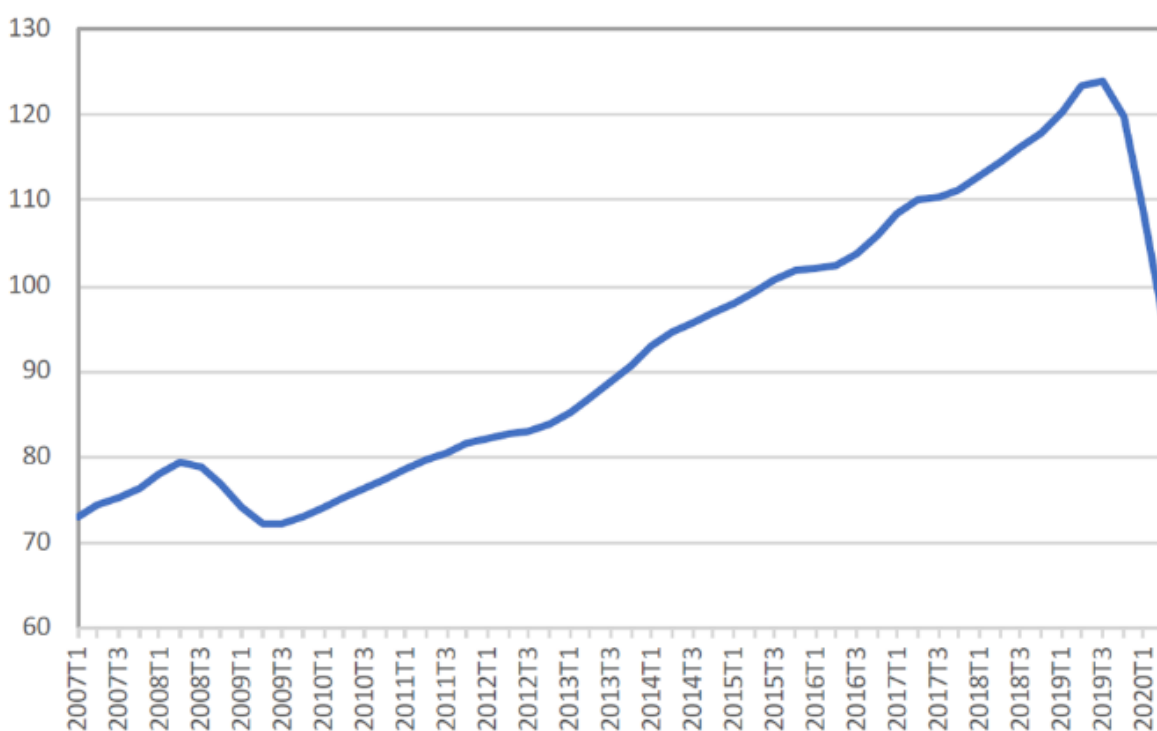


Figure 4. Quarterly developments in world services trade (World Trade Organization, s.f.)

Figure 4. Quarterly developments in world services trade shows how, after reaching its historical peak in 2019, trade in services suffered the largest historical drop in its rate of activity (-23%), larger than that of the 2008 crisis (-9%).

Taking this devastating picture of the fall experienced by international trade in services at the beginning of the COVID-19 pandemic as a starting point, we will now analyse in detail

how it has actually evolved in 2020 and 2021, as we have done previously for trade in goods.

Again, before delving into the impact of the pandemic on each of the economies chosen for our analysis, we turn to the WTO's statistical database for a first global perspective:



Figure 5. Quarterly evolution of trade in services in 2020 by service category (World Trade Organization, s.f.)

It should be recalled that a large part of the travel services are for the tourism sector, which experienced its biggest drop in history due to the restrictions put in place by the different governments that prevented people from travelling freely between countries or even, sometimes, from moving between two points within the national territory.

That said, we will now carry out a descriptive analysis, based on data from statistical databases such as WTO, OECD and Eurostat, of the trade and services balance of the world's main trading powers: United States of America, China and EU-27, as well as the impact that the COVID-19 pandemic has had on this trade activity and their reactions to overcome its devastating effects.

5 UNITED STATES OF AMERICA

To begin our analysis, we will talk about the top representative in international terms of the North American economy: the United States. Leader of world hegemony after the end of the Second World War, in 1945 the United States had a gross product 60% higher than the total of the other 15 most powerful economies in the world (Marichal & Tedde, 2010). In 2001, United States would see the end of its absolute hegemony with the end of its phase of economic expansion and the entry of China into the WTO, confirming a new change of cycle reminiscent of what happened between Americans and British at the end of the 19th century.

In 2022, United States ranked first in the world in international trade in services, being the country that imported and exported the most services, representing the 10,32% and 12,78% respectively in terms of value of the world economy. In terms of trade in goods, our North American representatives ranked second in the world ranking of goods exporting countries last year (behind China) with the 8,28% of world exports in terms of value and first as importers of goods with the 13,15%.

In this section, we will discuss in detail the composition of the US trade and services balance, i.e. a descriptive analysis of the composition of its exports and imports.

5.1 Merchandise Trade

As mentioned at the beginning of this section, United States accounted for the 8,28% (2.062.937.261 thousand US \$) and 13,15% (3.375.948.186 thousand US \$) of total merchandise exports and imports value, respectively, in 2022. United States has been the second country in the top 5 merchandise exporters/importers with the smallest decrease in exports in 2020 (only behind China, whose merchandise exports increased by half a percentage point with respect to the previous year).

The evolution of the value of exports and imports of goods over the last five years is shown below.

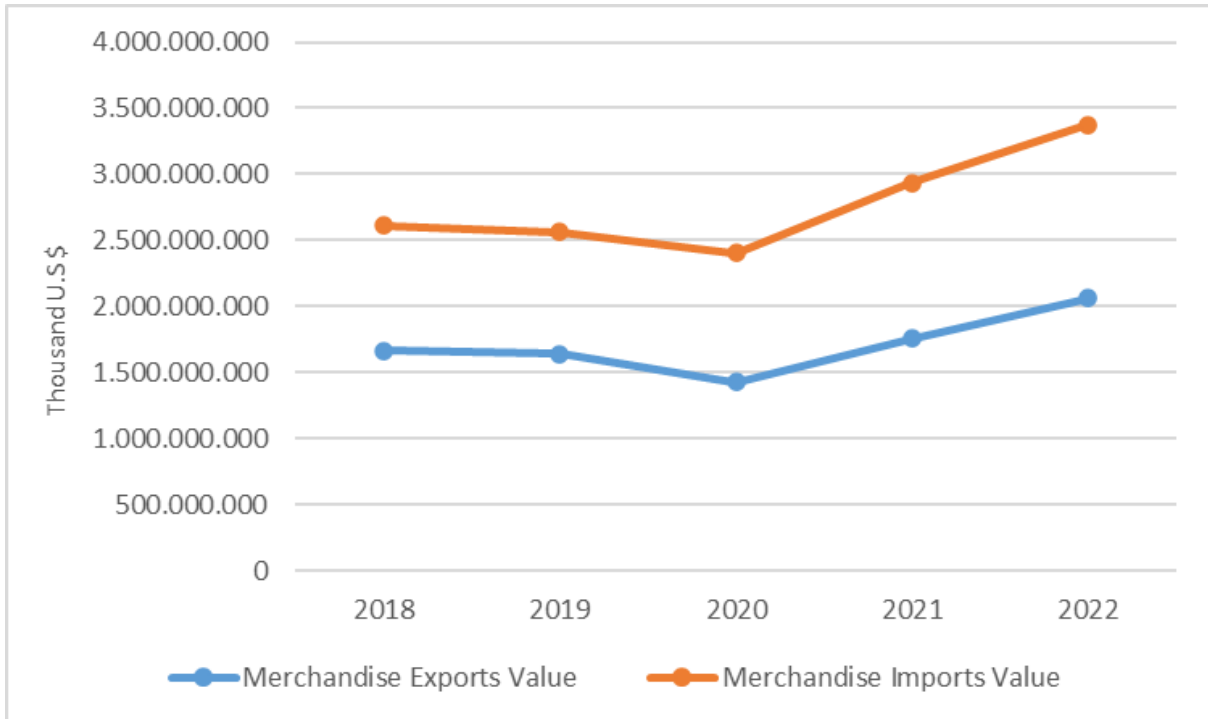


Figure 6. US merchandise exports and imports value evolution

As can be clearly seen in Figure 6, the evolution of the value of US exports and imports has been considerably homogeneous over the last 5 years. If we take a closer look, we can extract the following information:

The resulting balance of US trade in goods with the rest of the world has been negative throughout the period under review. Specifically, the balance of these exchanges in 2022 was $-1.313.010.925$ thousand US dollars. This fact leaves us with clear evidence that American trade in goods is, in general terms, in deficit for the Americans.

The value of imports and merchandise imports had already declined from 2018 to 2019 but recorded its largest drop in the period under review in 2020 as a consequence of COVID-19 pandemic. In this case, the value of imports contracted to a lesser extent than that of exports, leaving the Americans with decreases of $-6,11\%$ and $-13,26\%$ respectively.

Finally, for the recovery period (2020-2022), we again see higher growth in the value of imports than in exports. The former increased by $44,77\%$ in value terms between the end of 2020 (the year in which the immediate effects of the pandemic were most felt) and 2022, while the latter increased by $40,26\%$ over the same period. This data show how United

States has increased its dependence on other countries in terms of merchandise during COVID-19 pandemic.

Now that we know the weight of the US economy in international merchandise trade and how it has evolved during last years, we will analyse what the country exports and imports and what its main trading partners are:

The first thing we will do is to get a first overview of the composition of the portfolio of products exported by the United States in 2022.

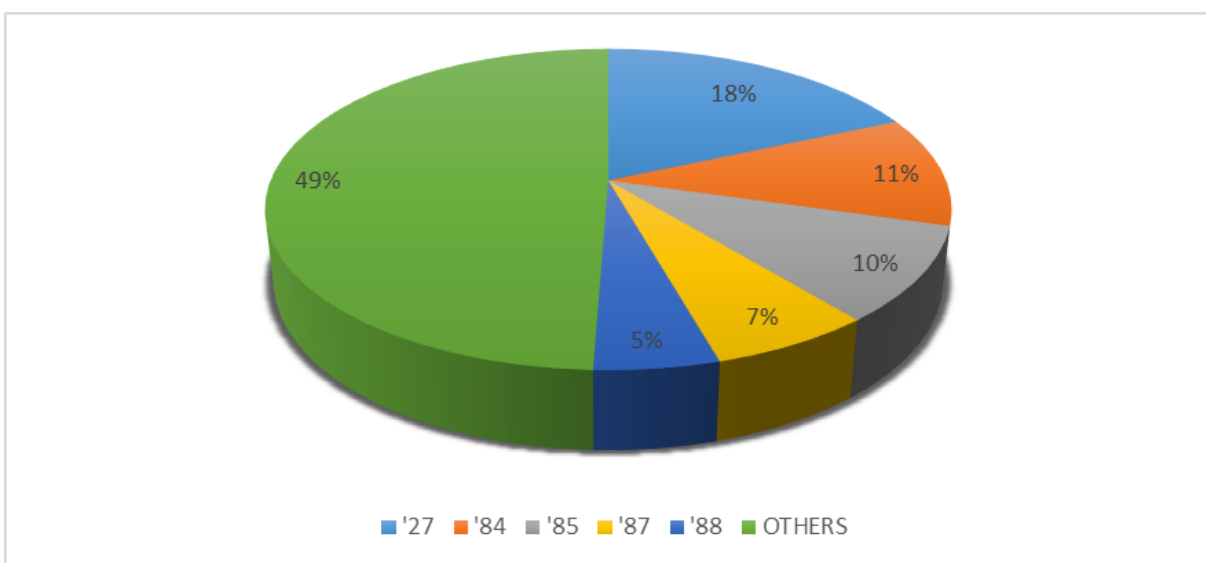


Figure 7. US Exported product share 2022

As can appreciate in Figure 7, the 51% of the value of American merchandise exports is concentrated in these 5 product groups, which are detailed below as a summary:

- 27: Mineral fuels, mineral oils and products of their distillation.
- 84: Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof
- 88: Aircraft, spacecraft and parts thereof.
- 85: Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television, etc.

- 87: Vehicles other than railway or tramway rolling stock, and parts and accessories thereof.
- 88: Aircraft, spacecraft, and parts thereof.

Regarding the main exported products, in Figure 8 we can see the evolution of the value of their exports from the United States between 2018 and 2022.

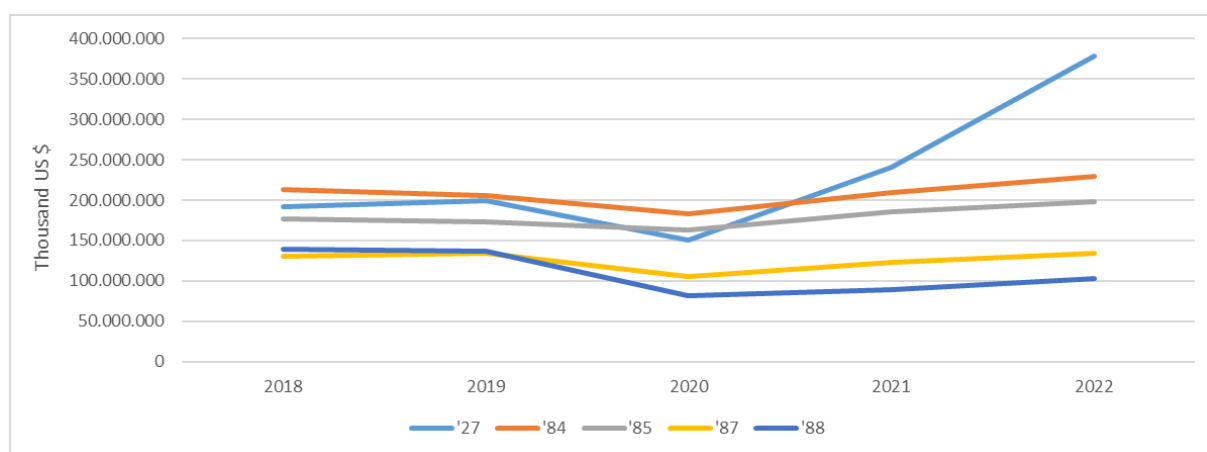


Figure 8. US Main products exports value evolution

Below, we highlight a number of facts that are evident simply by looking at the data exposed:

The products that suffered most from the effects of the pandemic were those in groups 27 and 88 recording a 24,25% and 40,45% diminution respectively between 2019 and 2020. The remaining products, despite slight decreases in the value of their exports, were considerably more reticent than the previous two groups.

Between the end of 2020 and 2022, on the other hand, the value of exports of group 27 products grew well above average (44,77%), reaching the top of the portfolio of products exported by United States from 2021.

In terms of imports, in the main products purchased by United States from foreign countries in 2022.

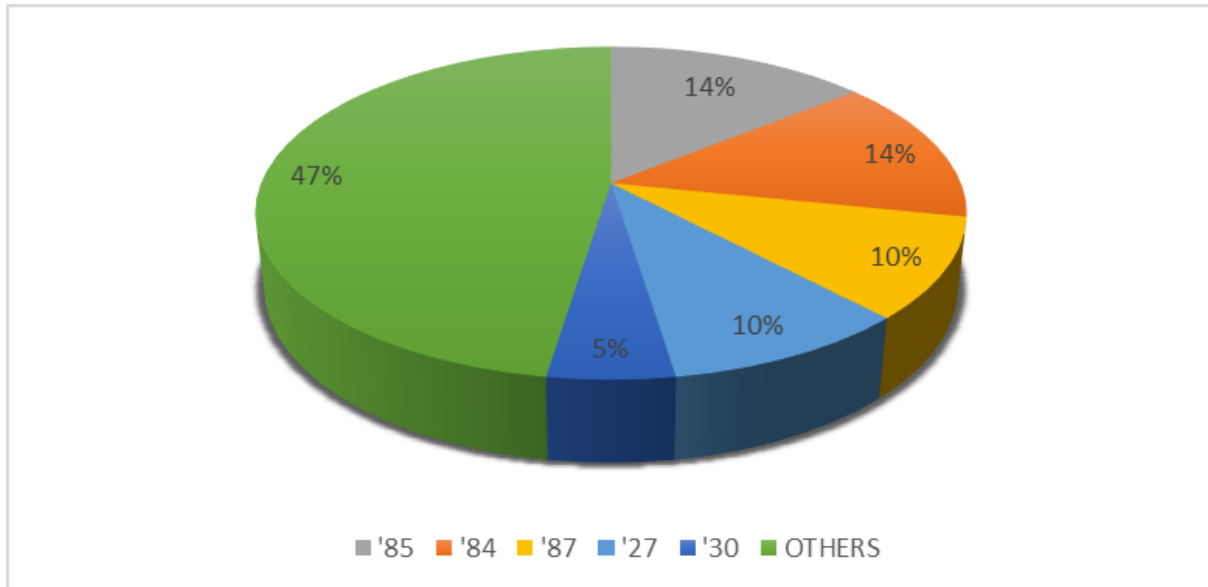


Figure 9. US Imported products share 2022

In this case, the 53% of the value of American merchandise imports is concentrated in these 5 product groups. We have a new group in Figure 9:

- 30: Pharmaceutical products.

Regarding the main exported products, in Figure 10 we can see the evolution of the value of their imports between 2018 and 2022.

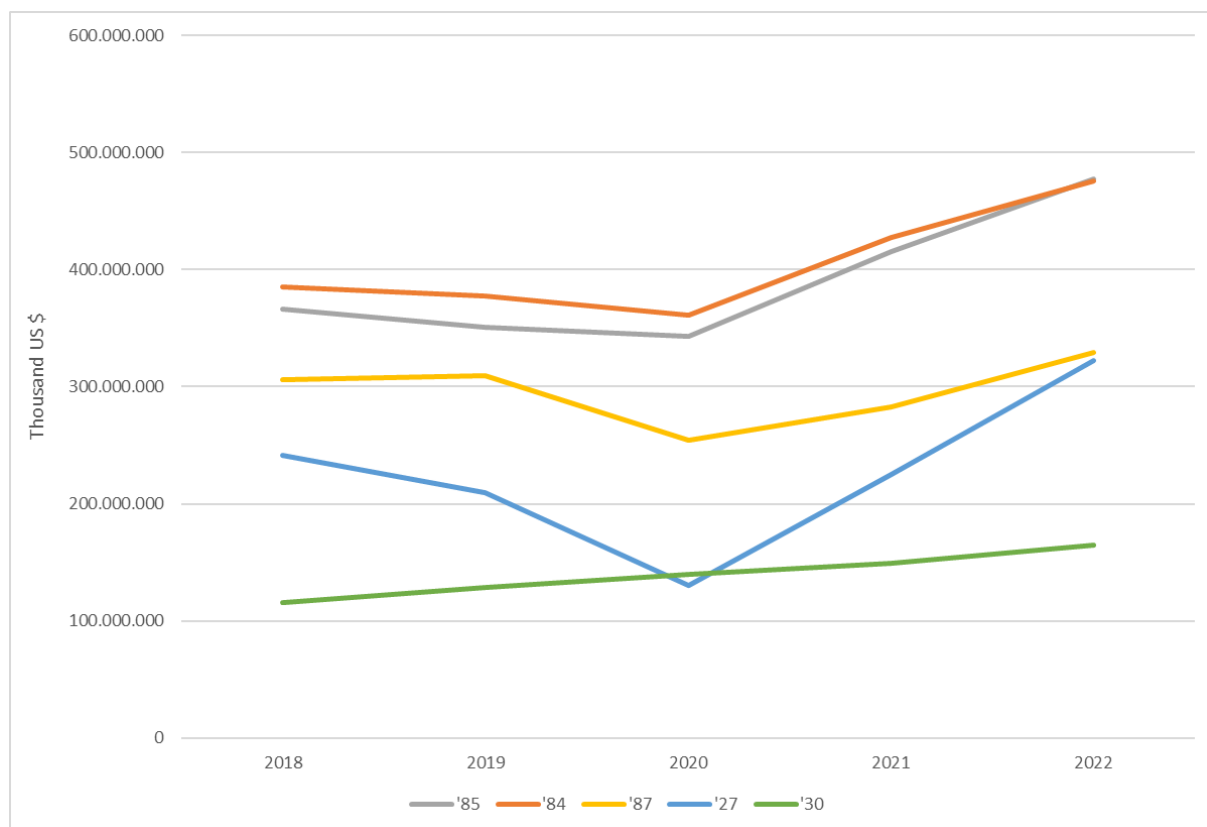


Figure 10. US Main products imports value evolution

From the graph shown above, we highlight the following facts:

All products experienced a drop in the value of their imports with the exception of those belonging to group 30, which maintain a slight but stable growth since 2018.

The value of imports of group 27 products decreases in 2020 to a greater extent than the rest of the exposed groups, but also registers the highest growth in subsequent years. The drop in the value of imports between 2019 and 2020 was -37,3%, while the increase in the value of imports in the two subsequent years was 147,03%. In addition, we can see how the value of purchases by Americans of this type of products is growing well above that of the rest of imports, which leads us to believe that in the coming years it could be positioned as the group of items with the highest import value (ahead of groups 85 and 84).

To conclude our analysis of products exchanged between Americans and the rest of the world, we will highlight several significant facts regarding the value of exports and imports.

Despite the fact that products belonging to group 72 have occupied the first place among the most exported products by the Americans in terms of value, the growth of imports of this same group of products means that the trade result is not as favorable as would be expected. Specifically, the trade in this type of products is worth 55.865.452 thousand US \$ for the Americans.

Regarding product groups 84 and 85, which have a considerable presence in both US exports and imports, the foreign trade balance is -247.551.842 and -279.396.910 thousand US \$ respectively.

Having analyzed the composition of the portfolio of products that Americans trade with the rest of the world, it is time to find out with whom they trade.

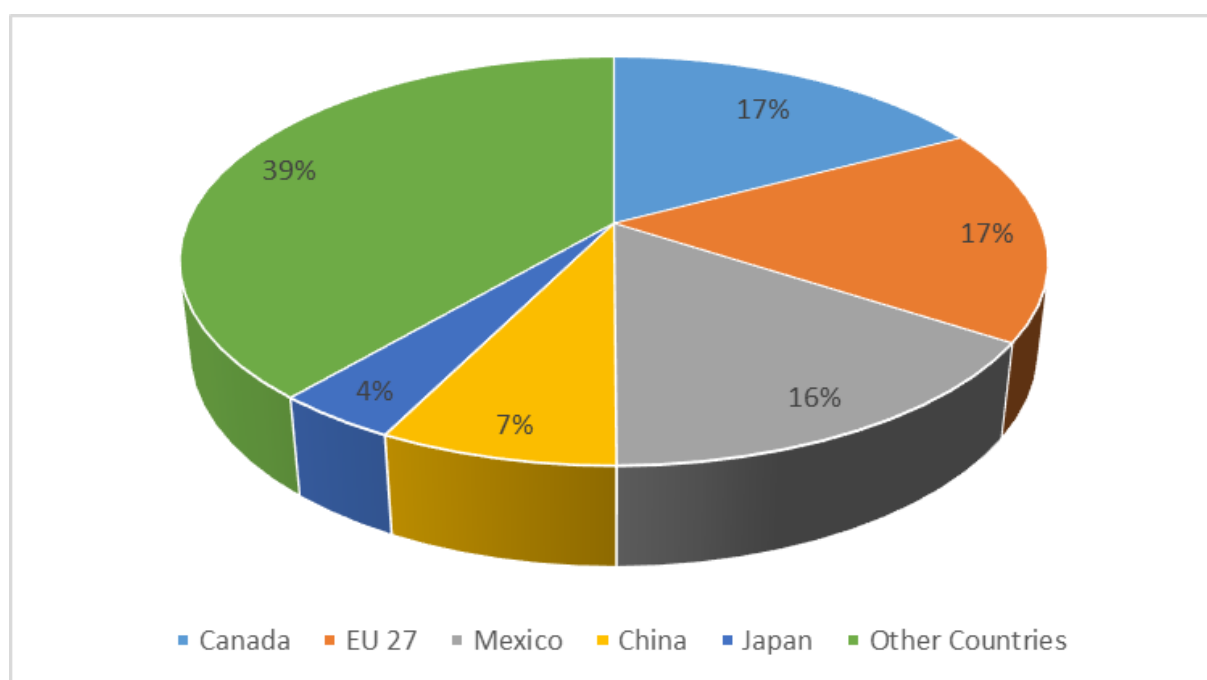


Figure 11. US exported merchandise value share by partner 2022

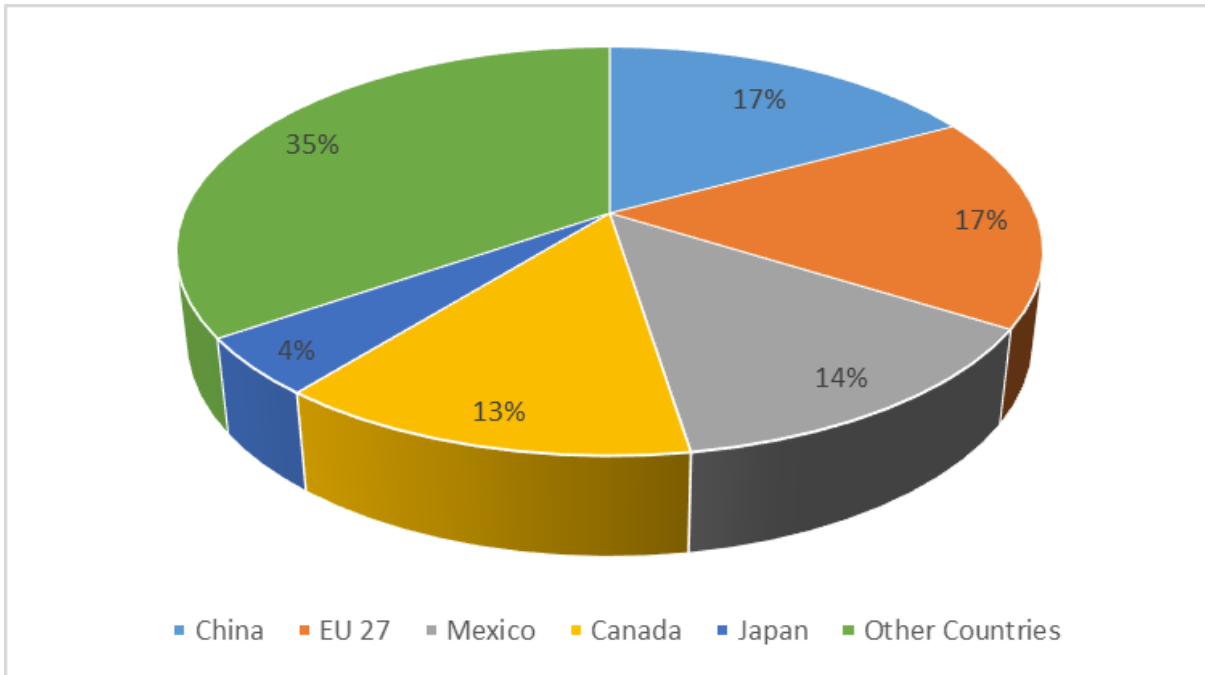


Figure 12. US imported merchandise value share by partner 2022

As can be seen in Figure 11 and Figure 12, China, the EU 27, Mexico, Canada and Japan are the main trading partners in US merchandise trade in exports and imports, in both cases accounting for more than half of the value of trade in goods.

Let's look at how trade in goods with these products has evolved between 2018 and 2022.

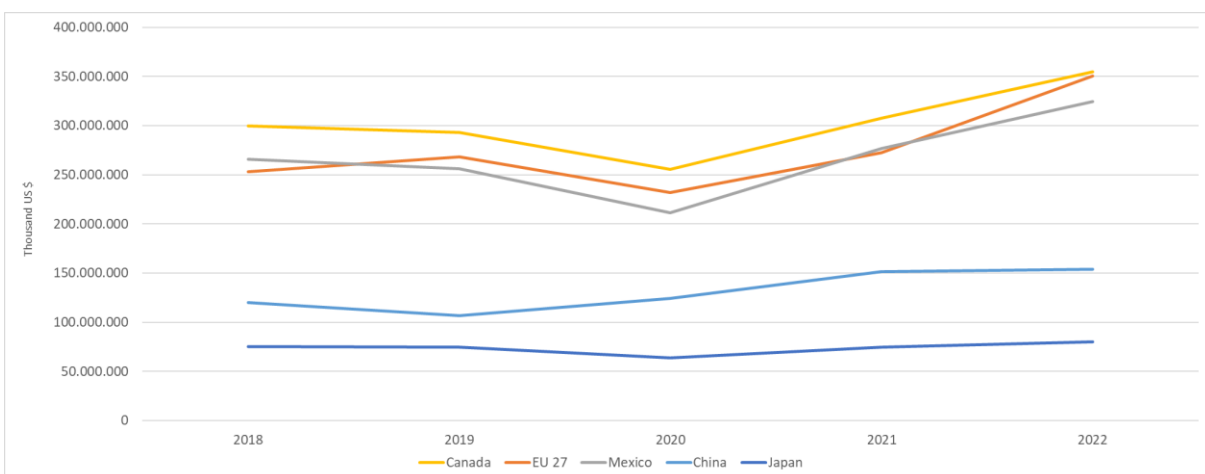


Figure 13. US Merchandise exports value evolution by partner

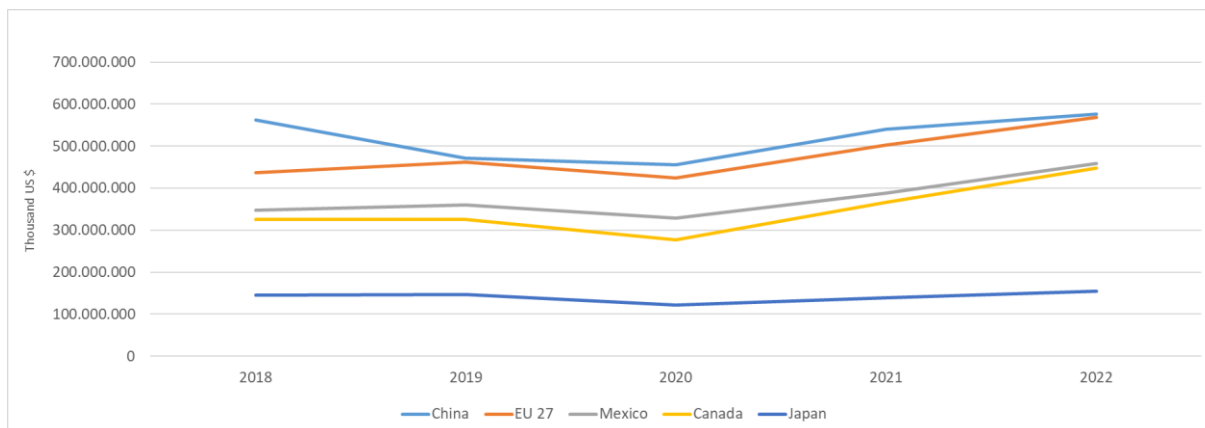


Figure 14. US Merchandise imports value evolution by partner

From those shown in Figure 13 and Figure 14, we highlight the following on the evolution of the American merchandise trade with its main partners:

- **Canada:** Accounts for 17% of US merchandise exports and 13% of US merchandise imports value in 2022. The balance of trade in goods between these two North American countries is a deficit of -93.341.539 US \$. This result shows how, once again, the U.S. buys more than it sells. Similarly, Canada exports 75,5% of its goods by value to the United States and imports 48,5% of its goods from, with trade between North American countries being essential for Canadians. Among the most important products in this trade relationship are technological components, products related to the automotive sector (cars and car parts) and crude petroleum oil, which represents approximately 90% of US imports of Canadian origin. Regarding its evolution, we note that Canada is the first trading partner of the US in terms of merchandise exports, while it ranks fourth among its trading partners in terms of imports. Like most countries, both exports and imports fall in value during 2020 and grow in the following years.
- **EU 27:** They account for 17% of the value of US exports and 17% of imports in 2022. Again, we appreciate a negative trade balance for the United States of -218.739.924 thousand US \$. Trade between the two economies is in electronics and automobiles, with Europe counting Germany, the world's largest exporter of automobiles. The EU 27 is the second largest partner of the Americans in both exports and imports, although the data above show that its share of American imports is growing.

- **Mexico:** Like Canada, Mexico is a key player in intra-continental trade and a major trading partner for the United States. Merchandise trade with Mexico represents 16% of the value of exports and 14% of imports for the United States in 2022, again with a deficit of -134.827.140 thousand US \$ in trade value. On the other hand, the United States represents 78% of the value of Mexican exports and 44% of imports. As mentioned above, and as in the case of Canada, the United States is a key foreign trade partner for American countries. In this case, the exchange of goods between these countries focuses on energy products (natural gas, propane and oil) and intermediate manufactures for the manufacture of vehicles as the main exports from the United States to Mexico and, in the opposite direction, vehicles for the transport of people and goods, electronic components and corn. In terms of the evolution of trade over the last five years, Mexico has remained the third largest trading partner of the Americans in terms of export destinations, while it has been overtaken by the EU 27 in terms of imports since 2021.

- **China:** Merchandise trade accounts for 7% of the value of US exports and 13% of US imports in 2022, making China the largest seller of goods to the United States. The resulting balance of trade between the two countries is a deficit of -421.872.990 thousand US \$ for the Americans, the most unfavourable result in terms of value for the Americans out of all the results achieved with its main partners. The issue of trade between the United States and China has become one of the main concerns of international trade today. Former President Trump began a trade war against the Asians in 2018, raising tariffs on goods that Americans import from China and threatening to shape an even more protectionist trading system. Despite this, in January 2020 the two countries reached an agreement to increase the flow of trade between their economies to achieve a more win-win situation, one of the most encouraging events in contemporary international trade. The products on which trade between the world's two leading economic powers is based are electronics (circuits, data processing machines and radiotelephony transmitters) from China to the United States, while the reverse flow is based on oil and soybeans.

- **Japan:** Finally, Japan accounts for 4% of the value of both US exports and imports in 2022, leaving the trade in goods between the two countries with a result of -

74.128.621 thousand US \$ for the Americans. Conversely, the US is the origin of 10% of the value of Japanese imports and the destination of 19% of its exports. With regard to the evolution of trade during the period under study, it could be said that Japan has been the country that has remained the most constant and has felt the effects of the pandemic the least in this respect.

With these data, we have concluded the analysis of US merchandise trade, from which we can draw, a priori, two relevant conclusions:

On the one hand, we have seen that the flow of US merchandise trade is in deficit in practically all sectors. This fact shows that the importance of international trade lies not only in the possible benefits that could be generated from the exchange of goods between countries, but also in its strategic nature, which allows the different countries involved to generate dependencies between them.

Secondly, analysing US trade flows with its main partners, we observe that the US is an essential and connecting economy for its American trading partners, i.e. Canada and Mexico.

5.2 Commercial Services Trade

With regard to international trade in services, the (World Trade Organization, s.f.) shows at the end of 2022 that United States occupies first place in the world ranking of countries both exporting services, with a global share of 12,78% (900.001.000 thousand US \$), and importing services, with a global share of 10,32% (671.387.000 thousand US \$). It should be noted at this point that the EU-27, as a group of countries, has a greater share of total exports of services (20,56%) and of imports (19,51%), but the contribution of its member countries is very uneven, as will be analyzed below.

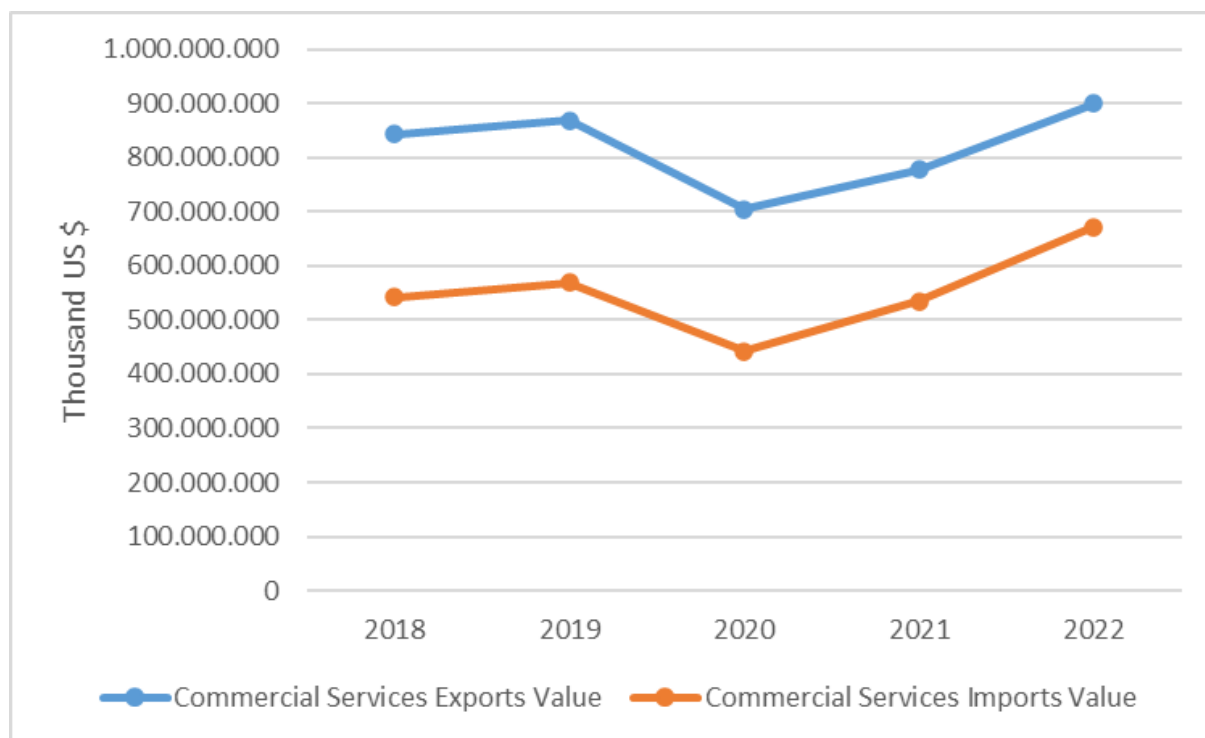


Figure 15. US Commercial services exports and imports value evolution

As can be seen in Figure 15, in terms of trade in commercial services with other countries, the US sells more than it buys. The result of these exchanges in 2022 was 228.614.000 thousand US \$ in favour of the Americans. This benefit does not offset the deficit for the Americans in the trade of merchandise.

With regard to the evolution of trade in commercial services, we can clearly see how the effects of the pandemic were felt more than in trade in goods, registering a higher year-on-year variation than the latter in the period 2019-2020. The value of exports decreased by -18,92% and imports by -28,88%. In the recovery period (2020-2022), on the other hand, we find a similar case to the one analyzed in merchandise trade. The value of exports grows below that of imports (27,78% and 51,98% respectively), but the difference in both growth rates is considerably more pronounced than in trade in goods. Again, we conclude that the US increases its dependence on other countries in this type of trade.

As in the previous section, we will now analyse the composition of the US services trade balance, as well as trade flows with its main partners.

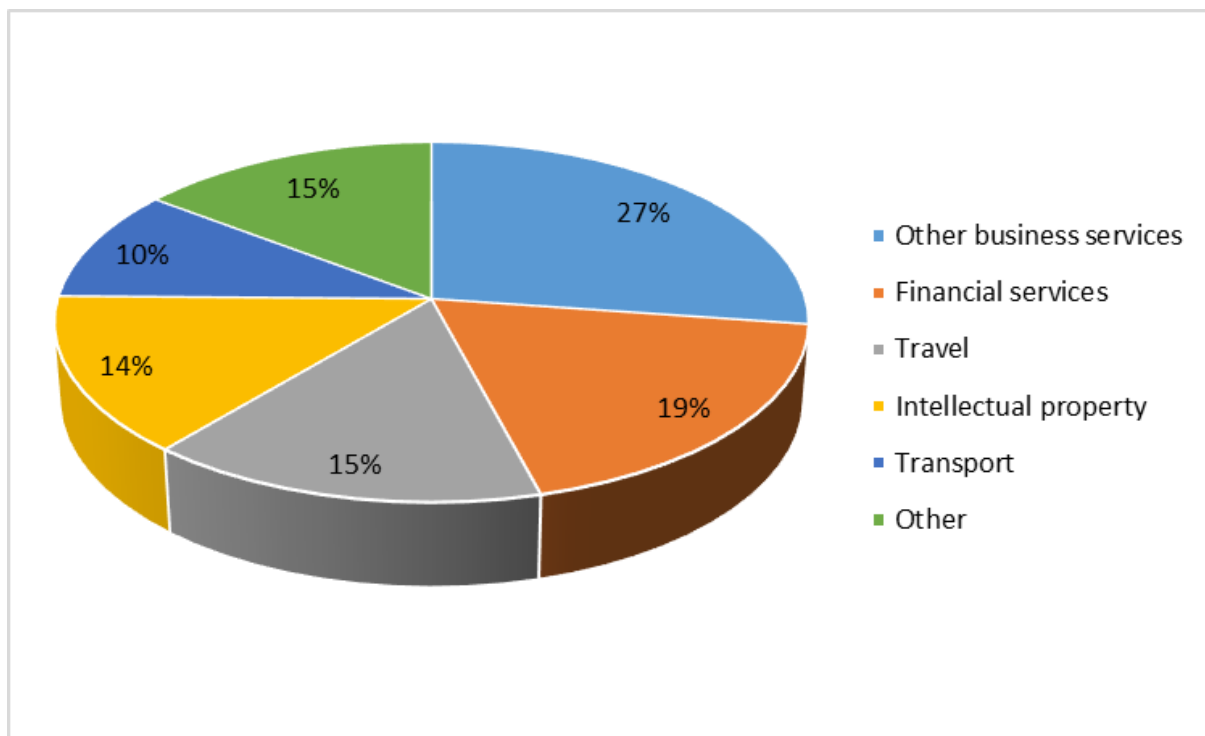


Figure 16. US Exported commercial services share 2022

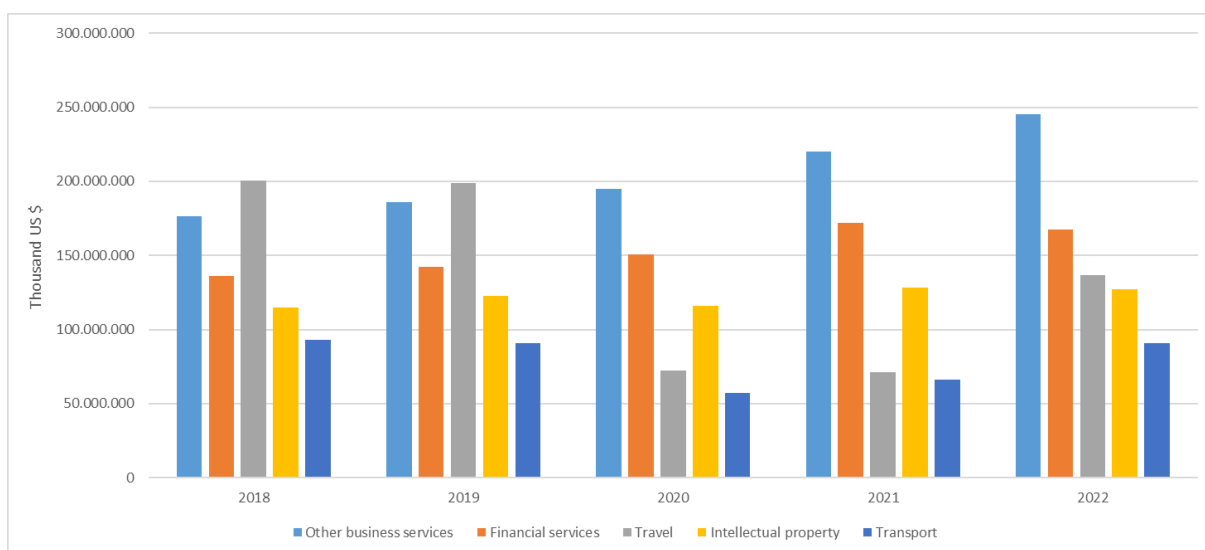


Figure 17. US Commercial services exports value evolution by service

From what is shown in Figure 16 and Figure 17, we highlight the following relevant facts:

In 2022, the value of sales of Other business services and Financial services alone accounts for almost 50% of the total value of US commercial services exports.

Travel services went from being the most exported before the pandemic to the second least exported (behind only transport) by the end of 2020, with a drop of 63,57%. Although a clear

recovery can be seen in 2022, they have fallen behind the categories of Other business services and Financial services.

The category of services linked to intellectual property, given its nature, maintained constant values in the period analyzed.

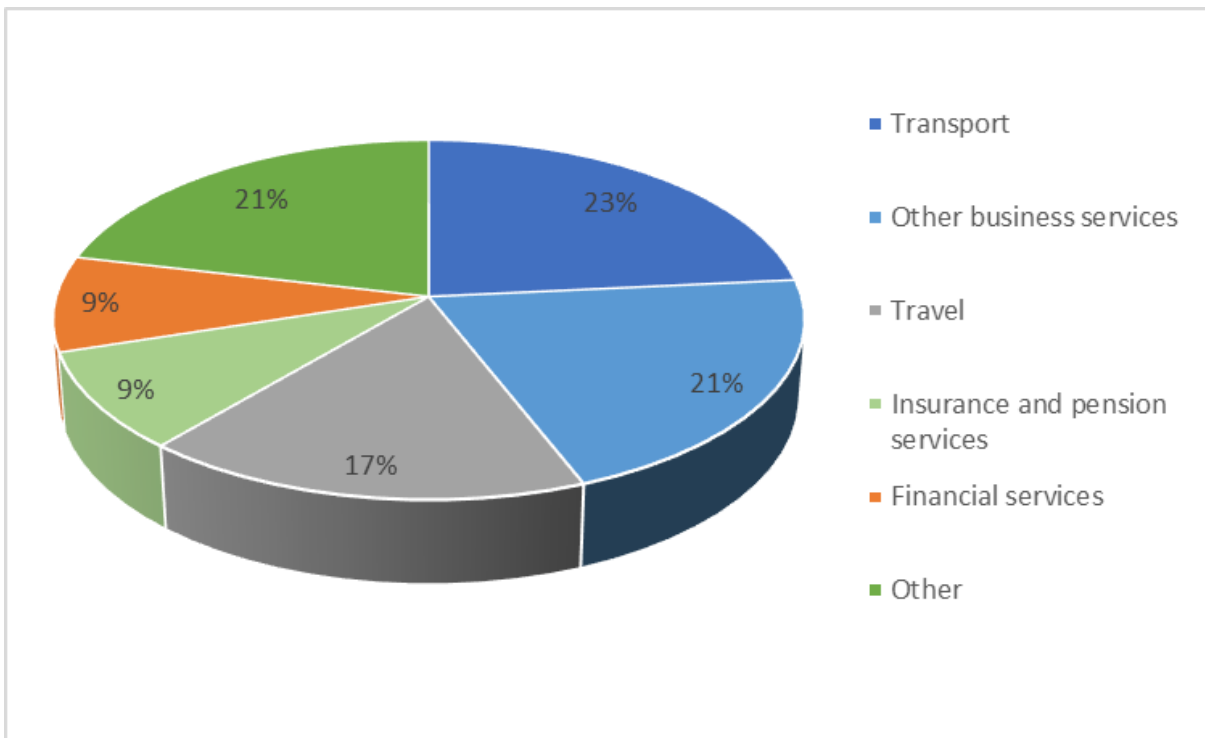


Figure 18. US Imported commercial services share 2022

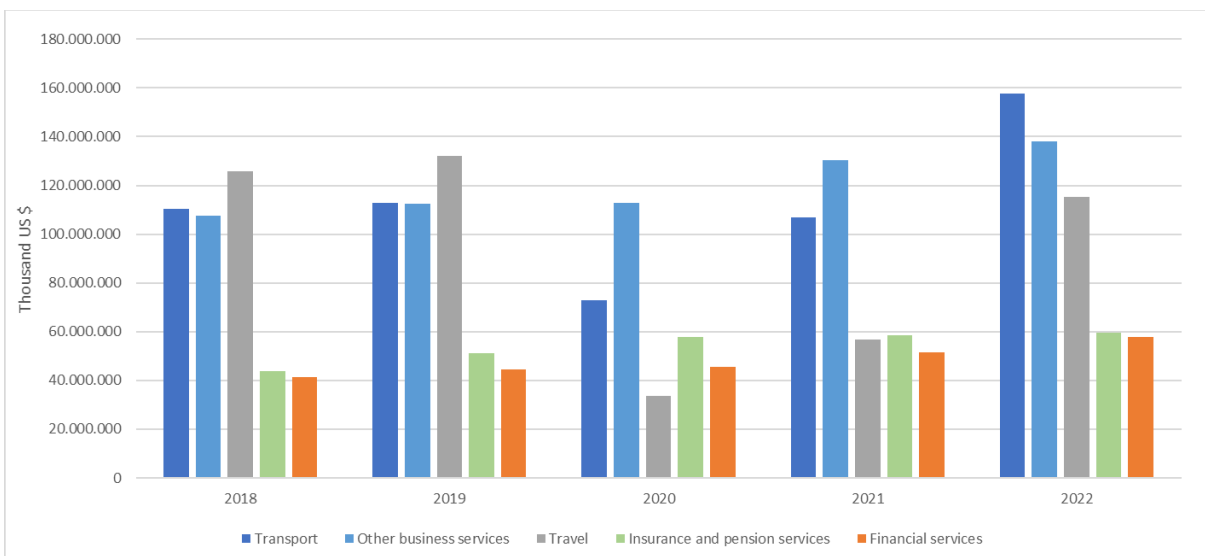


Figure 19. US Commercial services exports value evolution by service

From what is shown in Figure 18 and Figure 19Figure 16, we highlight the following relevant facts:

Again, almost 50% of the value of imports is concentrated in two types of commercial services. In this case in Transport services and the category Other business services.

Transport services, which play a minor role in the portfolio of services exported by Americans, overtake travel services after the pandemic and are positioned as the most imported service in 2022.

With this overview of exported and imported commercial services, we draw the following conclusions:

The category of Other Business Services, which represents more than 20% of the value of services both exported and imported by the Americans, leaves a balance of 107,149,000 thousand US \$. We could affirm that, occupying the first place among the services exported by the US, this category is positioned as one of the main engines of its economy and drives the growth of US trade in services.

Travel services, after falling both in terms of exports and imports during the pandemic, has not managed to regain its position as the main service exported and imported by Americans. Moreover, the balance resulting from the exchange of this type of service with the outside world is almost zero for the Americans.

The charges generated by the use of intellectual property are a very profitable business for the Americans, with this product category accounting for 14% of the value of their exports and just under 8% of the value of their imports.

Having analyzed the US services portfolio, we need to look at its main trading partners in the international market. In contrast to goods, the United States' international trade in services is highly concentrated in one geographical region: the EU 27. In this case, we will take 2019 as the first year of reference due to the lack of homogeneous data in previous periods and taking into account the exit of the United Kingdom from the European Union.

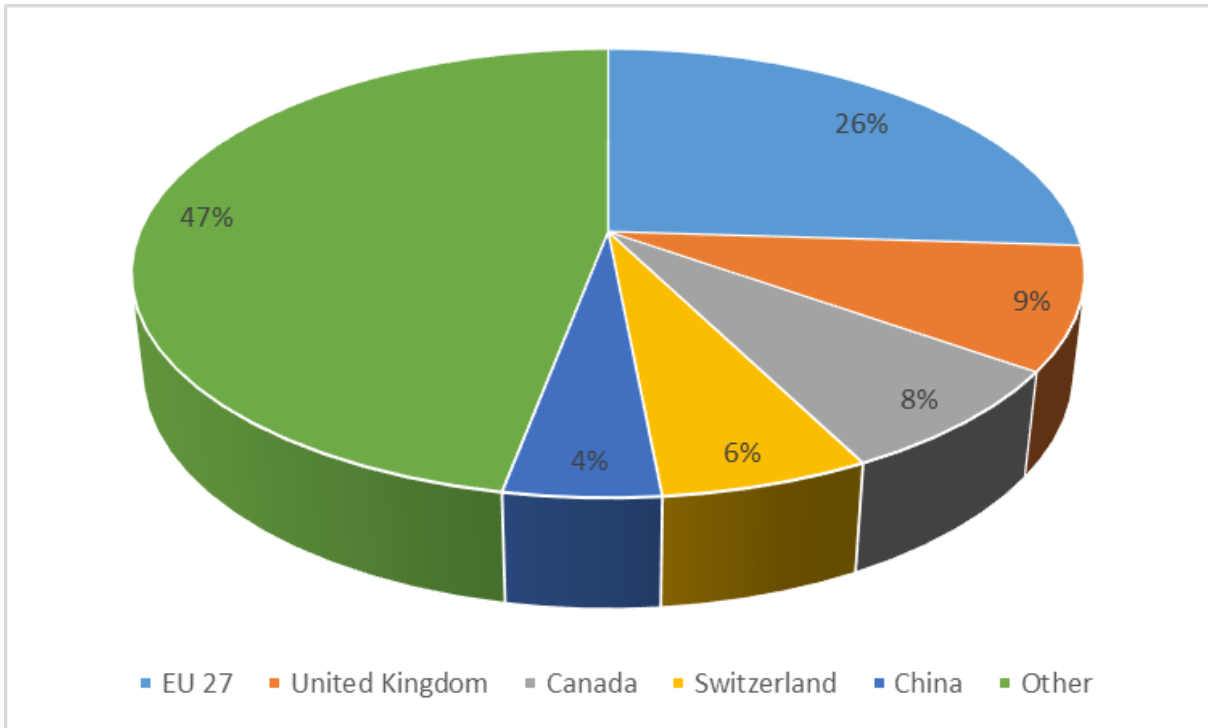


Figure 20. US exported service value share by partner 2022

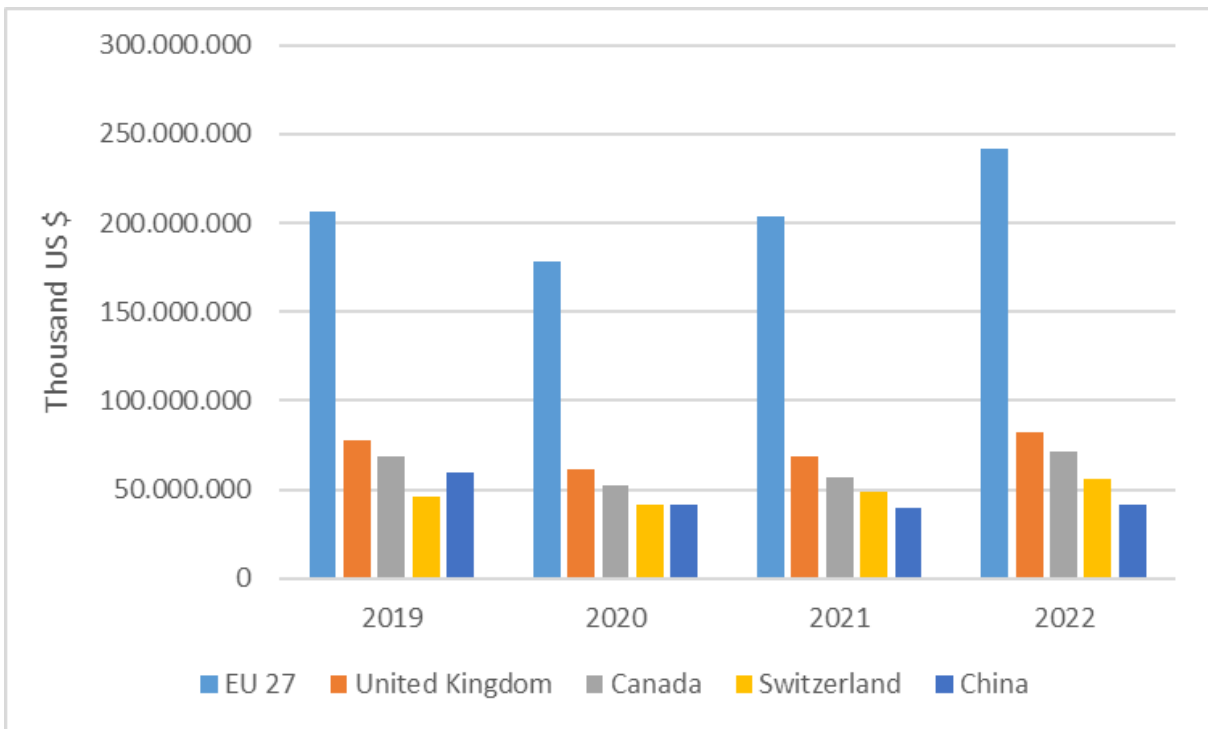


Figure 21. US Commercial services exports value evolution by partner

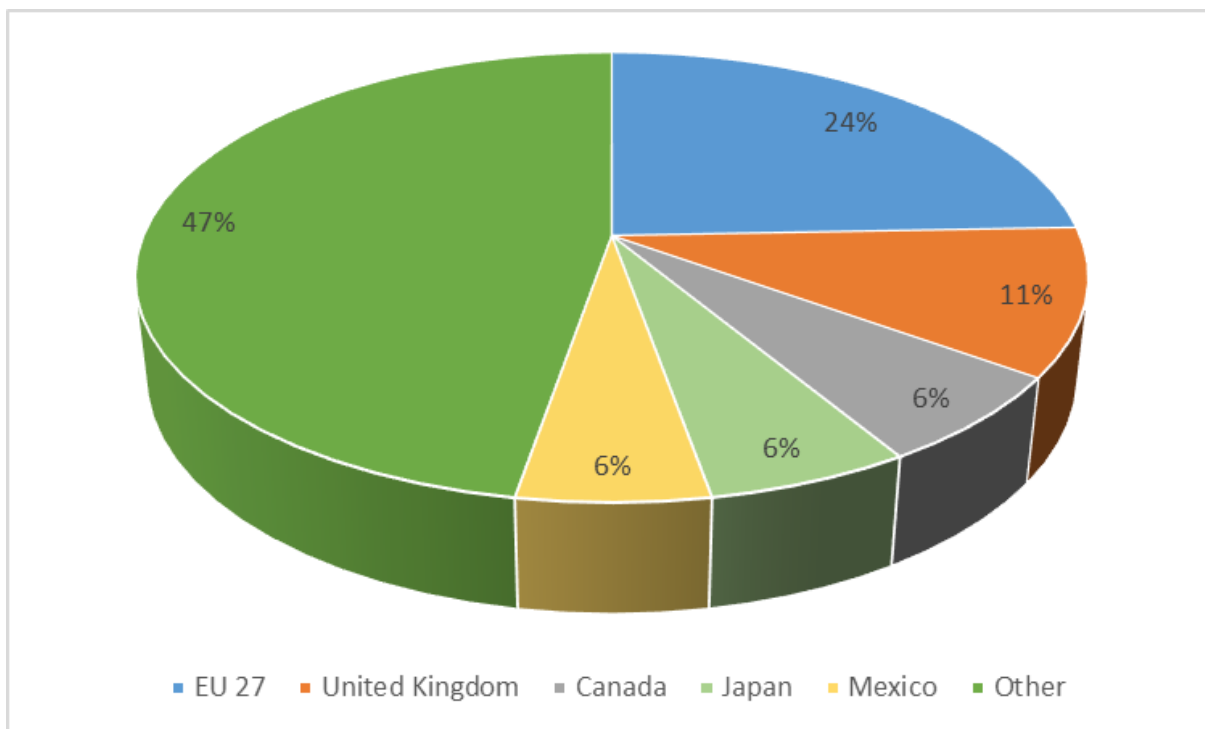


Figure 22. US imported service value share by partner 2022

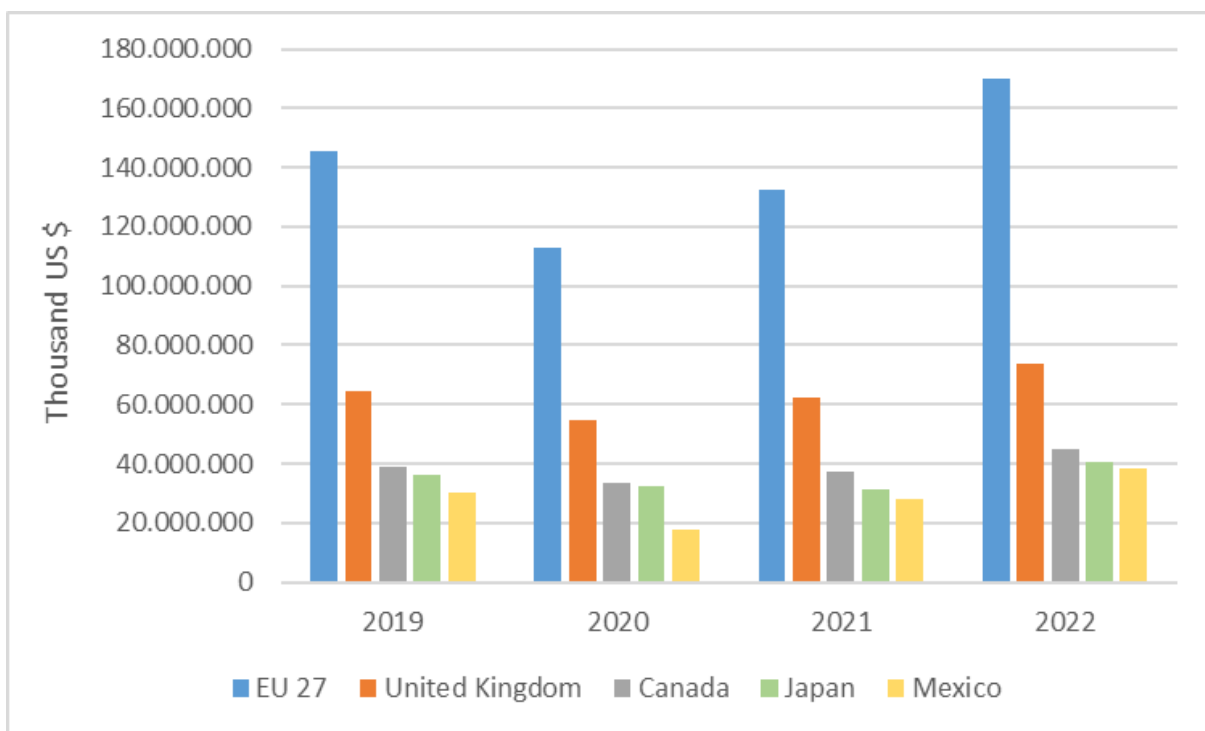


Figure 23. US Commercial services imports value evolution by partner

Based on the graphs shown, we highlight the following:

As mentioned at the beginning of this section, the EU 27 is the main partner of the Americans in terms of trade in commercial services, accounting for a quarter of the value of exports and imports. In this sense, the result of these exchanges is favourable to the Americans for a value of 71.421.292 thousand US \$. It should be noted that imports of European services have grown more than exports, by 28,2% compared to 18,6%, respectively, between 2021 and 2022.

With regard to the pandemic, which as we have already seen we have placed in the 2020 period, none of the main partners of the United States have seen their position in trade in services change beyond the global effects of the pandemic, maintaining their position in both the period of trade recession (2019-2020) and recovery (2020-2022).

In conclusion, after analysing US trade activity, as well as its evolution after suffering the effects of the Covid 19 pandemic, we find an economy with a negative trade balance whose losses greatly outweigh the benefits it obtains in the exchange of commercial services. Although it is true that it acts as a propelling economy for the rest of the American countries, it seems that, far from investing in reducing its dependence on goods from foreign countries, the Americans are committed to promoting the sale of commercial services.

6 CHINA

As Napoleon said more than 200 years ago: "When China awakes... the world will tremble" (Peyrefitte, 1973) Today, the Asian giant is considered the world's second largest power, second only to the United States in terms of its share of world GDP. In 2022, the contribution of North Americans to world GDP was 25,4%, while China's contribution amounted to 17,6%, The particular feature of China's case is the rapid growth of its economy: while the United States and European countries have topped the rankings of economic development and growth since the era of industrialisation, China has multiplied its growth by almost 500% in the last forty years, specifically since 1978.

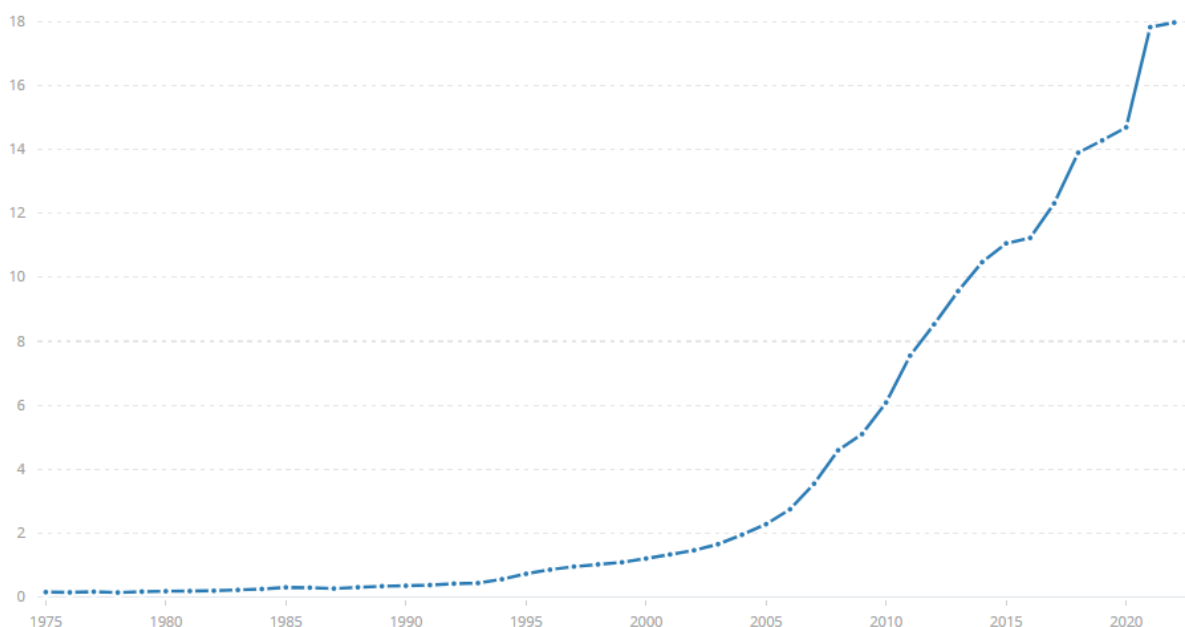


Figure 24. China GDP evolution (World Bank, s.f.)

As we have already said, 1978 was a year that will remain in the annals of Chinese history for eternity. With the coming to power of Deng Xiaoping, the Asian country which, until then, had been characterised by being mainly agricultural, jumped on the train of progress that left from the West and began to open up to the outside world. Since then, China has been the country with the highest annual economic growth, with an average of 10% according to WTO data.

Thus, at both production and consumption levels, China is at the pinnacle of international trade. In 2022, this country ranked first in the world ranking of merchandise exporting countries with 14,42% of total exports and second in the ranking of importers with 10,58%, only behind the United States. In terms of international trade in services, China was last year the largest seller in Asia and the third largest in the world with 6% of total exports, while it was the world's second largest importer of services with 7,09% of the total, again behind the United States.

Therefore, the trade analysis of China is a crucial element for understanding how international trade works today, which is why, as was done in the previous section with the Americans, we will analyse its trade and services balance in a descriptive way.

6.1 Merchandise Trade

As mentioned at the beginning of this section, China's trade with other countries accounts for 14,42% (3.593.601.450 thousand US \$) of the value of world exports and 10,58% (2.715.998.754 thousand US \$) of the value of imports in 2022. In addition to these impressive figures, it is worth noting that China's merchandise trade was the only one among the major powers to grow during the first year of the COVID-19 pandemic (2019-2020).

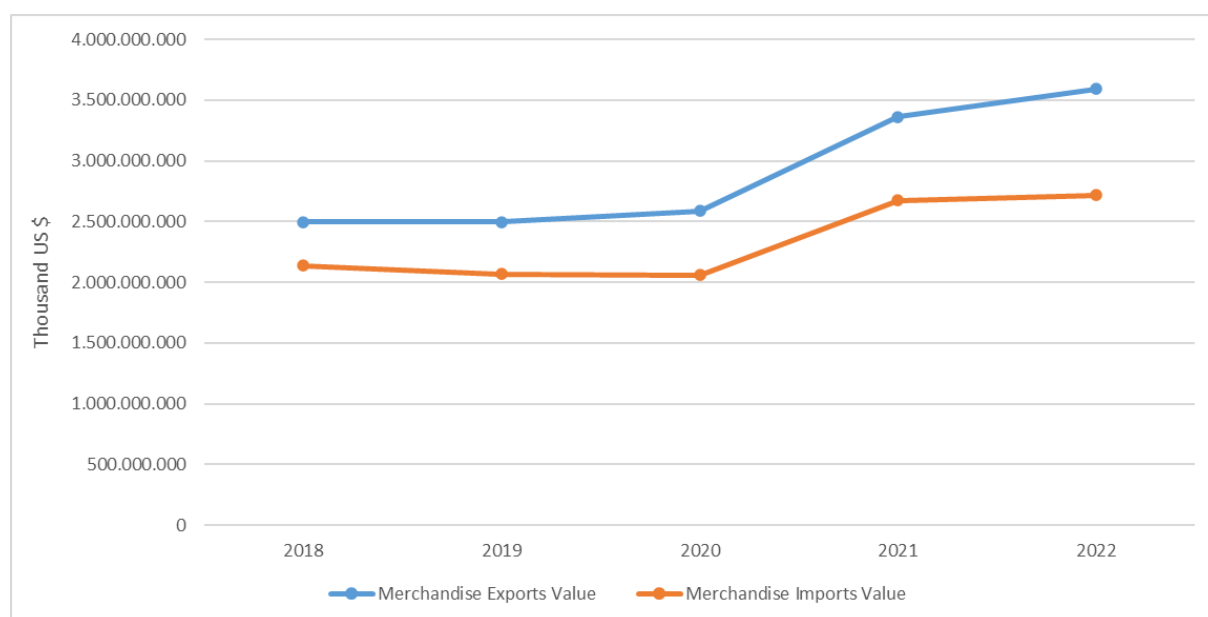


Figure 25. China merchandise exports and imports value evolution

If we look at Figure 25, we can see several relevant facts regarding trade in goods between China and the rest of the world before, during and after the pandemic:

The first fact to note about China's trade balance is that, unlike the US, the buying/selling of goods with foreign countries is a profitable activity for China. Specifically, these exchanges left a balance of 877.602.696 thousand US \$ in 2022.

Prior to the COVID-19 pandemic (2018-2019), while the value of China's exports held up in the face of the fall in merchant trade discussed at the beginning of this thesis, the value of unprocessed goods fell by -3,2%.

During the first year of the pandemic (2019-2020), following the trend that China had already been promoting in merchandise trade, they not only managed to further reduce the amount of goods imported from abroad, but also managed to increase their foreign sales.

Finally, with regard to the recovery phase (2020-2022), we observe that the value of imports increases homogeneously during the first year, while exports increase more than imports during the second year. This means that, three years after the emergence of COVID-19, China has managed to reduce its dependence on foreign countries in terms of merchandise trade while at the same time increasing its sales to other countries.

Once China's trade position in the international exchange of goods has been explained, and as we did with the United States, we will now break down its trade balance in order to understand the products on which this country's trade is based.

The first thing we will do is to get a first overview of the composition of the portfolio of products exported by China in 2022.

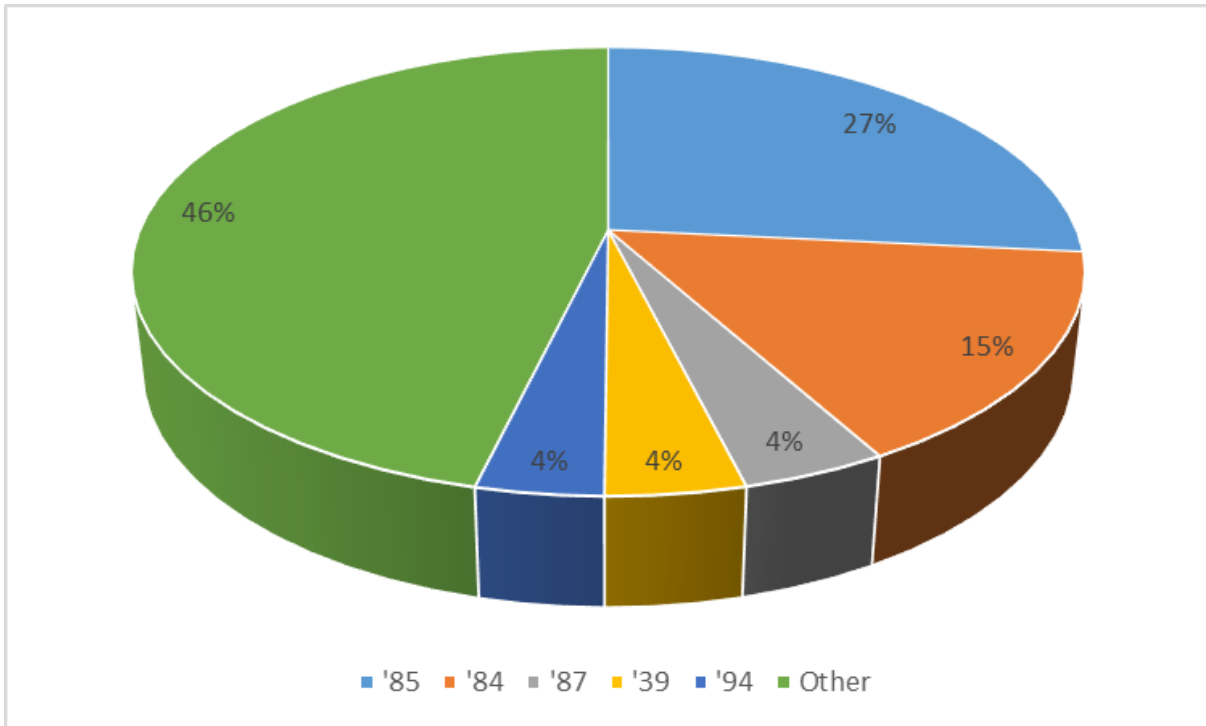


Figure 26. China Exported products share 2022

As can be seen in Figure 26, more than 50% of the value of merchandise exports is concentrated in five product groups. As there are groups that have already been detailed in the previous section, we will specify only those that we were not aware of:

- 39: Plastics and articles thereof.
- 94: Furniture.

In Figure 27, we will analyse how foreign sales of these product groups have evolved from 2019 to 2022.

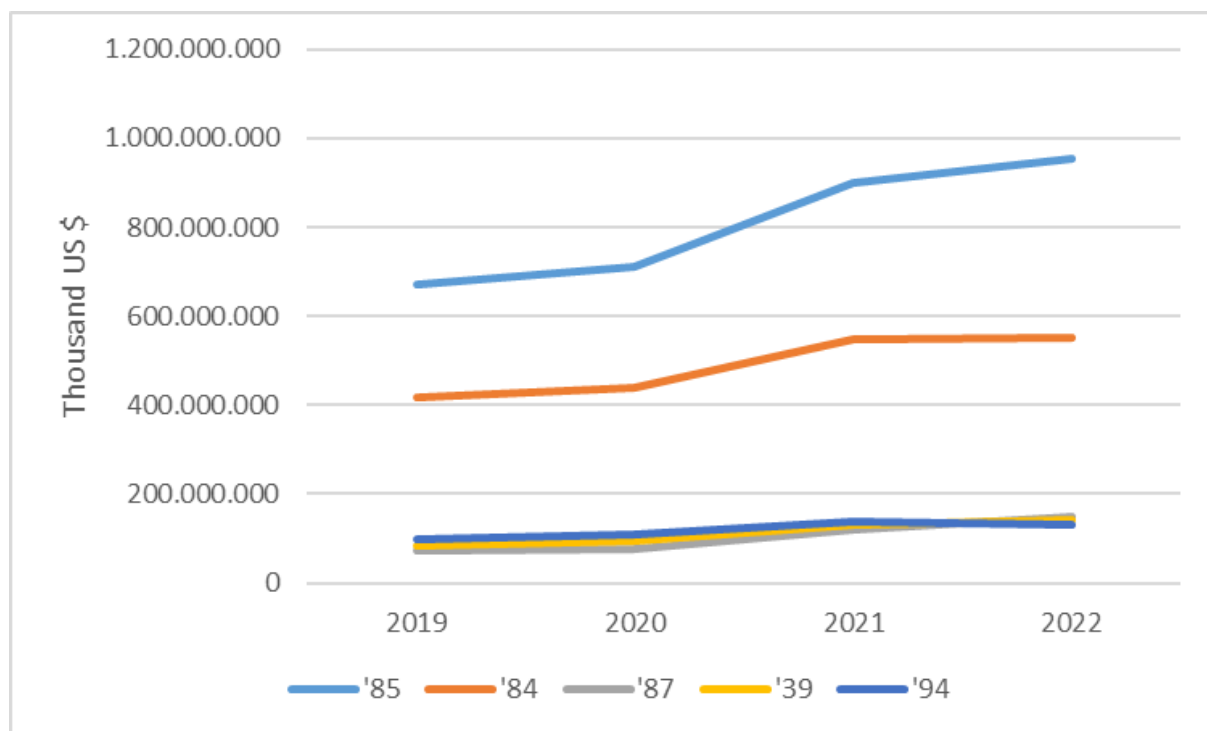


Figure 27. China Main products exports value evolution

As can be seen, group 85 products account for the bulk of China's merchandise sales. In this product group, we highlight the sale of Radio-telephony transmission tools and Electronic integrated circuits products. With regard to their evolution, we should highlight the growth in sales both during the first year of the pandemic and in subsequent years (34,49% between 2020-2022), with this product group becoming the main source of Asian sales abroad (954.783.812 thousand US \$; 27% of the value of exported products in 2022).

With regard to group 15 products, although they do not have as much weight as those mentioned above in the portfolio of products sold to other countries for China (in this case, 15% of the total value of products exported in 2022), we should point out that they are a valuable asset for the Asians given the stability that their exports have shown. We can see how the growth in exports of this group of products is rather more discreet than that of the products in group 85 in the last period analyzed (2021-2022). Among the most exported products we highlight Automatic data-processing machines.

Lastly, of the exposed groups with less weight in China's export portfolio, mention should be made of group 39, which in the last period analyzed came close to equalling the value of its sales to those obtained with the products of group 87.

Having analyzed the composition of China's product portfolio, we must highlight the great weight of manufactured products in its sales (more than 90% of the value of its exports). This fact should come as no surprise, since China positioned itself more than a decade ago as the main exporter of manufactured products.

The same analysis is then carried out for products imported by China.

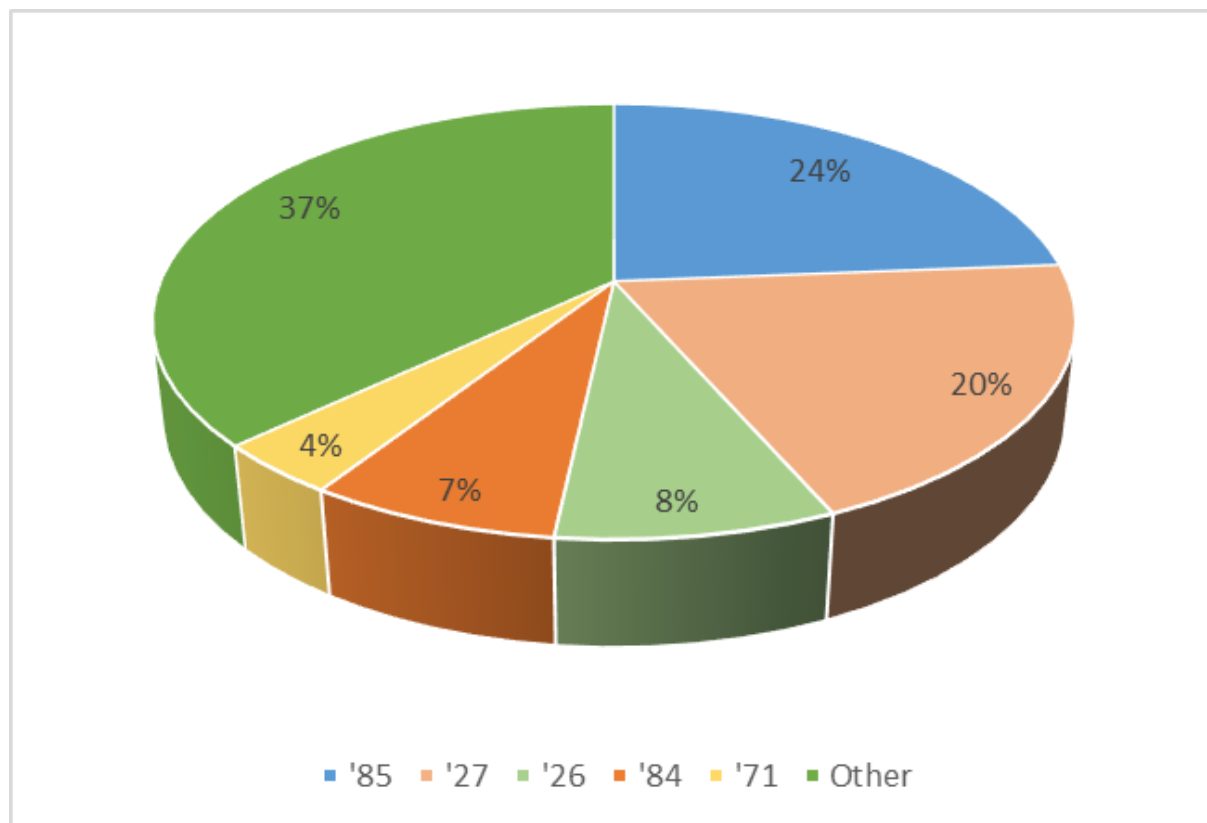


Figure 28. China Imported products share 2022

As can be seen in Figure 28, unlike the US, there is little commonality between China's exports and imports. As in the previous cases, let us see to which types of products the groups that we have not seen so far correspond:

- 26: Ores, slag and ash.
- 71: Natural or cultured pearls, precious or semi-precious stones, precious metals, ...

In Figure 29 we appreciate the evolution of this products imported by China value:

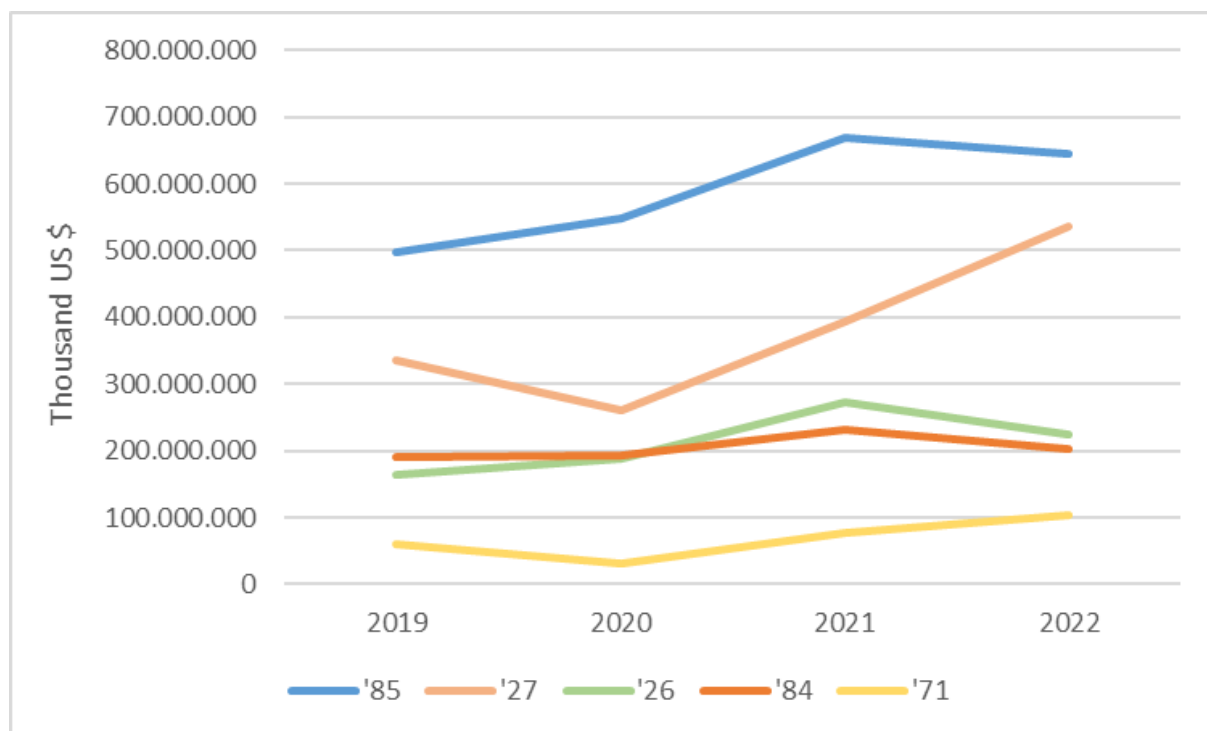


Figure 29. China Main products imports value evolution

As in foreign sales, the products of group 85 occupy the first position in the ranking of products imported by China. Specifically, imports of Electronic integrated circuits stand out within this group. With an import value in 2022 of 644.691.916 thousand US \$, the exchange of this type of products abroad leaves China with a benefit of 310.091.896 thousand US \$. With regard to the evolution of the value of imports, we highlight the decrease of -3,58% during the period 2021-2022, a fact that indicates China's intentions to reduce its foreign dependence on this type of products.

As for the products in group 27, among which Petroleum oils, crude and Petroleum gases stand out, the first thing that should strike us is that, occupying the second place in terms of value in China's export portfolio, it does not appear in our particular top 5 exports. This fact allows us to affirm that, as far as this group of products is concerned, China has a strong external dependence. On the other hand, looking at the evolution of the value of imports, we can see a sharp drop in value during the first year of the pandemic (a fact which, as far as oil and derivatives are concerned, we know in advance is common) and an even higher growth in the following years (105% between 2020-2022).

Having analyzed the composition of the portfolio of products that Americans trade with the rest of the world, it is time to find out with whom they trade.

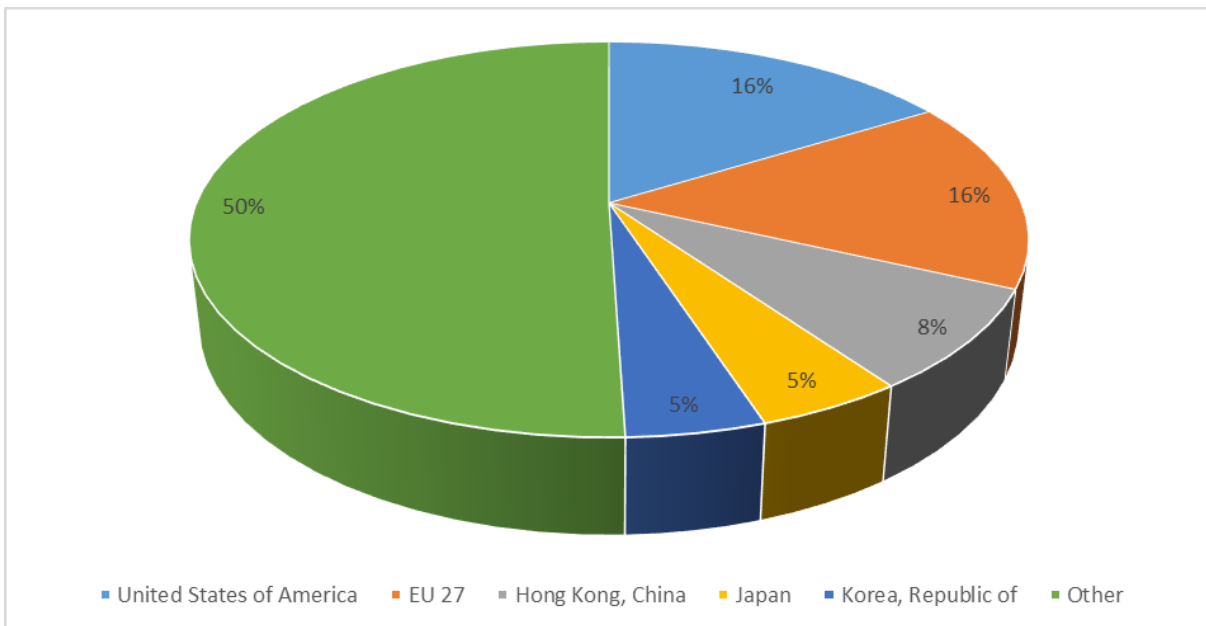


Figure 30. China exported merchandise value share by partner 2022

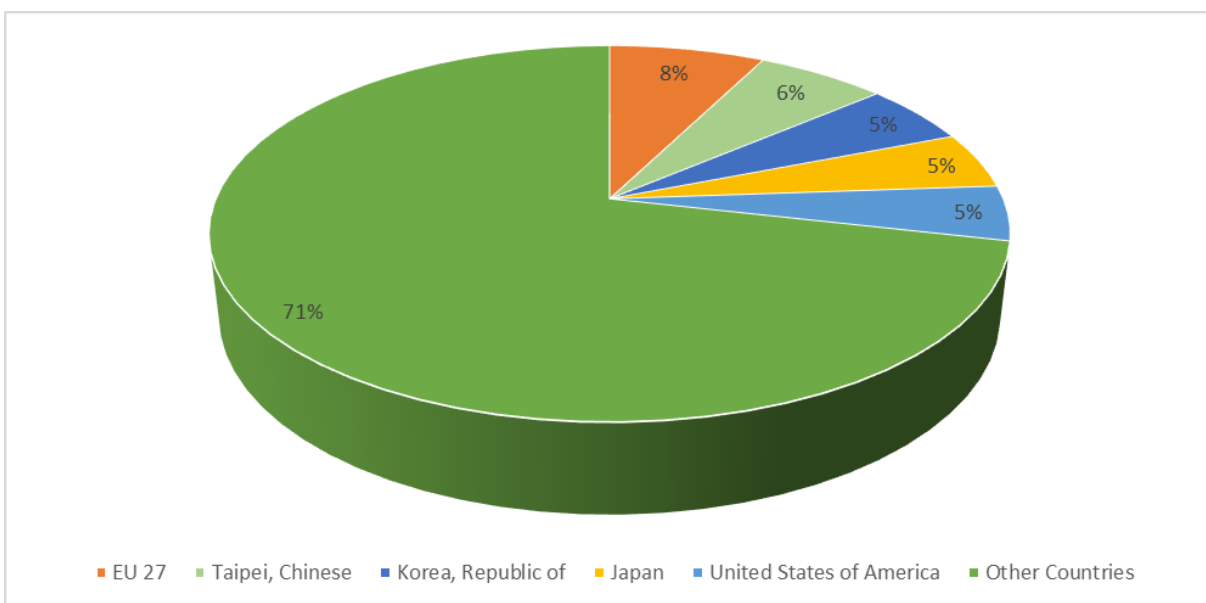


Figure 31. China imported merchandise value share by partner 2022

As can be seen in the Figure 30 and Figure 31, the main trading partners with China are the United States, the EU 27, Hong Kong, Japan, the Republic of Korea and Taipei. In this case, we should pay special attention to the fact that, while the value of exports is relatively concentrated in five countries (50% of the value, to be precise), the value of imports is much

more dispersed (29% of the value between five partners). This fact shows us one of the main advantages that China has in world merchandise trade: diversified suppliers.

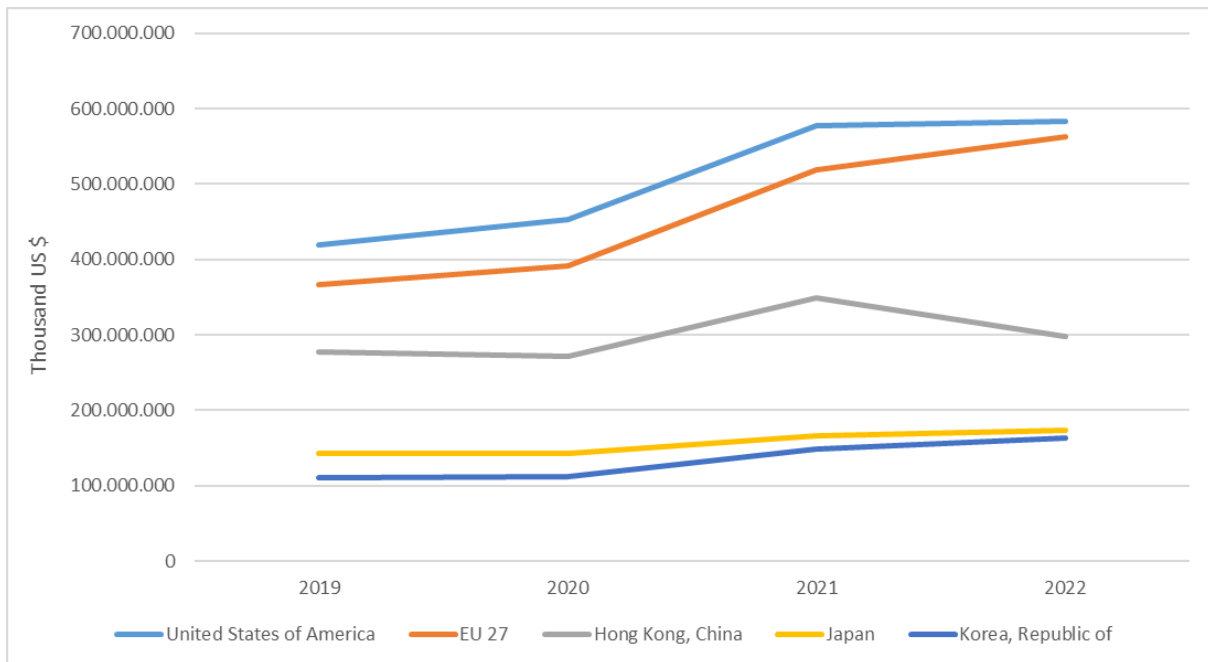


Figure 32. China Merchandise exports value evolution by partner

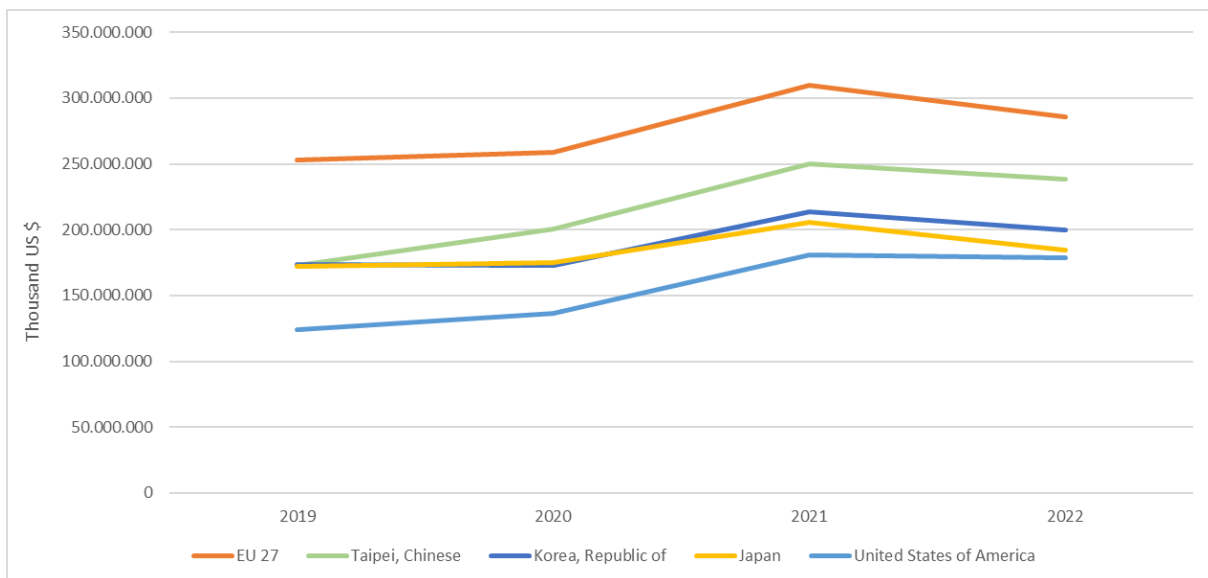


Figure 33. China Merchandise imports value evolution by partner

In the following, we will analyse how trade with these countries has evolved between 2019-2022.

- **United States of America:** Representing 16% of the value of Chinese exports and 5% of imports, the exchange of goods with the Americans will result in a benefit of 403.799.274 thousand US \$ for the Asians in 2022. With regard to the evolution of trade, we note, as is often the case, that both imports and exports increased in terms of value during the first year of the pandemic. In particular, the value of US imports in 2022 decreased slightly compared to the previous period.
- **EU 27:** With 16% of the value of exports and 8% of the value of imports, the EU 27 is the second destination of Chinese goods and the first origin of imported goods. This trade will result in a profit of 277.083.448 thousand US \$ in 2022 for China. With regard to the evolution of trade exchanges, while Chinese exports to the EU 27 have grown over the last period to the point of almost equalling those of the United States, the value of European imports has fallen significantly over this period (by -7.8% compared to 2020). Again, there is evidence of China's strategy of non-dependence in trade in goods and how it intends to promote sales over purchases.
- **Japan, Taipei, Hong Kong and Republic of Korea:** With respect to the Asian countries, given that they do not really have a significant weight in terms of the value of the goods exported and imported by China, we will simply highlight that they act as drivers of the Asian giant's trade activity (a similar case to what we saw with the United States in the United States).

Thus, we conclude our analysis of China's trade activity with the rest of the world. From this analysis, we highlight the following significant facts:

Unlike what was analyzed with the United States, China's mercantile exchange with the rest of the world is a highly beneficial activity for the Asians, positioning itself as the world's leading manufacturing power.

In addition to the benefits in terms of value, we have seen China fostering competitive advantages in terms of global trade, decreasing its dependence in terms of purchases from other major economies and increasing its sales to these economies.

Finally, it is noteworthy that while world merchandise trade contracted in an almost unprecedented way during the first year of the COVID-19 pandemic, China managed to increase the value of its sales.

6.2 Commercial Services Trade

In terms of trade in commercial services with other countries, China ranks third in 2022 in terms of the value of its exports (422.332.801 thousand US \$; 6% of world exports) and second as an importer of services (461.449.912 thousand US \$; 7,09% of world exports).

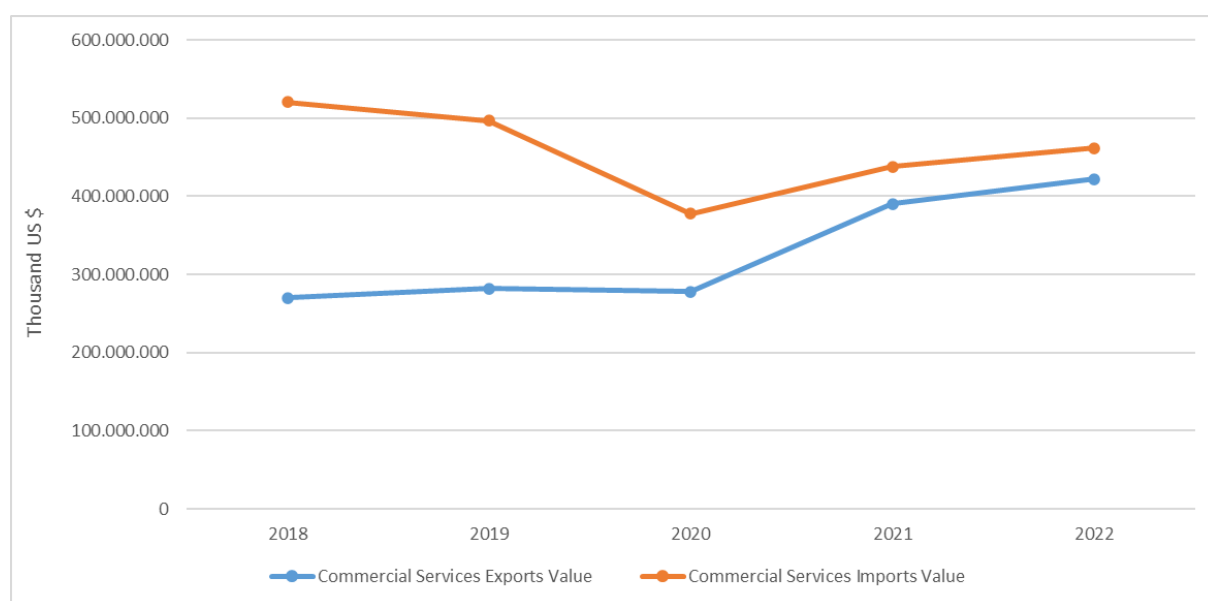


Figure 34. China commercial services exports and imports value evolution

Looking at the evolution of these exchanges in Figure 34, we highlight the following relevant facts:

The first fact is that, unlike trade in goods, trade in services is loss-making for the Asians. Specifically, trade in services with other countries resulted in a deficit for China of -39.117.111 thousand US \$. In contrast to what happened with United States, this deficit is far from exceeding the profits that China obtains in the same year from international trade in goods.

On the other hand, special attention needs to be paid to how the value of this type of trade has evolved for China over the last five years. In this respect, we make two observations:

- The first is that during the first pandemic year (2019-2020) China manages, as we have already seen is frequent in its approach to the market, to decrease the value of its imports much more than that of its exports (by 24% the former and 1,26% the latter). Although we can see that this trend has been dragging on since 2018, it is worth highlighting the effectiveness of the domestic consumption policies implemented by China during the first year of the COVID-19 pandemic.
- The second fact to note is the disparate growth in the value of purchases and sales in the subsequent period (2019-2020). China has been unable (or unwilling) to recover the value of its imports before the pandemic, while we can clearly see how the value of its exports has not stopped growing since then. This fact leads us to think that China, as in trade in goods, is reducing its dependence on other countries for trade in services and that, most probably, in a couple of years we will see how this will become beneficial for the Asians.

That said, let's take a closer look at what these services are. Given the lack of current official data on the origin and destination of China's imports and exports of commercial services, we will find our analysis in the exported and imported services.

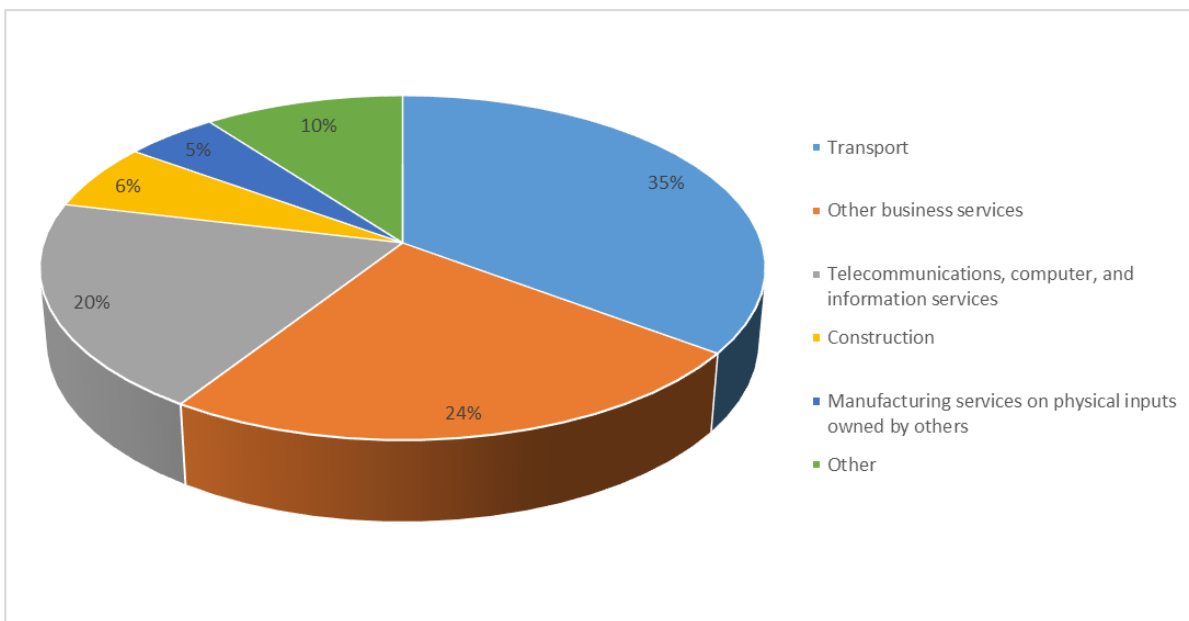


Figure 35. China exported commercial services share 2022

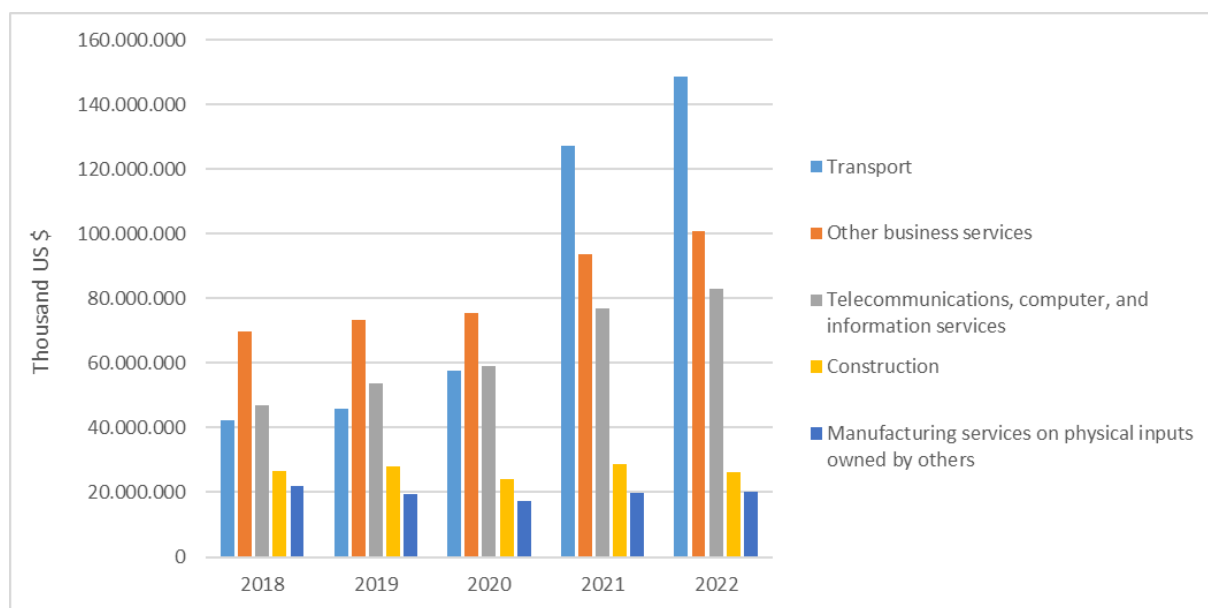


Figure 36. China commercial services exports value evolution by service

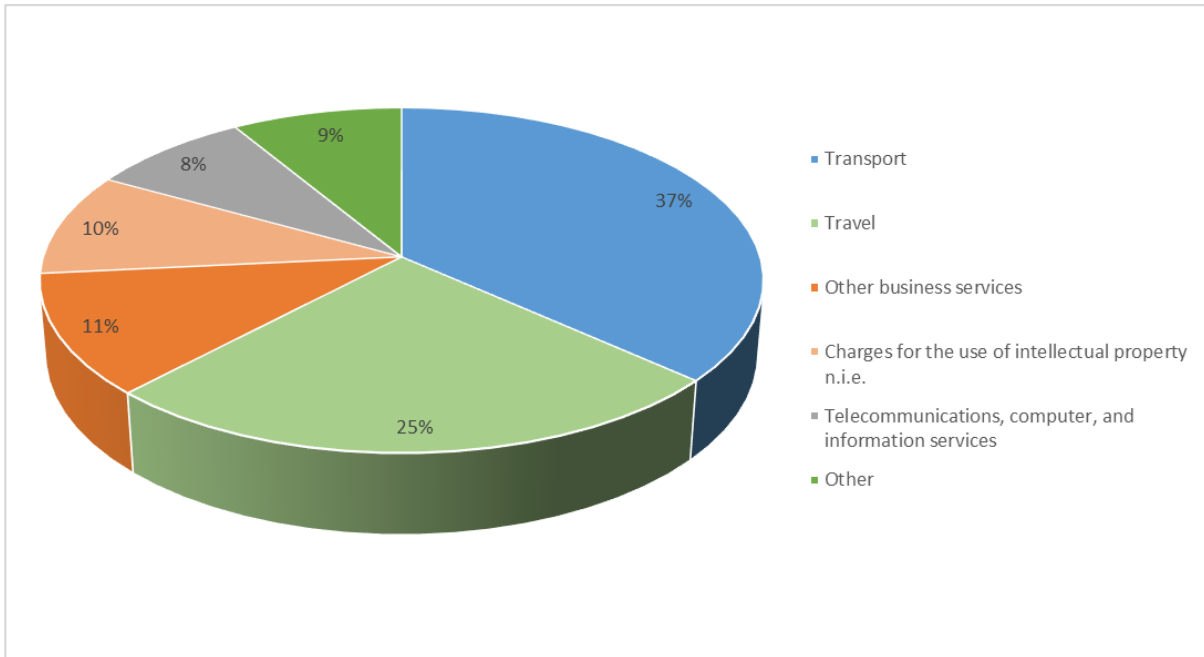


Figure 37. China imported commercial services share 2022

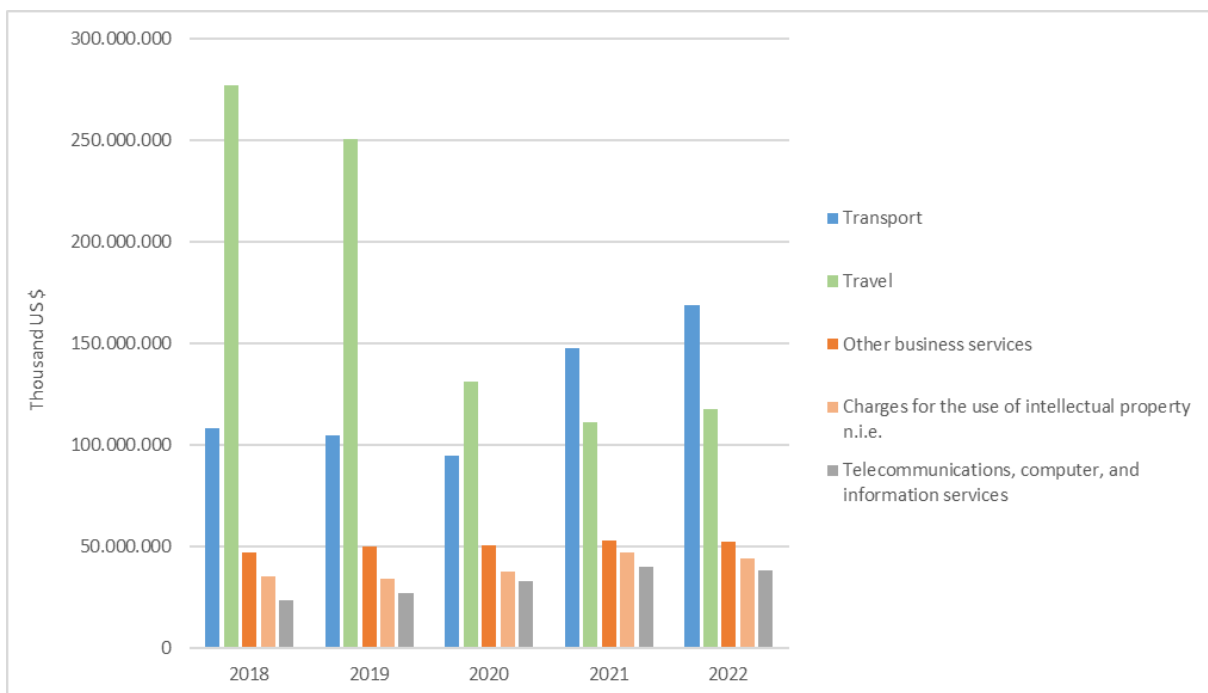


Figure 38. China commercial services imports value evolution by service

As can be seen in the graphs above (and as expected from China) the services exported and imported by Asians are quite disparate in terms of value. The following facts stand out:

As a main service, we highlight the weight of Transport services in the value of exports and imports (35% and 37% respectively in 2022). Trade in these services resulted in 2022 in a

deficit balance of -20.068.657 thousand US \$ for the Asians. However, we should pay particular attention to the evolution of the value of exports and imports of transport services, especially after the first year of the pandemic. In this sense, the value of exports has grown by 158,16% compared to 78,31% for the period 2020-2022. It should be borne in mind that transport services are closely related (or at least a part of them) to trade in goods, so it should come as no surprise that, once again, the production policies applied by China during the pandemic resulted in an increase in its sales above that of its purchases.

The second type of service to be highlighted is Other Business Services. Representing 24% of the value of Chinese exports and 11% of imports, trade in these services with other countries brings China a profit of 48.523.009 thousand US \$. In this case, China is not managing to reduce the value of its imports, as we have seen in other cases, although it is growing at a much slower rate than the value of its exports.

Last but not least, we analyse the situation of the service most imported by China: Travel services. As we all know, China is historically known for issuing a huge amount of tourists to foreign countries, being the world's number one consumer of travel services. This fact should come as no surprise given the population of the Asian powerhouse. This all changed with the arrival of the COVID-19 pandemic which, accompanied by the highly restrictive mobility policies implemented by the Asian country, led to a drop in the value of imported travel services of -52,6% (2018-2020). The value of imports continued to fall in the following year (2021), with transport services becoming the most imported. It is in the last year analyzed (2022) that travel services start to grow again (albeit very slowly). It should be remembered that this decline in sales of travel services (essentially tourism) has had and continues to have repercussions at a global level given the volume of tourists from China, with tourism also being one of the economic engines of many countries in the world.

Having said and seen this, we conclude the following on China and international trade:

In contrast to the United States and following our descriptive analysis of the evolution of trade in both merchandise and services, we can affirm that China, following its strategy of domestic production and consumption, will continue to increase its profitability in the sale of goods and will make gains in the short/medium term in trade in services with other countries.

Moreover, the Asians have shown us a clear example of how effective certain policies (both in terms of exports/imports, consumption and even social policies) can be in mitigating the effects of a global pandemic on international trade, registering growth in their foreign sales when the other major economies have not been able to and reinforcing their position as a world power.

7 EUROPEAN UNION 27

European Union, made up of 27 countries since the departure of the United Kingdom in January 2020, is currently one of the world's leading economic powers and the largest single market in the world. Unlike the two countries analyzed above, in this section we will talk about the EU-27 as a group of countries, in an attempt to show its importance in world trade.

In the period between 1999 and 2010, the EU, in order to unify the economic potential of its member countries, was able to double its foreign trade figures in just one decade. Today, such trade accounts for 30% of its GDP. According to the official website of the EU-27 (European Union, 2022), approximately 61% of international trade in 2022 has been between its member countries, an unmistakable sign of the cohesion shown by the single market. On the other hand, according to the same source, the EU's international trade represents approximately 16% of total international trade, a fact that supports our assertion that it constitutes a fundamental pillar for the development of such trade, as do China and the United States.

According to the latest publication on trade profiles published by al , the EU 27 is the second largest exporter and importer of goods in terms of value and the largest in terms of value of trade in commercial services. We give this figure bearing in mind that the positions we have given to our other two major powers have been based on the fact that the EU is considered as a unit, thus not including trade between member countries.

Next, as with the two previous countries, we proceed to analyse the trade activity of the EU 27 in terms of foreign trade, differentiating between goods and services.

According to the latest publication on trade profiles published by the WTO (World Trade Organization, s.f.), the EU 27 is the second largest exporter and importer of goods in terms of value and the largest in terms of value of trade in commercial services. We give this figure bearing in mind that the positions we have given to our other two major powers have been based on the fact that the EU is considered as a unit, thus not including trade between member countries.

Since we do not have precise data on the value of exports and imports in periods before 2020, this part of our analysis will focus on the three years after 2020, 2021 and 2022.

7.1 Merchandise Trade

As we explained above, when we talk about the EU 27 we are referring to all trade activity carried out by all the countries that make up the EU 27 as a group. For this reason, we must differentiate between two types of trade: intra-EU 27 and extra-EU 27, with our analysis focusing on the second.

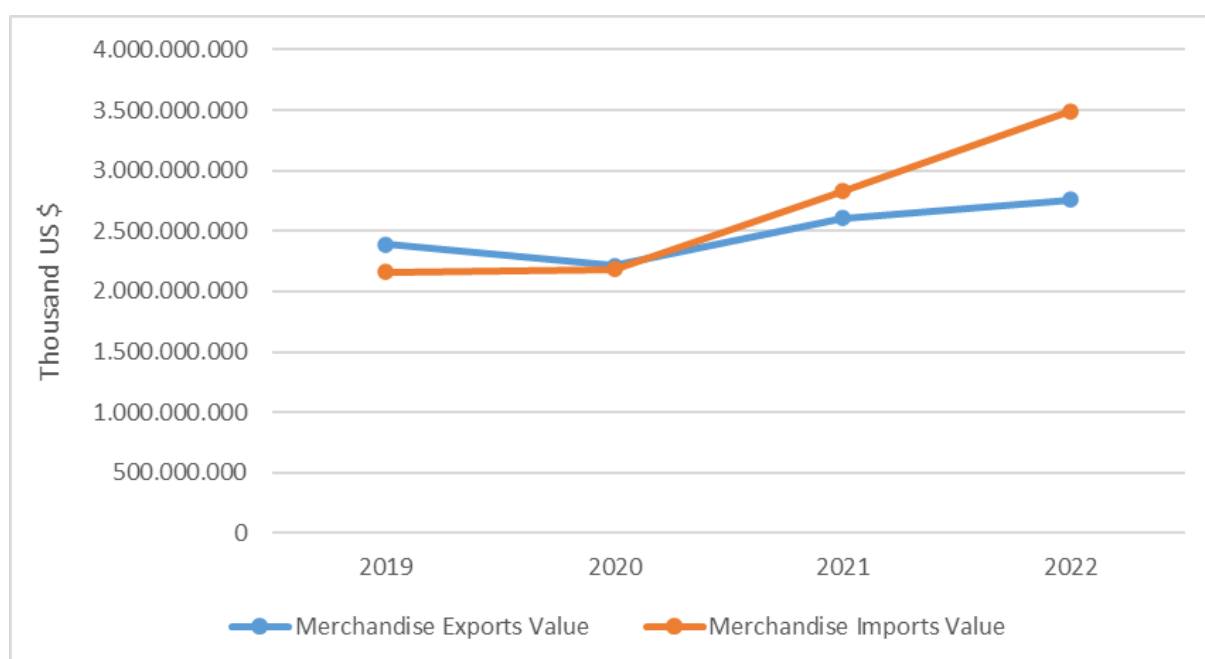


Figure 39. EU 27 merchandise exports and imports value evolution

On the basis of the information provided by Figure 39, we highlight the following relevant facts regarding the evolution of European merchandise trade:

In contrast to the US and China, the EU 27 has had a very irregular evolution of the value of its trade in goods with other countries. In the first pandemic year (2019-2020), the value of exports falls by -7,34%, while the value of imports increases slightly (by just over 1%), reaching almost the same value in 2020 (slightly above the value of exports). In the following years, the value of imports grows steadily above the value of exports, leaving a trade balance for the EU 27 in 2022 of -734.733.466 thousand US \$.

This gap between imported and exported value, which is increasing throughout the post-pandemic period, is a clear indicator of the growing dependence of the EU 27 on merchandise trade.

In the following, we will analyse how the portfolio of products bought and sold by the EU 27 to non-member countries is made up:

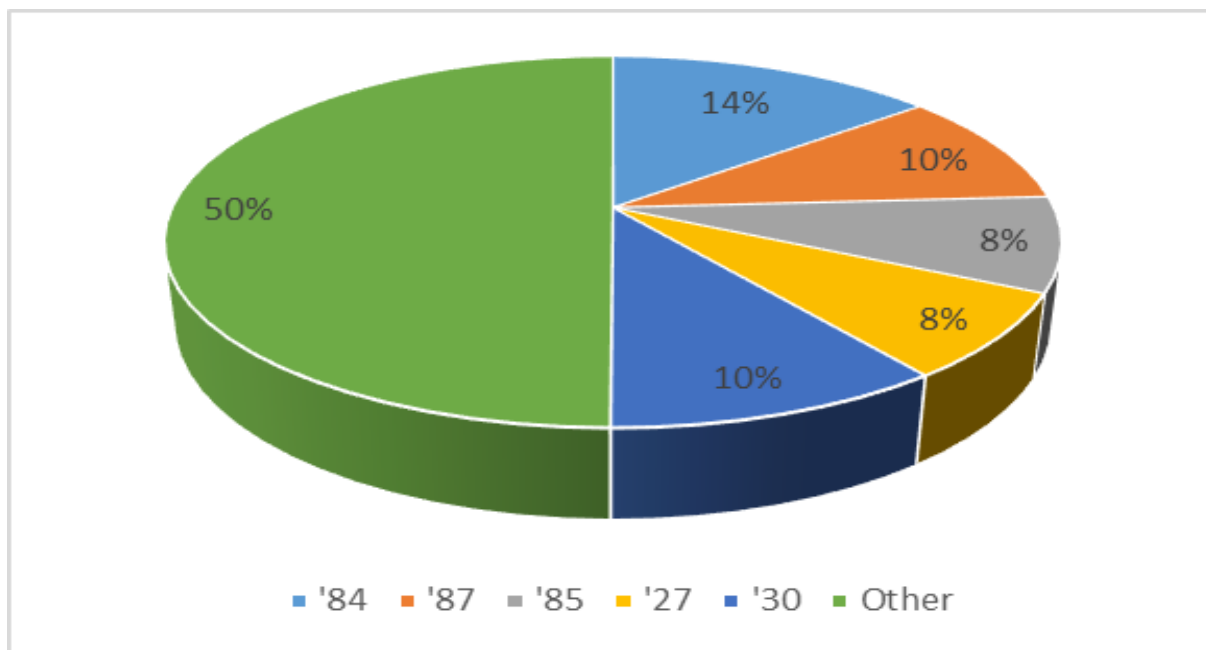


Figure 40. EU 27 Exported products share 2022

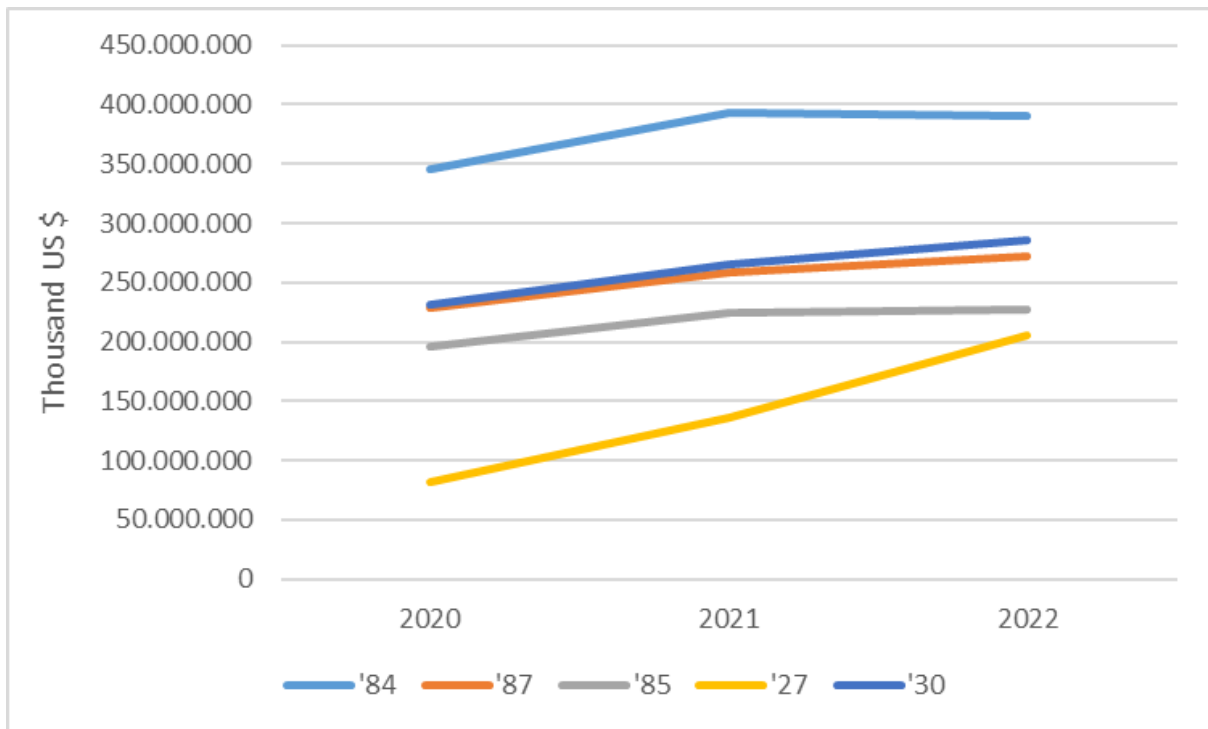


Figure 41. EU 27 Main products exports value evolution

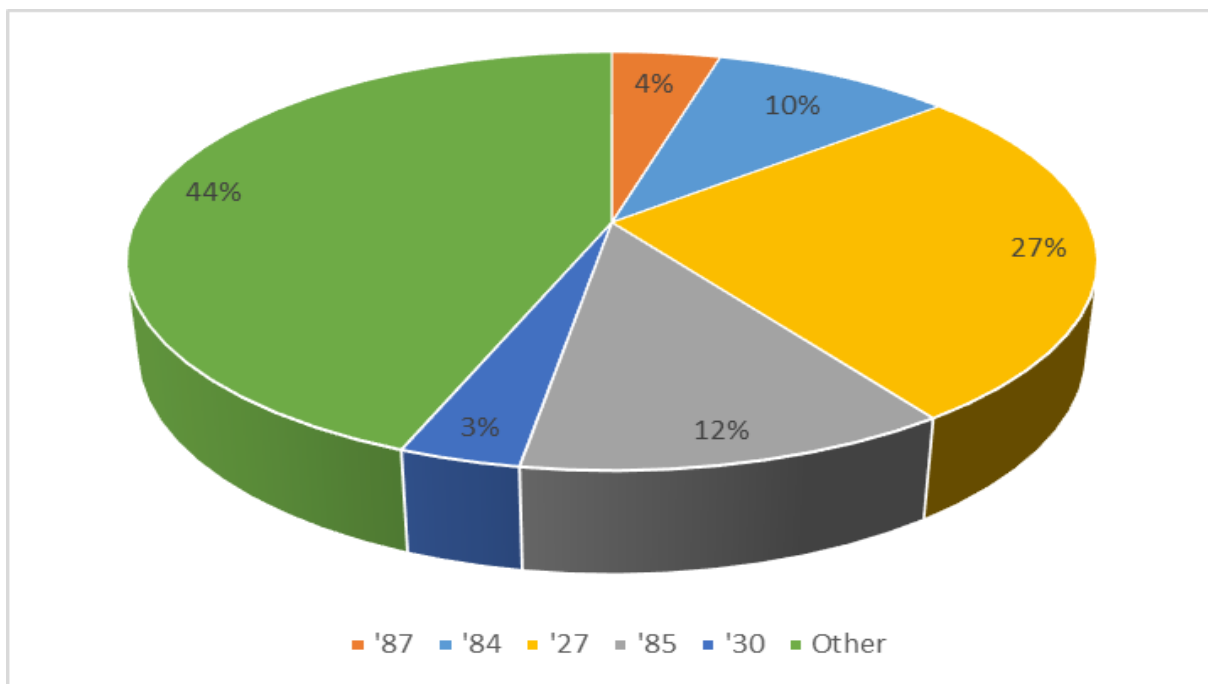


Figure 42. EU 27 Imported products share 2022

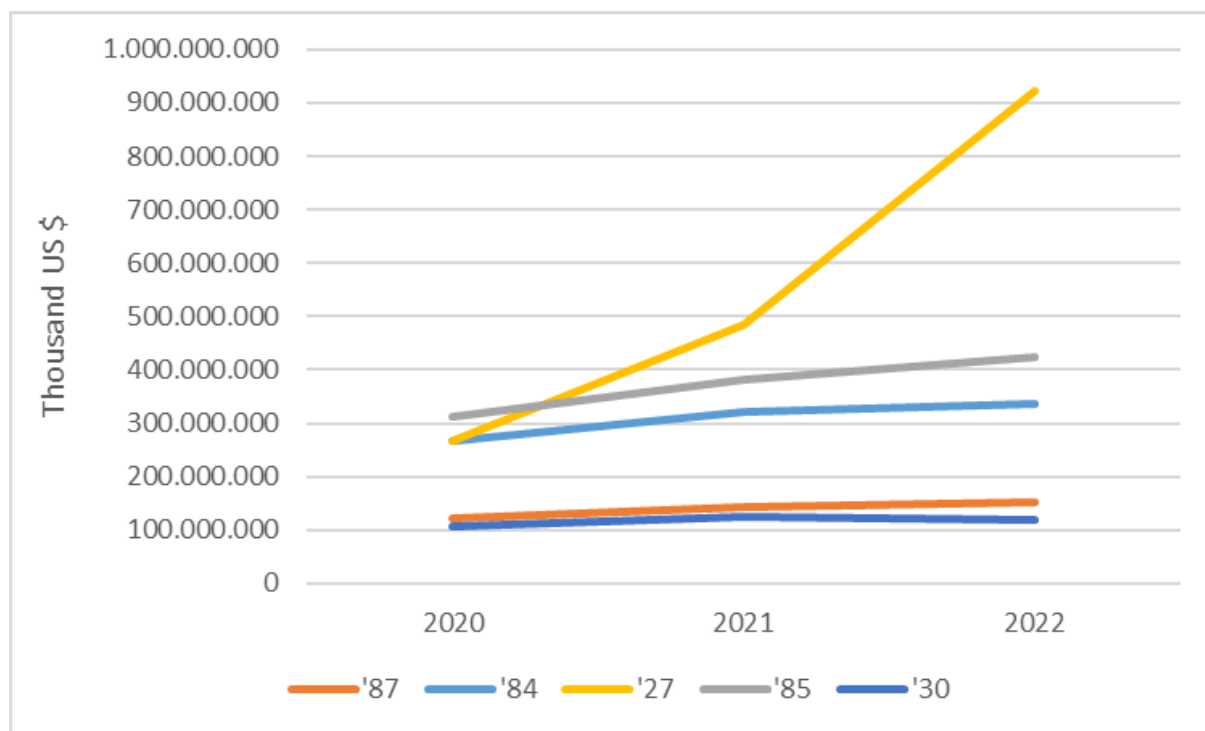


Figure 43. EU 27 Main products imports value evolution

Taking into account that the product groups to be analyzed are common in exports and imports, we will comment on both together:

The first product group to be analyzed is 84 (Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof). Representing 14% of the value of exports and 10% of the value of imports in 2022, trade in products belonging to this group represents a benefit of 239,577,685 thousand US \$ for the EU 27. With regard to its evolution, we can see a significant increase in the first year after the pandemic (2021) in the value of both exports and imports, followed by a phase of stabilisation of this growth during 2022 and even a slight decrease in the case of exports. These products represent the most important asset in terms of EU 27 trade with non-EU 27 countries, so a drop in the value of their exports, even if minimal, is not good news for the Europeans.

With regard to product groups 87 (Vehicles other than railway or tramway rolling stock, and parts and accessories thereof) and 30 (Pharmaceutical products), rather than their evolution (which, as we can see, is fairly constant in terms of value), we will simply highlight that they leave a profit for the EU 27 of 121.808.754 and 166.450.595 thousand US \$ respectively, so we can conclude that they are also a relatively valuable asset for Europeans. We will also

highlight the growth in the value of exports as opposed to the decline in the value of imports since 2021, a fact that reinforces our assumption that these are assets that Europeans have an interest in keeping under control in their trade with the outside world.

Finally, we must analyse the situation regarding the evolution of trade in product group 27 (Mineral fuels, mineral oils and products of their distillation). Representing 8% of the value of goods exported by Europeans in 2022, these products account for 27% of the value of imports in 2022 (almost the same as the sum of the other products highlighted). Leaving a deficit balance for Europeans of -718.011.199 thousand US \$, the disproportionate increase in the value of imports is justified by the recent wars between Ukraine and Russia, which have pushed up the price of energy resources to an unprecedented level. Despite this terrible fact, it should be noted that, given the global nature of the war-related energy crisis, the value of exports is also growing at a high rate, although not at all comparable to that of imports.

Having analyzed the main products traded by the EU 27, let's take a look at its main trading partners in trade in goods:

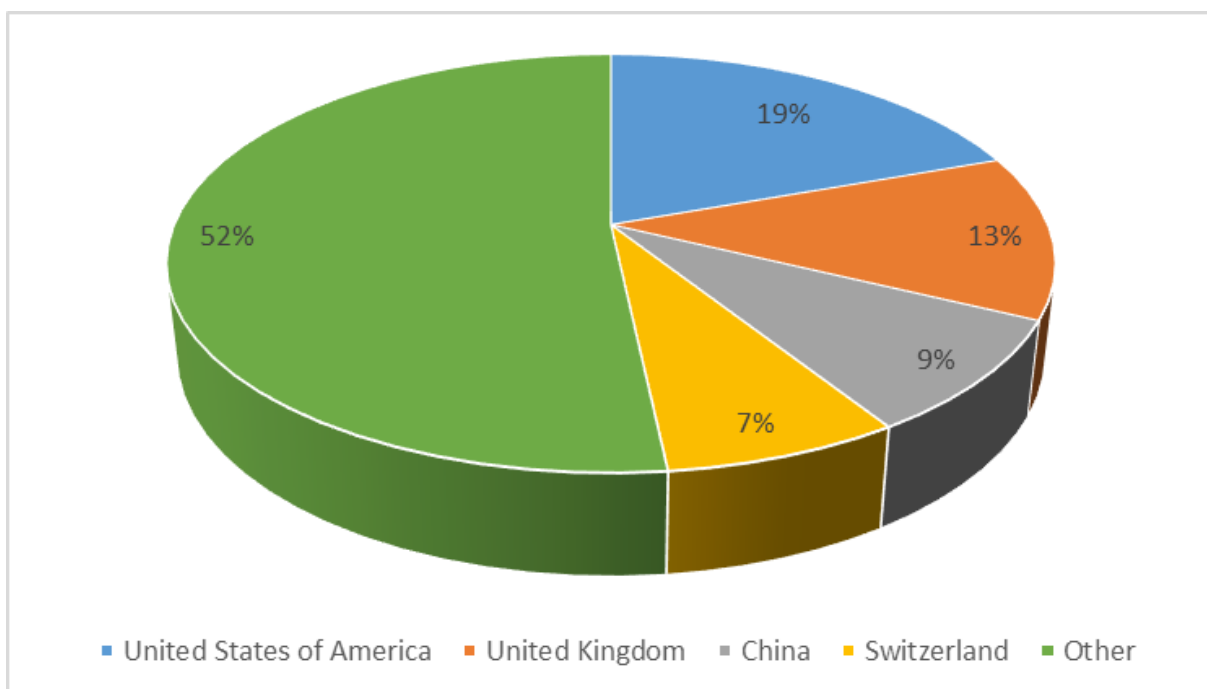


Figure 44. EU 27 exported merchandise value share by partner 2022

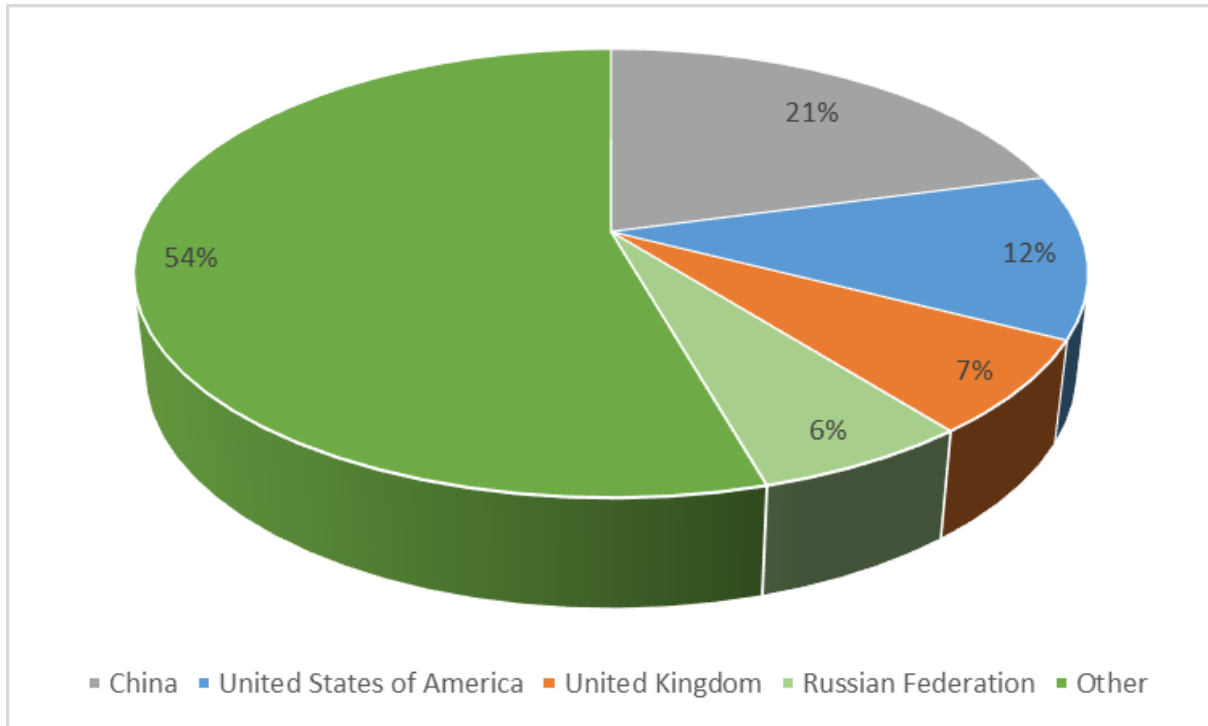


Figure 45. EU 27 imported merchandise value share by partner 2022

As can be seen in Figure 44 and Figure 45, almost 50% of European exports and imports in terms of value are concentrated in four/five countries (a similar case to that of the US, but very different to that of China).

Let us look in more detail at how trade with the countries shown has evolved.

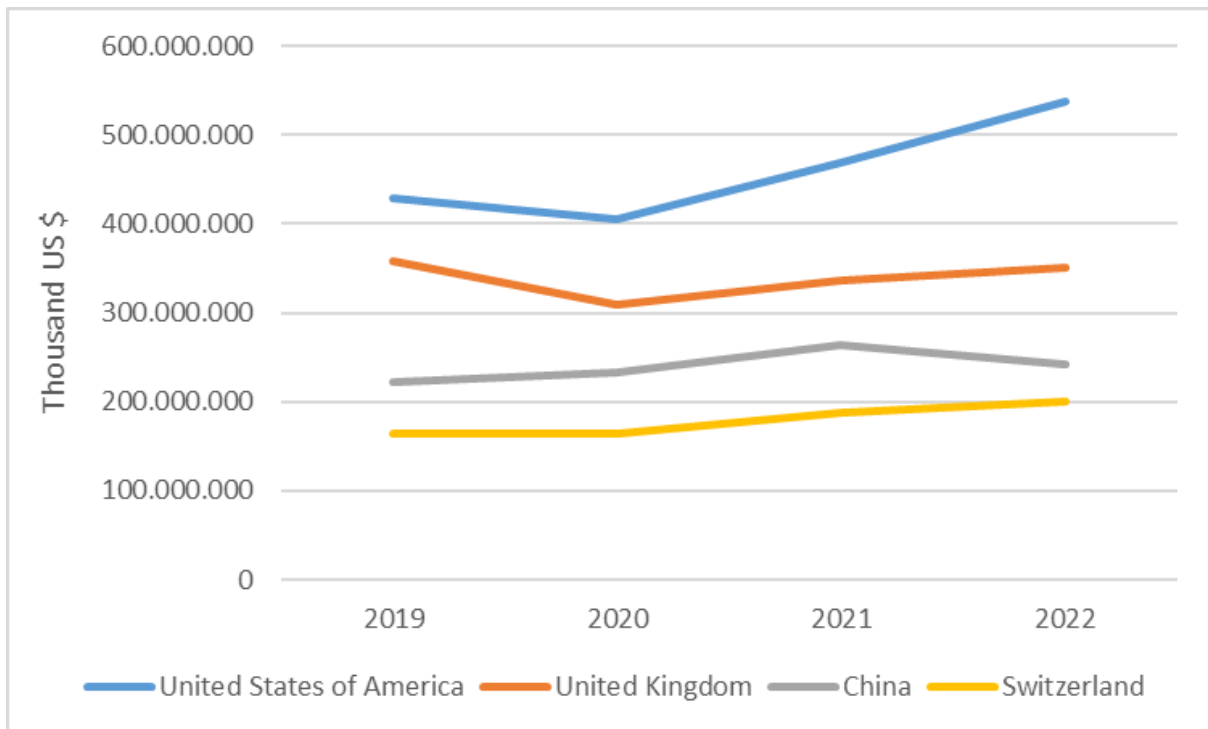


Figure 46. EU 27 Merchandise exports value evolution by partner

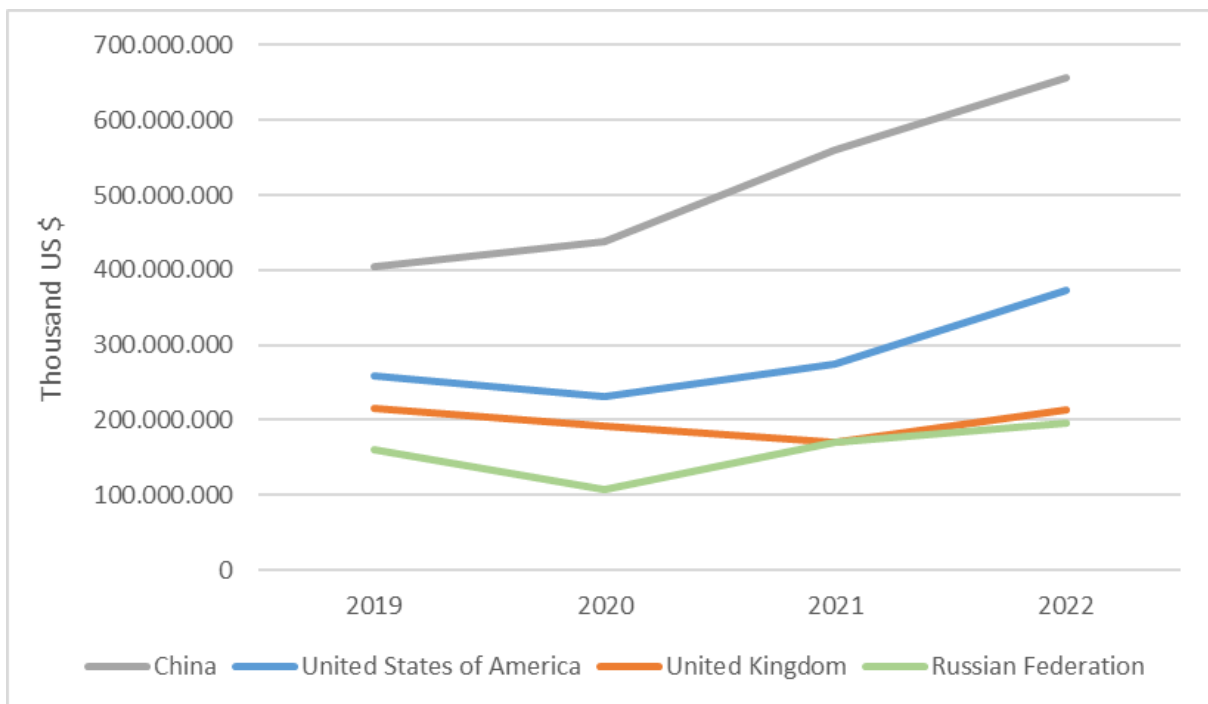


Figure 47. EU 27 Merchandise imports value evolution by partner

From Figure 46 and Figure 47, the following data are relevant:

- **United States of America:** In 2022, the Americans will represent 19% of the export destination in terms of value, ranking first as a partner for the export of goods, and

12% of the origin of the value of European imports, ranking second in terms of import partners. Thus, the exchange of goods leaves for the Europeans a benefit of 165.385.677 thousand US \$ in 2022. On the other hand, as regards the evolution of trade activity between the two economies, both the value of exports and imports experience a slight fall during the period 2019-2020, followed by a growth phase in the two subsequent years (2020-2022). This situation, which we have already seen during our analysis to be quite generalized, has led to a higher growth in the value imported than exported during the last period analyzed (2021-2022), so we conclude an increased dependence in terms of goods in the post-pandemic stage for the EU 27 with respect to the US.

- **China:** The trade relationship with China in terms of goods is governed by the comments made in the section we have dedicated to the great Asian power. As we can see, China represents only 9% of the value of European exports, but it is the main source of its imports, accounting for 21% of their value in 2022. The exchange of goods resulted in a deficit of -413.541.682 thousand US \$ for the EU 27 in 2022. If we look at the evolution of the value of trade between the two countries, we can clearly see what we have already seen in recent sections: growth in the value of exports to China during the first year of the pandemic and a subsequent fall in value between 2021 and 2022; very significant growth (approximately 50%) in the value of imports between 2020 and 2022, although this had already been growing in the previous period, unlike what happened with the rest of the partners.
- **Russian Federation:** In the case of the Russian Federation, we will pay special attention to the increase in the value of imports from 2020 onwards. This fact, as we have commented in the previous section, is a product of the current energy crisis derived (among other things) from the war between Russia and Ukraine. Let us note how the strong increase in the value of imports between 2020-2021, which corresponds mostly to the increase in the value of the products of group 27 (energy resources), is followed by a slight decrease of this growth (although still registering positive values) in the subsequent period (2021-2022), as a result of the policies that the EU 27 decided to adopt during the year 2021 to reduce its energy dependence on the Russians.

This concludes our descriptive analysis of European merchandise trade, which, unlike China, is not exactly at its best when it comes to trade with other countries. We highlight, above all, the inability of Europeans to recover from the effects of the COVID-29 pandemic on their merchant trade, since then seeing the value of their sales to other countries surpassed by the value of their purchases and increasingly dependent on non-member countries for key resources for our economy.

7.2 Commercial Services Trade

In the case of services, the EU 27 as a group of countries has shares in exports (23,93%) and imports (23,01%) that are considerably higher than the country that occupies first place in the ranking of international trade in services: The United States. As we explained at the beginning of the section on Europeans, the trade flows in terms of value that they move with non-EU countries are what place the EU-27 at the top of the world's major traders, a fact that would not be possible if we analyse the role played by the member countries separately.

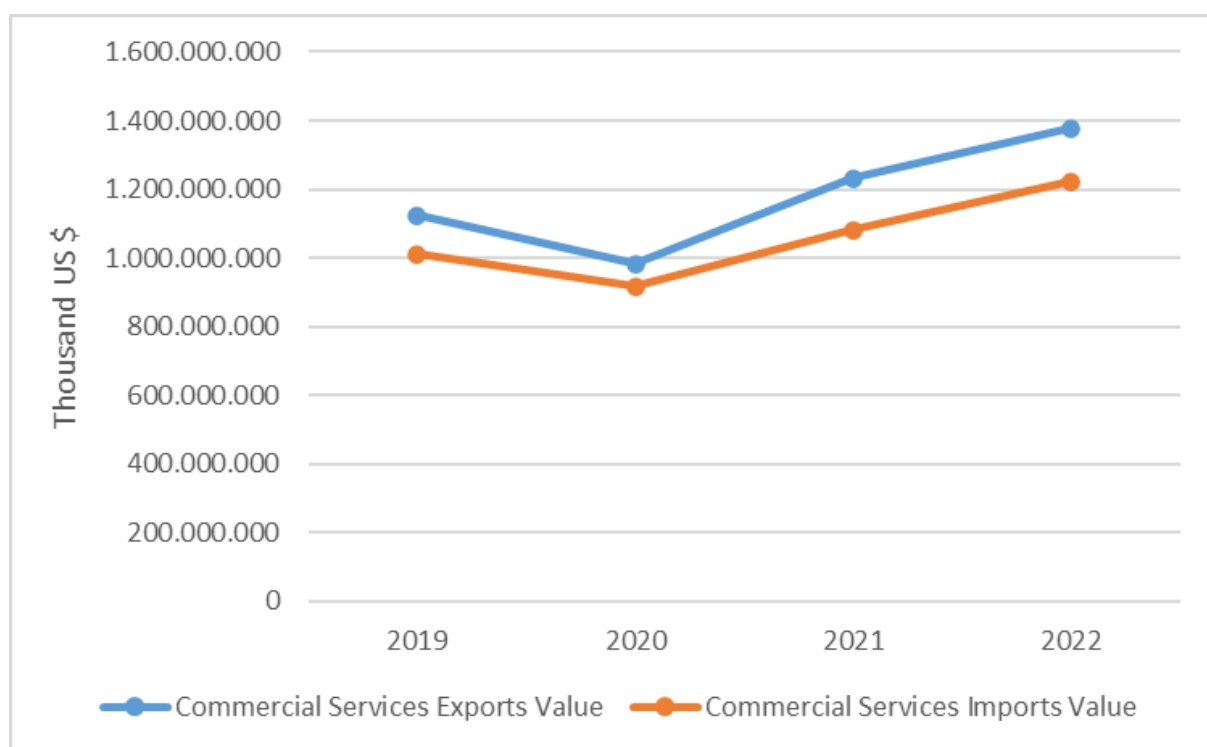


Figure 48. EU 27 commercial services exports and imports value evolution

Based on the information shown in the Figure 48, we highlight the following relevant facts about the EU 27's trade in commercial services with non-member countries:

The first fact to highlight is that, being a similar case to the one analyzed with the US, the exchange of commercial services is beneficial for the Europeans during the entire period analyzed (2019-2022), leaving a benefit in 2022 of 154.429.000 thousand US \$. Again, as in the case of the US, we see that the profits obtained from trade in services with the outside world are not enough to cover the deficit generated by trade in goods.

With regard to the evolution of the value of their trade, we can see that it has been fairly homogeneous in terms of exports and imports during the different periods analyzed, but there are a couple of details that stand out:

- The value of imports fell slightly more than the value of exports during the first year of the COVID-19 pandemic (12,48% vs. 9,35% respectively).
- In contrast, in the later period (2020-2021), although the value of both exports and imports grew above their initial levels, the value of exported services grew significantly more than that of imported services. In the last period analyzed (2021-2022), both show similar growth. This trend leads us to conclude a priori that trade in services with other countries will continue to be beneficial for Europeans, at least in the short term.

Having said that, we now turn to the main services exported and imported by Europeans. In this case, given the lack of specific data on the different sub-types of exported and imported products, we will base our analysis on the four main categories of commercial services: Transport, Travel, Good-related Services and Other commercial services.

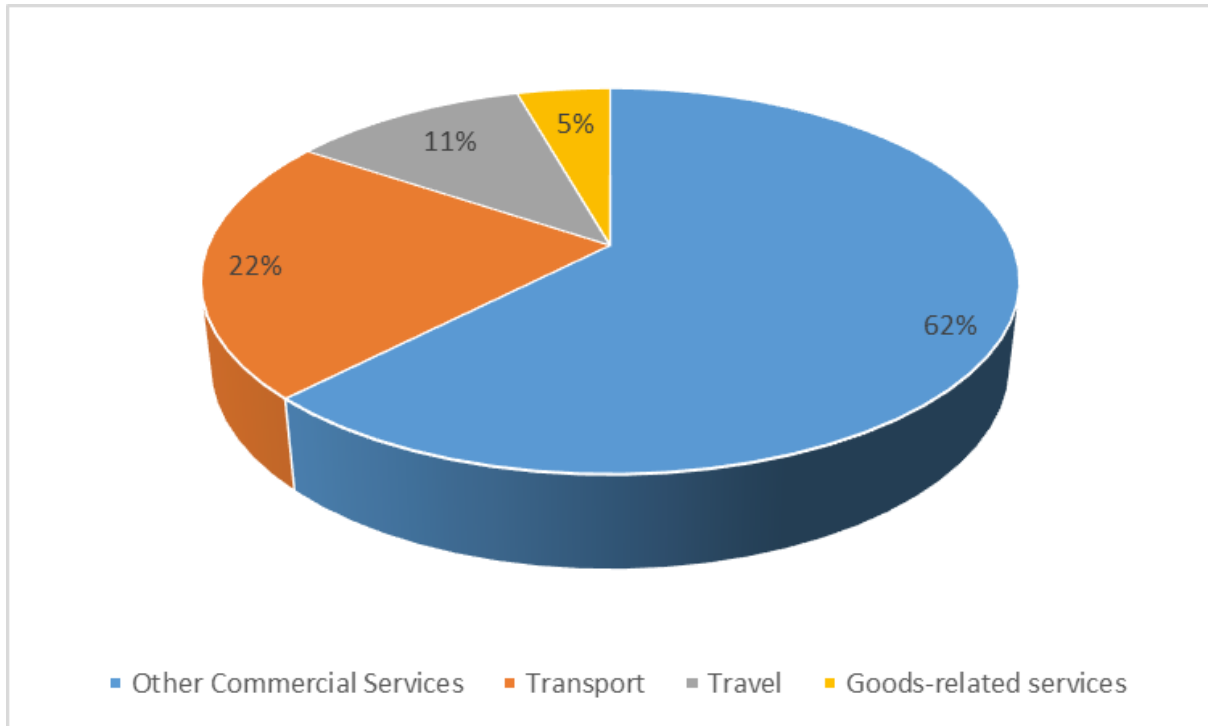


Figure 49. EU 27 exported commercial services share 2022

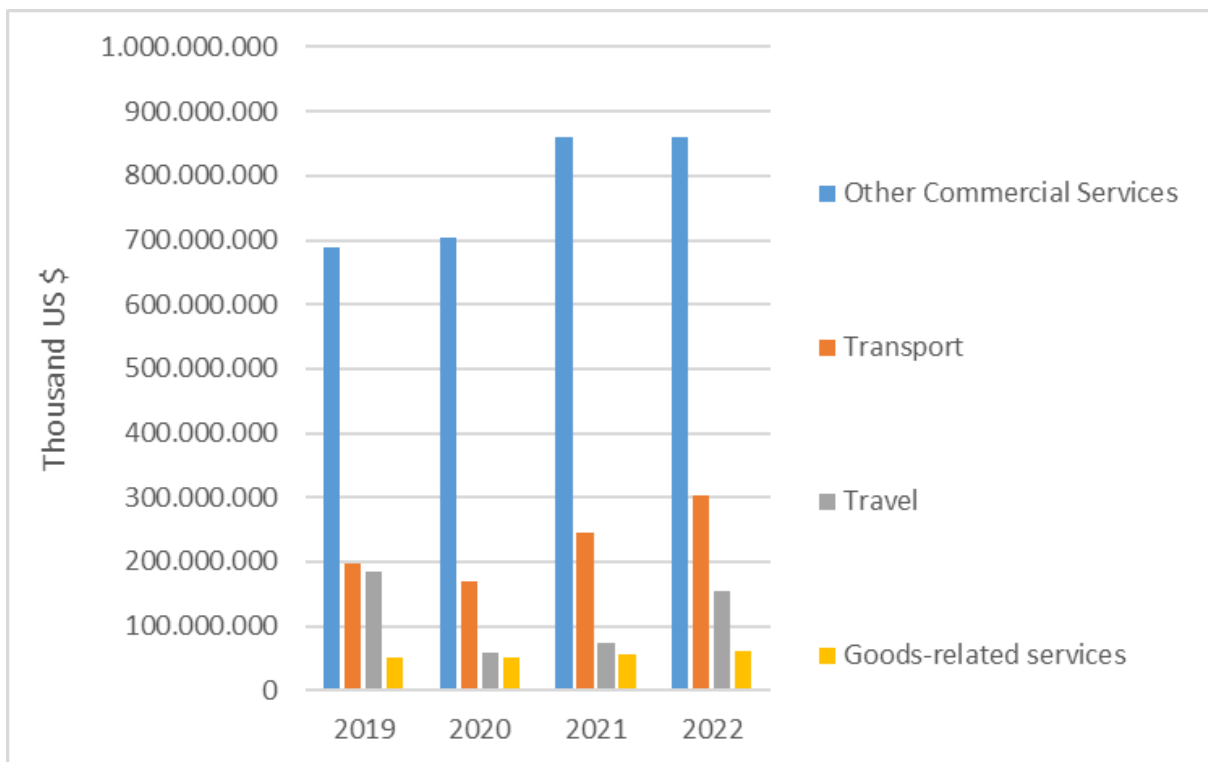


Figure 50. EU 27 commercial services exports value evolution by service

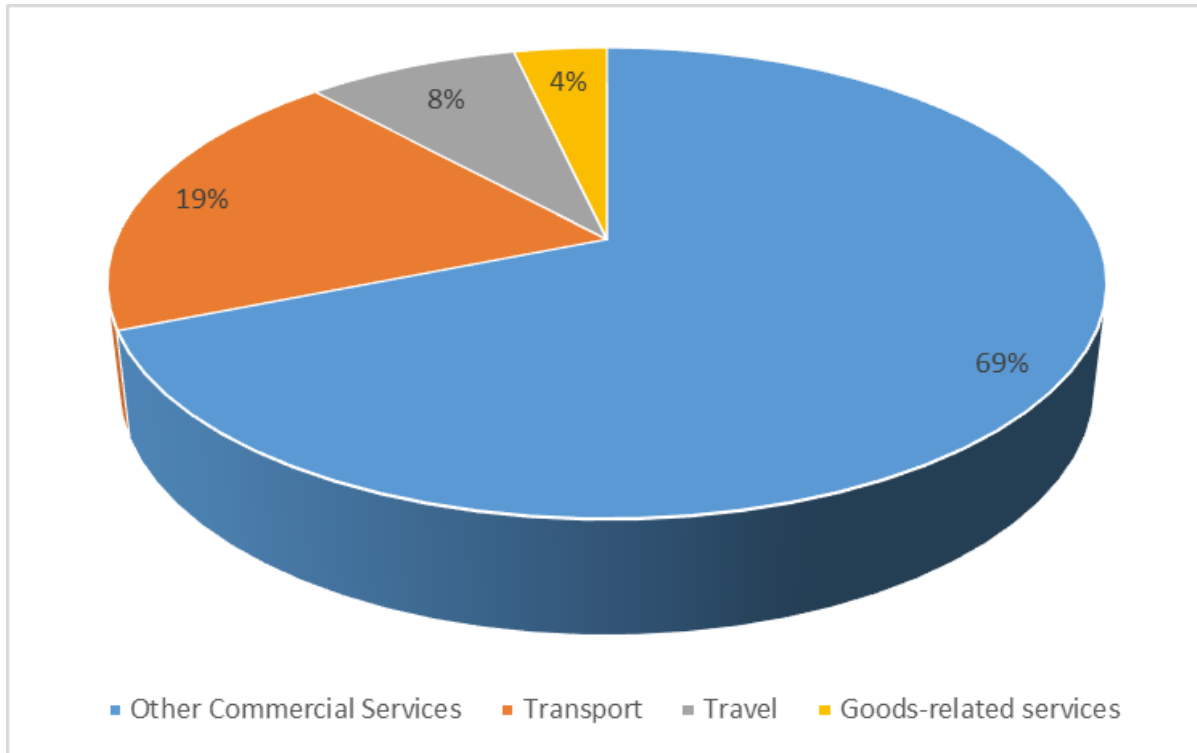


Figure 51. EU 27 imported commercial services share 2022

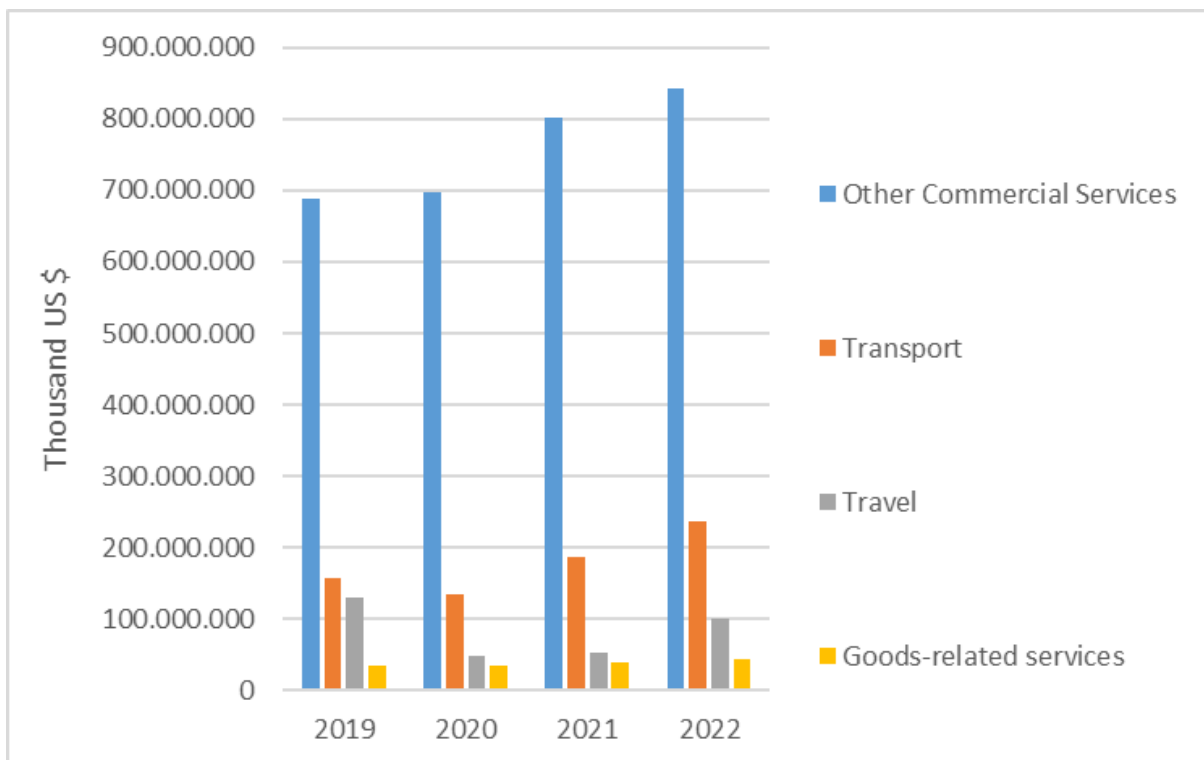


Figure 52. EU 27 commercial services imports value evolution by service

As can be seen in Figure 49 and Figure 51, the value of trade in commercial services is fairly evenly distributed between the different service categories for both exports and imports.

In the following, we will analyse how the value of exchanges in the different service categories has evolved:

First, we will look at the category of Other Business Services. Trade in these services, which account for 62% of European exports and 69% of European imports, results in a benefit of US\$ 16.899.571 thousand for the EU 27. Although we do not have reliable data on which specific services were imported in 2022 within this category, we can highlight the weight of Telecommunications Services and Other Business Services in the composition of exports. With regard to their evolution, it should be noted that the value of exports and imports of these categories of services has not stopped growing since 2019 (not registering a fall during the first year of the pandemic), with the growth during the last period (2021-2022) being greater for the imported value (less than 1% for the exported value compared to 5% for the imported value).

With regard to transport services, which represent 22% of the value of exports and 19% of imports in 2022, Europeans will benefit from trade with other countries to the tune of US \$ 68,359,509,000. In this case, we do see a decrease in terms of value in both exports and imports during the first year of the pandemic (2019-2020), followed by growth, again homogeneous in terms of value exported and imported, in subsequent periods.

With travel services, where we already know that all tourism services are included, we see the biggest drop in the value of exports and imports during the first year of the pandemic (-68.17 for exports and -62% for imports in the period 2019-2020). The recovery of this sector in Europe has been slower than in China, as can be seen in Figure 50 and Figure 52, with no real signs of recovery until the end of 2021. In 2022, the exchange result for this category of services was 53.971.798 thousand US \$.

Finally, as far as Good-related Services are concerned, we will simply point out that their exchange with other countries results in a benefit of 16.575.076 thousand US \$ for Europeans in 2022.

Thus, we can see how the services included in the Other Commercial Services category, despite being the most exported, are not the ones that leave the greatest benefit in the

exchange of services to the EU 27, the most beneficial for these being Transport and travel services.

To conclude our analysis of the EU 27, let us look at who have been its main trading partners in the exchange of services. In this case, again due to the lack of updated data, we will analyse how trade has evolved between 2019 and 2021, with 2021 being the last year for which reliable data are available.

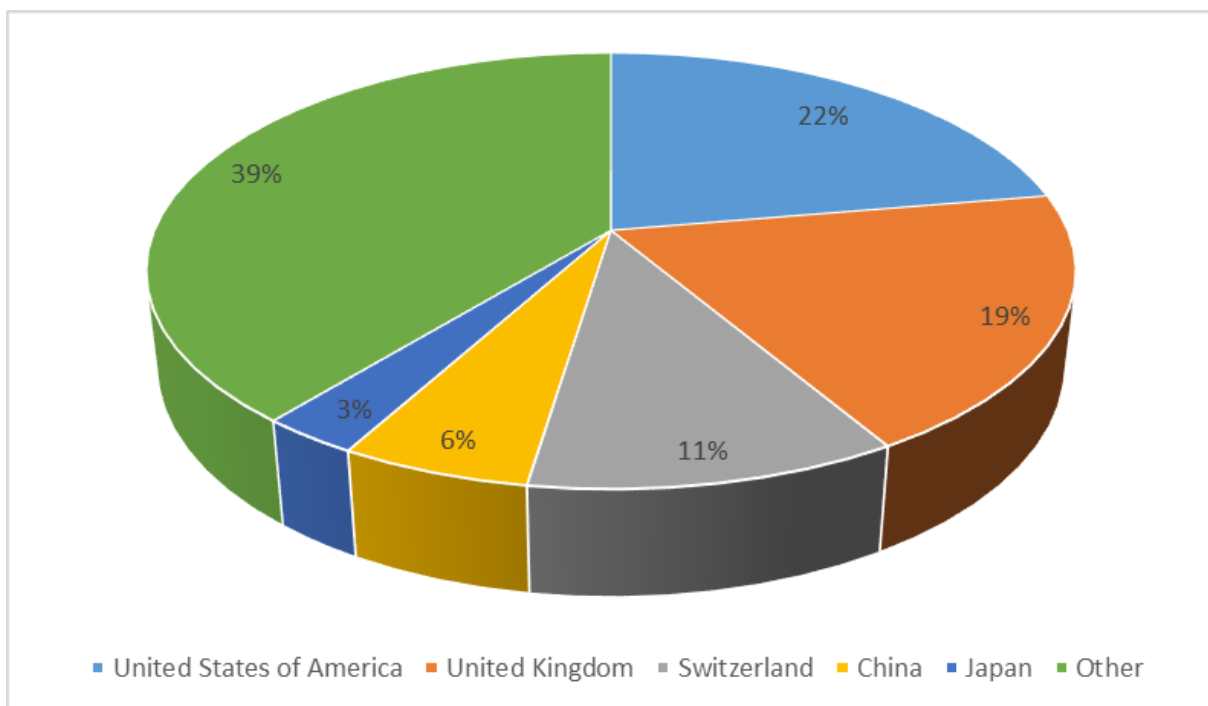


Figure 53. EU 27 exported service value share by partner 2021

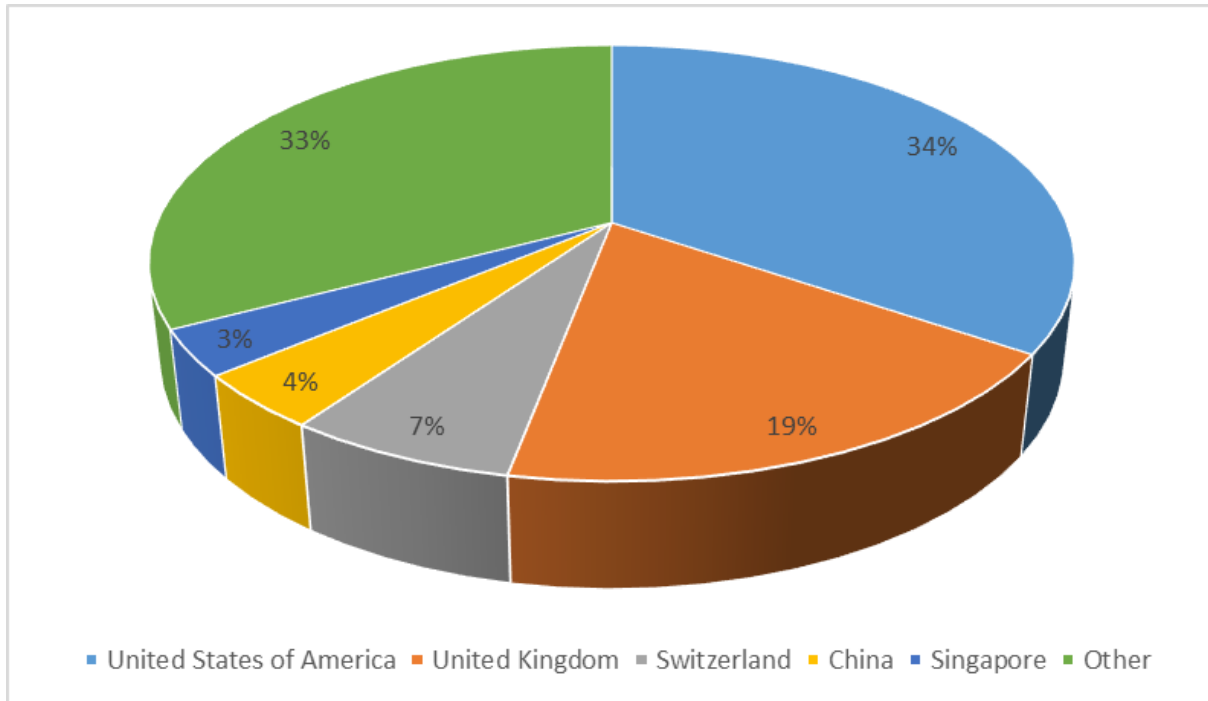


Figure 54. EU 27 imported service value share by partner 2021

As can be seen in Figure 53 and Figure 54, the distribution of exports and imports is quite homogeneous, although it is more concentrated than in some of the cases studied, with these five countries accounting for more than 60% of both the origin and destination of European trade.

Let us now look at how trade with these countries has evolved to highlight, as the most relevant facts, the following:

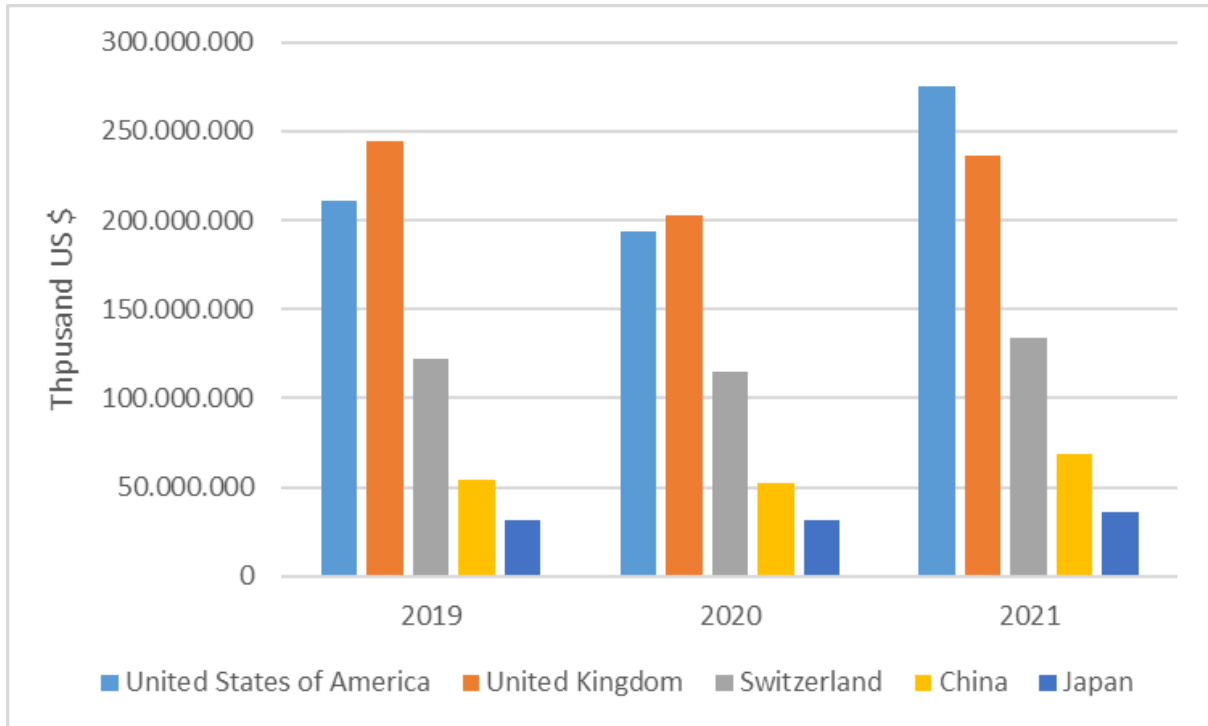


Figure 55. EU 27 Commercial services exports value evolution by partner

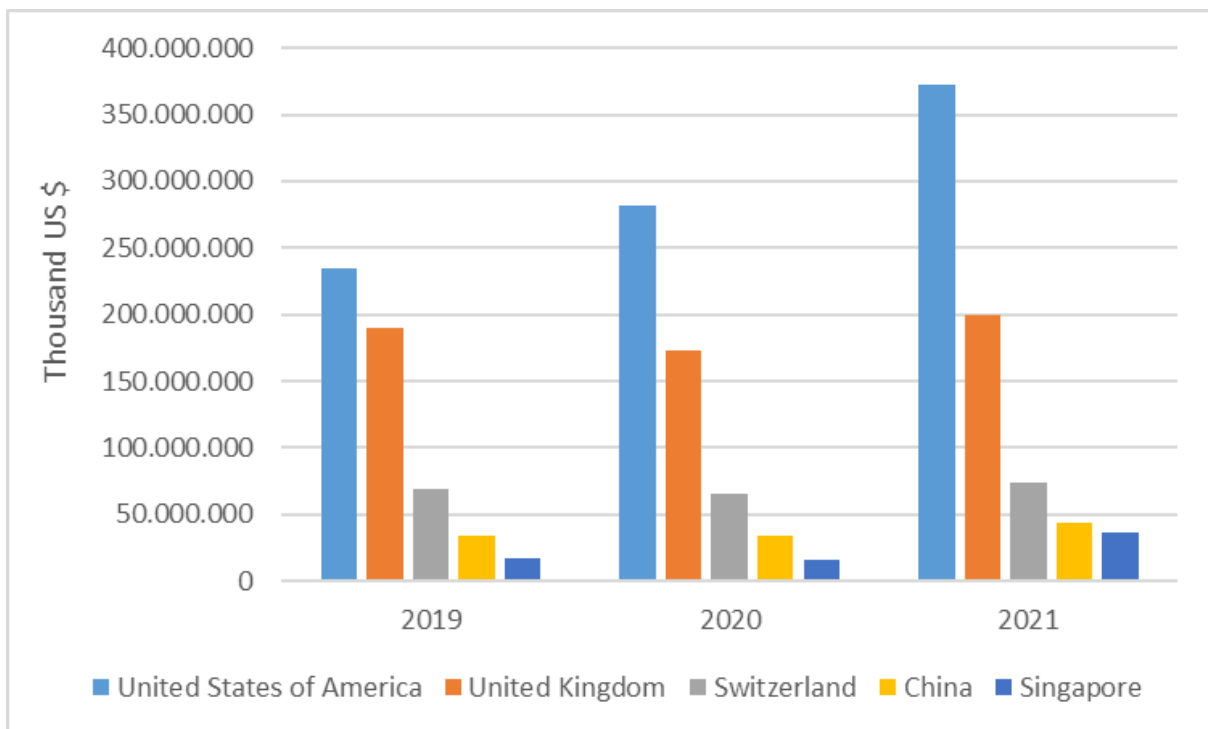


Figure 56. EU 27 Commercial services imports value evolution by partner

As we have already seen in the section on the US, the Americans are the most important trading partners in terms of trade in services, accounting for 22% of the value of their exports and 34% of the value of their imports in 2021. The result of this trade is a loss of -97.988.004

thousand US \$ for the Europeans for the year in question. With regard to the evolution of trade between the two economies, it should be noted that, until 2021, the US ranked second (after the United Kingdom) in terms of the destination of European exports of services which, after registering a fall in the value of exports during the first year of the pandemic (2019-2020), took a position ahead of the British in the subsequent period. It should be recalled that at the end of 2010 the UK officially leaves the EU 28, so this change of destination for European products should not come as a surprise. The value of European imports from the US, on the other hand, is growing steadily from 2019 to 2021.

Trade in commercial services between the EU 27 and the UK, which accounts for 19% of the value of both European exports and imports, results in a benefit of US \$ 36.692.134 thousand for the EU 27 in 2021. Its evolution between 2019-2021 follows similar patterns in the value of exports and that of imports: fall during the first year of the COVID-19 pandemic (2019-2020) followed by an increase in the subsequent period (2020-2021).

Switzerland is an important economic driver of the EU 27's trade in services. Representing 11% of the value of its exports and 7% of the value of its imports in 2021, the trade in services with the Swiss represents a benefit for the EU 27 of US\$ 60.836.698 thousand (the highest among the main trading partners). Given that its evolution is homogeneous in terms of exports and imports, there is no reason to believe that the exchange of services between the EU 27 will cease to be of benefit to Europeans in the short term.

Finally, as far as China is concerned, we will simply highlight the "secondary" role it plays in the exchange of commercial services with the Europeans, given the weight it has in the exchange of goods. Even so, representing 6% of the value of European exports and 4% of the value of imports, trade between the two economies is worth 24,703,222 thousand US \$ for the Europeans. Among the services exported by the EU 27 to China (or consumed by China from the EU 27), those derived from tourism once again stand out.

Thus, we conclude our analysis of the last of our big three economies: the EU 27.

After taking a close look at both the composition of its goods and services portfolios, as well as their evolution and main origins and destinations, we conclude the following:

Trade in goods, which was a source of income and an engine of the economy for Europeans in the years following the COVID-19 pandemic (2019-2020), has become unfavourable for Europeans in the wake of the outbreak of COVID-19. Unlike China, it seems that the measures taken by the EU 27 to mitigate the effects of the pandemic on their merchandise trade were not sufficiently effective. As a result, we are left with a growing dependence on imports from other countries which, compounded by the war in Ukraine and Russia and the growing energy crisis (with its consequent inflation in energy prices), does not suggest that Europeans will recover in the short term.

With regard to trade in services, although it is true that it continues to be a source of income for Europeans, the homogeneous growth between the value exported and imported does not suggest that a strong transformation of European policies is taking place in this regard (unlike in the case of China). Thus, we can see how the benefits obtained from the exchange of services with non-member countries do not serve to offset the losses derived from trade in goods, and the data analyzed do not, a priori, give the impression that this is going to change in the short/medium term.

8 CONCLUSIONS

Having carried out our descriptive analysis of the evolution of trade in goods and services of the main world economies, as well as its evolution since the arrival of the COVID-19 pandemic, in this section we will reflect in a simple and precise manner the conclusions that have been shared in the different sections of this thesis.

Firstly, as far as trade in goods is concerned, we have seen how the effects of the pandemic have manifested themselves in a very heterogeneous manner in the different economies analyzed. In this sense, the data suggest that China, with its dominant position in trade in manufactured goods, will continue to increase the benefits it currently obtains in the exchange of products with other countries as a result of the effectiveness of the policies implemented since the outbreak of the pandemic. In contrast, the US and the EU 27 must consider a drastic change in their trade policies. With increasing dependence in both cases on other countries for imported goods, these two economies are seeing their trade performance become increasingly unfavourable. We highlight the worrying situation of the EU 27, which after the pandemic has gone from making a profit in the exchange of goods with other countries to registering a deficit in its trade balance, with the value of its imports growing well above that of its exports.

In international trade in services, the situation is slightly different, but again seems to favour China. While the US and the EU 27 maintain their historical gains in these exchanges, with a homogeneous growth in the value of their exports and imports, China is increasingly increasing the value of its exports and slowing down the growth in the value of its imports. Thus, it is not unreasonable to think that in the short term the Asians will achieve profitability from the exchange of services and that, in the not-too-distant future, this profit will be greater than that obtained by our two other economies studied.

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