WORLD BANK GROUP

TRADE WATCH

Volume 16

November 2021

TRADE STAGNATION AND LOGISTICS BOTTLENECKS CONTINUE

KEY MESSAGES

- *Global merchandise trade has stabilized at levels above pre-pandemic ones.*
- *Global services trade continues to recover, and it is only now slightly below pre-pandemic levels.*
- *Trade in travel services increased 20.5 percent between July and August, and the number of commercial flights is now at nearly 80 percent of pre-pandemic levels.*
- *Stresses on the global logistics systems continue to be high, but shipping rates have stabilized.*

NOVEMBER'S SPECIAL FOCUS

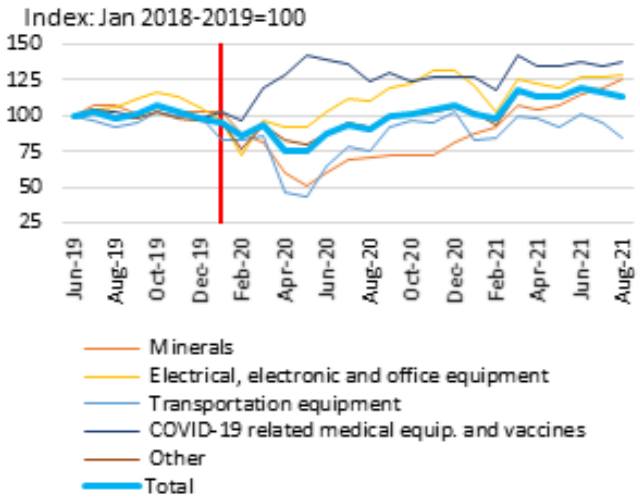
- *Understanding the disruption in global supply chains.*

RECENT TRENDS

Merchandise trade

Global merchandise trade has stabilized at levels above pre-pandemic. In August 2021, trade values were 2 percent less than in July 2021, consistent with a trend of sluggish MoM growth observed for the previous five months (Figure 1). However, trade remained above the levels in previous years, growing by 26 and 18 percent relative to August 2020 and 2019, respectively. According to the CPB World Trade Monitor, volumes exceeded July 2021 levels by 0.8 percent. In addition, unit values grew by 0.4 percent on a MoM basis, down from an average of 2 percent earlier in the year.

Figure 1. Global trade in current U.S. dollars, not seasonally adjusted (n.s.a), by product group



This note has been prepared by the Global Trade and Regional Integration Unit of the World Bank. It has been prepared by a team led by Cristina Constantinescu and Michael Ferrantino, with contributions from Jean Francois Arvis, Karly Dairabayeva, Ian Gillson, Karen Muramatsu, Mike Nyawo, Daria Ulybina, and Pratyush Dubey, under the guidance of Antonio Nucifora (Practice Manager). For further information please contact Cristina Constantinescu at ineagu@worldbank.org

In medical equipment (including COVID-19 related), electronics and office equipment, trade values remained stable on a MoM basis (Figure 1). Minerals bucked the trend, increasing by an average of 5 percent over the past three months. In August 2021, trade in transport equipment declined by 11 percent MoM — which is more than expected also accounting for seasonality. Transportation equipment also fell short of the level in August 2019 by 8 percent, while other product groups continued to exceed pre-pandemic levels by a large margin.

Notwithstanding seasonal fluctuations, exports of most broad country groups trended flat for the past several months (Figure 2). By contrast, trade in East Asia, including China grew steadily throughout 2021.

Services Trade

Global services trade has continued to recover, and it is now only slightly below pre-pandemic levels (Figure 3). In August 2021, services exports and imports were 19.4 and 21.5 percent higher respectively compared to August 2020 (YoY change). However, comparing 2021 values with those in 2019 (Y2Y change), services exports were 4.9 percent lower and imports 5.8 percent lower. On a monthly basis, exports were 0.5 percent higher, but imports were 0.6 percent lower in August 2021 compared to July 2021.

As evidenced by the aggregate data for 14 economies, the growth in services trade is driven by a rebound in travel and transport services. Trade in travel services increased 20.5 percent between July and August, driven by the ongoing relaxation of COVID-19 restrictions, while trade in transport services increased 4.2 percent. Trade in other services subsectors decreased both in July and August (Figure 3). Services requiring face-to-face proximity remain the types most affected by COVID-19 compared to pre-pandemic levels. Construction and goods-related services also remain low compared to pre-pandemic levels.

Figure 2. Exports in current U.S. dollars, not seasonally adjusted (n.s.a), by country group

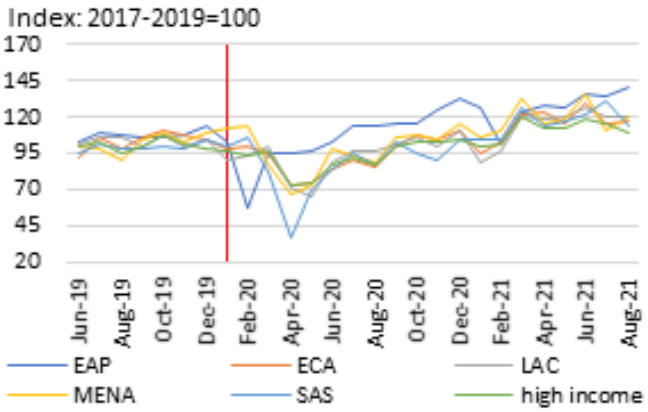


Figure 3. World services trade, by type

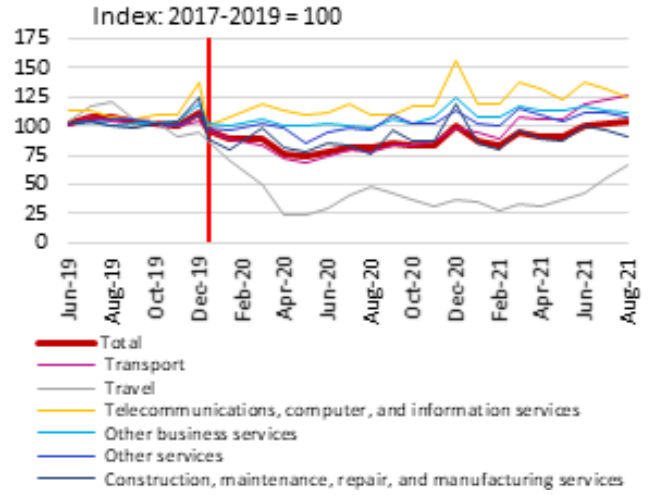
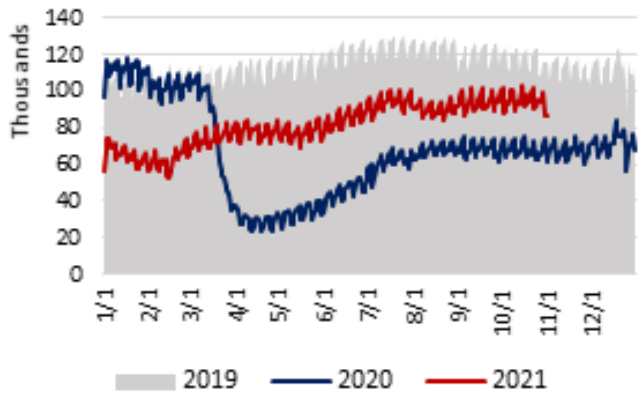


Figure 4. Number of Commercial Flights in 2019-2020



As evidenced by the aggregate data for 14 economies, the growth in services trade is driven by a rebound in travel and transport services. Trade in travel services increased 20.5 percent between July and August, driven by the ongoing relaxation of COVID-19 restrictions, while trade in transport services increased 4.2 percent. Trade in other services subsectors decreased both in July and August (Figure 3). Services requiring face-to-face proximity remain the types most affected by COVID-19 compared to pre-pandemic levels. Construction and goods-related services also remain low compared to pre-pandemic levels.

The number of commercial flights has been gradually increasing and is now only slightly lower compared to before the pandemic. For instance, the number of commercial flights in late October 2021 was around 80 percent of those on the same period in 2019, and about 30 percent higher compared to 2020 (Figure 4).

Logistics constraints

Stresses on the global logistics systems continue to be high. While moving capacity is back to the level of two years ago, the volume of container ship capacity that has stopped moving because of operational disruptions in ports and landside logistics reached 1.6 MTEU in August and September (Figure 5) -- mostly in China and the U.S. -- amounting to 12 percent of the global container fleed of ships in the Panamax class or larger. Shipping rates have stabilized in recent weeks (Figure 6), thanks largely to a voluntary cap on rates by shipping lines, possibly reacting to a statement of concern by the Chinese Ministry of Transportation (September 2021).

Figure 5. Global supply chain capacity stress (up to September 2021, in TEU)

Figure 6. Shanghai Exchange Container Index

Sources of Figures:

1, 2: Staff estimates using Global Economic Monitor, data from WTO, IMF International Financial Statistics, OECD, and official data from China, Eurostat, Japan, UK, and the USA. 3: Estimates based on WTO and UNCTAD data. 4: Flightradar24. 5: WBG staff based on data from MarineTraffic's Automatic Identification System (AIS). Ship tracking data for Automated Identification System (AIS) reveals real-time information on trade in motion. The analysis has been 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 to Figures:

1, 2: 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. 3: The global aggregate includes data on services exports and imports. Data includes 14 economies that reported in June 2021, which accounted for a total of approximately 38 percent of global services exports and 39 percent of global services imports in 2017 (UNCTAD). 4: Commercial flights include commercial passenger flights, cargo flights, charter flights, some business jet flights. 5: The 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. 6. The index is a weighted average of rates for a 20-foot container over a series of global destination from Shanghai.

UNDERSTANDING THE DISRUPTION IN GLOBAL SUPPLY CHAINS

Rising shipping prices and increased lead times are putting the trade recovery at risk. Sea transportation is the backbone of global merchandise trade—about 80% of the goods we consume are carried by ships, mainly container vessels. With the economic recovery picking up since the beginning of the year, global supply chains have been experiencing unprecedented disturbances due to capacity stress in container shipping—not enough containers and ships not moving—and to landside disruptions in ports and multimodal logistics, mostly in the US and East Asia. The crisis is the realization of a downside scenario of interconnectedness in global supply chain networks. Localized bottlenecks in large economies bring global consequences: a shortage of blue-collar jobs in California's warehousing or trucking industries reduces trading opportunities for Kenyan farmers. These disruptions are expected to persist well into 2022.

Three main factors explain the crisis:

1. A very fast rebound of demand for goods: A pent-up demand and a shift in consumer expenditures triggered a surge in containerized exports starting in May 2020. Demand for commodities increased, as well as demand for consumer goods—in the first three quarters of 2021, U.S. retail sales of motor vehicles and parts were up 27.8 percent from the previous year, while retail sales of furniture and home furnishings were up 37.0 percent (U.S. BEA).

2. Massive operational disruptions on the landside (ports and hinterlands): Global circulation of ships are slowed and disrupted by a series of chokepoints. About 12 percent of capacity is stalled at relatively few ports primarily located in the USA and Asia, but with cascading effects around the world (Figure 7). In Asia, disruptions are caused by a sequence of lockdowns of port cities. Yantian, the third-busiest port in the world, was operating at 30% capacity to prevent the spread of the Alpha variant, causing the dwell time of ships to double to 16 days and reverberating the congestion impact across the world. The USA experienced unseen levels of stress of its port hinterland logistics, that unfortunately could persist if the demand remains strong. Ship-to-shore productivity in the U.S. West Coast plummeted 50 percent since the pandemic as it could not cope with the added stress. Several U.S. ports don't run 24/7, unlike major ports around the world, and are under-invested in modern handling equipment and IT solutions. Moreover, the removal of containers is constrained by a lack of trucking capacity resulting in a longer dwell time. Several high-income countries have experienced a shortage of skilled workforce post-pandemic such as logistics operators and truckers.

3. Supply-side constraints in ships and containers: After scaling down operations from February to April 2020 in response to the pandemic, the moving capability of shipping lines was back at full capacity by October 2020. Growing port and hinterlands disruptions are causing ships to circulate less, however, which compounds the effect of the very strong demand, resulting in insufficient available shipping capacity. The repositioning of empty containers—stalled across many locations during the pandemic—to export locations where they are needed has also been disrupted. Furthermore, production of new containers dropped 40% in 2020 as main manufacturers in China were forced to shut operations for several months. Shipping lines and container leasing operators (e.g., Triton corporation) are rushing orders of containers to address the shortage. Lines are ordering new ships, but they will not come for 2-3 years, especially as the crisis caught the industry at the bottom of the investment cycle.

** This Special Focus has been prepared by Jean Francois Arvis (Senior Economist, ETIRI), Michael Ferrantino (Lead Economist, ETIRI), Martin Humphreys (Lead Transport Economist, ITRGK), Cordula Rastogi (Senior Economist, ETIRI), Daria Ulybina (Consultant, ETIRI), under the guidance of Mona Haddad (Global Director, ETIDR) and Antonio Nucifora (Practice Manager, ETIRI).*

The crisis entails several consequences:

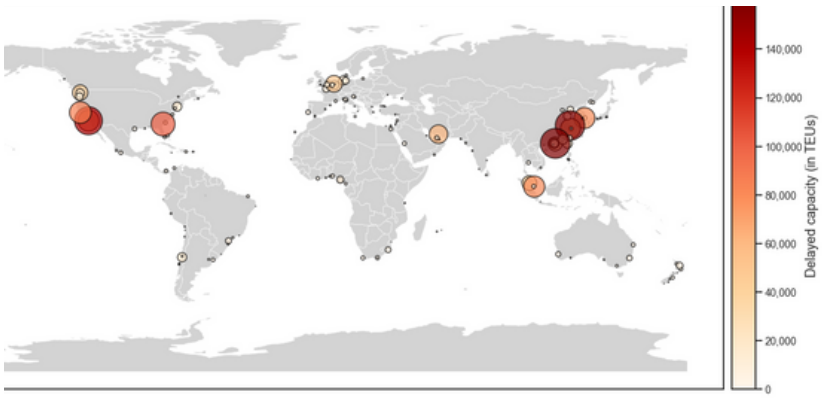
First, the combination of very strong demand and capacity constraints means that traders are competing for shipping slots, pushing **shipping rates globally much above the pre-pandemic level** (Figure 8). Increases are highest for goods originating from China, with an eightfold increase to Europe and a fourfold increase to the U.S. West Coast. Freight rates to developing regions, including South America and Africa skyrocketed as well. This is especially true for freight from China—by early 2021, freight rates from China to South America had jumped 443%. This was due to the high rate of containers returning empty due to trade imbalance, as well as to hub and spoke network structure in the South directly impacted by the slower circulation on the China, US, Europe main trade lane.

Second, traders are paying more for **slower and less reliable supply chains:** Traders experience disruptions before and after shipping, with longer lead time to get a shipping slot, and delays in getting empty containers repositioned for exports. Reliability and timeliness have dropped to levels not seen in modern logistics. Trans-Pacific lead time rose threefold while the proportion of container ships arriving on schedule dropped from 75% to 35% (Figure 9).

Third, the dozens of ships moored outside ports in California or China waiting to offload their cargo may be only the most visible part of supply chain tensions experienced by manufacturers and traders worldwide (Figure 10). **Longer lead time and low inventory disrupt activities and impact production.** The Purchasing Managers' survey (HIS Markit) points to exceptional concerns with supply chain disruption. In the USA, the inventory-to-sale ratio dropped to its lowest in years.

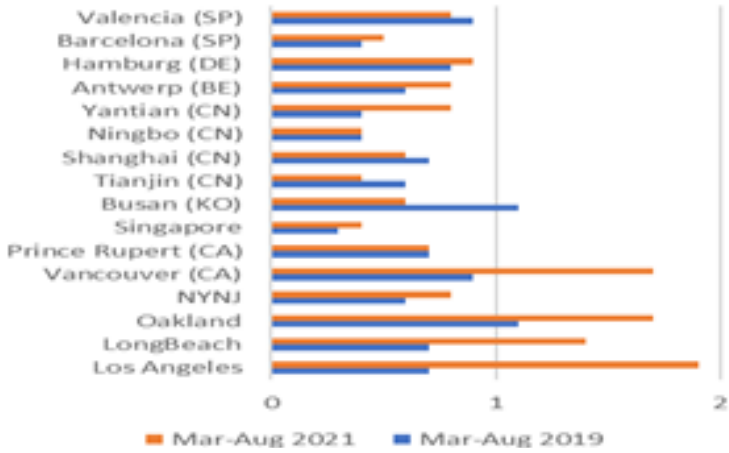
Figure 7: Global supply chain capacity stress jumped in the last few months, with concentration in US and Asia

Where are the global port bottlenecks? Mapping the sources of capacity stress



Source: *World Bank based on calculations from AIS data (Marine Traffic). The indicators represent the excess capacity of ships not moving that should move under normal circumstances.*

Ship to shore apparent productivity

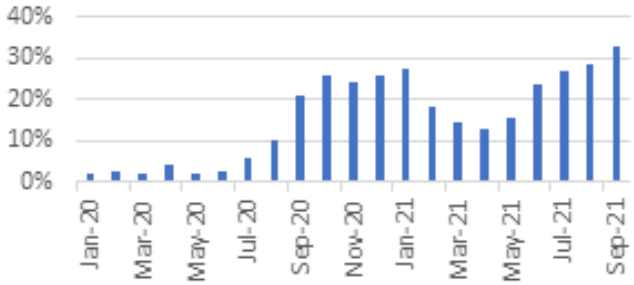


Source: *World Bank Container Port Productivity Indicators 2021. The index measures minutes by box move (the smaller the better), for large call size (>6000 units)*

Evolution of Truckers Employement in the U.S.

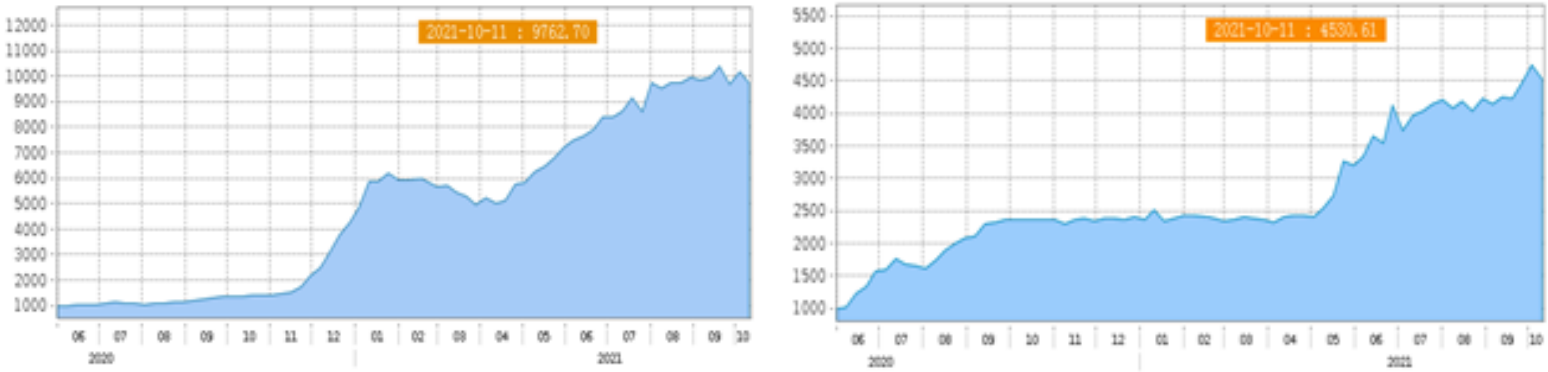
Source: *Bureau of Labor Statistics (BLS)*

Percentage of containers staying more than 5 days at Los Angeles Long Beach



Source: *Pacific Merchant Shipping Association*

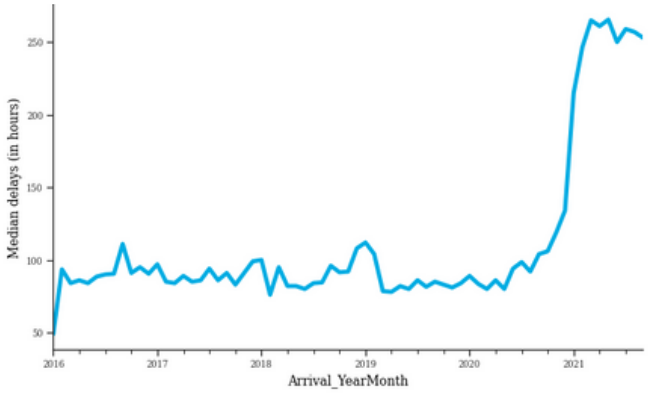
Figure 8: Freight rates soared (Compound Shanghai Freight index)



Source: *Shanghai Shipping Exchange. The index is a weighted average of rates for a 40-foot container from Shanghai.*

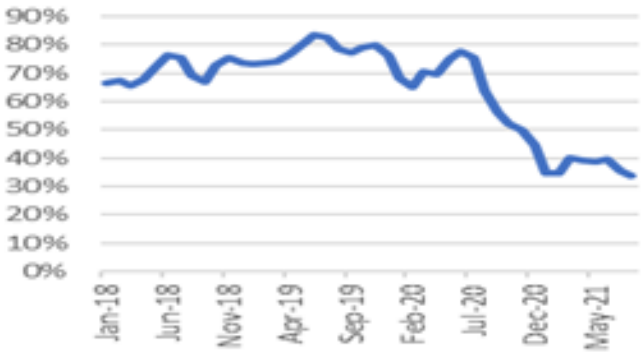
Figure 9: Logistics reliability dropped to unprecedented weak levels

Transpacific lead time



Source: *World Bank estimates from AIS Marine Traffic data*

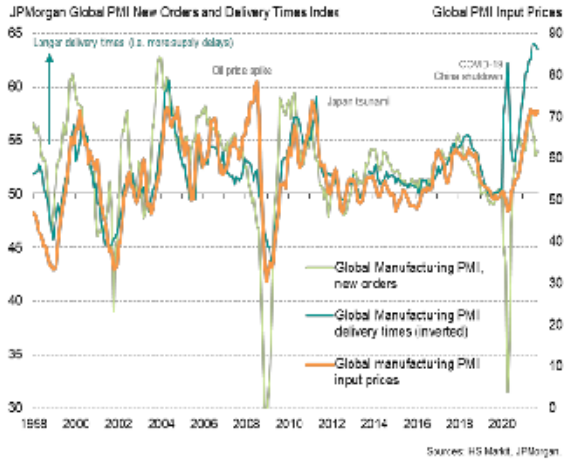
Ship reliability index



Source: *Sea intelligence. The ratio represents the proportion of ship arriving within 8 hours of the schedules announced by the shipping lines.*

Figure 10: Impact of supply chain disruptions

Transpacific lead time



Source: *IHS-Markit*

US inventory over sale ratio

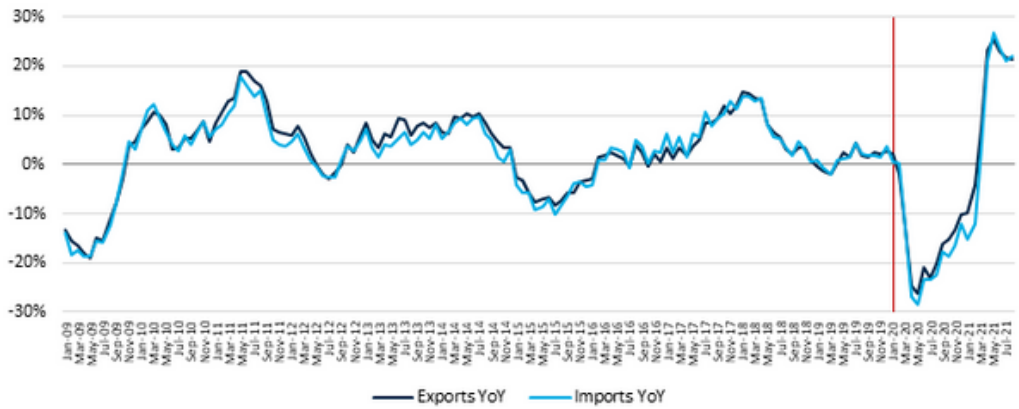
Source: *Fed St Loius*

APPENDIX

Figure A1: Global aggregate monthly goods exports and imports, YoY percent change, Jan 2007 - Aug 2021

Source: *World Bank staff estimates using Global Economic Monitor, data from World Trade Organization, IMF International Financial Statistics, OECD and official data from China, Eurostat, Japan, UK, and the United States.* ***Note:*** *Mirror data is used when data for recent months are missing. Vertical line indicates January 2020.*

Figure A2: Global aggregate monthly goods exports and imports, YoY percent change, Jan 2007 - Aug 2021



Source: *Estimates based on WTO and UNCTAD data.* ***Note:*** *The global aggregate monthly services exports and imports data includes 30 economies that reported in December, which accounted for a total of approximately 51 percent of global services exports and 47 percent of global services imports in 2017 (UNCTAD).*