**GEOPOLITICS UNDERMINES TRADE RECOVERY**

**KEY MESSAGES**

» The conflict in Ukraine has already disrupted shipping logistics in the Black Sea area and raised futures prices of fuels and key agricultural products on fears of extensive disruptions to global value chains.

» In January 2022, trade in goods and services alike continued to exceed pre-pandemic levels. However, trade in transportation equipment and international travel have yet to catch up with pre-pandemic levels.

**SPECIAL FOCUS**

An analysis of the trends in the international trade of vaccines and vaccine ingredients since the COVID-19 vaccines.

**RECENT TRENDS**

**Goods Trade**

In January 2022, global goods trade values (in current U.S. dollars) declined relative to the previous months on account of seasonality while exceeding pre-pandemic levels by 28 percent and January 2021 levels by 21 percent (Figure 1). Trade values continued to exceed pre-pandemic levels in all regions and in all product groups except transportation equipment.

As measured by volume in constant U.S. dollars, trade grew by 6 percent in January 2022 relative to January 2021 and by 10 percent over the pre-pandemic level, according to the World Trade Monitor published by the CPB Netherlands Bureau for Economic Policy Analysis. By contrast, trade prices, proxied by the gap between trade in current and constant U.S. dollars,
increased by 10 percent relative to January 2021 and by 18 percent over the pre-pandemic level.

During March 2021, futures prices of agricultural and mineral products exported by Ukraine and Russia surged to record levels amid mounting fears of severe disruptions to supply and demand due to the war in Ukraine and associated sanctions against Russia and Belarus.

**Services Trade**

In January 2022, global services trade was slightly above pre-pandemic levels—1 percent higher than in January 2020 Relative to January 2021, services exports were 12 percent higher, and imports were 18.2 percent higher in value terms. However, on a monthly basis, services exports in January 2022 were 10.4 percent lower, and imports were 9.2 percent lower, than in December 2021 (a seasonal trend that has also been observed in previous years between the months of December and January).

Trade in most services sub-sectors shows signs of having recovered to pre-pandemic levels except for travel, which remains heavily depressed, and construction and goods-related services (Figure 2). Travel services remain the most affected by the pandemic, with a significantly slower recovery relative to other services.

International tourist arrivals continued to gradually recover in January 2022. However, arrivals remained 67 percent below pre-pandemic levels, and the pace of recovery slowed down in January 2022 relative to December 2021 due in part to an increase in restrictions implemented in response to the Omicron variant (Figure 3). Travel restrictions remain highest in Asia and the Pacific, which helps to explain the slower pace of recovery in tourism there compared with other regions. The average number of commercial flights in March 2022 was approximately 86 percent of that in 2019, suggesting a muted impact of the Ukraine conflict on global air transport flows so far (Figure 4).

**Logistics Constraints**

Four weeks into the conflict, containerized shipping in the Black Sea area faced severe disruptions. Trade carrying
capacity plunged to its lowest point in three years, as ships were unable to leave most ports in the region (Figure 5). Shipping delays surged by 130 percent from the levels in the previous months (Figure 6). Carrying capacity picked up elsewhere, as demand rebounded following the Lunar New Year celebration and some cargo transiting Russia and Belarus was likely redirected to other routes (Figure 5). Yet global capacity remained broadly stable, despite regional variation.

Global stress on maritime supply chains remained high by historical norms, and so did traffic delays in ports on the West Coast of North America, although they were smaller by 8 percent in March 2022 compared with February (Figure 6). The pressure on shipping rates eased further in March, reflecting in part reduced vol-umes due to newly imposed COVID-19 restrictions in Chinese ports (Figure 6).

Sources: 1: Staff estimates using Global Economic Monitor, data from WTO, IMF International Financial Statistics, OECD, and official data from China, Eurostat, Japan, UK, and the U.S. 2: Estimates based on WTO and UNCTAD data. 3: UN World Tourism Organization. 4: FlightRadar24. 5-6: WBG staff based on data from MarineTraffic’s Automatic Identification System (AIS). Ship tracking data for AIS reveals real-time information on trade in motion. The analysis was conducted using a calling event database prepared for the World Bank by MarineTraffic, covering over 7,000 ships calling at over 1,000 ports worldwide. The focus is on container shipping, as opposed to commodity freight in bulk. Container shipping carries manufactured goods and is representative of GVCs. The main indicator is instant (weekly) capacity calling countries or regions, measured in capacity units of Twenty-Foot Equivalent (TEU) boxes (Atlantic ports of France, Spain, Portugal). 6: Shanghai Shipping Exchange.

Notes: 1: Mirror data is used when data for recent months are missing. Lines depict the average of exports and imports normalized by the average across selected pre-pandemic years. 2: The global aggregate includes data on services exports and imports. Data includes 14 economies that reported in September 2021, which accounted for a total of approximately 38 percent of global services exports and 39 percent of global services imports in 2017 (UNCTAD). 6: The stress index is an estimation of shipping capacity additionally mobilized or stalled at ports when excessive delays are observed over historical port-to-port lead time.

Online Excel data: Some of the numbers in the text and additional data corresponding to the merchandise, services, and logistics sections can be found in the online Excel file that accompanies Trade Watch. The file includes data used in the latest issue. Data for previous issues can be shared upon request.
Since the deployment of the first COVID-19 shots in late December 2020, trade in vaccines has surged to record levels. Vaccine exports by China, EU countries, and the US, which together account for 87% of global COVID-19 vaccine output and 76.5% of trade, amounted to almost USD8 billion as of December 2021. That was an increase of 300 percent relative to January 2021 and 450 percent relative to pre-pandemic levels (Figure 1a). Imports of vaccines by the three economies have collectively risen by 150 percent in 2021, supplementing domestic production. Exports and imports peaked in September 2021, coinciding with the peak in the pace of vaccinations. The timing of the increases shows that export surges were driven by the COVID-19 vaccines and not by other vaccines that had been traded internationally before the pandemic. Unit prices of vaccines exported by China, the US, and the EU have also surged in line with trade values and volumes. The price increases were more pronounced for the EU, where prices were more dynamic (Figure 2).

Trade in vaccine inputs started to increase in 2020, driven by key ingredients for COVID-19 vaccines. The manufacture of COVID-19 vaccines requires key ingredients in the form of active substances (such as mRNA, Adenovirus26 or inactivated COVID-19 virus), other ingredients (including inactive substances, antibiotics, adjuvants, stabilizers) and inputs such as consumables, packaging, and equipment. China, the EU, and the US together reported that trade in these goods increased 15 percent over pre-pandemic levels by July 2020, with the gap since then varying from 20 percent to more than 60 percent (Figure 1b). As of December 2021, combined exports of inputs were 38 percent higher than in December 2019, and imports of inputs were 66 percent higher. A closer look at the data up to February 2021 highlights that key ingredients were the main drivers of import growth. The contribution of key ingredients remained sizable after February 2021, despite a rise in the importance of trade in other manufacturing inputs.

Exports of vaccines initially favored high-income countries and now favor lower-income countries. Until September 2021, the three economies’ exports to high and upper-middle income destinations rose significantly faster than their exports to lower-middle and low-income countries (Figure 3a). Since then, this trend has reversed. Exports to high and upper-middle income countries declined sharply, consistent with the slowing pace of vaccinations (Figure 3b). In contrast, exports to lower-middle income countries rose sharply, and those to low-income countries picked up as the pace of vaccinations accelerated there. By December 2021, lower-middle and low-income countries accounted for more than 50 percent of the total exports of the three exporting economies, up from less than 20 percent in January 2020.

Different regions sourced vaccines from different exporters. In 2021, the EU was the largest vaccine exporter, followed by China and the US. However, the share of exports from the EU declined in 2021, while China and the US increased their share. This shift is likely due to supply shortages in the EU and increased production capacity in China and the US.

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1 As of December 31, 2021, according to the WTO-IMF COVID-19 Vaccine Trade Tracker (https://www.wto.org/english/tratop_e/covid19_e/vaccine_trade_tracker_e.htm).

2 The tariff line disaggregation of the international trade statistics does not distinguish by type/brand of vaccines.

3 The rise in trade volumes went hand in hand with the rise in trade values for China, the US, and the largest EU vaccine exporter, namely Belgium (which accounted for over 70 percent of the EU vaccine exports in 2021).

4 This note focuses on inputs required for manufacturing, not those related to the storage, distribution, and administration of vaccines, as the recent surge in the latter also reflects factors other than vaccines. Manufacturing ingredients account for at least three fourths of overall vaccine ingredients.
supplier, in value terms, to East Asia and the Pacific, Europe and Central Asia, North America, and the Middle East and North Africa (MENA) regions. (Figure 4a). By contrast, China dominated vaccine exports to South Asia, and the US was the most important supplier to Latin America and the Caribbean. China also supplied a significant share of MENA’s vaccine imports.

Trade flows in vaccine ingredients suggest the existence of a vaccine production club. Vaccine inputs were mainly traded between a handful of countries, mainly those involved in vaccine manufacturing. In 2021 the top vaccine producers supplied as much as 70 percent of the key ingredients (i.e. active substances in COVID-19 vaccines) imported by China, the EU, and the US (Figure 4b). These producers also provided large shares of other vaccine inputs, ranging from more than 20 percent to 50 percent, depending on the type of product. Top vaccine producers and few other countries together supplied 70 to 90 percent of all vaccine manufacturing inputs.

References:

Figure 1: Trade in vaccines and vaccine ingredients (including for COVID-19)

- Equipment and other inputs
- Key Ingredients
- Other Ingredients
- Manufacturing Ingredients

Note: Vertical lines denote: the COVID-19 outbreak in December 2019, the administration of the first COVID-19 vaccine and outbreak of the Delta variant in December 2020, and the outbreak of the Omicron variant in November 2021. Key ingredients refer to active substances such as mRNA, Adenovirus26, inactivated COVID-19 virus; Vaccine manufacturing inputs refer to Key Ingredients (1.1), Other Ingredients (including Inactive Ingredients (1.2) and Other Ingredients (1.3)), and Equipment and other inputs (including Consumables (1.4), Equipment (1.5) and Packaging (1.6)).
Figure 2: Vaccine exports (including COVID-19): values and unit prices, by exporter, Jan 2018-Dec 2021

a. Exports (Value)
Exports have surged in all three reporting economies...

b. Exports (Unit price)
...and so have prices.

Figure 3. Vaccine exports and vaccination rates, by income group

a. China, EU, and US vaccine exports
Exports of vaccines first served high income countries and now are serving lower income countries...

b. Vaccination rates
...mirroring trends in vaccination rates.

Figure 4. Bilateral trade in vaccines (including COVID-19) and vaccine ingredients, 2021

a. Vaccine imports from China, EU, and US, by origin
EU has been the main source of vaccines (including COVID-19) for most regions.

b. Origin of vaccine inputs, by type
Ingredients were mainly traded among few countries.