Global Trade and Value Chains in the Pandemic

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Trade Through the COVID-19 Pandemic

Some basics facts

- Trade collapsed dramatically in 2020Q2 (-21 percent against 2019Q4)...
- ...But rebounded quickly compared with previous global recessions
- Yet, many dimensions of heterogeneity
  - Services vs Goods
  - GVC-intensive goods vs other goods

Sources: Kose and others (2020); and IMF staff calculations.

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Trade Patterns around Global Recessions: Goods and Services

Import Volume (Index)

Sources: CPB World Trade Monitor; Hale and others (2021); and IMF staff calculations.

Global Import Volume and Lockdown Stringency (Index)

Sources: Kose and others (2020); and IMF staff calculations.
Large swing in GVC-intensive goods, but quick recovery

Trade in GVC-intensive industries was more volatile than trade in other industries

Volatility of Trade in GVC-Intensive Industries versus Non–GVC-Intensive Industries Early in the Pandemic  (Index)

- GVC sectors
- Non-GVC sectors
- Oxford stringency index (right scale, inverted)

Sources: Hale and other (2021); Trade Data Monitor; and IMF staff calculations.

The quick recovery occurred in some GVC-intensive goods but not for others

Trade in Automobiles and Semiconductors  (Index, January 2018 = 100)

- Automobiles
- Electronics (total)
- Of which: Semiconductors

Sources: Trade Data Monitor; and IMF staff calculations.
Chapter Structure

Combine empirics and model-based analysis to inform policy

1. **Q: Can demand factors explain fully the observed trade patterns?**
   - Import-demand model and analysis of unexplained components of import growth

2. **Q: Did the pandemic response affect trade via international spillovers?**
   - Empirical analysis of bilateral trade flows to isolate spillovers

3. **Q: Were Global Value Chains (GVCs) able to adjust?**
   - Track GVC developments using trade data

4. **Q: How can GVCs be made more resilient?**
   - Analysis of trade linkages and response to supply shocks (multi-sector/multi-country model)
1. The pandemic had an important role in determining trade patterns

Average Forecast Errors of the Growth in Imports from the Import Demand Model
(Percentage points)

Factors Associated with the Demand Model’s Forecast Errors in 2020
(Standard deviation, unless noted otherwise)

Sources: Eora Global Supply Chain Database; IMF, Balance of Payment Statistics; and IMF staff estimates.

Sources: Global Health Security Index; Google, Community Mobility Database; Hale and others (2021); Our World in Data; World Trade Organization; and IMF staff calculations.
2. Lockdown policies had substantial—but unintended—international spillovers

The Spillover Effect of Trade Partner Containment Policies Faded over Time

(Index)

[Graph showing the spillover effect of trade partner containment policies, with indices for goods imports and stringency index over time from Jan-20 to Jun-21.]

Sources: Hale and others (2021); Trade Data Monitor; and IMF staff calculations.

Lockdowns accounted for 60% of the observed decline in Trade from Jan 2020 to May 2020

(Percentage point)

[Graph showing the total fall in trade without lockdowns and the observed fall in trade, with lockdowns accounting for 60% of the observed decline.]

Due to other factors

Due to lockdowns

Observed fall in trade

\[
\frac{14.3pp}{23.9pp} \times 100 = 59.7\%
\]

Sources: Hale and others (2021); Trade Data Monitor; and IMF staff calculations.
### 3. GVCs adapted well to the shock

#### Change in Regions' Market Shares of GVC-related products
(Percentage points, unless noted otherwise)

<table>
<thead>
<tr>
<th>Importer regions</th>
<th>Rest of the World</th>
<th>Asia</th>
<th>Europe</th>
<th>North America</th>
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</thead>
<tbody>
<tr>
<td>1. 2020:H2 vs 2019</td>
<td></td>
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<tr>
<td>Rest of the World</td>
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<td>-0.8</td>
<td>1.8</td>
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<td>0.3</td>
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<tr>
<td>Europe</td>
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<td>-1.9</td>
<td>4.6</td>
<td>-1.9</td>
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<tr>
<td>North America</td>
<td>-2.4</td>
<td>-1.4</td>
<td>2.3</td>
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<tr>
<td>2. 2021:H1 vs 2019</td>
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<tr>
<td>Rest of the World</td>
<td>-0.6</td>
<td>-1.7</td>
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<tr>
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Sources: Trade Data Monitor, reported import flows, GVC-related products; and IMF staff calculations.
4. Diversification and substitutability in input sourcing can enhance GVC resilience

Gains from Diversification Following a Supply Disruption in a Large Supplier Country
(Percent)

Source: IMF staff calculations. Note: The figure shows GDP declines in response to a 25 percent labor supply contraction in a country that is a large global supplier of intermediates.
Policies

1. **Vaccinate widely across countries:**
   a) Domestic benefits plus reduced costs from minimizing spillovers from supply disruptions in partner countries

2. **Enhance infrastructure (digital and physical):**
   a) Digital infrastructure to strengthen teleworking capacity can smooth lockdown-type shocks
   b) Upgrade and modernize trade logistics infrastructure including ports

3. **Closing information gaps:**
   a) Generate more information on supply chain networks, including through advancing digitalization of firms’ document filings (e.g., tax returns)
   b) Use such information to conduct stress-testing exercises to identify weaknesses

4. **Reduce trade costs:**
   a) Large scope to reduce nontariff barriers
   b) Minimize trade policy uncertainty providing open and stable rules-based trade policy regime to support diversification
THANK YOU!