

Global Trade Outlook and Statistics



About the WTO

The World Trade Organization is the international body dealing with the global rules of trade between nations. Its main function is to ensure that trade flows as smoothly, predictably and freely as possible, with a level playing field for all its members.

Embargo

This publication is under embargo until 14.00 Geneva time on 5 April 2023.

Contents

Key points	2
Trade volume growth	3
Drivers of trade volume	4
Trade developments in value terms	11
Merchandise trade	11
Services trade	11
Other indicators	17

Appendices

Appendix Table 1: Leading exporters and importers in world merchandise trade, 2022	19
Appendix Table 2: Leading exporters and importers in world merchandise trade excluding intra-EU trade, 2022	20
Appendix Table 3: Leading exporters and importers of commercial services, 2022	21
Appendix Table 4: Leading exporters and importers of commercial services excluding intra-EU trade, 2022	22
Appendix Table 5: Leading exporters of digitally delivered services, 2022	23

Key points

- World merchandise trade volume is projected to grow 1.7% in 2023 before picking up to 3.2% in 2024.
- Risks to the forecast are tilted to the downside, including geopolitical tensions, food insecurity, potential financial instability stemming from monetary policy tightening, and increasing levels of debt.
- Trade volume growth in 2022 was slower than expected at 2.7% following a fourth quarter slump, but still stronger than worst case scenarios considered at the start of the war in Ukraine.
- The value of world merchandise trade rose 12%to US\$ 25.3 trillion in 2022, inflated in part by high global commodity prices.
- The value of world commercial services trade increased 15% in 2022 to US\$ 6.8 trillion. Digitally delivered services exports were worth US\$ 3.82 trillion in the same year.

Trade growth to slow to 1.7% in 2023 following slump in fourth quarter of 2022

The outlook for the global economy has slightly improved since the WTO's most recent trade forecast was issued in October of last year but the pace of trade expansion in 2023 is still expected to be subpar, weighed down by the ongoing war in Ukraine, stubbornly high inflation, tighter monetary policy and financial uncertainty.

Trade volume growth

WTO economists are now projecting merchandise trade volume growth of 1.7% in 2023 – up from last October's estimate of 1.0% – accompanied by real GDP growth of 2.4% at market exchange rates (see Chart 1). Growth rates for trade and output this year are expected to be below their respective averages of 2.6% and 2.7% for the 12 years since the trade collapse that followed the global financial crisis.

Trade growth should rebound to 3.2% in 2024 as GDP growth picks up to 2.6%, but this estimate is more uncertain than usual due to the presence of substantial downside risks, including rising geopolitical tensions, global food insecurity, the possibility of unforeseen fallouts from monetary tightening, risks to financial stability and increasing levels of debt.

Goods trade was more resilient than expected for most of 2022 despite the drag exerted by the war between Russia and Ukraine. Year-on-year merchandise trade volume growth averaged 4.2% in the first three quarters of 2022 before a 2.4% quarter-on-quarter decline in the fourth quarter dragged growth for the year down to 2.7%. The final result for 2022 was weaker than the WTO's October forecast of 3.5% but close to the earlier estimate of 3.0% from last April, which relied on simulations to gauge the economic impact of the war.

A 2.7% increase in trade volume in 2022 is consistent with the WTO's initial report on the crisis in Ukraine¹, which estimated that trade growth for the year would fall somewhere between 2.4% and 3.0%. The final figure ended up being within this range and well



Chart 1: World merchandise trade volume and GDP growth, 2015-2024 Annual % change

Note: 2023 and 2024 are projections.

Source: WTO for merchandise trade volume and consensus estimates for GDP.

above the most pessimistic scenario considered in the report, which would have seen trade growth of just 0.5% if countries had split into competing trade blocs. Fragmentation has mostly been avoided but it remains a significant threat, which could hinder economic growth and reduce living standards over the long term. The fact that worst-case scenarios were avoided in 2022 should not be a cause for complacency.

Several factors contributed to the trade slump in the fourth quarter of 2022, the most conspicuous being the rise in global commodity prices. Although food and energy prices had receded from their post conflict peaks by Q4, they remained high by historical standards and continued to erode real incomes and import demand. The impact of energy prices was strongest during the winter months in Europe, where gas supplies from Russia were cut off. High prices for wheat and other grains were also keenly felt in Middle Eastern and African countries that relied heavily on imports from Ukraine and Russia before the war.

On a more positive note, a WTO follow-up study marking one year of war in Ukraine² found that vulnerable economies were able to find substitute products and suppliers to obtain essential food supplies. This response might not have been possible without an open and inclusive multilateral trading system to anchor the global economy.

Rising COVID-19 infections also had a major impact on the Chinese economy in Q4, where GDP growth dropped to 0.0% and exports fell 6.5%. This decline may be reversed to China's advantage in 2023 now that pandemic controls have been wound down. The relaxation of such measures is expected to unleash pent-up consumer demand in China, which could provide a boost to international trade, particularly in travel-related services.

Finally, interest rate hikes in advanced economies may have succeeded in cooling demand by Q4 but they have also revealed weaknesses in banking systems that could lead to wider financial instability if left unchecked. After years of expansionary monetary policy, central banks find themselves in the difficult position of having to strike a balance between taming inflation, sustaining economic growth, and maintaining financial stability. Miscalculation could have negative consequences for the global economy and trade. Several factors contributed to the trade slump in the fourth quarter of 2022, the most conspicuous being the rise in global commodity prices.

Reversing course on low interest rates was never going to be easy, and the road ahead is likely to be bumpy. Recent bank failures in the United States and Europe highlight the possible existence of further vulnerabilities stemming from a changed interest rate environment. Upside surprises in inflation could raise the prospect of bigger rate hikes but these would come at the risk of broader financial contagion that would reduce output and trade. Governments and regulators need to be alert to these and other financial risks in the coming months.

Drivers of trade volume

Geopolitical tensions, inflation (and related measures), energy and other commodity prices, and the lingering effects of COVID-19 were the main drivers of trade and output in 2022. Last year saw some of the highest inflation rates since the 1980s together with massive swings in commodity prices and an appreciation of the US dollar. Since strong price movements tend to distort trade statistics in value terms, it makes sense to focus on trade volumes when forecasting trade.

Chart 2 shows quarterly merchandise trade volumes up to 2022 Q4 and projections up to 2024 Q4, including "error bands" to illustrate the degree of confidence associated with the forecast periods. The entire shaded region represents an approximate 85% confidence interval adjusted to reflect the judgement of WTO economists that risks are tilted to the downside.

The forecast incorporates mixed-data sampling (MIDAS) techniques that use higher-frequency data for selected economies (specifically, monthly statistics on container throughput in US and Chinese ports) to improve the quality of estimates. Since the pandemic, this information has helped capture the impacts of port congestion and supply chain disruptions on trade. If current GDP assumptions hold, merchandise trade volume growth in 2023 could be as low as -2.8% or as high as 4.7%. Trade growth for the current year could also fall outside of this range if economic conditions change.

Chart 2: Volume of world merchandise trade, 2015Q1-2024Q4

Seasonally-adjusted volume index, 2015=100



Note: The shaded region represents both random variation and subjective assessment of risk. *Source:* WTO and UNCTAD for historical data, WTO Secretariat estimates for forecasts.

Commodity price fluctuations strongly influenced inflation and trade volumes in 2022. These swings were particularly strong for European natural gas prices, which rose 48% between January and August 2022 before falling 76% by February 2023 (see Chart 3). Unlike oil prices, which tend to be strongly correlated across regions, natural gas prices normally diverge considerably. Increased trade in liquified natural gas (LNG) might equalize regional gas prices in the future but for now this convergence is limited by shipping and pipeline infrastructure.

European countries responded to the loss of gas shipments from Russia by importing more from other suppliers, including the United States, Qatar, Norway and Algeria. This appears to have increased LNG prices elsewhere, including in Japan, where its price doubled between January 2022 and February 2023. Europe was fortunate to have a mild winter in 2022, which prevented energy prices from rising even further. However, if European countries are unable to secure sufficient supplies of natural gas for next winter and if the weather is colder, prices could spike again.

Prices of food commodities also fluctuated strongly over the course of 2022, jumping 19% between January and May before falling 15% between May and December. For the year, food prices were up 18% compared to

Commodity price fluctuations strongly influenced inflation and trade volumes in 2022.

2021, including a 21% rise in grain prices. Prices of fertilizers registered an even larger year-on-year increase of 63%. In theory, higher food prices should encourage more agricultural production, resulting in greater availability and lower prices for food in the future. On the other hand, less land under cultivation and the high cost of fertilizer could lead to reduced crop yields and higher prices.

Declining food and energy prices have helped bring down headline consumer price inflation in developed economies but core inflation (excluding volatile items such as food and fuels) remains stubbornly high (see Chart 4). According to OECD statistics, headline inflation in the United States dropped from 9.1% last June to 6.0% in February 2023 but core inflation only fell from 6.6% in September to 5.5% in February. Similarly for the European Union, headline inflation dipped from 11.5% in October to 9.9% in February while core inflation continued to climb, reaching 6.6% in February. This suggests that monetary policy has not



Chart 3: Global average primary commodity prices, January 2019 - February 2023 Index 2019=100 and US\$ per million Btu

Source: World Bank.

Chart 4: Consumer price inflation in developed economies, January 2019 - February 2023 Year-on-year % change



CPI: All items — CPI: All items non-food, non-energy

yet succeeded in taming inflation and that interest rates may have to stay high for longer to have their intended effects.

Chart 5 shows quarterly merchandise trade volume developments by region up to 2022 Q4, with projections shown up to 2023 Q4. The 10.4% quarter-on-quarter decline previously recorded for exports from the CIS³ region in Q2 of 2022 has since been revised to a 3.0% drop, which suggests that the Russian Federation has been able to find new markets for its goods despite the imposition of economic sanctions. This revision had a strong impact on the estimated exports of the Middle East, which were expected to greatly increase to make up for shortfalls in supplies of Russian energy products.

Global food supplies are less precarious than many had feared at the start of the war in Ukraine, but they remain a cause for concern. Africa was also expected to export greater quantities of goods than it ultimately did although the US dollar value of the region's exports did increase sharply (nearly 18%) due to higher commodity prices. Exports of North America, South America and Europe were all broadly in line with expectations while shipments from Asia were considerably weaker due to a sharp drop in exports in Q4.

Imports of the CIS region are estimated to have plunged 20.4% in the second quarter of 2022, but they recovered more quickly than expected in the second half of the year. Unfortunately, it is difficult to be confident about these figures due to lack of official data. Russian trade statistics have been unavailable for many months, but estimates based on statistics of trading partners provide a reasonable approximation. All other regions' imports declined in volume terms in the fourth quarter of 2022 due to reduced domestic demand or, in some cases, reduced export revenues as commodity prices eased.

Global food supplies are less precarious than many had feared at the start of the war in Ukraine, but they remain a cause for concern. Chart 6 shows estimated changes in the price, value, and volume of world trade in wheat in the first ten months of 2022.

Chart 5: Merchandise exports and imports by region, 2019Q1-2023Q4



a Refers to South and Central America and the Caribbean.

b Refers to Commonwealth of Independent States, including certain associate and former member states.

Source: WTO and UNCTAD.

3 Refers to Commonwealth of Independent States, including certain associate and former member states: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan and Uzbekistan.



Chart 6: Estimated world trade in wheat, January 2020 - October 2022

Index, January 2020=100

The average price of wheat rose 44% year-on-year during this period while the value of traded wheat increased by 31%. This implies a decline of around 7.5% in the volume of world wheat trade. This may not have disastrous consequences if consumers in all countries – including the poorest – are able to import sufficient quantities of wheat or some close substitute.

However, there is little margin for error if a major producer suffers a crop failure or climate-related natural disaster. Such an event could precipitate a more serious food crisis, which would require an increase in trade. Fortunately, countries appear to have accessed alternative sources of supply so far. For example, between January and October of last year, Ethiopia's imports of wheat from Russia and Ukraine fell 75% and 99.9% respectively but this was compensated by increased shipments from the United States and Argentina.

There are some signs of a trade turnaround in early 2023. The J.P. Morgan global purchasing managers' index (PMI), which is based on surveys of manufacturers in major economies, returned to its baseline value of

50 in February, suggesting accelerating global output growth (see Chart 7). The new export orders sub-index, which is more directly predictive of trade volumes, has also risen in recent months but remained below the baseline value in February at 48.3, suggesting continued trade contraction but at a slower rate.

However, preliminary PMIs for the United States and the euro area in March point to stronger recoveries in demand, which would boost trade but also stoke inflation. Global inflationary pressures appeared to be easing, as evidenced by falling input and output price sub-indices in the PMI. Sub-indices representing delivery times and stocks of finished goods also returned to normal in February, suggesting that supply chain issues had mostly been resolved.

Table 1 provides detailed estimates of merchandise trade and GDP growth from 2019 to 2024. It should be noted that annual trade volume statistics can diverge slightly from quarterly statistics due to differences in methodology but in general they tend to track one another quite closely.

Source: WTO estimates based on partner statistics.





Note: Values greater than 50 indicate expansion while values less than 50 denote contraction. *Source:* J.P. Morgan and S&P Global.

The projected 1.7% increase in the volume of world trade in 2023 is stronger than the previous estimate of 1.0% from last October but it is still quite weak. The difference between the two estimates is partly explained by a small upgrade in the consensus estimate of world GDP growth in 2023 from 2.3% to 2.4%. This modest change at the global level masks important shifts between regions, most notably between Europe and Asia.

Europe's expected GDP growth has been revised up by 0.7 percentage points while Asia's has been revised down by 0.4 points. Stronger than expected GDP growth in Europe would stimulate intra-EU trade, which gives Europe extra weight in world totals. Europe's exports are now projected to grow by 1.8% in 2023, up from the previous estimate of 0.8%. Europe's imports are expected to decline by 0.6% this year, less than the previous estimate of -0.7%. It should be noted that the region "Europe" includes Ukraine, whose exports and imports fell precipitously in 2022 (33% and 23%, respectively) and have yet to recover.

North America is expected to record the strongest merchandise export growth of any WTO region in 2023

The projected 1.7% increase in the volume of world trade in 2023 is stronger than the previous estimate of 1.0% from last October but it is still quite weak.

(3.3%), followed by the CIS (2.8%), Asia (2.5%) and Europe (1.8%). Weaker export growth is expected in the Middle East (0.9%) and South America (0.3%) while Africa's goods exports are expected to decline (-1.4%).

The relative strength of CIS exports is partly due to a reduced base in 2022, when shipments fell sharply (-4.9%). The region is expected to record the fastest import growth of any region in 2023 (14.9%) for the same reason, with purchases having fallen 13.5% in the previous year, followed by Africa (5.6%) and the Middle East (5.5%), whose export volumes have been boosted by increased revenues from exports of natural resources.

Table 1: Merchandise trade volume and GDP growth, 2019-2024 a

Annual % change

World merchandise trade volume b 0.4 Exports 0.4 North America 0.4 South America c -1.3 Europe 0.4 CIS d -0.1 Africa -0.3 Middle East -1.0 Asia 0.6	-8.9 -4.9 -7.7 -0.9 -7.2 -6.6	9.4 6.5 5.8 8.1 -3.0 3.5 -2.4	2.7 4.2 1.9 2.7 -4.9 0.7 9.9	1.7 3.3 0.3 1.8 2.8 -1.4	3.2 3.1 0.6 2.0 2.2 1.4
North America0.4South America °-1.3Europe0.4CIS d-0.1Africa-0.3Middle East-1.0	-4.9 -7.7 -0.9 -7.2 -6.6	5.8 8.1 -3.0 3.5 -2.4	1.9 2.7 -4.9 0.7	0.3 1.8 2.8 -1.4	0.6 2.0 2.2
South America °-1.3Europe0.4CIS d-0.1Africa-0.3Middle East-1.0	-4.9 -7.7 -0.9 -7.2 -6.6	5.8 8.1 -3.0 3.5 -2.4	1.9 2.7 -4.9 0.7	0.3 1.8 2.8 -1.4	0.6 2.0 2.2
Europe0.4CIS d-0.1Africa-0.3Middle East-1.0	-7.7 -0.9 -7.2 -6.6	8.1 -3.0 3.5 -2.4	2.7 -4.9 0.7	1.8 2.8 -1.4	2.0 2.2
CIS ^d -0.1 Africa -0.3 Middle East -1.0	-0.9 -7.2 -6.6	-3.0 3.5 -2.4	-4.9 0.7	2.8 -1.4	2.2
Africa -0.3 Middle East -1.0	-7.2 -6.6	3.5 -2.4	0.7	-1.4	
Middle East -1.0	-6.6	-2.4			1.4
			9.9		
Asia 0.8	0.6	10.4		0.9	4.7
		13.1	0.6	2.5	4.7
Imports					
North America -0.6	-5.9	12.5	6.0	-0.1	1.4
South America ° -1.8	-10.8	25.6	4.2	-1.6	2.3
Europe 0.3	-7.2	8.5	5.2	-0.6	1.8
CIS ^d 8.3	-5.5	9.1	-13.5	14.9	0.8
Africa 3.3	-14.8	6.4	5.6	5.6	5.5
Middle East 11.2	-10.1	8.3	9.4	5.5	4.3
Asia -0.5	-0.8	10.5	-0.4	2.6	5.2
World GDP at market exchange rates2.6	-3.3	5.9	3.0	2.4	2.6
North America 2.1	-3.8	5.5	2.2	1.5	1.0
South America ° 0.5	-6.5	7.4	4.0	1.4	2.0
Europe 1.7	-5.6	5.9	3.4	0.9	1.8
CIS ^d 2.6	-2.5	4.9	-0.9	-0.9	0.7
Africa 2.6	-2.4	4.7	3.4	3.5	3.9
Middle East 1.0	-4.1	4.2	5.8	2.9	3.1
Asia 4.0	-0.9	6.2	3.3	4.2	4.3
Memo: Least Developed Countries (LDCs)					
Volume of merchandise exports 0.2	-1.6	-2.6	2.0	4.8	9.1
Volume of merchandise imports 2.2	-11.0	7.4	3.6	4.8	5.4
Real GDP at market exchange rates 4.6	4.9	0.4	2.1	4.4	4.4

a Figures for 2023 and 2024 are projections.

b Average of exports and imports.

c Refers to South and Central America and the Caribbean.

d Refers to Commonwealth of Independent States (CIS), including certain associate and former member states.

Note: These projections incorporate mixed-data sampling (MIDAS) techniques for selected countries to take advantage of higher-frequency data such as container throughput and financial risk indices.

Sources: WTO and UNCTAD for historical trade data, WTO for trade forecasts, and consensus estimates for GDP.

Imports of North America, South America and Europe are all expected to contract in 2023 (-0.1%, -1.6% and -0.6% respectively) due to weaker domestic demand.

In 2024, trade and GDP growth are expected to grow at rates of 3.2% and 2.6% but these figures should be interpreted with caution since they are highly dependent on the course of the war in Ukraine.

Other major risks to the forecast include resurgent inflation, sharper than expected slowdowns in major economies due to monetary tightening, and geopolitical tensions. Most serious of all would be a food crisis triggering widespread hunger and starvation in low-income countries. Wealthy countries need to be on the lookout for signs of such a crisis and take steps in advance to prepare for it.

Trade developments in value terms

This report is released in conjunction with the WTO's preliminary annual trade statistics for 2022 as well as quarterly statistics for Q4 of 2022, covering both merchandise and commercial services trade. The data can be downloaded via the WTO website (www.wto.org/statsnews23_e) or from the WTO's online database at stats.wto.org.

Merchandise trade

World merchandise trade as measured by the average of the dollar value of exports and imports rose 12% in 2022 to US\$ 25.26 trillion (see Chart 8). This growth is slow compared to 2021, when merchandise trade recorded a 27% rebound following a 5.3% decline in 2020. Global merchandise trade in 2022 was also up 32% compared to its pre-pandemic level in 2019.

The fastest growing sectors were those related to energy. In 2022, growth in fuel trade was 61%. This growth came on the back of a similarly large increase in 2021, mainly reflecting rising energy prices.

The dollar value of trade in agricultural products was up 11% last year while trade in manufactured goods rose 7%. Among manufactures, trade in automotive products increased by 6% while trade in clothing jumped 9%. Despite declines of 1% and 2% in 2022 and 2021, the value of world textiles trade last year was still 14% higher than in 2019 owing to the large 2020 increase in demand for medical face coverings, which is included in this category.

The fastest growing sectors were those related to energy. In 2022, growth in fuel trade was 61%. This growth came on the back of a similarly large increase in 2021, mainly reflecting rising energy prices.

Exports of merchandise from the United States grew by 18% in 2022, following a 23% increase in 2021. Exports of merchandise from the Kingdom of Saudi Arabia rose 49% last year, causing the country to climb six places in the rankings of top merchandise exporters. See Appendix Tables 1 and 2 for detailed statistics on the leading merchandise exporters and importers in 2022.

Chart 8 shows estimated year-on-year growth in the value of world merchandise trade by product in 2021 and 2022, as well as growth in 2022 compared to pre-pandemic levels.

Services trade

The value of trade in commercial services as measured by the average of exports and imports rose 15% in 2022 to US\$ 6.8 trillion. All broad sectors recorded growth. Transport had another record year, with trade up by 25% in 2022, and 40% above 2019 levels (see Chart 9). However, growth slowed as shipping rates started to decline steadily since the spring. This reflects in part the shift back to consumers' spending on services as the health situation normalized in most countries. On the other hand, the difficult economic and geopolitical context, high inflation, and soaring energy and commodity prices have reduced demand.

The slowdown in goods-related services trade in 2022 points to decreased contract manufacturing activities (i.e. goods processing on a contract basis such as assembly, packaging, labelling, etc.) in other countries. Freight transport rates have now largely returned to pre-pandemic levels. In the week ending 31 March 2023, the global spot market rate for 40-foot container units was down to US\$ 1,481, just 14% above 2019 prices in the same period. As prices continue to fall, the outlook for the shipping sector is bleak at least for the first half of 2023 (source: Freightos).

Chart 8: Year-on-year growth in world merchandise trade by product, 2021-2022

% change in US\$ values



a Other machinery comprises energy generating machinery, electrical machinery and non-electrical machinery. *Source:* WTO for total merchandise trade, Secretariat estimates based on partner statistics for trade by product.

Three years after the onset of COVID-19, international tourism is on a path to full recovery as mobility restrictions have been removed worldwide. Travel demand appears resilient to the current adverse economic context. In addition, the reopening of China's borders in early January 2023 is expected to boost regional and global travel. Over recent years, China ranked as the largest tourism outbound market and spender.

Three years after the onset of COVID-19, international tourism is on a path to full recovery as mobility restrictions have been removed worldwide.

Chart 9: Year-on-year growth in world commercial services trade, 2021-2022

% change in US\$ values



Note: Average of exports and imports. *Source:* WTO-UNCTAD estimates with cooperation from ITC.

Travel, which accounted for almost one quarter of services trade before the pandemic, as well as passenger transport were hit hard by border closures and quarantine requirements. Despite remarkable catchup growth of 79% in 2022, global travellers' expenditure abroad was still 22% below pre-pandemic levels as Asia remained closed. In 2022, tourism growth was largely driven by European countries and the United States due to a strong US dollar.

The appreciation of the US dollar against major currencies is partly responsible for slower trade growth of other commercial services in 2022. This aggregate category, which covers different types of services, from business services to financial services rose by 2%, down from 13% in 2021. The European Union and the United Kingdom accounted for half of trade in these services which formed the bulk of services trade in 2021 (64%).

The Euro and the British pound depreciated by 11% and 10% respectively in 2022 (see Chart 10). This had an impact, for example, on global financial services, which fell 3% in US dollar terms, although both major traders saw increases in exports. However, higher interest rates to fight inflation, the slowdown in economic activity, and uncertainty due to the war in Ukraine also weighed on the sector.

Computer services was the most dynamic service sector over the last decade (see Chart 11). In 2022, world exports were 45% above pre-pandemic levels. Growth was further boosted by the pandemic due to remote working as well as online learning and entertainment. Demand for software, cloud services, machine learning and enhanced cybersecurity concerns is ever rising. Subdued growth in 2022, at 6% compared with 21% in the previous year, is entirely due to exchange rate volatility.

Ireland is the leading global exporter of computer services, with a share in the world of 27% in 2021. In 2022, Irish computer services exports in Euro terms rose by more than 13% while growth in US dollar terms was only 1%.

Computer services was the most dynamic service sector over the last decade.



Chart 10: Exchange rates against the US dollar, January 2019 - February 2023

Source: Federal Reserve Bank of St. Louis.

Chart 11: Growth of other commercial services exports by main subsector, 2021-2022 % change in US\$ values



Source: WTO estimates.

Box 1: Global exports of digitally delivered services reached USD 3.82 trillion in 2022

According to WTO estimates, global exports of digitally delivered services recorded an almost fourfold increase in value since 2005, rising 8.1% on average per year in the period 2005-2022, outpacing goods (5.6%) and other services exports (4.2%).

While tourism and other services requiring cross-border mobility of people fell in this period, digitally delivered services exports continued to rise, reaching US\$ 3.82 trillion in 2022, and representing a 54% share in total global services exports. Digital delivery includes services traded cross-border through computer networks, that is through the Internet, apps, emails, voice and video calls, and increasingly through digital intermediation platforms such as online gaming, music and video streaming, and remote learning.

Chart 12: Global exports of digitally delivered services



Index 2005=100

Source: WTO estimates.

In 2022, business, professional, and technical services accounted for around 40% of digitally delivered services exports, followed by computer services (20%), financial services (16%), intellectual property related services (12%), insurance services (5%), telecommunications services (3%), audio-visual and other personal, cultural, and recreational services (3%), and information services (1%).

Europe accounts for more than half of global exports of digitally delivered services. The region's stagnating growth in 2022 largely reflects the depreciation of the Euro and the British pound against the US dollar (see Chart 13). Asia's exports have been rising faster than the rest of the world. In 2022, almost a quarter of digitally delivered services originated from Asian economies, and 19% from North America. Central and South America and the Caribbean as well as the Middle East saw an acceleration in growth in 2022. However, growth in Africa and in least-developed countries continued to lag, with Africa holding less than a 1% share of digitally delivered services exports in 2022.

Appendix Table 5 contains the list of leading exporters of digitally delivered services. Comprehensive country data are available via the WTO website (www.wto.org/statsnews23_e).



Chart 13: Growth of digitally delivered services exports by region and selected group Index 2015=100

* The Commonwealth of Independent States includes certain associate and former member states. *Source:* WTO estimates.

Other indicators

The WTO tracks a number of trade-related economic indicators to identify current trends in merchandise and commercial services trade. Some of these are presented here to provide additional context to the forecast.

One useful indicator is container throughput of major ports, which tracks global goods trade quite closely (see Chart 14). The RWI/ISL container index combines data on total throughput of 94 ports accounting for 64% of total container handling worldwide. The latest data showed a weak start to 2023, with a seasonallyadjusted decline from 122.4 in December to 120.2 points in January. The decline was strongest in Northern European ports, the index value of which dropped from 109.0 to 6.6, while throughput of Chinese ports remained stable. This is consistent with our forecast showing a small 0.6% decline in imports of Europe and a modest 2.6% increase in exports of Asia.

Chart 15 shows the daily volume and average tone of new media reports containing phrases related to economic activity, as monitored by the GDELT Project Summary Service. Despite the failure of American and Swiss banks in recent days, the volume of press reports on the economy has remained steady while the tone had been trending positive, despite a down-tick in non-smoothed data series. This suggests that strains in the banking system have not yet had a major impact on public sentiment about the economy. However, if the banking system were to come under more stress without action from governments and regulators, opinion could shift rapidly, as it did at the start of the pandemic.

Chart 16 shows the daily worldwide number of commercial flights, including both passenger transport and air freight, as measured by FlightRadar24. Commercial flights for the current year through 16 March 2023 are up 19% year-on-year and are roughly equal to their level at the start of 2019, before the pandemic. The WTO does not forecast services trade, but this data indicates that travel and transport, two of the most dynamic components of services trade, will continue to recover in 2023.

The WTO tracks a number of trade-related economic indicators to identify current trends in merchandise and commercial services trade.



Chart 14: RWI/ISL global container throughput index, January 2019 - January 2023 Index 2015=100

Source: Leibniz Institute for Economic Research and Institute for Shipping Economics and Logistics.





Source: The GDELT Project Summary Service.



Chart 16: Estimated daily commercial flights worldwide, 1 January 2019 - 01 March 2023

Source: FlightRadar24.com

Appendix Table 1: Leading exporters and importers in world merchandise trade, 2022

Billion dollars and percentage

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	China	3,594	14.4	7	1	United States of America	3,376	13.2	15
2	United States of America	2,065	8.3	18	2	China	2,716	10.6	1
3	Germany	1,655	6.6	1	3	Germany	1,571	6.1	11
4	Netherlands	966	3.9	15	4	Netherlands	899	3.5	19
5	Japan	747	3.0	-1	5	Japan	897	3.5	17
6	Korea, Republic of	684	2.7	6	6	United Kingdom	824	3.2	19
7	Italy	657	2.6	7	7	France	818	3.2	14
8	Belgium	633	2.5	15	8	Korea, Republic of	731	2.9	19
9	France	618	2.5	6	9	India	723	2.8	26
10	Hong Kong, China	610	2.4	-9	10	Italy	689	2.7	22
	Domestic exports	18	0.1	-13					
	Re-exports	592	2.4	-9					
11	United Arab Emirates ¹	599	2.4	41	11	Hong Kong, China	668	2.6	-6
						Retained imports ¹	164	0.6	3
12	Canada	597	2.4	18	12	Mexico	626	2.4	20
13	Mexico	578	2.3	17	13	Belgium	621	2.4	18
14	Russian Federation ¹	532	2.1	8	14	Canada	582	2.3	15
15	United Kingdom	529	2.1	13	15	Spain	493	1.9	18
16	Singapore	516	2.1	13	16	Singapore	476	1.9	17
	Domestic exports	239	1.0	15		Retained imports ¹	199	0.8	27
	Re-exports	277	1.1	11					
17	Chinese Taipei	478	1.9	7	17	Chinese Taipei	436	1.7	14
18	India	453	1.8	15	18	United Arab Emirates ¹	425	1.7	22
19	Spain	418	1.7	10	19	Poland	381	1.5	11
20	Australia	412	1.7	20	20	Türkiye	364	1.4	34
21	Saudi Arabia, Kingdom of 1	410	1.6	49	21	Viet Nam	359	1.4	8
22	Switzerland	402	1.6	6	22	Switzerland	356	1.4	10
23	Viet Nam	371	1.5	11	23	Australia	309	1.2	18
24	Poland	361	1.4	6	24	Thailand	303	1.2	14
25	Malaysia	353	1.4	18	25	Malaysia	294	1.1	24
26	Brazil	334	1.3	19	26	Brazil	292	1.1	25
27	Indonesia	292	1.2	26	27	Russian Federation 1, 2	240	0.9	-21
28	Thailand	287	1.2	6	28	Indonesia	237	0.9	21
29	Türkiye	254	1.0	13	29	Czech Republic	236	0.9	11
30	Norway	250	1.0	56	30	Austria	232	0.9	6
	Total of above ³	20,654	82.9	-		Total of above ³	21,177	82.7	-
	World ³	24,905	100.0	11		World ³	25,621	100.0	13

(1) Secretariat estimates.

(2) Imports are valued f.o.b.

(3) Includes significant re-exports or imports for re-export.

Source: WTO-UNCTAD.

Appendix Table 2: Leading exporters and importers in world merchandise trade excluding intra-EU trade, 2022 Billion dollars and percentage

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	China	3,594	17.6	7	1	United States of America	3,376	15.8	15
2	Extra-EU exports	2,704	13.2	5	2	Extra-EU imports	3,155	14.8	26
3	United States of America	2,065	10.1	18	3	China	2,716	12.7	1
4	Japan	747	3.7	-1	4	Japan	897	4.2	17
5	Korea, Republic of	684	3.3	6	5	United Kingdom	824	3.9	19
6	Hong Kong, China	610	3.0	-9	6	Korea, Republic of	731	3.4	19
	Domestic exports	18	0.1	-13					
	Re-exports	592	2.9	-9					
7	United Arab Emirates ¹	599	2.9	41	7	India	723	3.4	26
8	Canada	597	2.9	18	8	Hong Kong, China	668	3.1	-6
						Retained imports 1	164	0.8	3
9	Mexico	578	2.8	17	9	Mexico	626	2.9	20
10	Russian Federation ¹	532	2.6	8	10	Canada	582	2.7	15
11	United Kingdom	529	2.6	13	11	Singapore	476	2.2	17
						Retained imports ¹	199	0.9	27
12	Singapore	516	2.5	13	12	Chinese Taipei	436	2.0	14
	Domestic exports	239	1.2	15					
	Re-exports	277	1.4	11					
13	Chinese Taipei	478	2.3	7	13	United Arab Emirates ¹	425	2.0	22
14	India	453	2.2	15	14	Türkiye	364	1.7	34
15	Australia	412	2.0	20	15	Viet Nam	359	1.7	8
16	Saudi Arabia, Kingdom of ¹	410	2.0	49	16	Switzerland	356	1.7	10
17	Switzerland	402	2.0	6	17	Australia	309	1.5	18
18	Viet Nam	371	1.8	11	18	Thailand	303	1.4	14
19	Malaysia	353	1.7	18	19	Malaysia	294	1.4	24
20	Brazil	334	1.6	19	20	Brazil	292	1.4	25
21	Indonesia	292	1.4	26	21	Russian Federation $^{\rm 1,2}$	240	1.1	-21
22	Thailand	287	1.4	6	22	Indonesia	237	1.1	21
23	Türkiye	254	1.2	13	23	Saudi Arabia, Kingdom of	188	0.9	23
24	Norway	250	1.2	56	24	Philippines	144	0.7	16
25	Iraq 1	132	0.6	53	25	South Africa 1	136	0.6	19
26	Qatar	130	0.6	49	26	Israel	107	0.5	16
27	South Africa	123	0.6	-1	27	Norway	106	0.5	8
28	Kuwait, the State of ¹	104	0.5	65	28	Chile	104	0.5	13
29	Chile	97	0.5	3	29	Bangladesh	88	0.4	10
30	Argentina	88	0.4	13	30	Egypt ¹	86	0.4	17
	Total of above ³	18,725	91.5	-		Total of above ³	19,351	90.8	-
	World excluding EU intra-trade ³	20,460	100.0	12		World excluding EU intra-trade ³	21,313	100.0	14

(1) Secretariat estimates.

(2) Imports are valued f.o.b.

(3) Includes significant re-exports or imports for re-export.

Source: WTO-UNCTAD.

Appendix Table 3: Leading exporters and importers of commercial services, 2022

Billion dollars and percentage

Rank	Exporters	Value	Share	Annual percentage change	Rank	ank Importers		Share	Annual percentage change
1	United States of America	897	12.7	16	1	United States of America	658	10.1	25
2	United Kingdom	487	6.9	8	2	China	461	7.1	9
3	China	422	6.0	8	3	Germany	439	6.7	13
4	Germany	395	5.6	4	4	Ireland	371	5.7	7
5	Ireland	354	5.0	2	5	United Kingdom	306	4.7	20
6	France	325	4.6	9	6	France	274	4.2	6
7	India	313	4.4	31	7	Netherlands	270	4.1	11
8	Singapore	291	4.1	9	8	India	263	4.0	35
9	Netherlands	274	3.9	10	9	Singapore	258	4.0	7
10	Spain	185	2.6	57	10	Japan	207	3.2	0
11	Japan	163	2.3	-2	11	Switzerland	161	2.5	2
12	United Arab Emirates ¹	154	2.2		12	Belgium	135	2.1	0
13	Switzerland	151	2.1	10	13	Canada	135	2.1	18
14	Luxembourg	134	1.9	-9	14	14 Korea, Republic of		2.1	9
15	Belgium	133	1.9	-2	15	Italy	132	2.0	14
16	Korea, Republic of	129	1.8	9	16	Luxembourg	109	1.7	-9
17	Italy	122	1.7	20	17	Sweden	103	1.6	15
18	Canada	122	1.7	11	18	United Arab Emirates ¹	95	1.5	
19	Denmark	121	1.7	28	19	Denmark	94	1.4	13
20	Poland	94	1.3	16	20	Spain	89	1.4	21
21	Sweden	93	1.3	6	21	Brazil	78	1.2	36
22	Israel	93	1.3	26	22	Saudi Arabia, Kingdom of	76	1.2	23
23	Türkiye	90	1.3	47	23	Austria	74	1.1	11
24	Hong Kong, China	84	1.2	6	24	Russian Federation	71	1.1	-5
25	Austria	81	1.1	18	25	Australia	65	1.0	62
26	Chinese Taipei	58	0.8	12	26	Thailand	64	1.0	11
27	Greece	51	0.7	25	27	Hong Kong, China	63	1.0	2
28	Russian Federation	51	0.7	-7	28	Poland	56	0.9	14
29	Australia	50	0.7	14	29	Norway	56	0.9	33
30	Norway	48	0.7	18	30	Mexico	48	0.7	25
	Total of above	5,969	84.4	-		Total of above	5,348	81.9	-
	World	7,076	100.0	15		World	6,531	100.0	16

(1) Secretariat estimates. Quarterly data not available.

... indicates unavailable or non-comparable figures.

Note: Preliminary estimates based on quarterly statistics. Figures for a number of countries and territories have been estimated by the Secretariat. More data available at http://stats.wto.org/.

Source: WTO-UNCTAD estimates in cooperation with ITC.

Appendix Table 4: Leading exporters and importers of commercial services excluding intra-EU trade, 2022 Billion dollars and percentage

Rank	Exporters	Value	Share	Annual percentage change	Rank	Importers	Value	Share	Annual percentage change
1	Extra-EU exports	1,325	22.7	9	1	Extra-EU imports	1,147	21.2	8
2	United States of America	897	15.4	16	2	United States of America	658	12.2	25
3	United Kingdom	487	8.4	8	3	China	461	8.5	9
4	China	422	7.2	8	4	United Kingdom	306	5.7	20
5	India	313	5.4	31	5	India	263	4.9	35
6	Singapore	291	5.0	9	6	Singapore	258	4.8	7
7	Japan	163	2.8	-2	7	Japan	207	3.8	0
8	United Arab Emirates ¹	154	2.6		8	Switzerland	161	3.0	2
9	Switzerland	151	2.6	10	9	Canada	135	2.5	18
10	Korea, Republic of	129	2.2	9	10	Korea, Republic of	135	2.5	9
11	Canada	122	2.1	11	11	United Arab Emirates ¹	95	1.8	
12	Israel	93	1.6	26	12	Brazil	78	1.4	36
13	Türkiye	90	1.5	47	13	Saudi Arabia, Kingdom of	76	1.4	23
14	Hong Kong, China	84	1.4	6	14	Russian Federation	71	1.3	-5
15	Chinese Taipei	58	1.0	12	15	Australia	65	1.2	62
16	Russian Federation	51	0.9	-7	16	Thailand	64	1.2	11
17	Australia	50	0.9	14	17	Hong Kong, China	63	1.2	2
18	Norway	48	0.8	18	18	Norway	56	1.0	33
19	Philippines	40	0.7	18	19	Mexico	48	0.9	25
20	Saudi Arabia, Kingdom of	39	0.7	302	20	Chinese Taipei	45	0.8	14
21	Brazil	39	0.7	26	21	Israel	44	0.8	36
22	Thailand	38	0.6	50	22	Indonesia	43	0.8	52
23	Mexico	36	0.6	35	23	Malaysia	42	0.8	18
24	Malaysia	31	0.5	50	24	Türkiye	39	0.7	37
25	Egypt	27	0.5	27	25	Qatar	38	0.7	15
26	Qatar	23	0.4	31	26	Kuwait, the State of	28	0.5	41
27	Indonesia	23	0.4	70	27	Viet Nam	26	0.5	35
28	Morocco	22	0.4	50	28	Egypt	26	0.5	23
29	Argentina	17	0.3	85	29	Chile	25	0.5	43
30	Panama ²	17	0.3		30	Argentina	25	0.5	95
	Total of above	5,280	90.5	-		Total of above	4,730	87.6	-
	World (excl. intra-EU)	5,833	100.0	17		World (excl. intra-EU)	5,398	100.0	17

(1) Secretariat estimates. Quarterly data not available.

(2) Secretariat estimates.

... indicates unavailable or non-comparable figures.

Note: Preliminary estimates based on quarterly statistics. Figures for a number of countries and territories have been estimated by the Secretariat. More data available at http://stats.wto.org/.

Source: WTO-UNCTAD estimates in cooperation with ITC.

Appendix Table 5: Leading exporters of digitally delivered services, 2022

Billion dollars and percentage

			Valu	ıe		Share in expo		Annual percentage change			
Rank	Exporters	2019	2020	2021	2022	2019	2022	2020	2021	2022	2022/2019
1	United States of America	486	535	599	632	17.4	16.5	10	12	6	30
2	United Kingdom	280	321	346	350	10.0	9.2	15	8	1	25
3	Ireland	166	243	294	290	5.9	7.6	46	21	-1	75
4	Germany	180	201	241	227	6.5	5.9	11	20	-6	26
5	India	118	149	178	227	4.2	5.9	26	19	28	93
6	China	114	146	185	201	4.1	5.2	28	26	9	75
7	Netherlands	164	146	156	165	5.9	4.3	-11	7	6	1
8	Singapore	106	128	152	159	3.8	4.2	20	19	5	49
9	France	127	129	144	136	4.6	3.6	1	12	-6	7
10	Luxembourg	93	99	120	111	3.3	2.9	6	22	-8	19
11	Japan	103	110	117	110	3.7	2.9	7	6	-5	7
12	Switzerland	84	84	99	102	3.0	2.7	0	18	3	21
13	Belgium	60	74	85	81	2.2	2.1	22	15	-4	34
14	Canada	56	69	78	79	2.0	2.1	23	13	0	39
15	Sweden	45	51	57	57	1.6	1.5	14	12	0	27
16	Spain	34	43	51	57	1.2	1.5	27	20	11	69
17	Korea, Republic of	36	42	52	55	1.3	1.4	17	23	6	52
18	Italy	42	46	55	54	1.5	1.4	9	20	-1	29
19	Israel	28	37	46	54	1.0	1.4	31	27	16	92
20	Hong Kong, China	38	39	42	47	1.4	1.2	3	7	13	24
21	United Arab Emirates	29	34	39	45	1.0	1.2	17	14	16	55
22	Poland	23	29	35	38	0.8	1.0	30	21	8	70
23	Austria	25	29	33	33	0.9	0.9	15	17	-2	32
24	Philippines	19	23	25	28	0.7	0.7	19	9	11	45
25	Chinese Taipei	18	22	24	27	0.6	0.7	20	13	12	52
26	Denmark	18	22	24	25	0.7	0.6	22	6	3	33
27	Finland	18	22	25	23	0.6	0.6	21	13	-7	26
28	Australia	15	19	23	22	0.5	0.6	22	21	-3	44
29	Brazil	13	14	16	21	0.5	0.5	7	19	27	62
30	Russian Federation	17	17	21	19	0.6	0.5	0	20	-11	6
	Total of above	2,559	2,922	3,362	3,475	91.6	90.9	-	-	-	-
	World	2,795	3,198	3,683	3,825	100.0	100.0	14	15	4	37

Note: Figures for a number of countries and territories have been estimated by the Secretariat. *Source:* WTO estimates.

Useful resources

WTO Data - Information on trade and trade policy

measures data.wto.org

This portal gives access to a selection of key databases offering statistics and information on various trade-related measures.

WTO Stats

stats.wto.org

A user-friendly data portal to access a wide range of WTO statistical indicators on international trade, tariffs, non-tariff measures and other indicators.

Print ISBN 978-92-870-7552-9 Web ISBN 978-92-870-7551-2

World Trade Organization

154, rue de Lausanne CH-1211 Geneva 2 Switzerland Tel: +41 (0)22 739 51 11

WTO Publications

Email: publications@wto.org www.wto.org

Printed by the World Trade Organization. © World Trade Organization 2023. Report designed by Triptik, Annecy. The WTO's "Global Trade Outlook and Statistics" analyses recent global trade developments up to the fourth quarter of 2022 and presents the organization's forecasts for world trade in 2023 and 2024. Breakdowns of merchandise and commercial services trade by sector and region are provided, together with details on leading traders. The report is timed to coincide with the release of the WTO's latest quarterly and annual trade statistics, which can be downloaded from the WTO's online database at stats.wto.org.

