



# **Global Trade and Value Chains in the Pandemic**

**APRIL 2022 (SPILLOVER) WEO CHAPTER 4**

JUNE 15, 2022

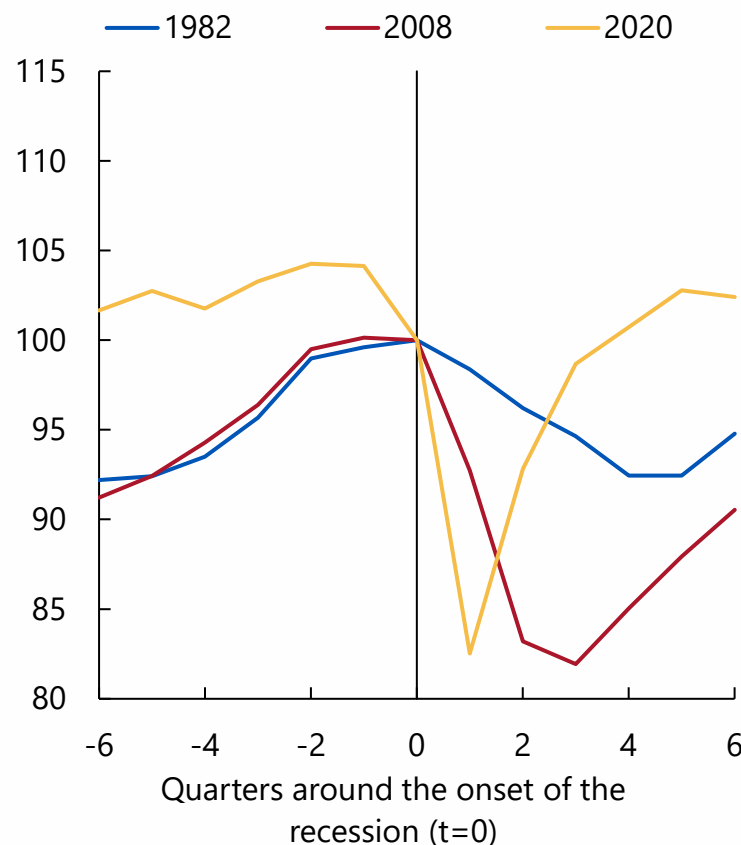
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# Trade Through the COVID-19 Pandemic

## Some basics facts

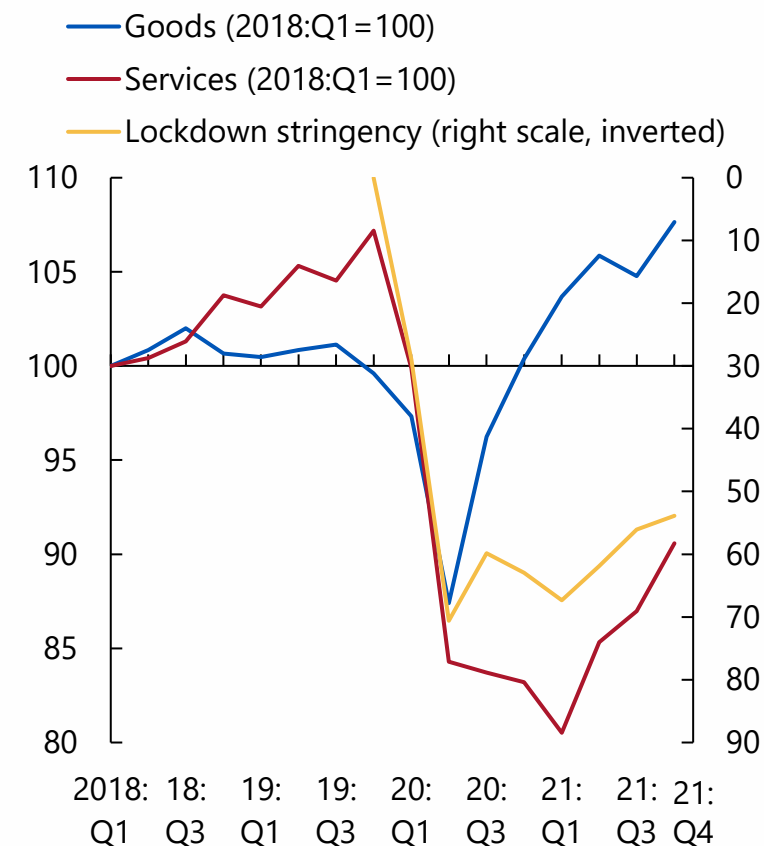
- Trade collapsed dramatically in 2020Q2 (-21 percent against 2019Q4)...
- ...But rebounded quickly compared with previous global recessions
- Yet, many dimensions of heterogeneity
  - Services vs Goods
  - GVC-intensive goods vs other goods

### Trade Patterns around Global Recessions: Goods and Services Import Volume (Index)



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

### Global Import Volume and Lockdown Stringency (Index)

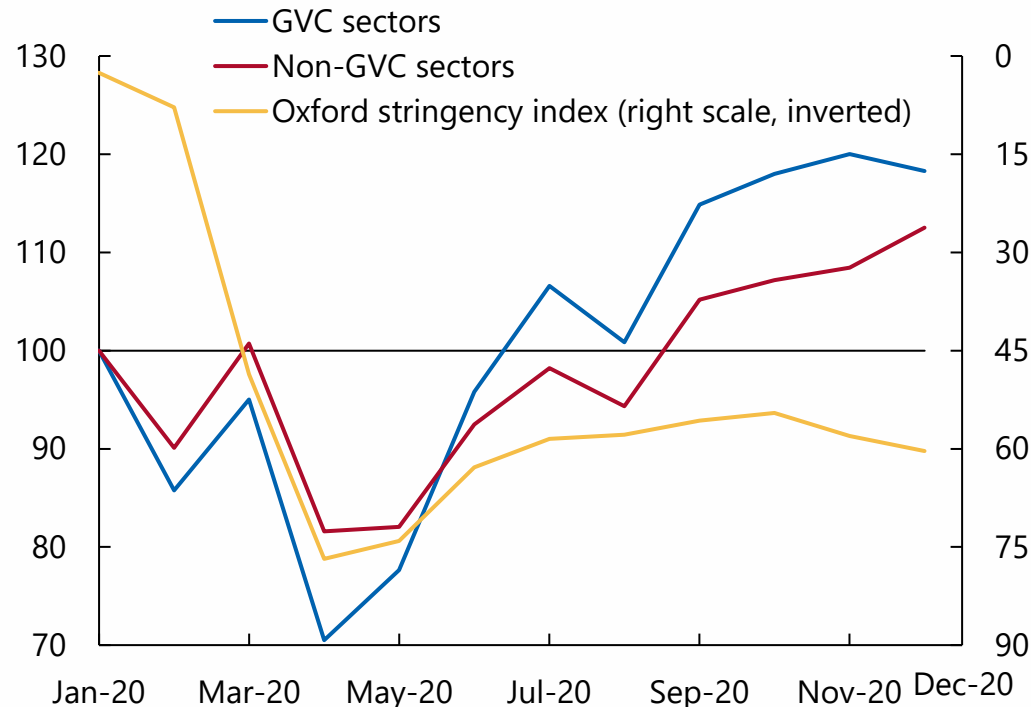


Sources: CPB World Trade Monitor; Hale and others (2021); and IMF staff calculations.

# Large swing in GVC-intensive goods, but quick recovery

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

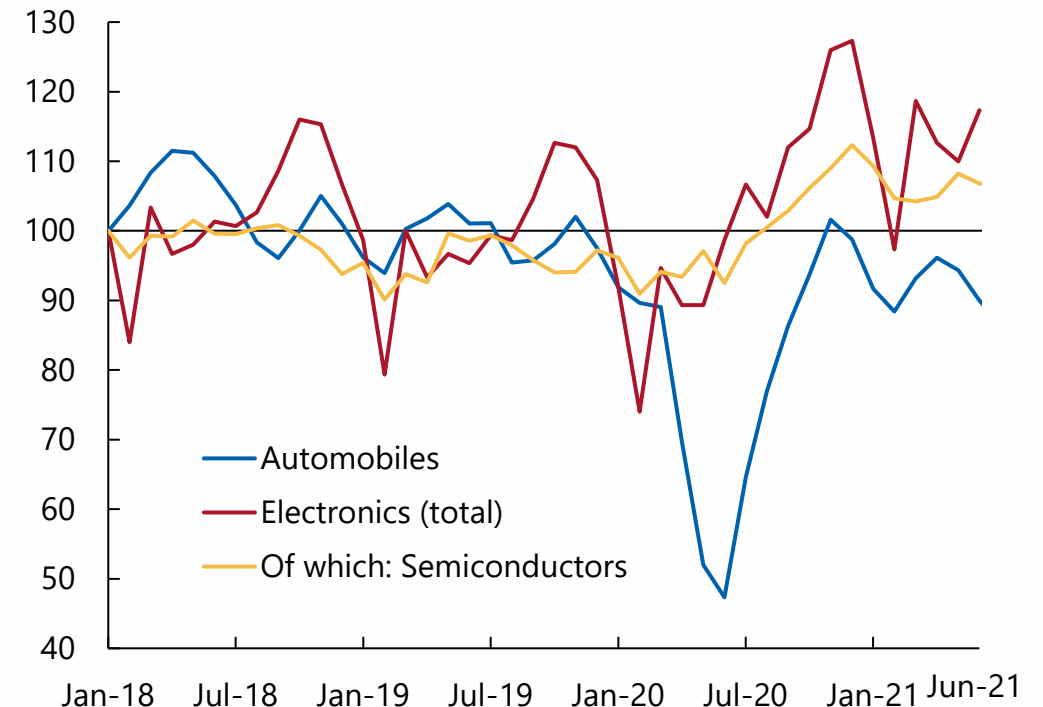
**Volatility of Trade in GVC-Intensive Industries versus Non-GVC-Intensive Industries Early in the Pandemic** (Index)



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)



Sources: Trade Data Monitor; and IMF staff calculations.

# Chapter Structure

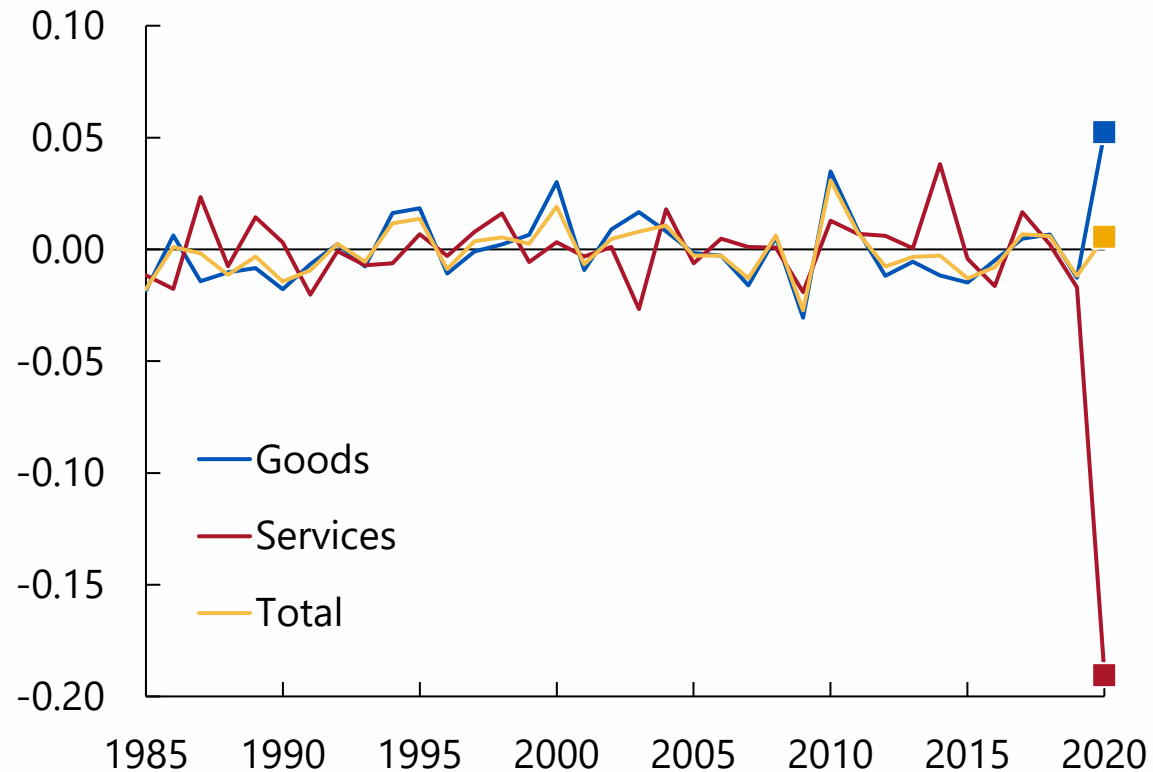
**Combine empirics and model-based analysis to inform policy**

- 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

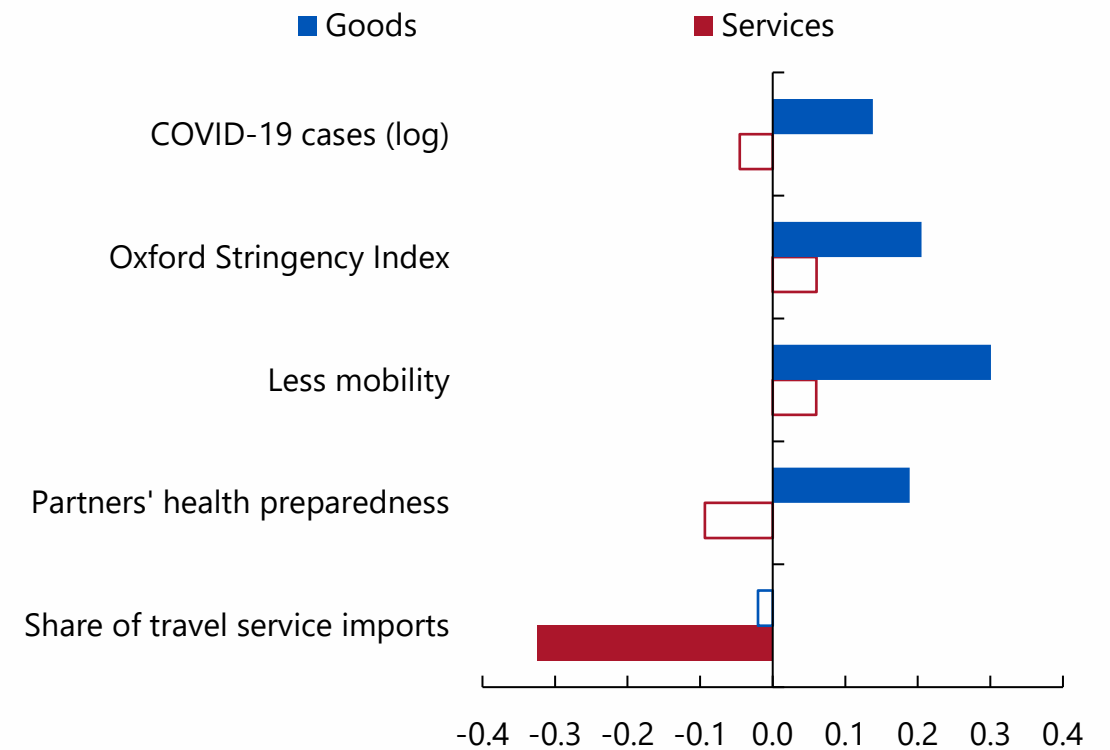
(Percentage points)



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

## Factors Associated with the Demand Model's Forecast Errors in 2020

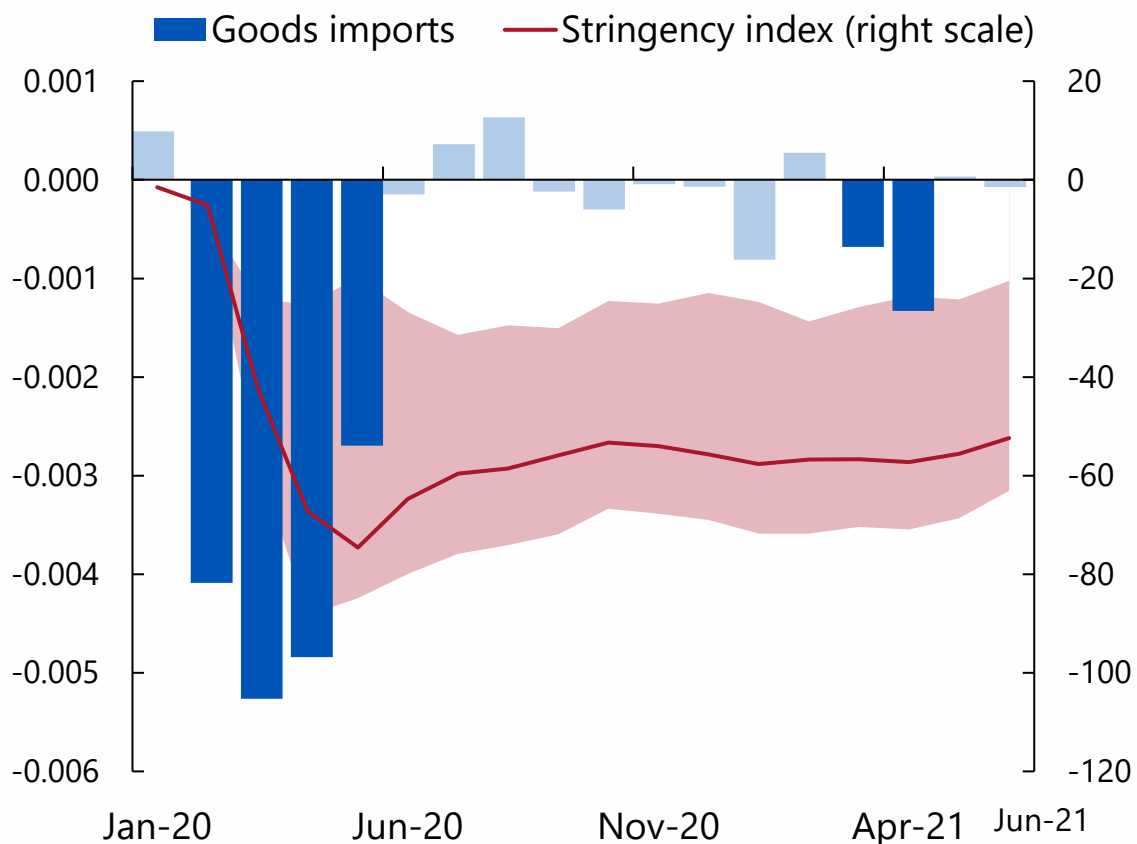
(Standard deviation, unless noted otherwise)



Sources: Global Health Security Index; Google, Community Mobility Database; Hale and others (2021); Our World in Data; World Trade Organization; and IMF staff calculations.

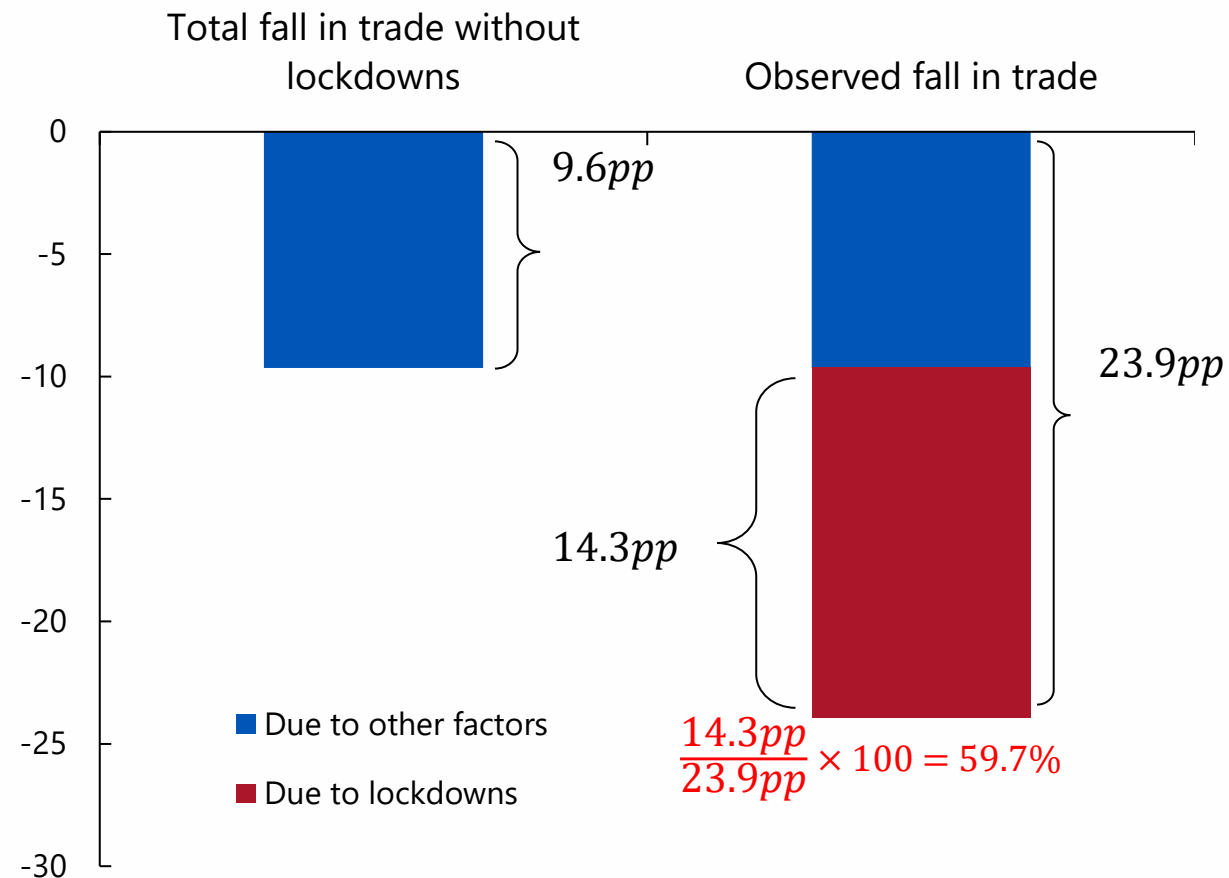
# 2. Lockdown policies had substantial—but unintended—international spillovers

**The Spillover Effect of Trade Partner Containment Policies Faded over Time**  
(Index)



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)



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)

1. 2020:H2 vs 2019

Importer regions	Rest of the World	-1.0	-0.8	1.8	0.0
	Asia	-0.8	-0.8	1.3	0.3
	Europe	-0.9	-1.9	4.6	-1.9
	North America	-2.4	-1.4	2.3	1.5
		North America	Europe	Asia	Rest of the World
		Exporter regions			

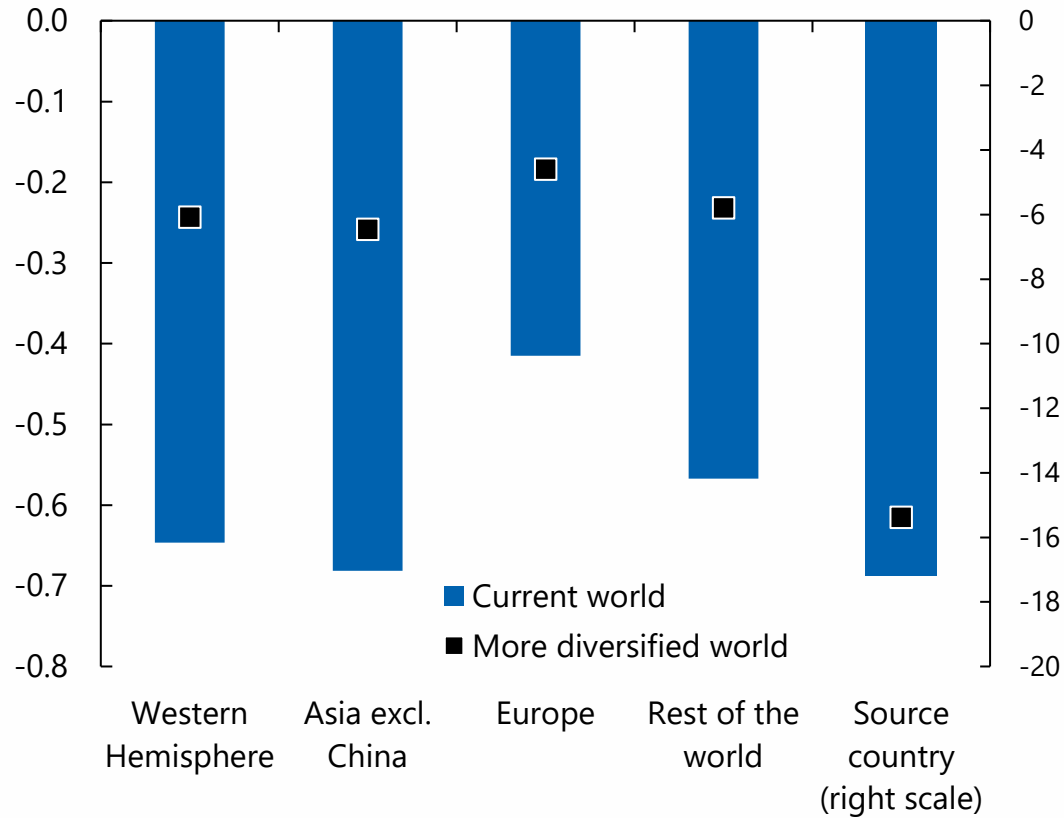
2. 2021:H1 vs 2019

Importer regions	Rest of the World	-0.6	-1.7	2.1	0.2
	Asia	-0.6	-0.6	1.1	0.1
	Europe	-0.5	-2.3	3.1	-0.4
	North America	-3.2	-0.8	0.6	3.4
		North America	Europe	Asia	Rest of the World
		Exporter regions			

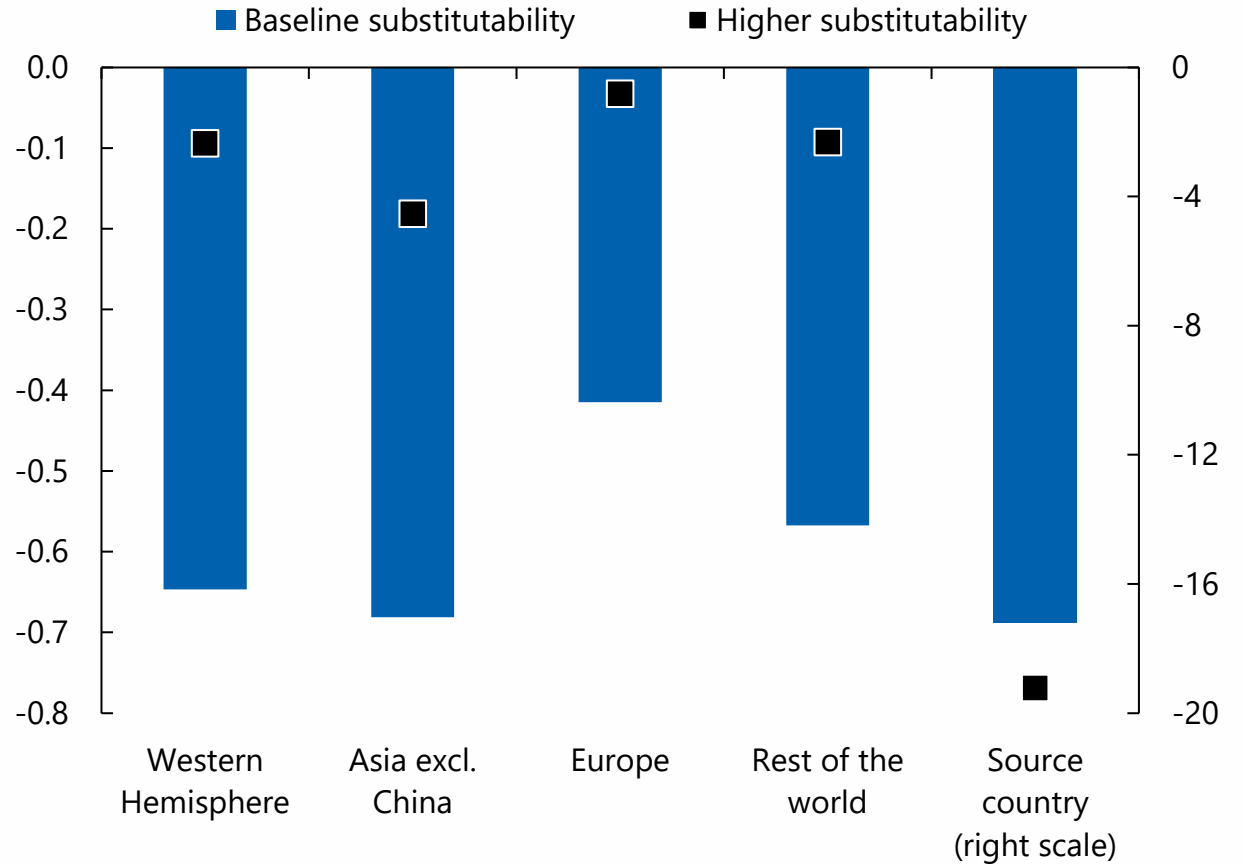
Sources: Trade Data Monitor, reported import flows, GVC-related products; and IMF staff calculations.

# 4. Diversification and substitutability in input sourcing can enhance GVC resilience

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



**Gains from Substitutability 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

Source: IMF staff calculations.



# 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



# **World Economic Outlook April 2022**

**THANK YOU!**