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**TRADE AND AGRICULTURE DIRECTORATE
TRADE COMMITTEE**

Working Party of the Trade Committee

OECD Global Trade Monitor

This final document provides an update on international trade developments in 2022 in the context of recovery from the COVID-19 pandemic and Russia's invasion of Ukraine. It builds on earlier updates of this kind presented in 2021 and 2022 [TAD/TC/WP/RD(2021)2, TAD/TC/WP/RD(2021)5, TAD/TC/WP/RD(2022)1, and TAD/TC/WP(2022)16]. This report was scoped in March 2023 in TAD/TC/WP(2023)2. It was declassified at the WPTC meeting held on 12-13 October 2023.

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Executive Summary

- **The pace of trade recovery is slowing and trade growth for 2023 is expected to be subdued.** Merchandise trade is recovering slowly and has been dampened by high and volatile commodity and energy prices, coupled with monetary tightening. Services trade has yet to recover losses incurred during the pandemic, and its accumulated trade losses remain at 5% relative to pre-pandemic trade levels. Recent economic outlooks by the IMF (2023_[1]), WTO (2023_[2]), and OECD (2023_[3]) all have low expectations for trade growth in 2023 (1.7%, 1.5%, 1.6% respectively).
- **China’s re-opening is slower than expected.** China’s export performance was hampered by the periods of COVID-related lockdown in 2022 and only started to recover in the first months of 2023. Through most of 2022, China’s export growth rate was well below expected, performing below other main trading partners.
- **The global merchandise trade slowdown is contributing to the decline in freight costs.** In 2021, transportation costs surged as trade rebounded while manufacturers continued to face logistical difficulties. However, as global trade growth slowed down in 2022, maritime and air freight transportation costs fell dramatically.
- **The product structure of trade has not returned to its pre-pandemic composition, particularly for goods.** The product structure of international trade changed significantly during the COVID-19 pandemic as demand shifted away from services and durable goods and towards food, pharmaceuticals, and electronics. The composition of traded goods remains significantly changed from the pre-pandemic period. The structure of services trade shows some movement back towards its pre-pandemic structure.
- **Moreover, as a result of COVID-19 recovery and Russia’s war of aggression against Ukraine, there has been a shift in bilateral trading patterns.** Countries in Asia grew in importance as the main source of imports for most of the world in 2020 as they were first to come out of lockdowns during the first wave of the pandemic, coupled with the increase in demand for electronics and other, “home-nesting” products produced by the region. More recently, Russia’s invasion of Ukraine has reoriented trade once again.
- **That said, Russia’s trade is adjusting as the war continues, with repercussions for commodities markets.** Since the invasion of Ukraine in February 2022, Russia’s trade in energy commodities – accounting for the majority of its exports – has been rerouted towards China and India, although this rerouting does not fully compensate for the overall lower volumes and prices of Russia exports.
- **The recovery, and then the invasion led to a spike in commodity prices but commodities markets are now calming down.** Many commodities experienced significant price increases in the economic rebound of 2021. Russia’s invasion of Ukraine added further upward pressures to commodities markets, particularly for energy, food, and raw materials, for which Russia and Ukraine are important suppliers. However, as supply concerns eased, and as other sources of supply have substituted for Russia and Ukraine, prices have started to decline. As of the first quarter of this year, prices stood 45% above their 2018-2019 average for metals and foods and 35% higher for energy products.

1. Introduction

1. This report is part of a series of trade updates launched in 2021 in order to build on available high-frequency data to monitor and analyse key recent changes in the direction and structure of international trade. As with previous reports, this report is designed to inform trade policy discussions in OECD countries, and feed into other trade-related work at the OECD¹.

2. Responding to the need for timely information on changing patterns of trade that emerged at the beginning of the COVID-19 pandemic, the first two reports (May and October 2021) provided a deepened analysis of the heterogenous impacts of the pandemic on goods and services trade flows and outlined some of the potential long-term implications. In addition to an update on the recovery from the pandemic, the June 2022 report used historical trade data and OECD modelling tools to shed early light on potential implications of the invasion of Ukraine by the Russian Federation (hereafter ‘Russia’), which occurred amidst the recovery from the pandemic and constituted a new large and highly idiosyncratic shock to international trade and the world economy. The December 2022 report followed up on some of the some of the issues monitored in the previous reports, such as the pandemic-initiated changes in product structure and directions of trade, set them in the context of growing global macroeconomic challenges, and provided some early evidence on key effects of Russia’s invasion of Ukraine, focusing on energy and food prices.

3. This report monitors a similar set of issues with continued attention to the impact of the recovery from COVID-19 and Russia’s war of aggression against Ukraine on trade and commodity prices. This report is an update of an interim version that was presented to the Working Party in June 2023, as per the scoping paper TAD/TC/WP(2023)2. Further planned work under this heading includes a report on energy shocks in supply chains.

¹ Note by Türkiye:

The information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Türkiye recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Türkiye shall preserve its position concerning the “Cyprus issue”.

Note by all the European Union Member States of the OECD and the European Union:

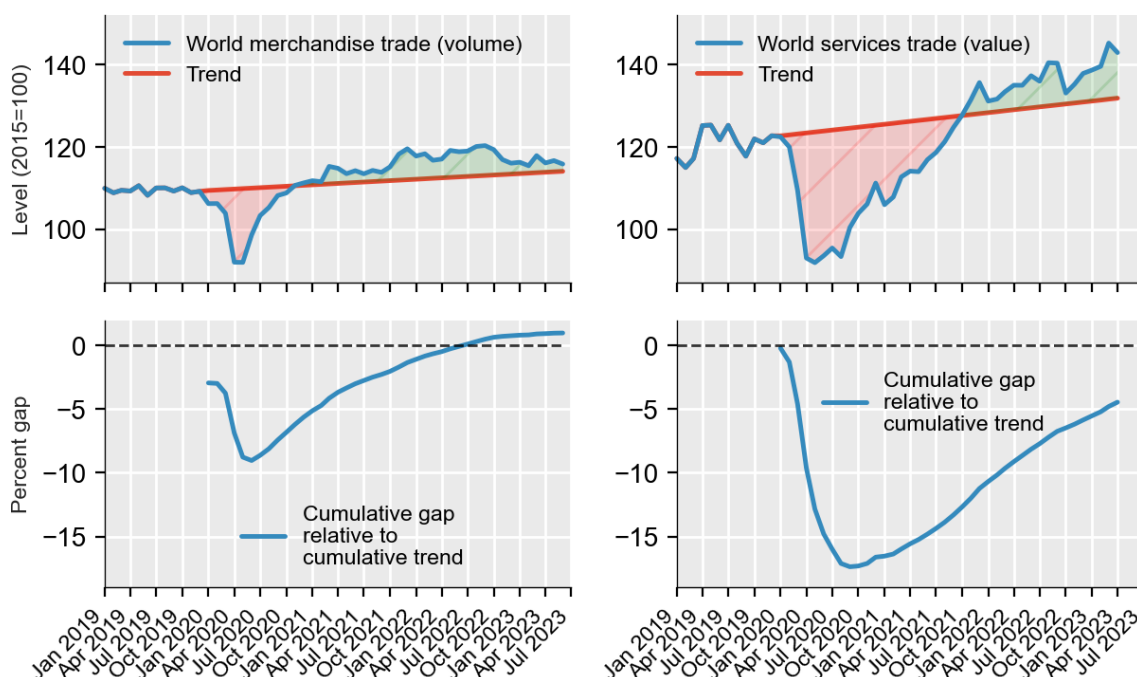
The Republic of Cyprus is recognised by all members of the United Nations with the exception of Türkiye. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

2. The pace of trade recovery is slowing

4. While global merchandise trade recovered relatively quickly from the COVID-19 shock, it saw more muted growth throughout 2022 and even declined in the last quarter of the year. High and volatile commodity and energy prices, coupled with policy measures to tame inflation, contributed to dampen import demand. While the *value* of global merchandise trade had grown by 12% in 2022 to reach USD 25.26 trillion, the expansion in *volume* terms (holding prices constant) was only 2.7% according to the WTO (WTO, 2023^[2]).

5. Services trade still struggles to recuperate the accumulated losses incurred during the pandemic. Services trade plunged deeper and emerged slower from the trough than merchandise trade, and its accumulated losses remained at about 5% relative to the pre-pandemic trend in April 2023. Subdued trade in tourism and travel services are holding back overall trade in services, but, as international tourism continues to rebound, a recovery can be expected.² Transport, telecommunications and business services are showing continued growth, in particular digitally delivered services. Construction services slowed during 2022, likely related to the overall slowdown of the global economy that is also reflected in the latest merchandise trade data.

Figure 1. World merchandise and services trade



Note: Monthly data up to June 2023. Services data cover countries for which consistent data are available since 2015: Australia, Bangladesh, Brazil, Canada, European Union (27), India, Japan, Mongolia, PR China, Pakistan, Republic of Korea, Russia, Serbia, Tanzania, Türkiye, Uganda, Ukraine, United Kingdom, United States. World services trade is calculated as (imports + exports)/2. The trend is estimated using the Theta method.

Source: Left panel CPB World Trade Monitor, 25 August 2023; Right panel WTO Commercial services exports and imports of selected economies – monthly, 20 August 2023.

² <https://www.unwto.org/news/tourism-on-track-for-full-recovery-as-new-data-shows-strong-start-to-2023>

2.1. Expectations for global trade growth in 2023 are tempered

6. Trade growth in 2023 is expected to be subdued. The WTO 2023 *Global Trade Outlook* (released April 2023) projects trade volume growth to slow to 1.7% in 2023. While this is an improvement from previous estimates (which predicted trade growth for 2023 of only around 1.1%), it is below the 2.6% average for the 2010-2022 period. The relatively low growth prediction for 2023 is heavily influenced by the war in Ukraine, inflation, tighter monetary policy, and uncertainties stemming from financial markets (WTO, 2023^[2]).

7. The IMF *Economic Outlook* of April 2023 (IMF, 2023^[1]) contains similarly low expectations, with trade in goods expected to grow by 1.5%, slightly below the WTO forecast but in the same range. The volume of world trade in goods and services combined is expected to decline from 5.1% in 2022 to 2.4% in 2023. The IMF identifies the slowdown in global demand and the shift in the composition of spending from traded goods back toward domestic services as important drivers. In addition, rising trade barriers and the lagged effects of US dollar appreciation in 2022, which made traded products more costly for numerous economies given the dollar's dominant role in invoicing, are also weighing on growth expectations for 2023.

8. The most recent OECD *Economic Outlook* released in June 2023 (OECD, 2023^[3]) projects trade growth to slow to 1.6% in 2023, similar to the estimates from the IMF and WTO. The low growth in 2023 is due in part to lingering effects of the weakness in 2022. That said, lower commodity prices and the full reopening in the People's Republic of China (hereafter 'China') should help support trade growth over the next year and a half. The OECD *Outlook* expects trade growth to recover to 3.8% in 2024, notwithstanding the continued effects of tight monetary policy. Trade in services is also expected to outperform goods in 2024 due in part to increased international travel.

9. With lower volumes of international trade, the pressures on supply chains that were a cause for concern during the post-COVID economic rebound are easing. For example, the Federal Reserve Bank of New York Global Supply Chain Pressure Index of April 2023 indicates falling pressures and a return to normalization³. While improvements in delivery times and falling transport costs are signs of improvement, this does not mean that all supply chains are back to normal. Many industries continue to report supply shortfalls, notably in semiconductors, electronic and electrotechnical components, and less than full capacity utilisation as a result. Concerns about inflation and tight labour markets are also now weighing more heavily on business sentiments. (See for example [Business Outlook Survey—Fourth Quarter of 2022 – Bank of Canada](#)).

2.2. China's reopening is slower than expected

10. China's reopening since January 2023 was expected to provide more stability for investors and to increase domestic demand for services, with positive consequences for its economic growth. The IMF (and OECD) expect 5.2% (5.4%) real GDP growth in China against 2.8% (2.7%) worldwide for 2023⁴. However, with weakened global demand for

³ <https://www.newyorkfed.org/research/policy/gscpi#/interactive> April 2023 estimates. Accessed 5 June 2023.

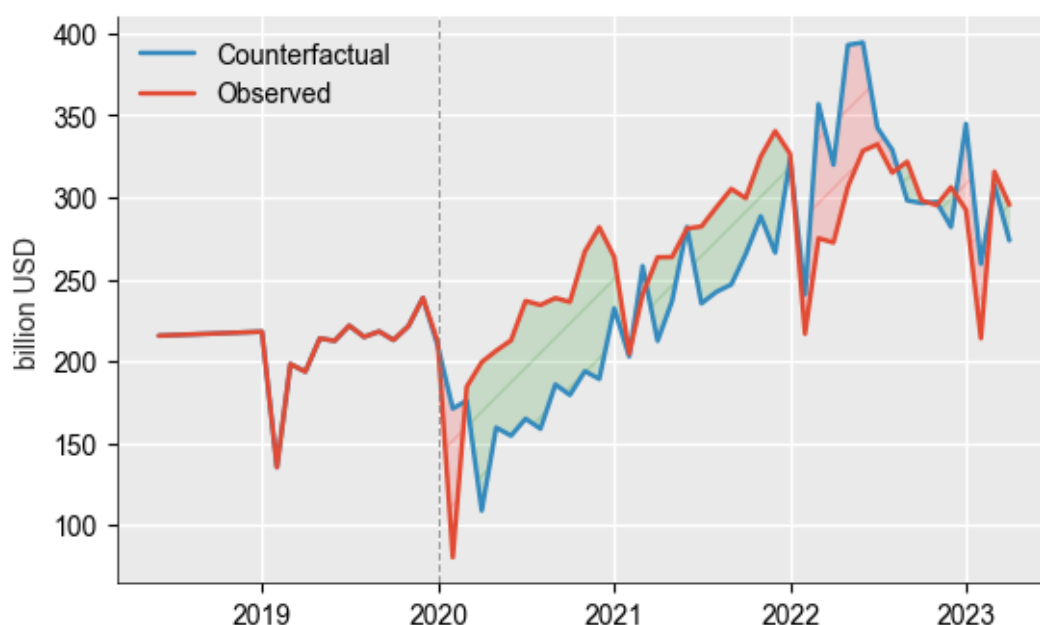
⁴ See <https://www.imf.org/-/media/Files/Publications/CR/2023/English/1CHNEA2023001.ashx>; https://www.imf.org/en/Publications/WEO/weo-database/2023/April/weo-report?c=924,&s=NGDP_RPCH,&sy=2021&ey=2028&ssm=0&scsm=1&sc=0&ss=1&ssc=0&sic=0&sort=country&ds=.&br=1; and <https://www.oecd-ilibrary.org/sites/ce188438-en/index.html?itemId=/content/publication/ce188438-en>.

durable goods, an ongoing crisis in the Chinese real estate sector, and subdued domestic consumption, China's recovery has to date been slower than expected. In July, China's General Manufacturing Purchasing Managers' Index (PMI) dropped below 50 for the first time in three months, indicating an overall deterioration of business conditions⁵.

11. China's export performance was hampered by the COVID-related lockdowns in 2022 and only started to recover in the first months of 2023. While having experienced a strong performance in 2020 and 2021, through most of 2022, China's export growth rate was well below expectations (Figure 2) with lower performance compared with other main trading partners. Looking at the year-on-year growth rates of trade flows and comparing with other geographic areas like ASEAN, EU, Japan, and USMCA, the growth rate of imports was around 20% in the second half of 2022 for all, but remained at 0% for China, even turning negative in January 2023 (Figure 3 Panel A). In terms of exports, Chinese growth rates remained among the lowest, together with Japan's (Figure 3 Panel B). For August 2023, China customs reported -8.8% export growth relative to one year earlier. This was the fourth consecutive month with negative export growth rates.

Figure 2. China's exports are lower than expected

China's observed exports against what they would be, had they followed the same trend as EU, the United States, Canada, Mexico and Japan

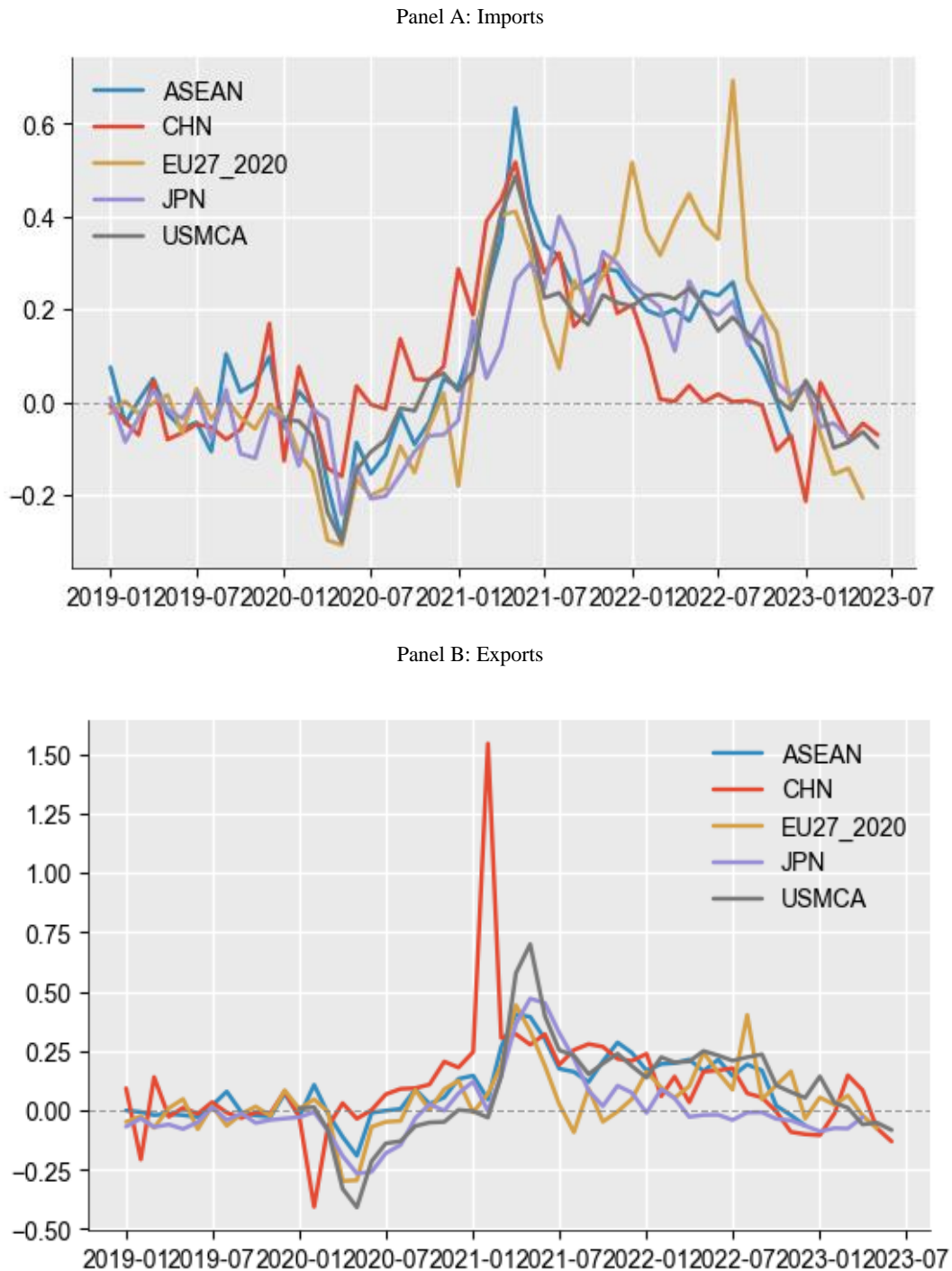


Note: Synthetic control method on Chinese exports (regressed on values from 2018-2019 of CAN, EU, JPN, MEX, USA; r-squared = 0.24).

Source: UN Comtrade, General Administration of Customs, People's Republic of China (GACC).

⁵ [43ec856dae1746a2825e7421fc9d13ad \(spglobal.com\)](https://www.spglobal.com).

Figure 3. Year-on-year growth rates 2019-2023



Source: UN Comtrade, Chinese Customs Data (GACC).

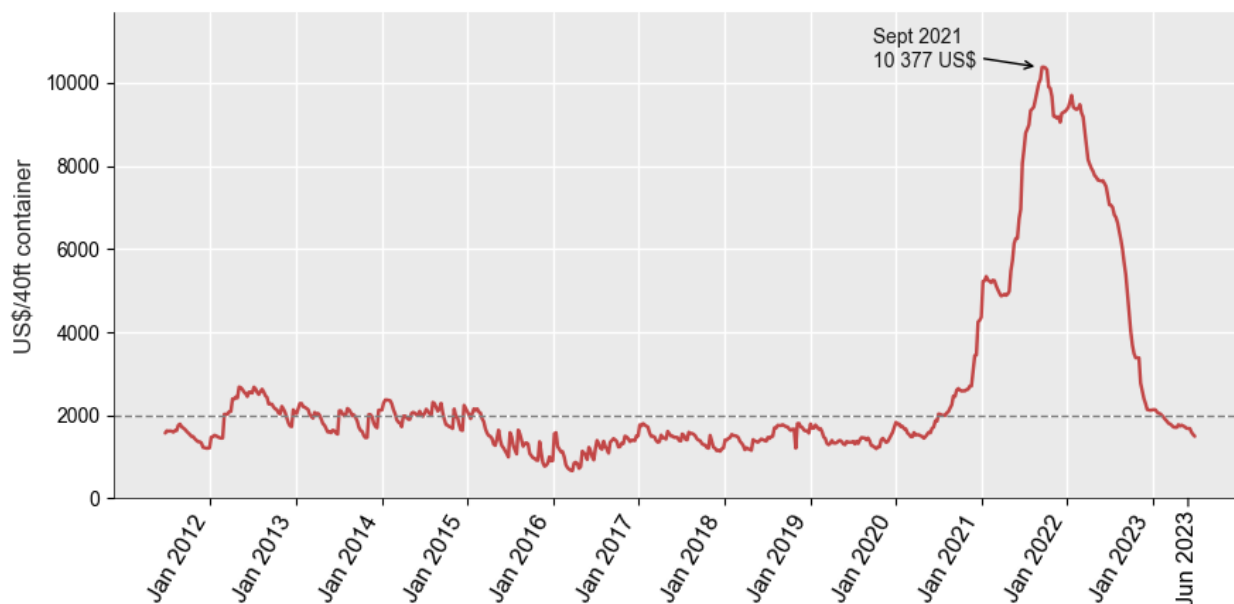
3. The global merchandise trade slowdown is contributing to declining freight costs

12. In 2021, transportation costs surged as trade rebounded while economies were still facing COVID-19 restrictions and manufacturers and transport services continued to face supply and logistical difficulties. However, as global trade growth slowed down in 2022 and sanitary measures were gradually lifted, maritime and air freight transportation costs dramatically decreased.

3.1. Container supply is catching up with demand

13. In June 2023, global container shipping costs reached their lowest levels since the start of the pandemic (Figure 4). The average cost for shipping a 40ft container fell to USD 1 494 by the end of June 2023, just above the 2019 average of USD 1 420 but well below the 2021 peak. Sharply increasing demand for container shipping during the economic recovery amidst port congestion and logistics difficulties led to container shipping costs increasing seven-fold between 2019 and September 2021. This contrasts with 2022, where demand stagnated while supply of container shipping grew at a steady pace. Moreover, exceptional profits of container carriers were partly invested in new vessel orderings: in 2021, the container ship orderbook grew by 121% according to UNCTAD (UNCTAD, 2022^[4]). The global container fleet is expected to grow by 6% in 2024 and 8% in 2025 according to BIMCO (BIMCO, 2023^[5]), a shipping industry organisation.

Figure 4. Weekly world container index



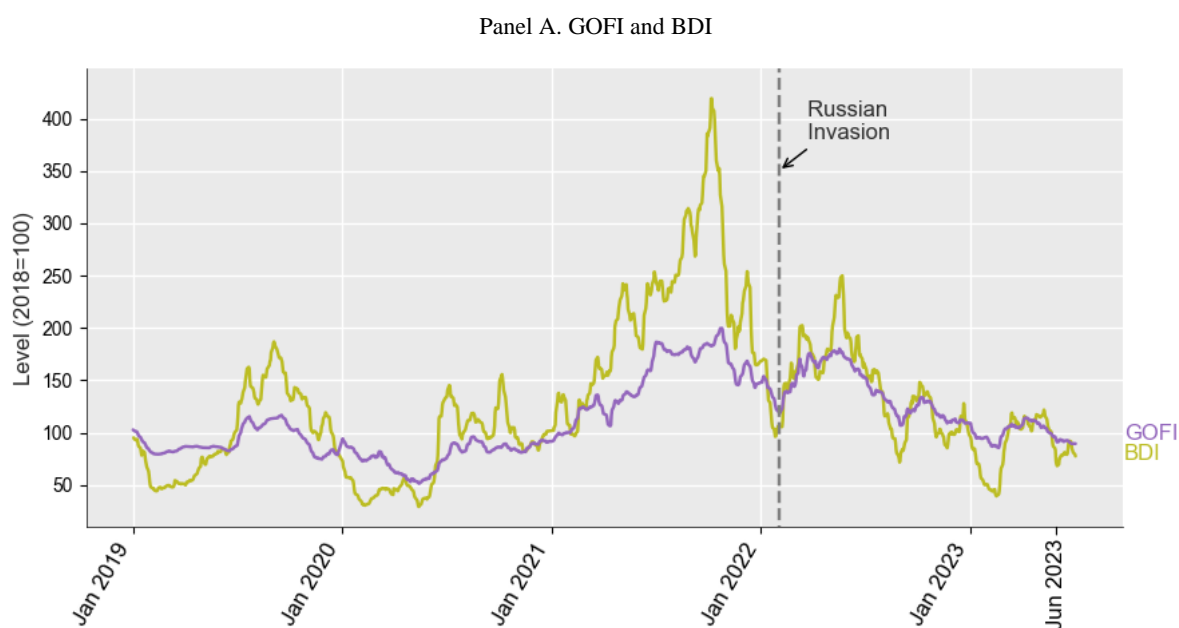
Source: Drewry composite world container index, sourced from [Infogram](#).

3.2. Dry bulk prices are returning to pre-pandemic levels, but high grain freight costs affected consumer food prices in 2022

14. After demand peaked in October 2021, dry bulk costs began to cool, only to increase again following the Russian invasion of Ukraine (Figure 5 Panel A). At the beginning of 2023, dry bulk costs returned to pre-pandemic levels, but this return to normal differs across shipping routes.

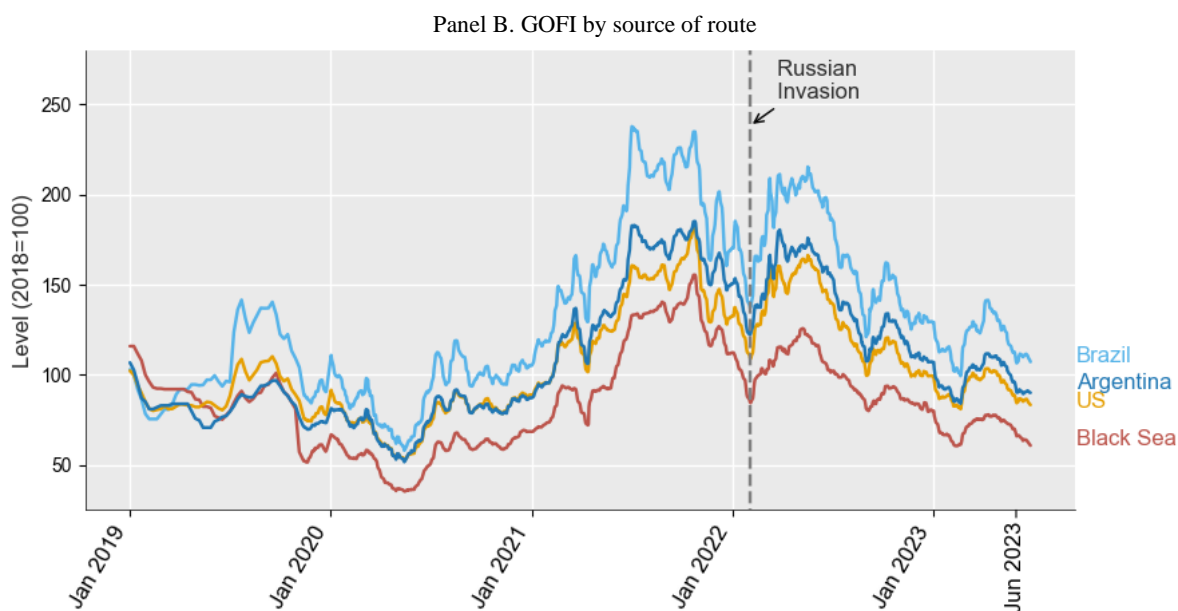
15. The Baltic Dry Index (BDI) monitors vessel hire costs for bigger vessels (Capesize, Panamax and Supramax) and the IGC Grains and Oilseeds Freight Index (GOFI) measures maritime transport costs, including vessel hire costs but also fuel and other additional costs, for vessels most involved in grains and oilseeds maritime transport: Panamax, Supramax and Handysize. Both the BDI and the GOFI measure shipping costs of commodities (Deuss, Maggi and Frezal, 2022^[6]). These two indices were both at a peak in October 2021: the BDI index was more than four times higher than its 2018 average during the first week of the month and GOFI hit a record of twice its 2018 level at the end of October 2021 (Figure 5 Panel A). After the peak, dry bulk indices began to fall, but rose again following the Russian invasion of Ukraine as a result of higher fuel costs⁶ and a reshuffling of seaborne trading patterns of commodities, particularly wheat and coal⁷. In July 2022, the Black Sea Grain Initiative made it possible again to export crops from Ukrainian and Russian ports and thus contributed to easing demand pressure. BDI and GOFI freight rates have now almost returned to pre-pandemic levels.

Figure 5. Evolution of the Baltic Dry Index (BDI) and of the IGC Grains and Oilseeds Freight Index (GOFI)



⁶ [War in Ukraine raises global shipping costs, stifles trade | UNCTAD.](#)

⁷ [Russian invasion of Ukraine shakes up dry bulk market | Institute of Shipping Economics and Logistics \(isl.org\).](#)

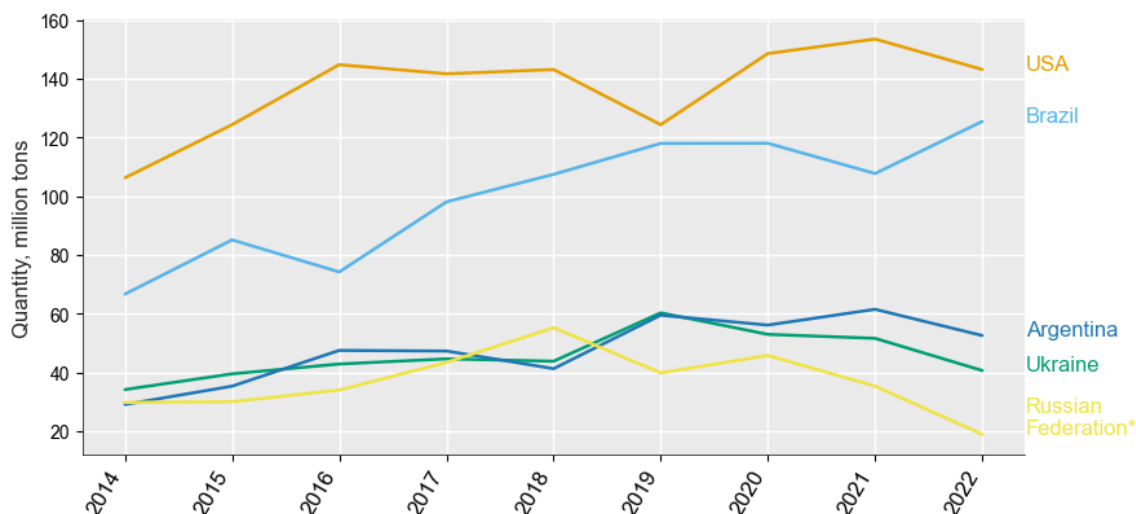


Note: Maritime routes originating from Brazil, USA, Black Sea, and Argentina are the main contributors to the GOFI trade-weighted composite indicator. They respectively account for 30.3%, 26.5%, 15.8% and 13.8% of the composite index.

Source: Baltic Dry Index sourced from [Investing.com](https://www.investing.com), GOFI index and sub-indices sourced from [IGC](https://www.icg.com), authors' calculation.

16. As noted above, the return to pre-COVID-19 trends of grains and oilseed freight costs differs across shipping routes. Freight costs for routes originating from the Black Sea were down 30% during the first half of 2023 compared to 2018 levels. However, for routes originating from Brazil freight costs were up 19% (Figure 5 Panel B). Stronger demand for bulk dry transport of grains and oilseeds from Brazil reflects increasing export volumes for this major producer and exporter. Much of the increase between 2018 and 2022 for Brazil is related to bumper soybean harvests (Figure 6).

Figure 6. Grains and Oilseeds exports for main exporters



Note: Grains and oilseeds include maize, wheat, soybeans, barley, sorghum, and durum corresponding to following HS codes: HS 1005, HS 1001, HS 1201, HS 1003 and HS 1007.

*For 2022, Russian exported volumes are based on mirror data.

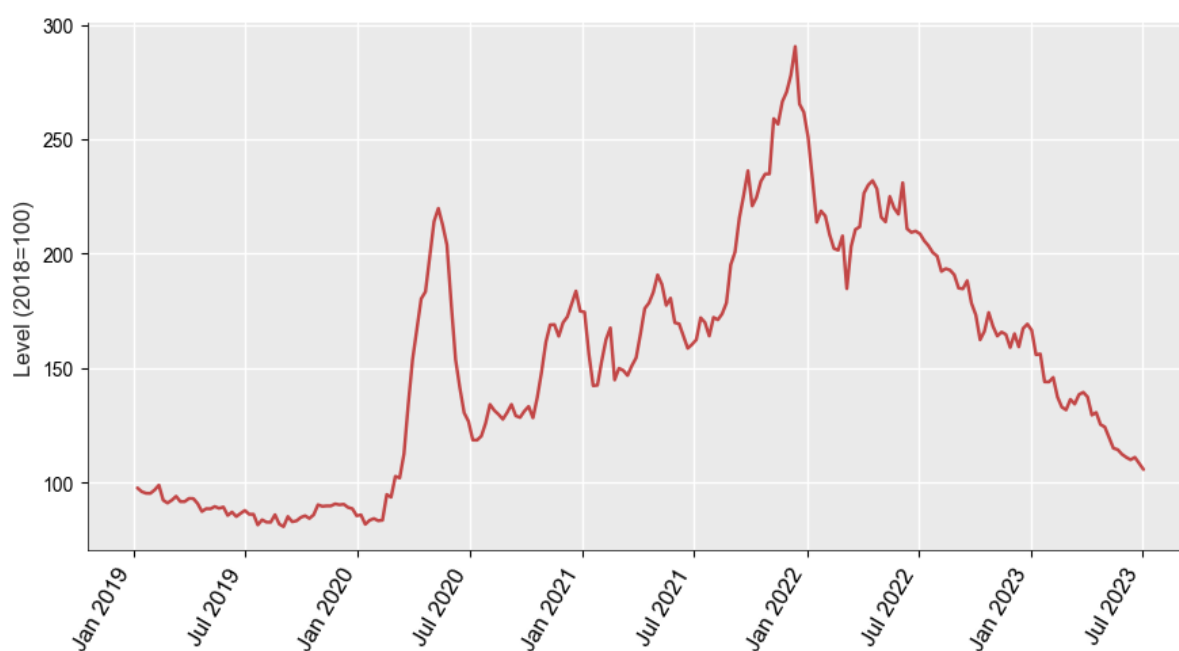
Source: [ITC trade map](https://www.itc-trademap.com), authors' calculation.

17. The overall increase in dry bulk transportation prices contributed to high consumer food prices in 2022. With ocean freight rates estimated to account for 11% of the cost and freight price (C&F price) for grains and oilseeds (2007-2021 average) (Deuss, Maggi and Frezal, 2022^[6]) a part of the 2022 rise in consumer food prices can be attributed to increasing maritime transport costs. For the first quarter of 2022, UNCTAD estimated that higher dry bulk freight rates alone could have contributed to a 1.7% rise in global consumers food prices (UNCTAD, 2022^[7]).

3.3. 2022 Air freight capacities and demand are returning to 2019 levels, following two unusual years

18. Air freight transport was highly impacted by COVID-19 restrictions as the capacity to carry freight in the belly of passenger aircraft all but disappeared. Air freight rates continued to rise in the wake of economic recovery until end 2021. While the market started to cool early 2022, surging jet fuel prices slowed the recovery of freight rates to a return to normal. Recent developments indicate that a normalisation of air freight is in sight. The post-pandemic demand peak is behind, and prices are now falling (Figure 7).

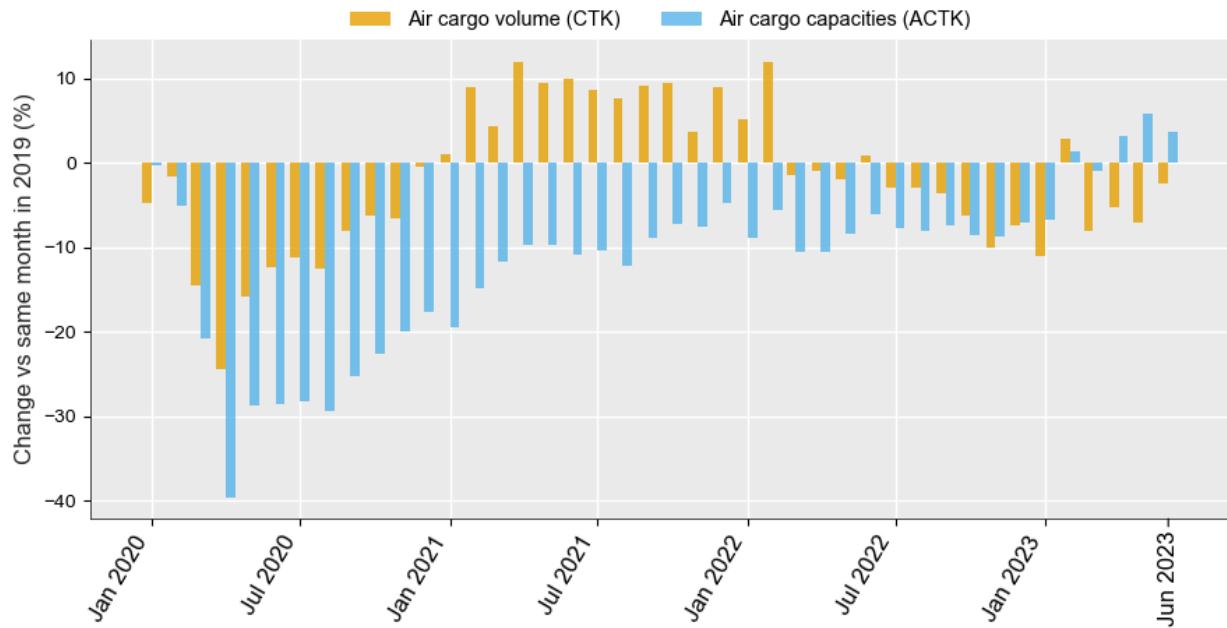
Figure 7. Weekly Baltic Airfreight Index (BAI)



Source: BAI Index fetched from [TAC Index](#), authors' calculation.

19. In December 2021, the Baltic Airfreight Index (BAI), which monitors air freight costs, reached a peak at three times its 2018 level. This was mainly due to increased demand throughout 2021 compared to pre-COVID-19, coupled with staffing shortages. In 2021, air cargo shipping, measured as cargo tonne-kilometres (CTKs), outperformed 2019 levels every month (Figure 8). Over the year, CTKs were up 6.9% compared to 2019 (IATA, 2021^[8]). At the same time suppliers were facing staff shortages due to ongoing COVID-19 mitigation measures (OECD, 2021^[9]). Despite an increase in load factor, a measure of aircraft capacity utilisation, (+9.3 percentage points in 2021 compared to 2019 (IATA, 2021^[8])), available cargo tonne-kilometres (ACTKs) were down 10.9% compared to 2019 in 2021 (IATA, 2021^[8]). All those factors combined to result in soaring air freight costs.

Figure 8. Global air cargo volumes and capacities growth



Note: Total market (Domestic and International).

Source: [IATA monthly air cargo analysis reports](#). © International Air Transport Association, 2019, All Rights Reserved; Author's calculation.

20. At the beginning of 2022, the situation softened as demand trended downward, but surging jet fuel prices, which increased by more than 70% during the first 6 months of 2022 (IATA, 2022_[10]), caused a temporary uptick in prices mid-year (Figure 7). As demand and jet fuel prices eased in the second half of 2022, overall freight costs declined. In December 2022, the BAI index was down by 28% from its peak in April. The decline continued during the first two quarters of 2023 and prices continued to fall slightly throughout July and August due to increasing bellyhold capacity (on passenger flights) during the Northern hemisphere summer season.

4. The structure of merchandise trade continues to evolve

4.1. The product structure of goods trade has not returned to its pre-pandemic composition

21. The product structure of international trade has changed significantly since 2020 and some of these changes suggest lasting adjustments. The Finger-Kreinin export similarity index, monitored since the beginning of the pandemic and calculated for exports of the world's eighth largest economies (G7 countries and China), compares product structures of goods and services exports of these economies to the pre-pandemic year 2019. Including the data for the whole 2022 for merchandise trade and for the first three quarters of 2022 for services trade, the index shows that the structure of both goods and services trade remained significantly changed throughout 2022 (Figure 9).

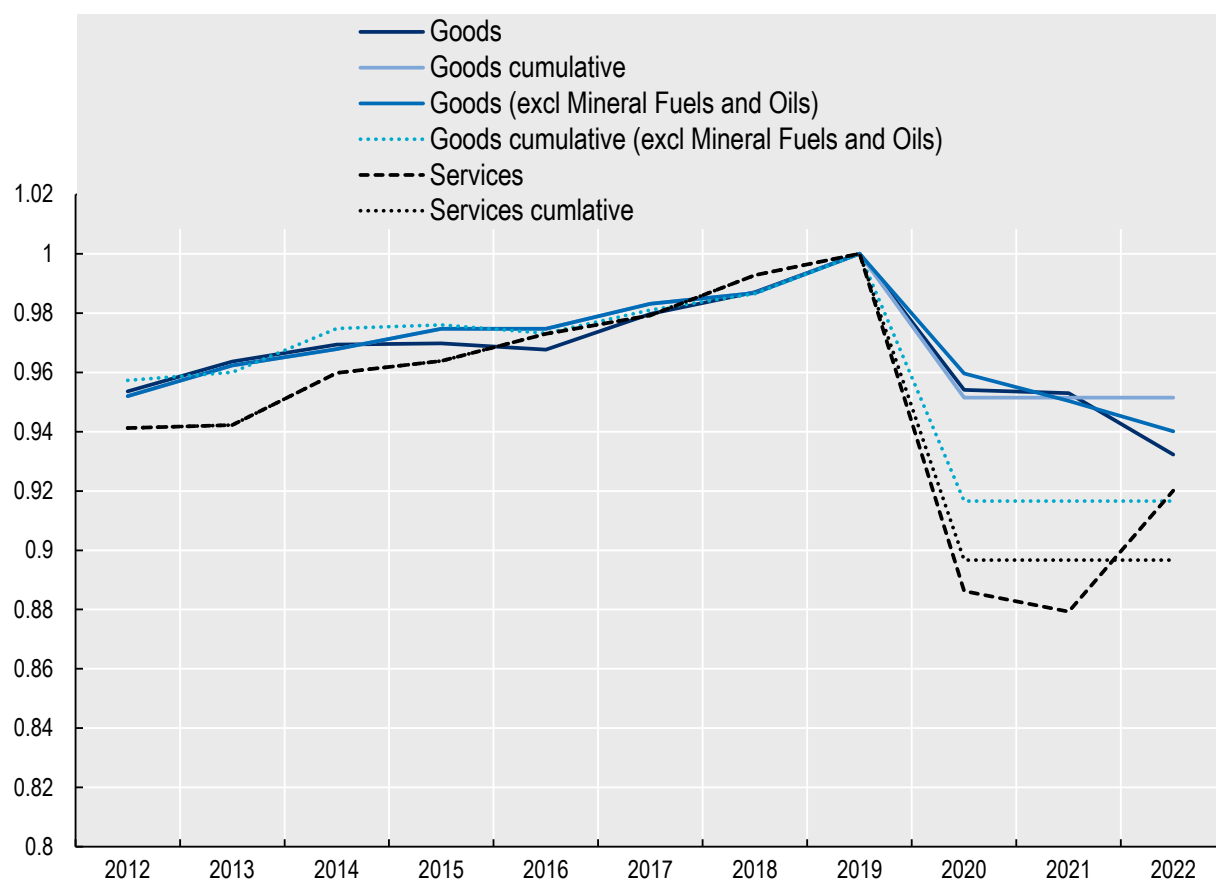
22. The 'cumulative' version of the index, where the three years 2020 to 2022 are treated as one period to smoothen any counterbalancing changes from one year to another, suggest that the structure of G7 and China's services exports has changed more than the structure of goods exports (the black and the blue dotted lines in Figure 9). However, the data also show a shift in the structure of services trade back to where it was in 2019. The same was not the case for goods trade, where in 2022 the similarity of export structures declined even more than in 2020 and 2021, suggesting continued changes to the structure of goods trade.

23. Some of the changes in goods export shares were driven by changes in relative prices of commodities which tend to experience large price changes during economic cycles (such as energy products (HS27), precious metals (HS71) and iron and steel (HS72)). But some more complex manufacturing products have also seen large and persistent share increases throughout the 2019-2022 period (electronics and electrical equipment HS85). Other complex manufacturing products saw large and consistent declines (vehicles and parts HS87), aircrafts (HS88) and optical and photographic equipment and machinery (HS84) (Figure 10 Panel A). This all suggests that real changes in demand and supply across the different merchandise product categories likely played a role, in addition to price adjustments.

24. Changes in services export shares on the other hand confirm the tendency of a gradual reversal of the shifts seen at the outset of the COVID-19 pandemic. For example, exports of transport services declined strongly in 2020, subsequently recovered strongly in 2021 and even more in 2022. At the same time, the share of charges for the use of intellectual property in services exports (essentially licencing fees) declined in 2022 after growing in 2020 and 2021 (Figure 10 Panel B). However, travel, which is a major category of internationally traded services, accounted for ever smaller shares of services exports throughout the period 2020-22, and by mid-2023 the level of trade services trade was still roughly 30% below the pre-pandemic activity.

Figure 9. Changes in the structure of goods and services trade as of the end of 2022

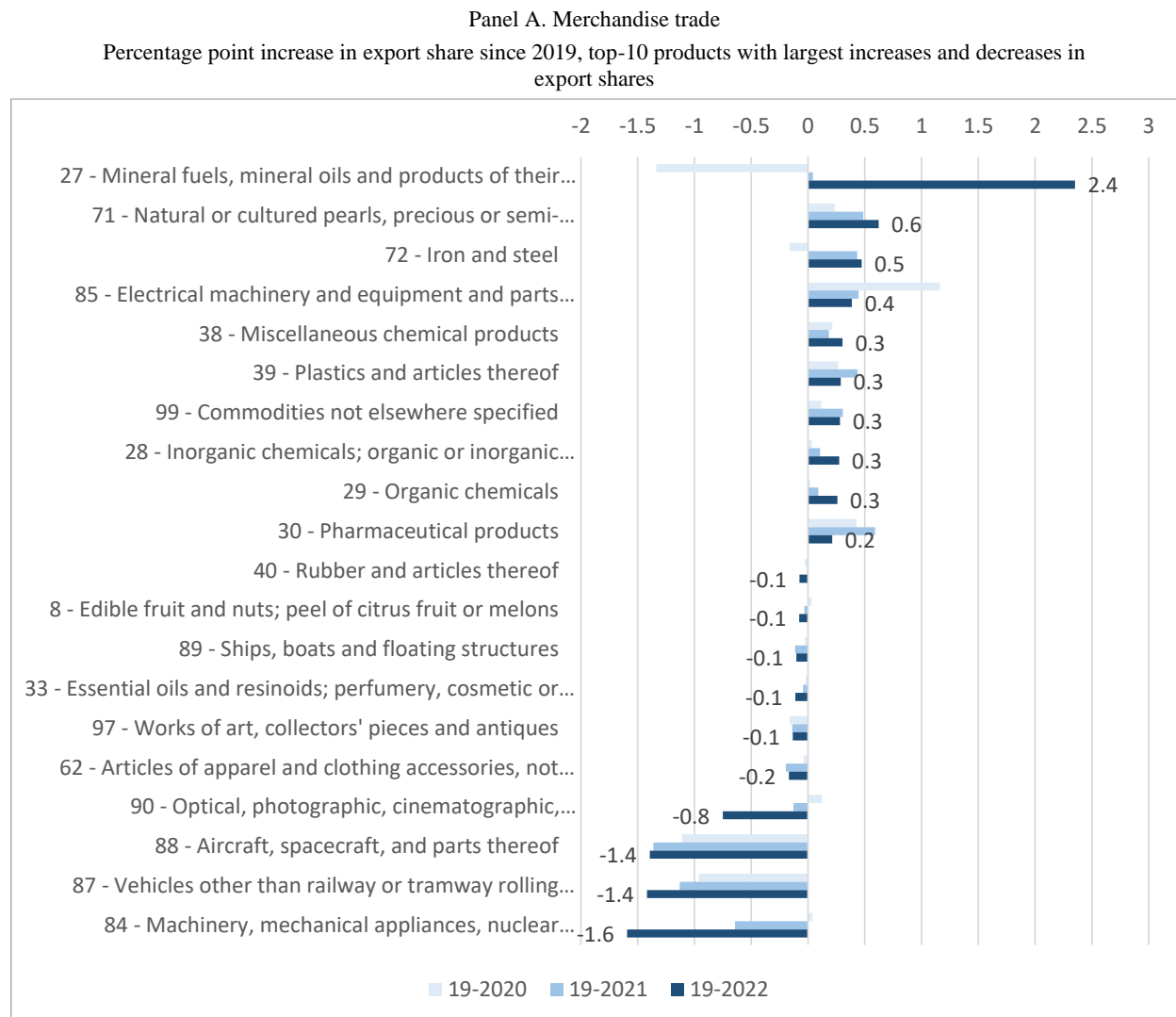
Finger-Kreinin index of similarity of export structure across products (1 = structure identical to 2019)

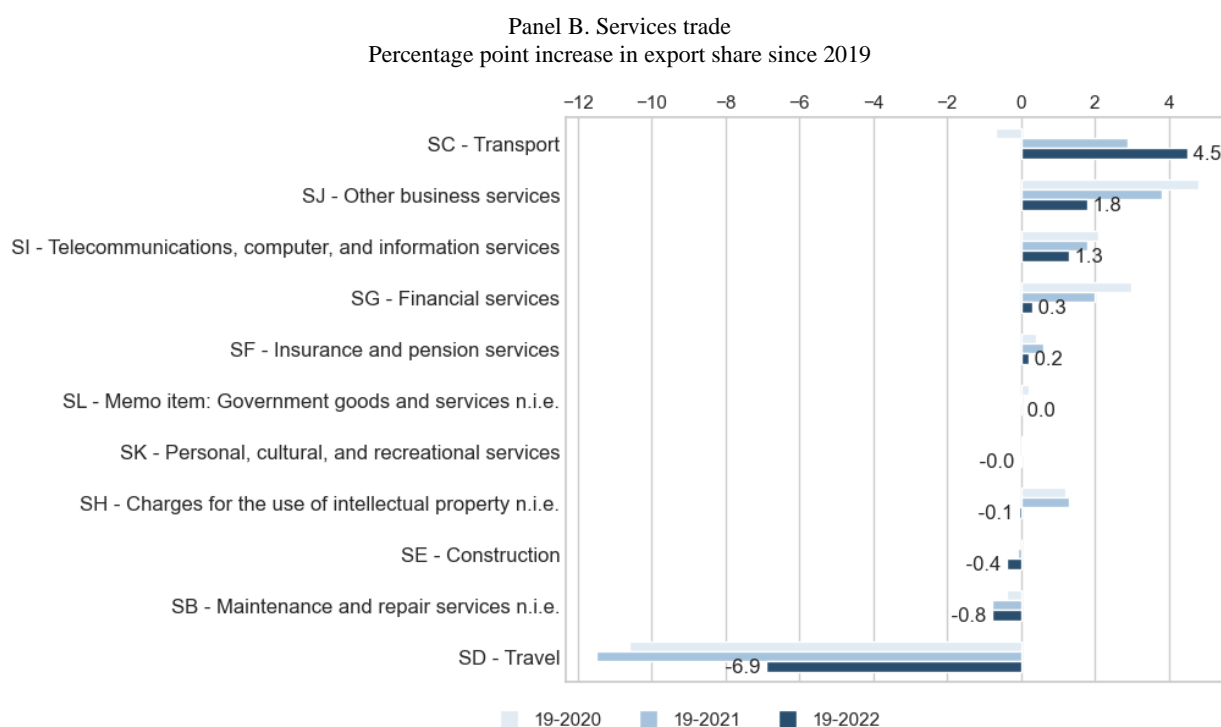


Note: This figure shows the Finger-Kreinin for exports of goods and services of G7 countries and China in a given year. The values of the index vary between 0 and 1. A value of 1 means that the group exports different goods (2-digit HS categories for merchandise trade and ten broad commercial services categories) in exactly the same proportions as in the reference year 2019, i.e. product shares are equal (product shares are calculated using trade values). When the indicator is equal to zero this means there are no export products in common in the two periods. A value of 0.5 can be approximately interpreted as representing a 50% overlap in export structures between the two periods. Note that comparable services trade data for the covered economies is only available since 2008 for the following services categories: Goods-related services; Transport; Travel; Construction; Insurance and pension services; Financial services; Charges for the use of intellectual property n.i.e.; Telecommunications, computer, and information services; Other business services; Personal, cultural, and recreational services. ‘Cumulative’ versions of the indices sum 2020, 2021 and 2022 exports to treat the post pandemic period as one to assume away any counterbalancing changes within this period. Series ‘Goods (excl. Mineral Fuels and Oils)’ excludes from the calculations HS chapter 27 Mineral fuels, mineral oils, and products of their distillation.

Source: OECD calculations based on ITC Trade Map data for merchandise trade and on WTO Services Trade data for services trade.

Figure 10. Goods and services with largest gains and losses in G7 and China's export shares





Note: Panel A. shows percentage point changes in export shares of G7 countries and China for 10 merchandise sectors (2-digit HS) with the largest increases and deepest decreases between 2019 and 2022. Panel B. shows corresponding change in export shares for all broad categories of commercially traded services reported in the source data.

Source: OECD calculations based on ITC Trade Map data for merchandise trade and on IMF Balance of Payments (1 September 2023) for services trade.

4.2. Data to date do not indicate significant evidence of reshoring or friendshoring

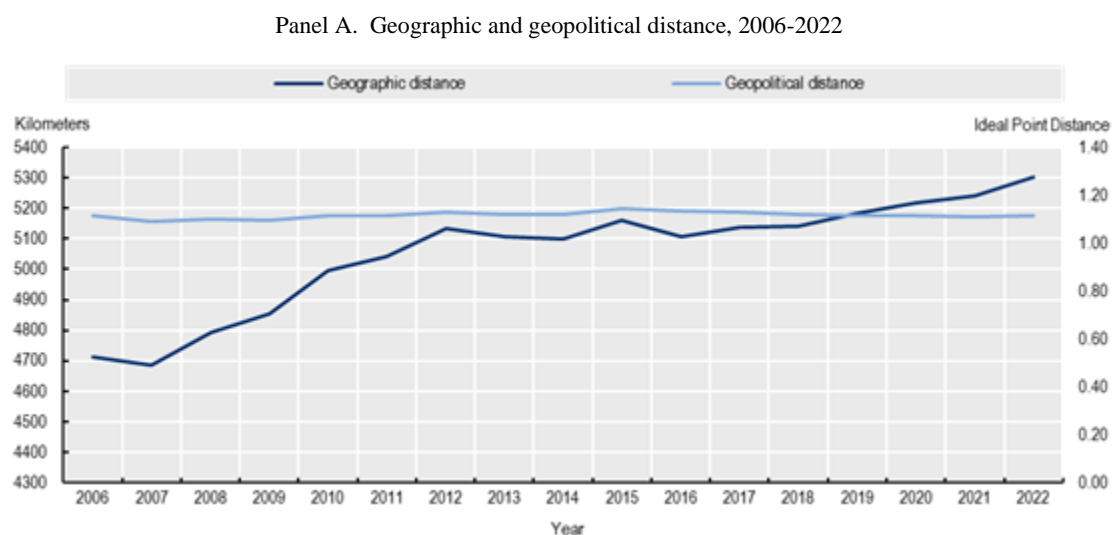
25. As global value chains have grown in importance, production stages have expanded to more cost-efficient, and often more remote, locations. However, in recent years, growing geopolitical tensions, and concerns about security and potential supply chain disruptions, have heightened calls of ‘reshoring’ or ‘friendshoring’. At present, there is no significant evidence of such reshoring or friendshoring in the annual data to end-2022. While the physical distance of imports has increased over the last 16 years, the average geopolitical distance (proxied by UN voting patterns)⁸ of trade has been stable, including in the last two years (Figure 11 Panel A). This data indicates that, on average, countries have not been increasing their sourcing from politically more aligned trade partners. At a broad regional

⁸ Bailey, Strezhnev and Voeten (2016_[12]) used UN general assembly voting data to calculate an ideal point estimate measure reflecting a country’s “position toward the US-led liberal order”. The distance between two countries (the ideal point distance, IPD) in each year is computed as the absolute value of the difference between the ideal point estimates of each country and is interpreted as the geopolitical distance of two countries. To give the reader a sense of the measure- the average geopolitical distance between 2017-2022 as measured by the IPD between the United States and countries ranged from 0.159 (Israel) and 4.59 (Syria). The average geopolitical distance between the US and Great Britain in the database is 0.945 while the geopolitical distance between the US and France is 0.22 units more (1.169).

The data is sourced from Harvard’s data-verse. <https://dataverse.harvard.edu/dataverse/Voeten>. The ideal point distance as a measure of geopolitical distance was most recently used in IMF’s [April 2023 Economic Outlook](#) Chapter 4: Geoeconomic Fragmentation and Foreign Direct Investment.

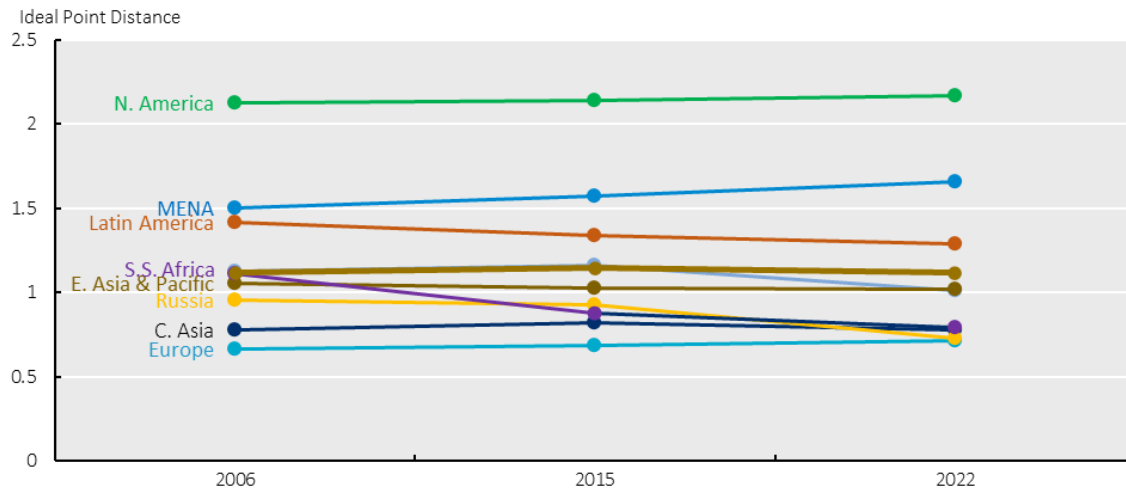
level, there are differences in the average geopolitical distance of imports which have remained relatively constant over time in most regions (Figure 11 Panel B). Imports into Europe, which includes the European Union and the intra-EU trade, has the lowest geopolitical distance.⁹ Russia and Central Asia import on average from countries that are more geopolitically aligned compared to most other regions outside the EU. On average, North American imports are the most geopolitically distant compared to other regions. There has been a small decline in political distance in some regions in recent years. The geopolitical distance of imports into Russia in 2022 was the lowest since 2006, declining 0.22 units. This change, however, is equivalent to the United States importing more from France than from the United Kingdom. WTO analysis found international trade has started to become sensitive to geopolitical distance since early 2022, after Russia's invasion of Ukraine. But despite these developments, there are clear signs of re-globalisation and greater international cooperation (WTO, 2023_[11]).

Figure 11. Physical distance of imports has increased but the geopolitical distance has been stable



⁹ Excluding intra-EU trade would raise the average distance of imports by about 1 000km while raising the average geopolitical distance by 0.2 points. This does not, however, alter the overall trends in those measures. The geopolitical distance of the EU's external imports places it between China and East Asia and the Pacific in Figure 12 Panel B.

Panel B. Average geopolitical distance of imports, 2006, 2015, 2022



Note: Bilateral geopolitical distance is measured using the ideal point distance (IPD) estimated by Bailey, Strezhnev and Voeten (2016^[12]) using observed voting behaviour during the United Nations General Assembly. The geopolitical distance (IPD) is the average IPD from the five most recent UN general assembly votes (2017-2022). As in the measure of physical distance, the lower the IPD between two countries, the closer they are in terms of geopolitical distance. The average geopolitical distance and geographic distance is weighted by bilateral trade. Geographic distance is based on the CEPII's main city to main city distance from their GeoDist database. Both measures of distance include Intra-EU trade.

Source: author's calculation based on ITC Trade Map data and UN COMTRADE, extracted April 2023, CEPII gravity database, and (Bailey, Strezhnev and Voeten, 2016^[12]).

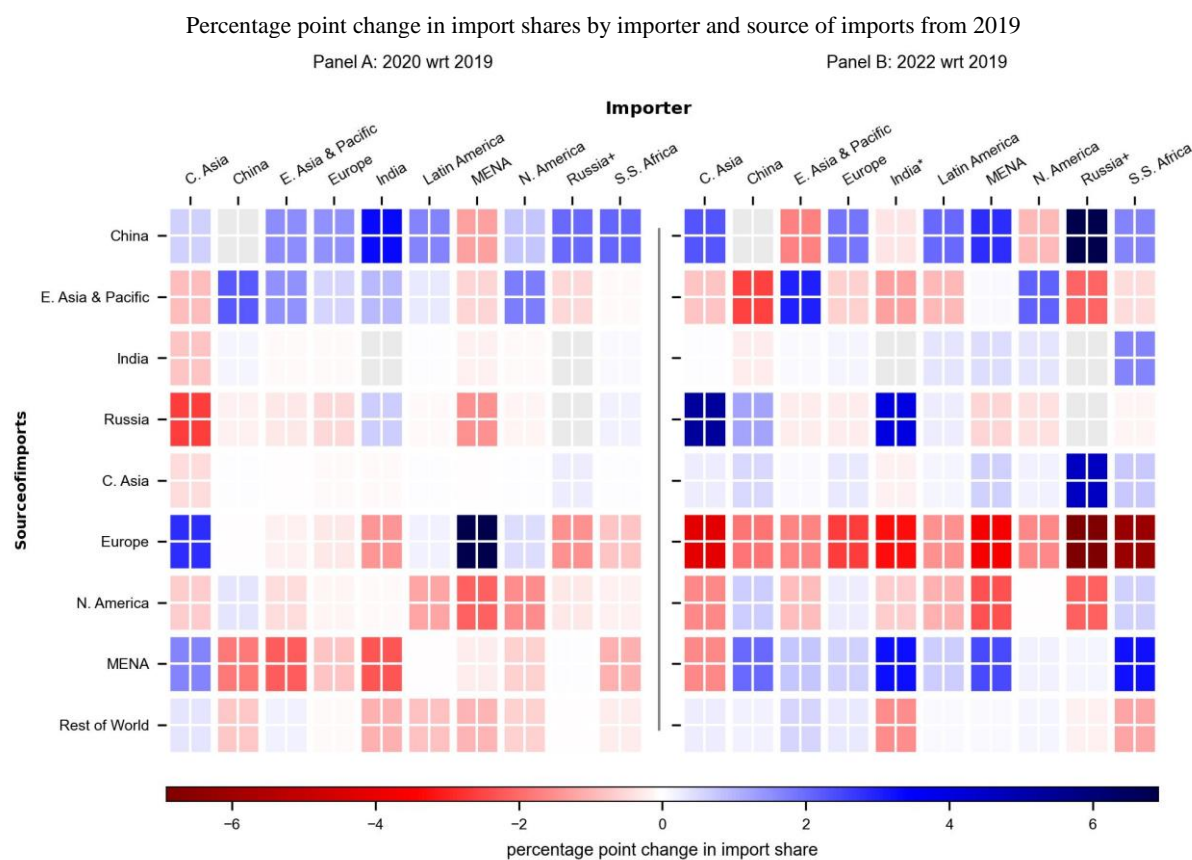
4.3. COVID and Russia's war in Ukraine are seeing some changes in trade patterns

26. The COVID-19 pandemic and the consequences of Russia's invasions of Ukraine have resulted in changes in the structure of trade, both in terms of geography and product composition. In early 2020, China was one of the first countries to lock down to prevent the spread of the pandemic. However, it was also one of the first to relax lockdown rules in mid-2020 while other regions, particularly those outside of Asia, were in the height of the pandemic and were imposing their own restrictive measures. Consequently, firms in China and other countries in East Asia and Pacific, were able to fill in the demand for merchandise trade which could not at the time be supplied by firms in other regions under lockdown (Figure 12, Panel A).

27. More recently, Russia's invasion of Ukraine has reoriented trade (Figure 12, Panel B). In 2022, China continued to grow in importance as a source of imports for most regions, but for none more so than for Russia. As Europe and North America reduced their imports from Russia, China and to some extent Central Asia, have grown in importance. Russia has become a more important exporter to Central Asia, China, India, and Latin America, notably for Russian energy exports which account for the majority of Russian exports, in value terms, into these regions, with the exception of Latin America where Russia is a key source of fertilizer imports.

28. Despite exports increasing to most regions between 2019 and 2022, the shares of Europe and East Asia & Pacific in regional imports have declined. This reflects stronger increases in exports from other regions like minerals and fuels from Russia and the MENA region, as well as electrical machinery, vehicles, and nuclear reactors, boilers, machinery from China, the East Asia & Pacific region into Europe, Latin America, and the MENA region.

Figure 12. The structure of trade reflects responses to global events in recent years



Notes: The chart shows the change in the share of total imported value accounted for by each source region (rows) between one period and 2019. A source region can increase exports between the two periods to regions in the columns but still account for less shares of total imports if other source regions had stronger growth. + Russia data based on mirror data of its trade partners reporting data through 2022. * Trade statistics for India as an importer are only available through Nov 2022, therefore statistics for Indian Imports in Panel B consider total imports between Jan-Nov 2019 and Jan-Nov 2022. Additionally, because of the incomplete coverage India could not be included in the Mirror Data for Russia. Grey boxes indicate no data. Regional classification based on World Bank definitions. The chart covers 72 importing countries and all their reported trading partners¹⁰. Does not include Chinese reimports. Includes Intra-EU trade.

Source: Author's calculation based on ITC Trade Map data and UN Comtrade, extracted April 2023.

¹⁰ Importers are classified as follow; **Central Asia**: Armenia (#), Georgia (#), Kyrgyzstan (#), Türkiye, Uzbekistan (#); **China**; **East Asia & Pacific**: Australia, Indonesia, Japan, South Korea, Malaysia, New Zealand, Singapore, Thailand, Chinese Taipei, and Hong Kong, China; **Europe**: Austria, Belgium, Bulgaria, Bosnia & Herzegovina, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Spain, Estonia, Finland, France, United Kingdom, Greece, Croatia, Hungary, Ireland, Iceland, Italy, Lithuania, Luxembourg, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Sweden, and Ukraine (#); **India** (#, monthly); **Latin America & Caribbean**: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Guatemala (#), Guyana (#), Mexico (#), Paraguay, El Salvador, and Uruguay (#); **Middle East & North Africa**: Egypt (#), Israel (#), and Malta; **North America**: Canada and United States of America; **Russia**; **Sub-Saharan Africa**: Mauritius (#), Rwanda (#), South Africa, and Zambia. “#” indicates countries sourced from COMTRADE because the ITC database coverage did not include 2022.

5. Russia's trade is changing as the war continues

5.1. Russia's trade flows are seeing massive adjustments

29. Since Russia's invasion of Ukraine in February 2022, its international trade has seen large changes in terms of the overall size of exports and imports and in the geographical composition.¹¹ A coalition of countries implemented far-reaching economic sanctions covering export market access, imports, logistics and financing as well as specific individuals.¹² Among the most important measures are the freezing of assets of the Russian Central Bank, removing access to reserves of foreign currencies; the US banning of Russia from the international US dollar-based payment system SWIFT that has the effect of impeding the continuous payments of gas shipments; the suspension of Nord Stream 2 investments by Germany; imposition of a price cap of Russian oil at USD 60 per barrel led by G7 countries and banning imports of Russian oil into the EU. Coalition countries also ban the exports of critical technologies and services to Russia and restrict imports of certain goods beyond energy.

30. At the start of the war, Russia's trade balance was helped by higher energy prices. However, data from the Russian Central Bank for the first quarter of 2023 show little change in imports from the previous year, while exports have shrunk considerably. In the first quarter of 2023, this data indicates that Russia's trade balance stood at USD 29 billion, which amounts to a 70% decline compared to one year earlier.¹³

31. The changes in the overall trade balance result from massive adjustments in bilateral trade flows. A declining share of Russian exports is going to the European Union and other coalition countries, translating into falls in export values of -80% and -57% respectively on a year-on-year basis as of May 2023. In contrast, China and to a greater extent, India, have dramatically increased their sourcing from Russia, with percentage increases reaching the same order of magnitude as the decrease of sanctioning countries' imports (Figure 13).

¹¹ For an analysis on trade exposure and dependency on Russia see OECD (2023_[25]).

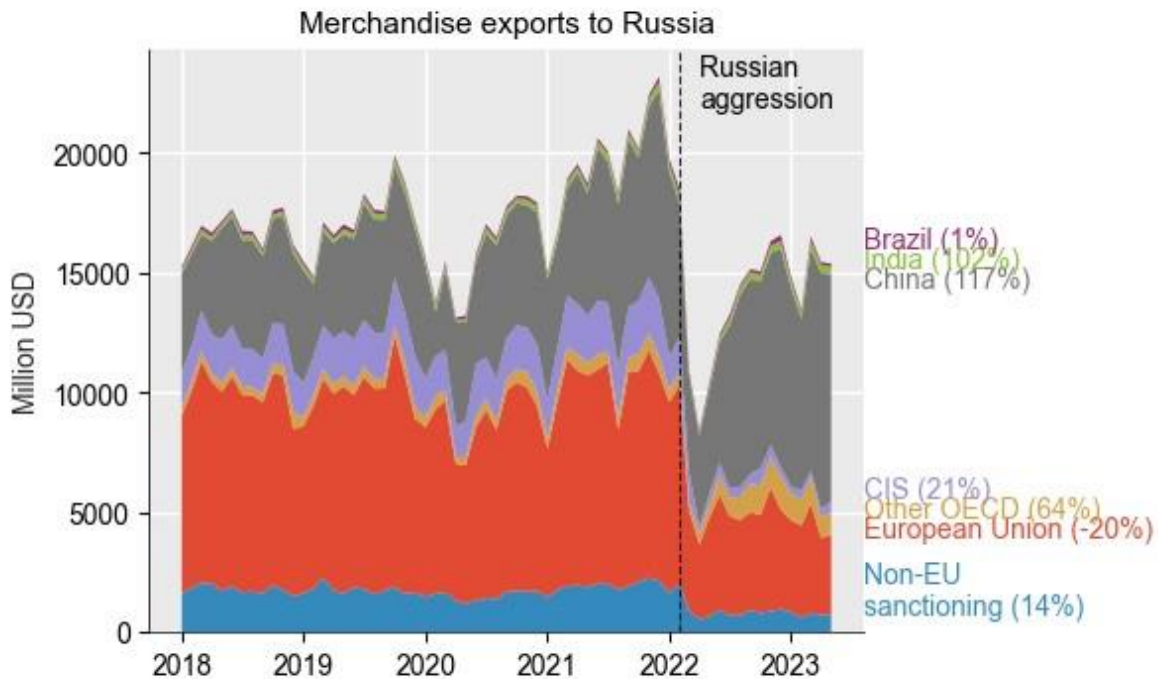
¹² See for instance <https://www.consilium.europa.eu/en/policies/sanctions/restrictive-measures-against-russia-over-ukraine/history-restrictive-measures-against-russia-over-ukraine/> for European sanctions and <https://ofac.treasury.gov/sanctions-programs-and-country-information/ukraine-russia-related-sanctions> for US sanctions.

¹³ Based on data from Russian Central Bank, these data are available at https://www.cbr.ru/eng/statistics/macro_itm/svs/ and must be looked at with caution. Russian official exports are between 3 and 10 billion USD above proxies for Russian trade that are based on other countries' bilateral data (Simola, 2023_[24]). However, these data also clearly show a large decline in the trade balance between 2022 and 2023.

Figure 13. Russian exports are shifting destination (million USD)



Note: Includes only imports from select partners and therefore this plot does not sum up to total Russian exports.
 Sanctions: Canada, Switzerland, US, Great Britain, Australia, Japan, Norway, New Zealand,
 European Union: EU 27 (2020),
 Other OECD: Türkiye, Mexico, Israel,
 CIS: Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldavia, Tajikistan, Uzbekistan, Turkmenistan.
 BRICS: China, India, Brazil, South Africa.
 Source: UN Comtrade, Chinese Customs Data (GACC), ITC Trade Map.

Figure 14. Russian imports fell and their origin shifted in 2022 (million USD)

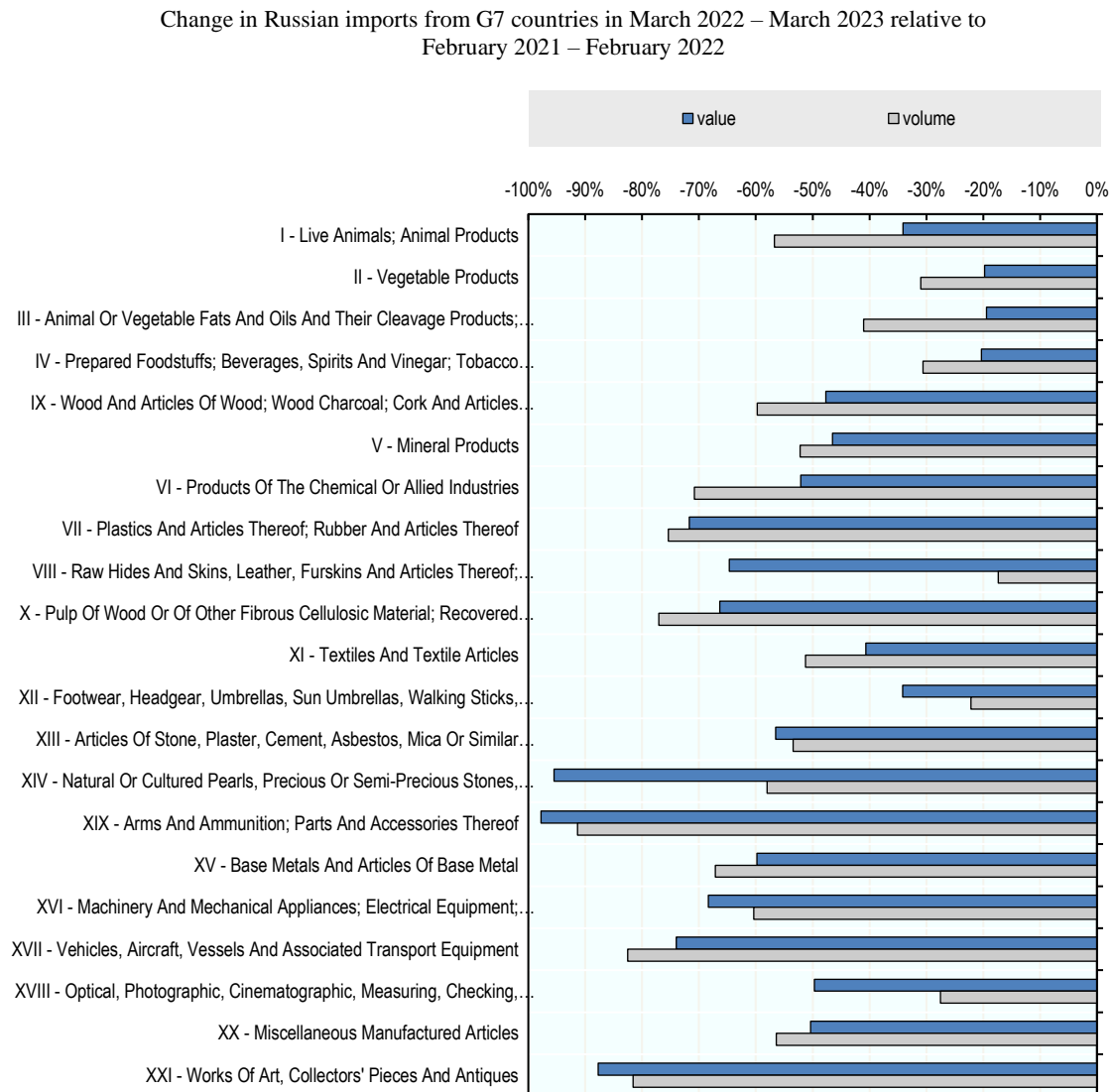
Note: Includes only exports to select partners and therefore this plot does not sum up to total Russian imports. Sanctions: Canada, Switzerland, US, Great Britain, Australia, Japan, Norway, New Zealand, European Union: EU 27 (2020), Other OECD: Türkiye, Mexico, Israel, CIS: Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldavia, Tajikistan, Uzbekistan, Turkmenistan. BRICS: China, India, Brazil, South Africa. Source: UN Comtrade, Chinese Customs Data (GACC), ITC Trade Map.

32. International trade data are now starting to capture the profound changes in Russian merchandise trade since the start of the war. In the period March 2022- March 2023, Russian merchandise imports from the G7 registered a 62% decrease relative to their pre-crisis value, going from an average value of USD 5.6 billion per month in the pre-war period to around USD 2.2 billion in the post-war period.

33. The decline in Russian imports from the G7 is unequal across goods. Figure 15 shows that imports of arms and ammunition plummeted (Section XIX of the Harmonised System), as did imports of jewels and precious stones (XIV) and works of art (XXI). Agricultural imports were relatively less affected, although they represent a relatively small share of trade with Russia and were already low as a result of measures adopted following the 2014 events in Crimea (Cheptea and Gagné, 2019^[13]). While the fall is similar in most product categories for both the value and the volume of imports, there is a much more marked reduction in values of trade rather than volumes for imports of leather products (VIII) and jewels and precious stones (XIV), reflecting that high-end and high-value goods are particularly targeted by G7 measures in those sectors.¹⁴ The changes in Russian imports from G7 countries appear to be largest for those products targeted specifically by sanctions (Figure 16).

¹⁴ G7 countries announced in March 2022 that they would ban exports of luxury goods to Russia. The announcement was closely followed by implementing legislation in the EU, Japan and the United States (March) the UK (April) and Canada (May).

Figure 15. Russian merchandise imports from the G7 took a strong hit, with differences across products

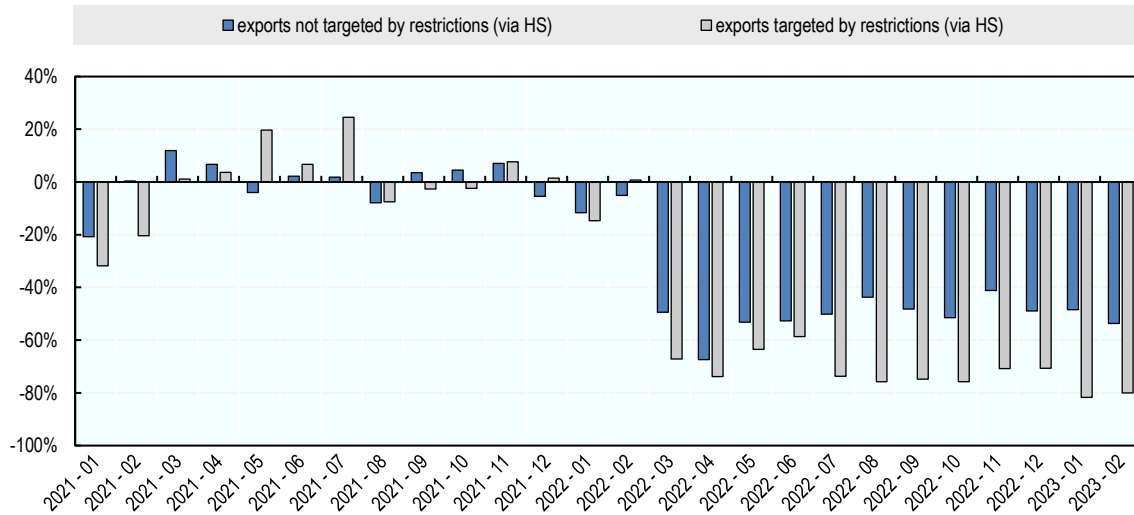


Note: based on the value and volume of exports from G7 economies to Russia, by Section of the Harmonised System Nomenclature. Based on 25,011 products for the value of exports and 21,732 products for the volume of exports (for which measurement in KG was available). Excludes trade flows reported with 00, 98, or 99 as the first two-digit codes.

Source: EUROSTAT, Statistics Canada, Statistics of Japan, UK Office for National Statistics, USITC.

Figure 16. Product targeted by G7 measures witnessed the largest fall in exports to Russia

Changes in exports of targeted and non-targeted products relative to their respective average monthly values over 2021



Note: Targeted products are identified based on the HS codes stated in the official sanctions legislation, and the identification is carried out for each G7 country separately.

Source: OECD calculations based on EUROSTAT, Statistics Canada, Statistics of Japan, UK Office for National Statistics, USITC.

34. At the same time, some Eurasian Customs Union Members¹⁵, notably Kyrgyzstan and Kazakhstan, have seen imports from the G7 skyrocket since the beginning of the war (Figure 17). (See also the recent increase in exports from China and Central Asia to Russia seen in Figure 12).¹⁶ This appears to be the case particularly for goods targeted by sanctions. (Figure 17, Panel B).

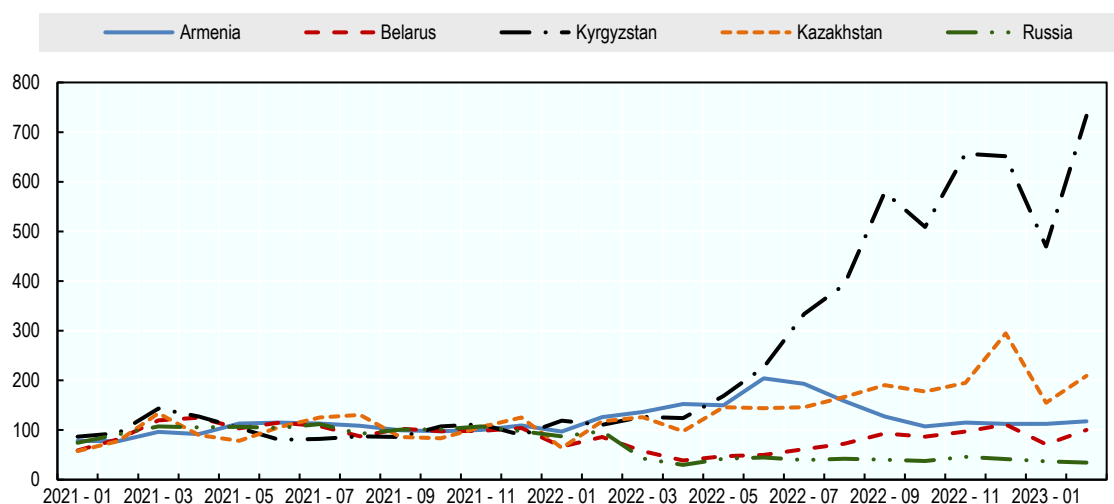
¹⁵ The Eurasian Customs Union is formed by Armenia, Belarus, Kazakhstan, Kyrgyzstan, Russia. Belarus is also the subject of G7 sanctions.

¹⁶ Some of this has been argued to be a re-routing of trade in chips and other electronics, as controlling the flows of ubiquitous semiconductors across complex supply chains has proven difficult. [Russia Is Importing Western Weapons Technology, Bypassing Sanctions - The New York Times \(nytimes.com\)](https://www.nytimes.com/2023/04/18/asia/nikkei.com/Business/Tech/Semiconductors/Special-report-How-U.S.-made-chips-are-flowing-into-Russia) 18 April 2023; <https://asia.nikkei.com/Business/Tech/Semiconductors/Special-report-How-U.S.-made-chips-are-flowing-into-Russia>.

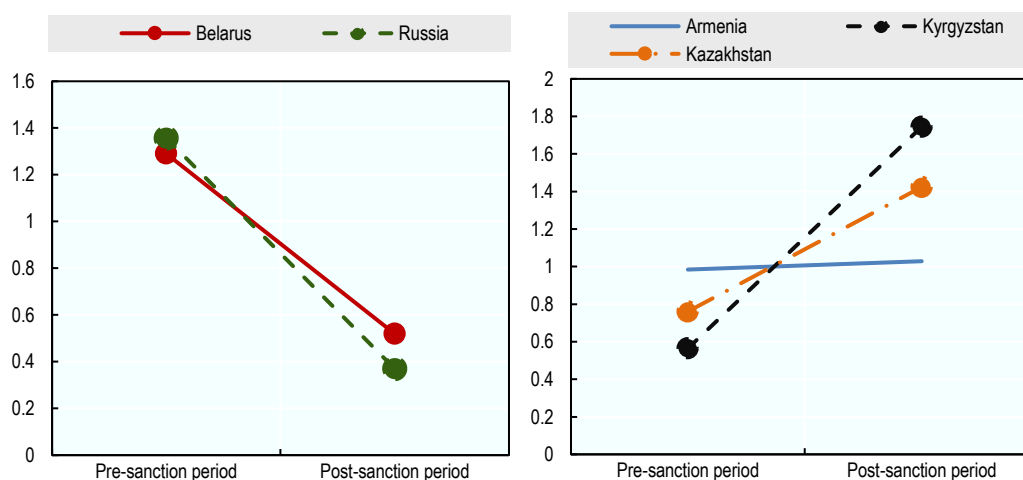
Figure 17. Some members of the Eurasian Customs Union have seen imports increase

Index, 100 = average monthly value of imports in 2021

Panel A. Changes in imports of goods to the Eurasian Customs Union from the G7



Panel B. Comparison of the average value of exported goods targeted by G7 measures before and after the measures are imposed. Changes relative to the average monthly value of exports over January 2021-February 2023



Note: Targeted products are identified based on the HS codes stated in the official sanction legislation, and the identification is carried out for each G7 country separately.

Source: Own calculations based on EUROSTAT, Statistics Canada, Statistics of Japan, UK Office for National Statistics, USITC

5.2. Oil and gas markets are adjusting

35. The adjustments in the gas and oil markets have been striking. In gas, before the war, 70% of Russian exports went to the European Union; this fell to only 400 GWh/d in mid-2023 against 2800 GWh/d in May 2022¹⁷. This shortfall cannot be easily compensated by exports to other destinations in the short run, as gas exports involve transport through pipelines which

¹⁷ <https://gasdashboard.entsog.eu/>. “GWh/d” stands for Gigawatt hour per day.

cannot be constructed at short notice to reach other destinations, such as China. While exports of gas via Russia's 'Power of Siberia' pipeline stood at 15 billion cubic meters (bcm) in 2022, it is expected that 23 bcm of Russian gas could reach China via this pipeline from 2023 onwards. In comparison, Russia exported 155 bcm of gas to Europe in 2021 (Lambert et al., 2022_[14])¹⁸. In addition, even though Russia has increased its gas sales to China, it reportedly does so at a lower price than other Chinese partner countries¹⁹.

36. In terms of oil exports, Russian crude oil exports were partly rerouted to India and China in early 2023, but at a price that lay between the crude oil global market price and the USD 60/barrel price cap set by the G7 coalition, depending on the logistics of trade. Babina et al. (2023_[15]) do not find a discount for sales to China via Pacific ports, while prices for oil supplied via the Black Sea were much lower. Russia is reportedly offering discounts to India due to the increasing CIF costs implied by the longer route from Baltic Sea ports²⁰ of the amount of USD 22/barrel (Babina et al., 2023_[15]). (For reference, the global oil price, based on the Brent Crude Oil index, had fallen from USD 117/barrel in May 2022 to USD 75/barrel one year later).

6. Commodities markets are calming down

37. Commodity prices remain high compared with their pre-pandemic level but have fallen from recent peaks (Figure 18). In 2022, prices of several commodities were at, or close to, historical highs. While commodity prices declined only mildly during the COVID-19 pandemic, many commodities experienced significant price increases during the economic rebound of 2021. Moreover, Russia's invasion of Ukraine has had a strong impact on prices in commodities markets. Prices in energy, food, and raw materials, in which Russia and Ukraine were important suppliers, have been affected most directly. These price increases contributed to global inflationary pressures, negatively affecting consumers and giving rise to concerns about food security in developing countries, and placed additional pressure on costs of producers in food, energy and raw-material-intensive industries.

¹⁸ In January-November 2022, the year-on-year flows of Russian gas to EU was -69 bcm based on (EC, 2023_[23]).

¹⁹ <https://carnegieendowment.org/politika/89552>

²⁰ Russian trade adjustments also challenge logistics as new routes are being opened. Russia is discussing with Iran the expansion of the so called international North South transport corridor. That is a multi-modal corridor that links Russia with India.

Figure 18. After a surge in 2021-2022 commodity prices are declining but remain high



Note: *: Excluding gold.

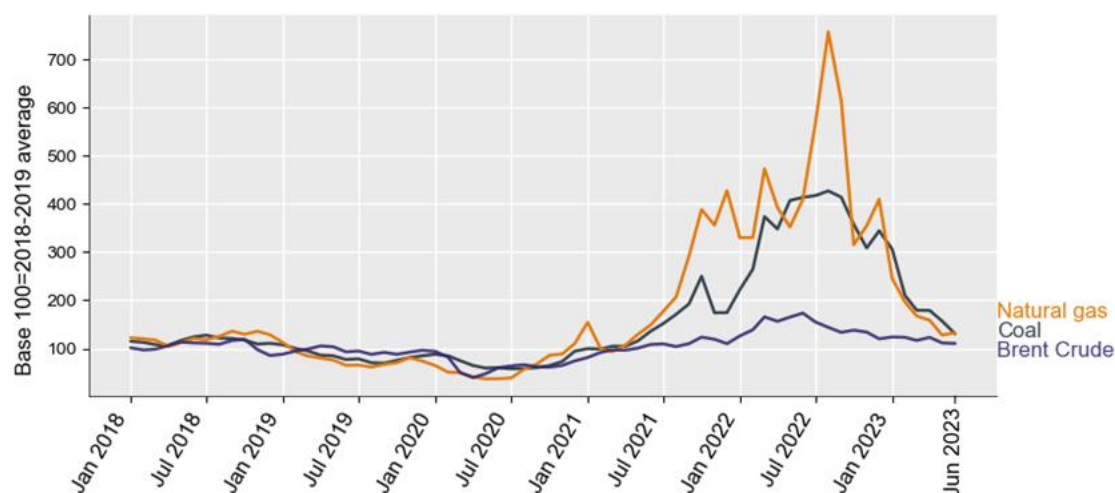
Source: IMF Primary Commodity Price System (PCPS).

6.1. Energy markets

38. Energy prices rose between 2020 and 2022, but have subsequently started to decline, bringing some relief to firms and consumers (Figure 19). The lower oil price has recently (4 June 2023) motivated an OPEC+ decision to cut production in face.

39. European gas prices soared during the first months of the invasion of Ukraine by Russia due to uncertainties over supplies. The sabotage of the Nord Stream pipeline in July 2022 led to further increase in prices and a surge in demand to fill stocks for the winter. In 2023, markets are on a more downward trend, however the ability to supply gas for the next winter will depend on European capacity to increase its supplies of gas via more costly liquified natural gas (LNG). That said, European Union countries have managed to fill their storage at above historical levels (IEA, 2023_[16]). This may be contributing to increased world prices as it puts a demand pressure on gas provided by LNG, which is already facing important demand from Asia and the Pacific.

Figure 19. Energy commodities



Source: IMF Primary Commodity Price System (PCPS).

6.2. Food and fertiliser

40. Global food and fertiliser prices are still considerably above their long-term average. The Black Sea Grain Initiative signed on 27 July 2022 and extended in March 2023 until 17 July 2023 enabled exports of 33 million metric tons of grains and oilseeds from Ukrainian and Russian ports and contributed to declining food prices globally.²¹ While global grains markets in August 2023 did not react with upward price movements, the expiry of the agreement risks ending the benefits of the trade corridor for global food security and for Ukrainian farmers.²²

41. Overall, fertiliser prices have reacted much more strongly than food prices to the Russian invasion of Ukraine, given their closer link to energy prices. Urea prices have been particularly affected due to urea's dependence on natural gas as a production input, given historically high gas prices following the invasion. This had cascading effects on food production, particularly in developing countries, due to the decreased affordability of fertilisers (Figure 20).

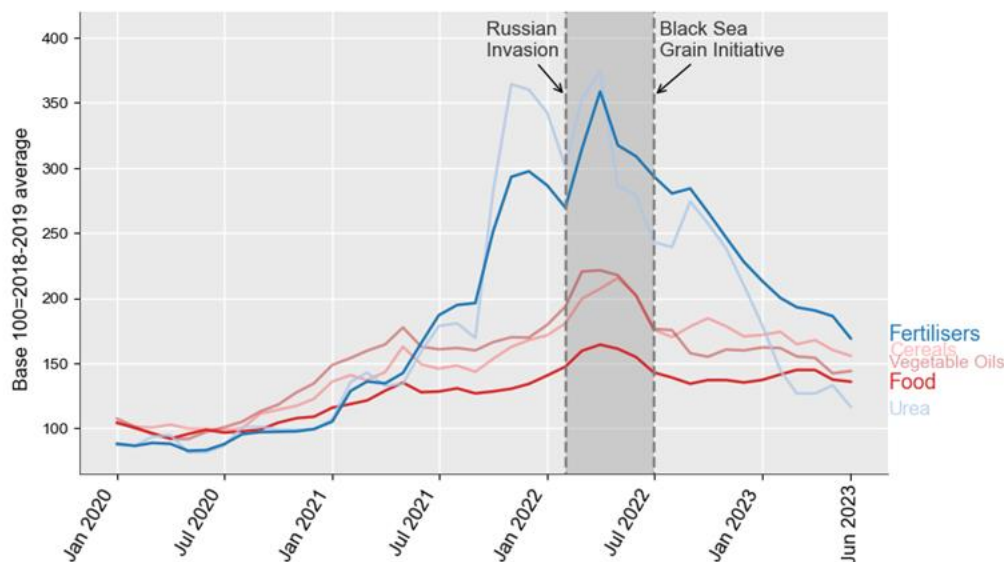
42. Moreover, grain and oilseeds exports from Ukraine in the 2023/24 season (running from 1 July 2023 to 30 June 2024) are uncertain. The Ukrainian Grain Association reports an export potential of 49 million metric tonnes, against 67.8 million metric tonnes in the 2022/23 season, of which 32.9 million metric tonnes went through the Black Sea under the Agreement. However, without the Black Sea Corridor, it depends on the capacities of alternative transport routes whether, and at what price, crops can be exported - notwithstanding the efforts to improve infrastructure and capacity, notably in the Danube ports. Alternative channels to the Black Sea ports may be possible, but they are far more costly (e.g., Danube ports and Solidarity Lanes), implying that export volumes might be

²¹ On **Monday 17 July**, a year after the agreement was first brokered by the UN and Türkiye, the Russian Federation withdrew from the Black Sea Grain Initiative, adding that all ships from Ukrainian Black Sea ports would be considered "potential carriers of military cargo".

²² For August 2023 price developments, see: [International wheat and maize prices declined in August while rice prices reached a 15-year nominal high | Food Price Monitoring and Analysis \(FPMA\) | Food and Agriculture Organization of the United Nations \(fao.org\)](#).

possible but at a higher cost, which would put further pressure on farmgate prices in Ukraine.

Figure 20. Food and fertiliser prices

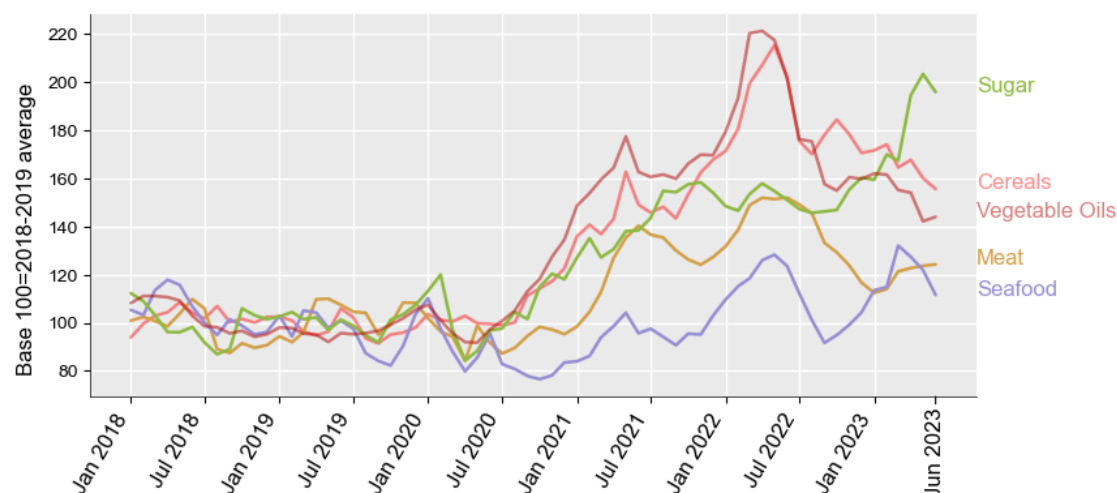


Source: World Bank's Pink Sheet for fertiliser prices; IMF Primary Commodity Price System (PCPS) for food prices.

43. The dramatic increase in food prices in the wake of Russia's invasion of Ukraine were mainly driven by the price increase of cereal and vegetable oil prices (Figure 21) as Russia and Ukraine are two of the leading exporters of these crops. In the second quarter of 2022, wheat and maize prices were more than twice their 2018-2019 averages.

44. Since then, almost all food commodity prices have declined, but remain high compared to recent years, raising serious concerns about food security in a number of developing countries. The decrease in the price of cereals is due to the extension, until recently, of the Black Sea Grain Initiative for wheat, and favourable supplies from major producers in conjunction with low demand from China for maize. By June 2023, the price of wheat was back to its 2021 level, yet 30% higher than its 2014-2016 prices²³. In contrast, the price of sugar has doubled since the pre-COVID19 period as a result of unfavourable weather conditions and concerns over available exports from Brazil (OECD/FAO, 2022^[17]). The rising price of fuel has also made the use of sugar cane for ethanol more attractive and limited its availability for sugar production. On the demand side, the recovery in developing countries following the COVID-19 pandemic has also contributed to upward pressure on prices (OECD/FAO, 2023^[18]).

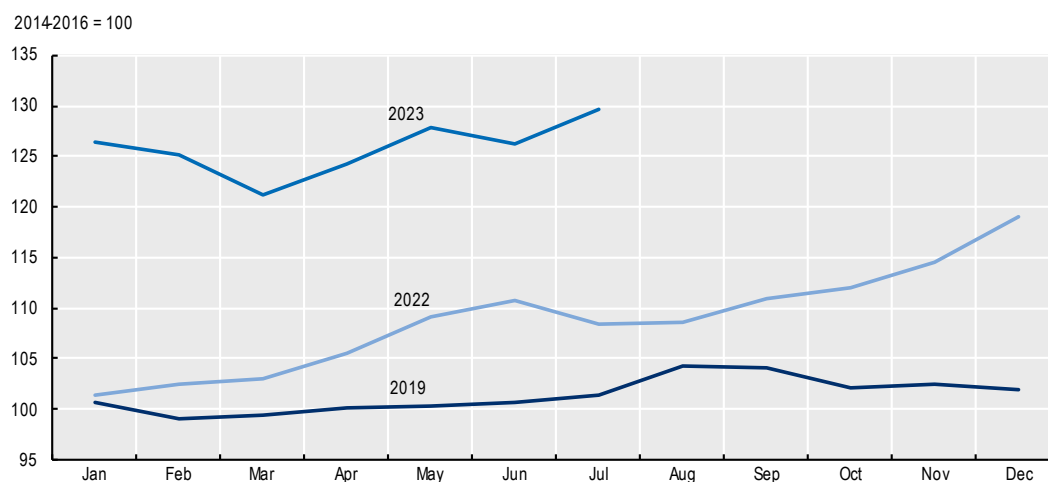
²³ <https://www.fao.org/worldfoodsituation/foodpricesindex/en/>

Figure 21. Food prices, while now declining, remain high

Source: IMF Primary Commodity Price System (PCPS).

45. Recent policy and weather-related developments on rice exports have put upward pressure on prices of this staple commodity. In July 2023 international rice prices, as monitored by the UN Food and Agriculture Organisation, reached their highest level since September 2011, largely driven by Indica rice prices (Figure 22). This coincided with a ban on the export of non-basmati white rice by India on 20 July 2023, motivated by a significant rise in domestic rice prices. The move follows a previously imposed ban on broken rice exports, and the imposition of a 20% export duty on non-basmati white rice, paddy, and husked rice. It was followed by announcements by the Indian government of additional export duties on parboiled rice and suspension of basmati rice exports valued below USD 1 200, although this was delayed pending review of the shipments to determine whether or not they constituted illegal exports of non-basmati rice that had been misclassified by exporters (AMIS Market Monitor, September 2023^[19]).

46. India is not the only country imposing export restrictions on rice. On 28 July, Russia extended a ban on the export of rice and rice groats, which will now apply until 31 December 2023. Export restrictions and export duties on rice, especially in the current context of stubbornly high food prices and expected lower production in 2023-24 due to El Niño, risk aggravating food security problems. There is a clear risk of a negative policy spiral as further price rises may motivate other countries to impose similar export-restricting measures (AMIS Market Monitor, September 2023^[19]).

Figure 22. FAO All rice price index

Source: FAO, [FAO Rice Price Update | FAO | Food and Agriculture Organization of the United Nations](#)

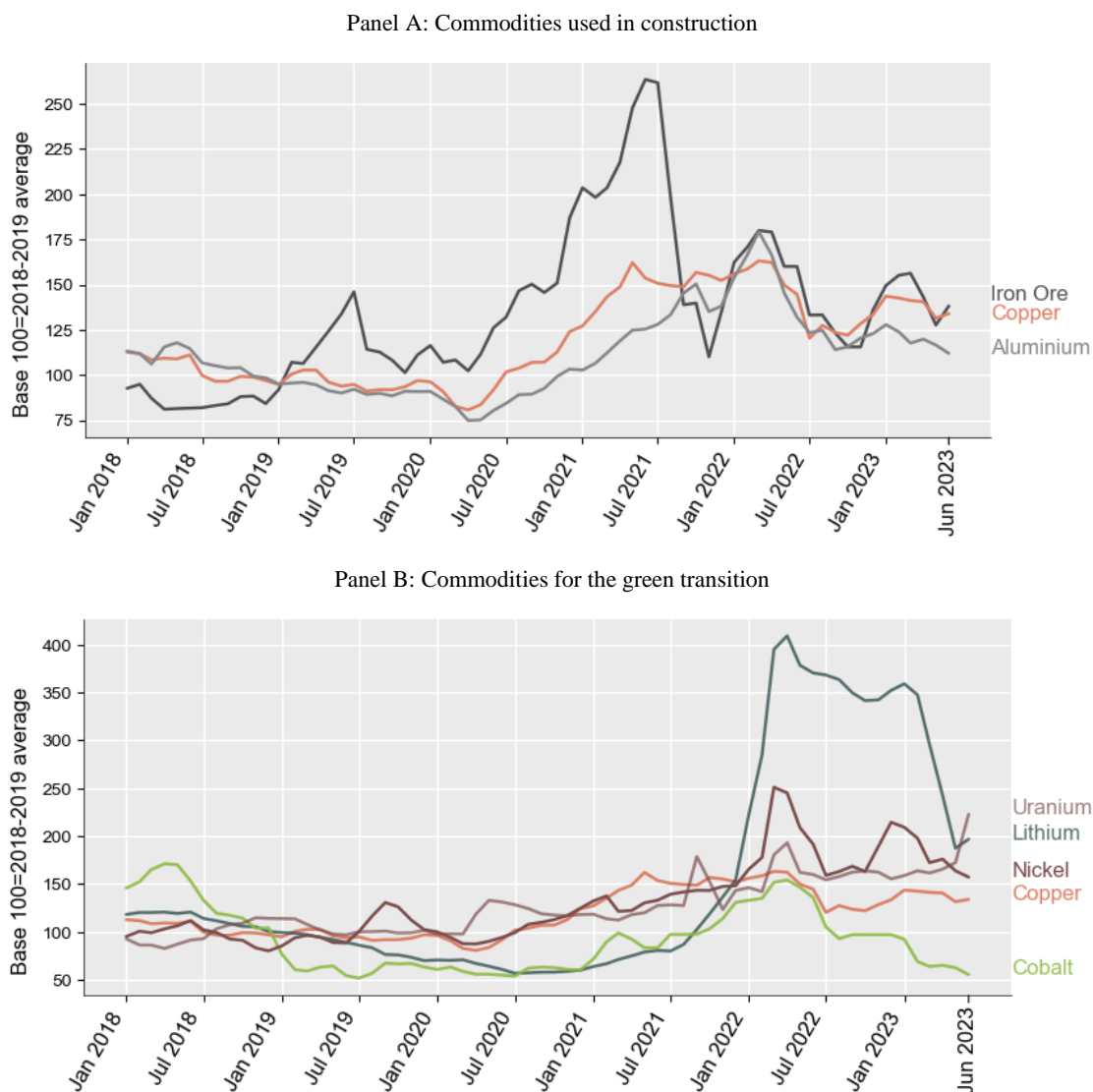
6.3. Metals

47. The Russian invasion of Ukraine in February 2022, also led to an increase in the prices of many other commodities, including copper, iron ores and aluminium, all important inputs in construction. China is the top importer of copper at more than 50% of worldwide imports²⁴ and thus has a sizable influence on copper markets. In late 2022 and early 2023, the reopening of China led to upward pressure on prices but this may only be temporary as China's economic growth outlook is currently lower. At the end of Q4 2022 copper prices were around higher 50% than their 2018-19 average (Figure 23 Panel A).

48. Similarly, most metals and minerals that are necessary for a transition to greener energy and storage and production of electricity have also seen an increase in prices. With the exception of cobalt that has seen a substantial increase in supply, prices of key minerals and metals are now between 150% to 250% higher than they were before the pandemic. Prices for uranium, for which Russia is a main exporter, have risen since its invasion of Ukraine. Prices for lithium, for which Chile is a main exporter,²⁵ soared due to higher demand in 2021-2022 but started a decrease in January 2023.

²⁴ Based on ITC Trade Map, HS code 2603.

²⁵ From 2021 to 2022, exports of lithium carbonates by Chile went up from around USD 900 million to USD 7.8 billion. Chile is by far the largest exporter with 78% of lithium carbonates exported in 2022 (ITC Trade Map HS code 283691). Lithium hydroxides are more exported by China with 80% of worldwide exports than Chile (5%) (based on ITC Trade Map HS code 282520).

Figure 23. Metal and mineral prices

Source: IMF Primary Commodity Price System (PCPS).

7. Conclusion

49. This fifth report on monitoring global trade since 2021 shows cooling commodity and energy markets and a partial return to the pre-pandemic structure of trade in terms of product and geographic composition. New adjustments of trade patterns are emerging following Russia's invasion of Ukraine. Redirection of Russia's oil exports has been relatively swift, albeit with price effects. Russia's merchandise trade has also seen significant changes on both value and partners. The outlook for trade growth is muted, in line with low expectations for global economic growth. Supply, and supply chain bottlenecks have become less of an issue than subdued import demand in the face of high inflation and tighter monetary policy.

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