Changing Global Linkages

ASIAN DEVELOPMENT BANK CONFERENCE

RETHINKING GLOBALIZATION AND FRAGMENTATION: FROM REGIONAL TO GLOBAL LINKAGES

JULY 2, 2024

Petia Topalova
International Monetary Fund

The views expressed herein are those of the author and should not be attributed to the IMF, its Executive Board, or its management.

ible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

This Talk

1. The story so far: is the world still integrated?
2. Where are the cracks: are global linkages changing and are these signs of fragmentation?
3. What would be the economic costs of fragmentation?
4. Principles for policy action

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

#1. The story so far

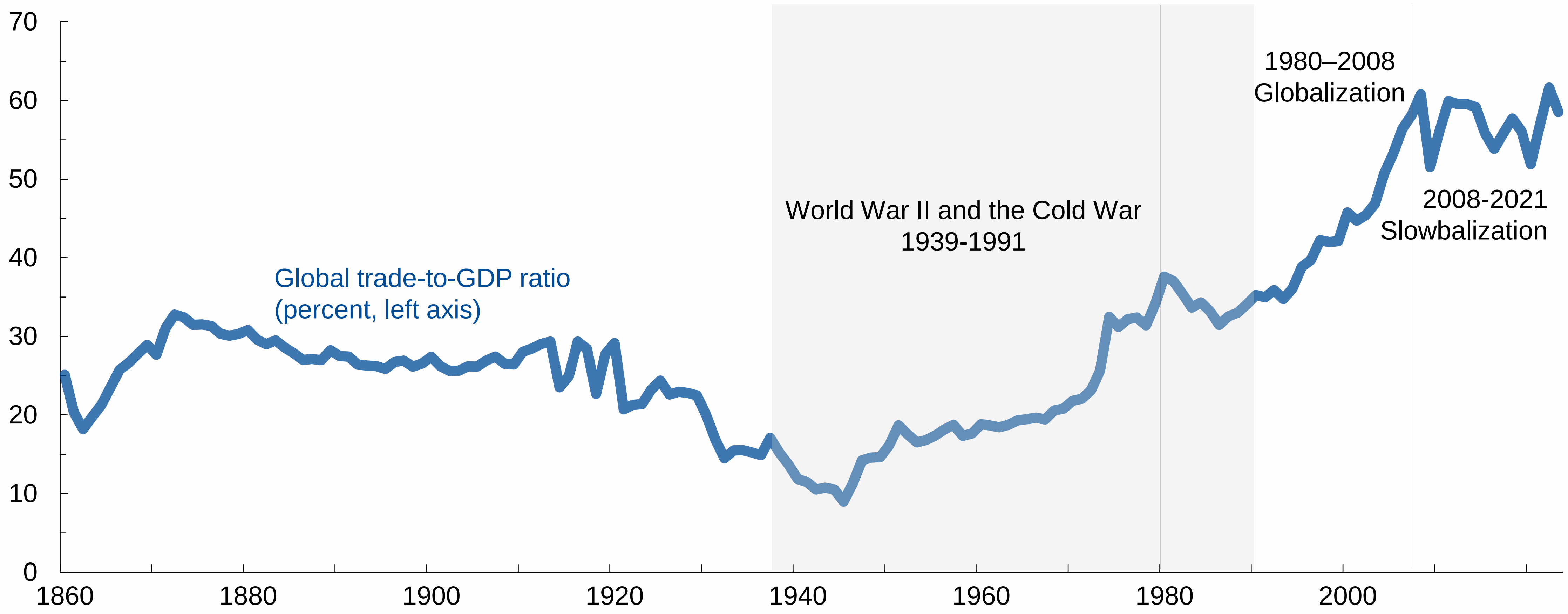
INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

No evidence of de-globalization in aggregate data

Goods trade has broadly kept up with activity since the global financial crisis

Trade openness

(percent)



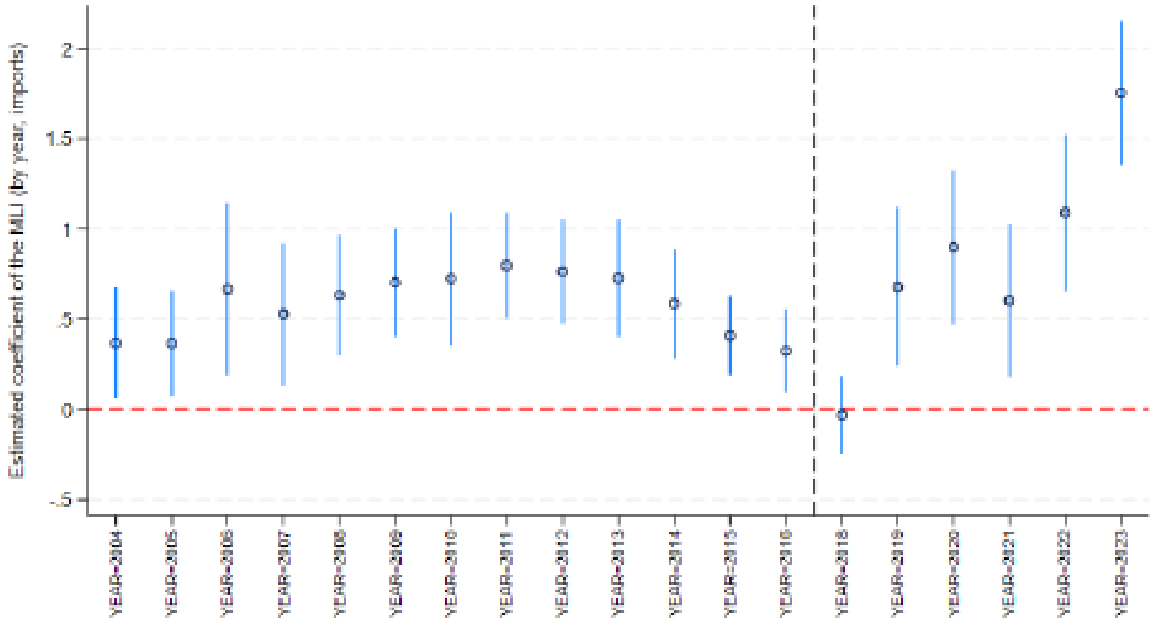
Sources: Jordà-Schularick-Taylor Macrohistory Database; IMF World Economic Outlook; and IMF staff calculations.

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

Increase in reallocation of trade and FDI across partners

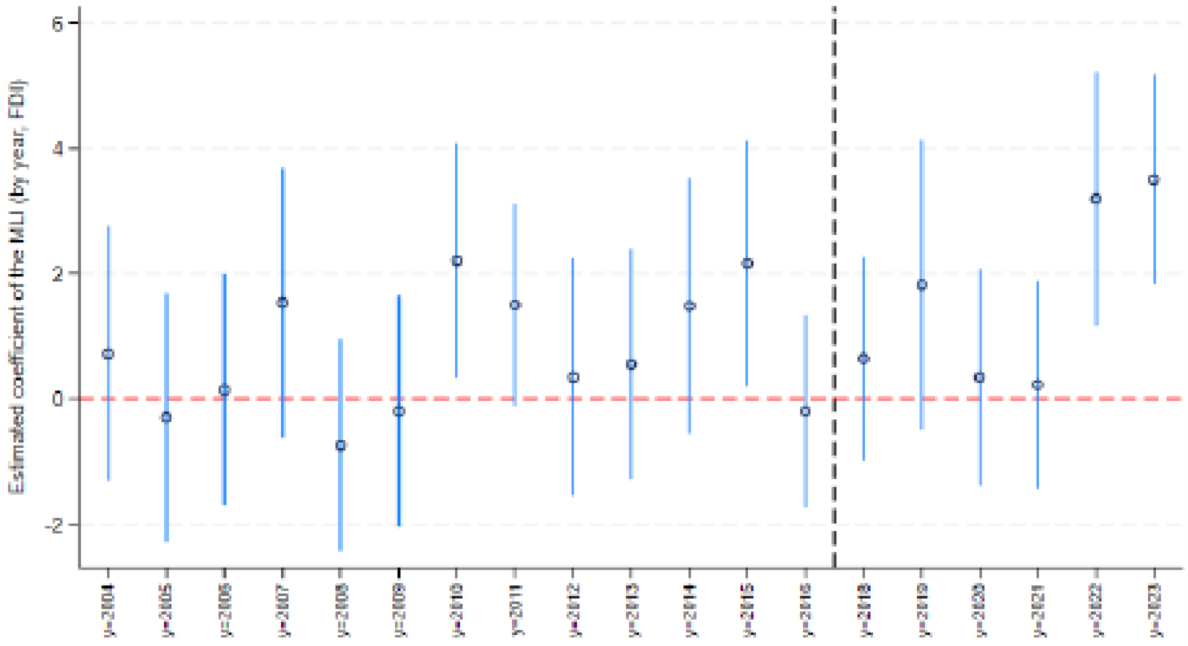
Reallocation across Import Sources

(Number; Lilien Index)



Reallocation across FDI Sources

(Number; Lilien index)



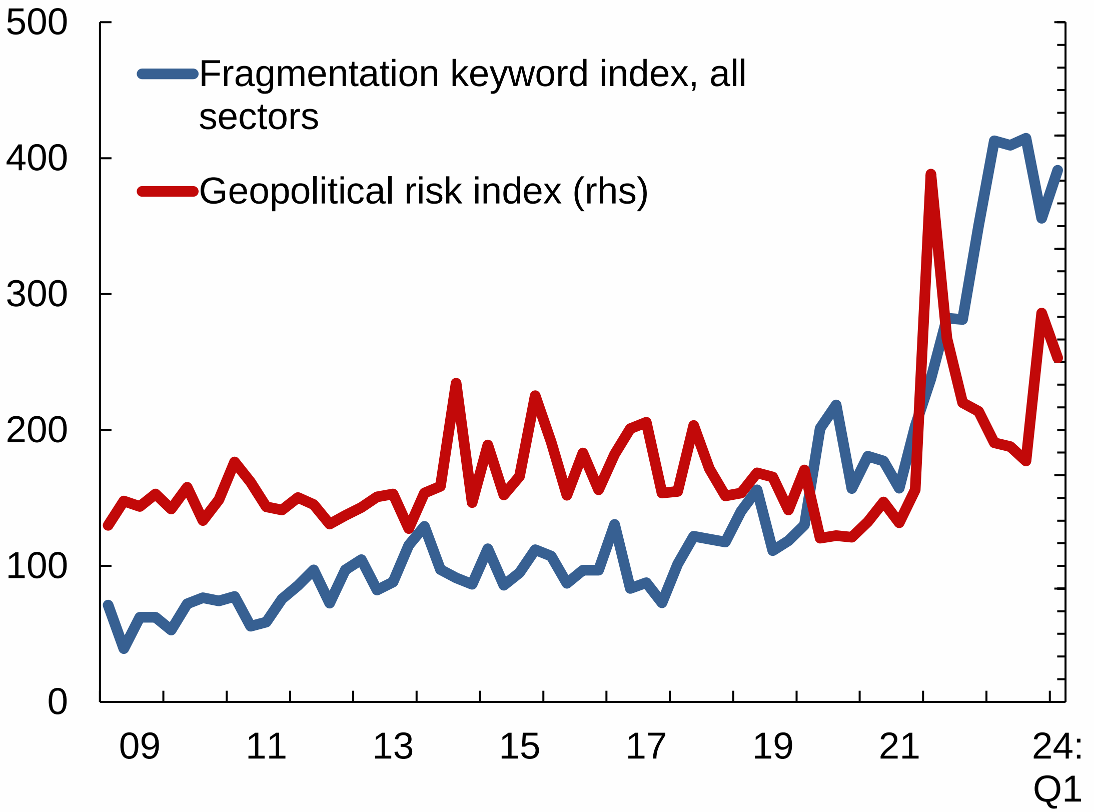
Sources: Trade Data Monitor; fDi Markets; and IMF staff calculations.
Note: The figure plots the estimated coefficients on year indicators along with the 90th percentile confidence intervals from regressing the modified lilien index (MLI) on country and year fixed effects with 2017 the excluded year.

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

Elevated geopolitical tensions and fragmentation concerns amid mounting trade tensions

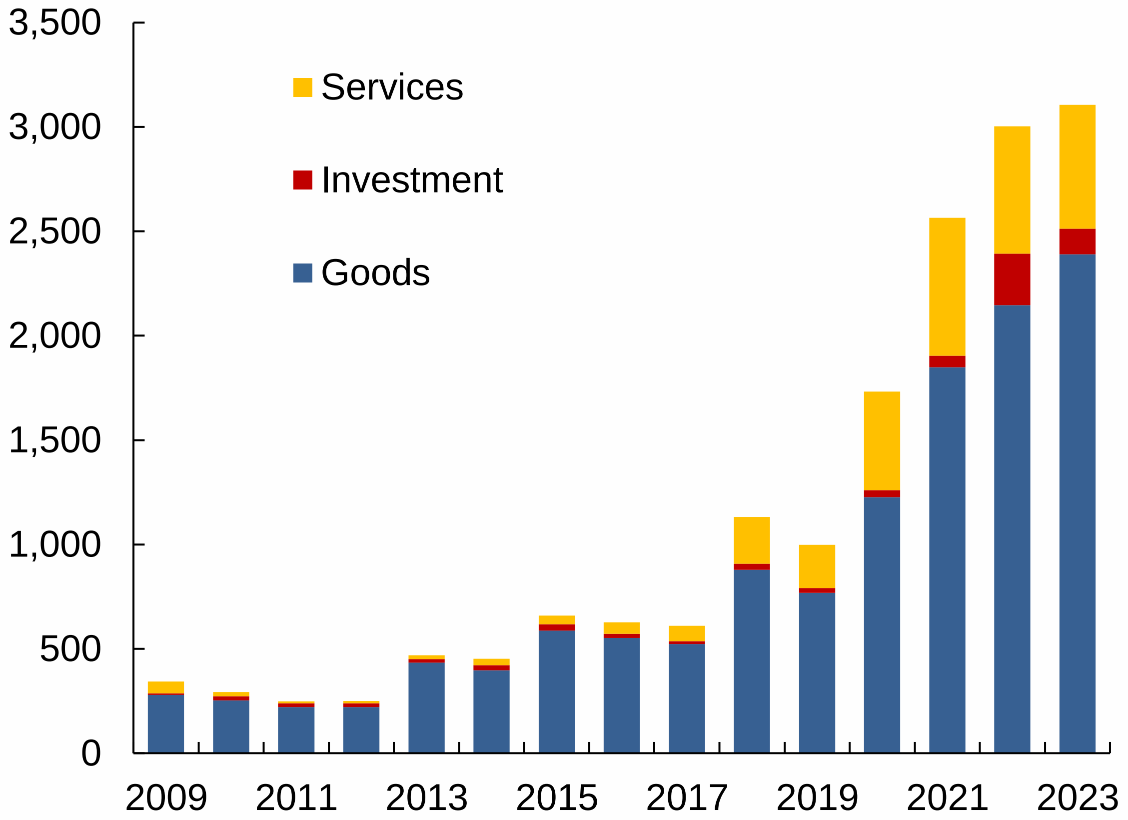
Geopolitical Risk and Fragmentation Keywords in Earnings Calls 1/

(Index, 2013-15=100)



Harmful Restrictions on Trade and Investment 2/

(Number)



Sources: Caldara and Iacoviello (2022); Global Trade Alert; Hassan and others (2019); NL Analytics, Inc.; and IMF staff calculations.
Note: 1/ Fragmentation indices measure the average number of sentences, per thousand earnings calls, that mention at least one of the following keywords: *deglobalization, reshoring, onshoring, nearshoring, friend-shoring, localization, regionalization.*
2/ Includes adjustment for reporting lags.

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

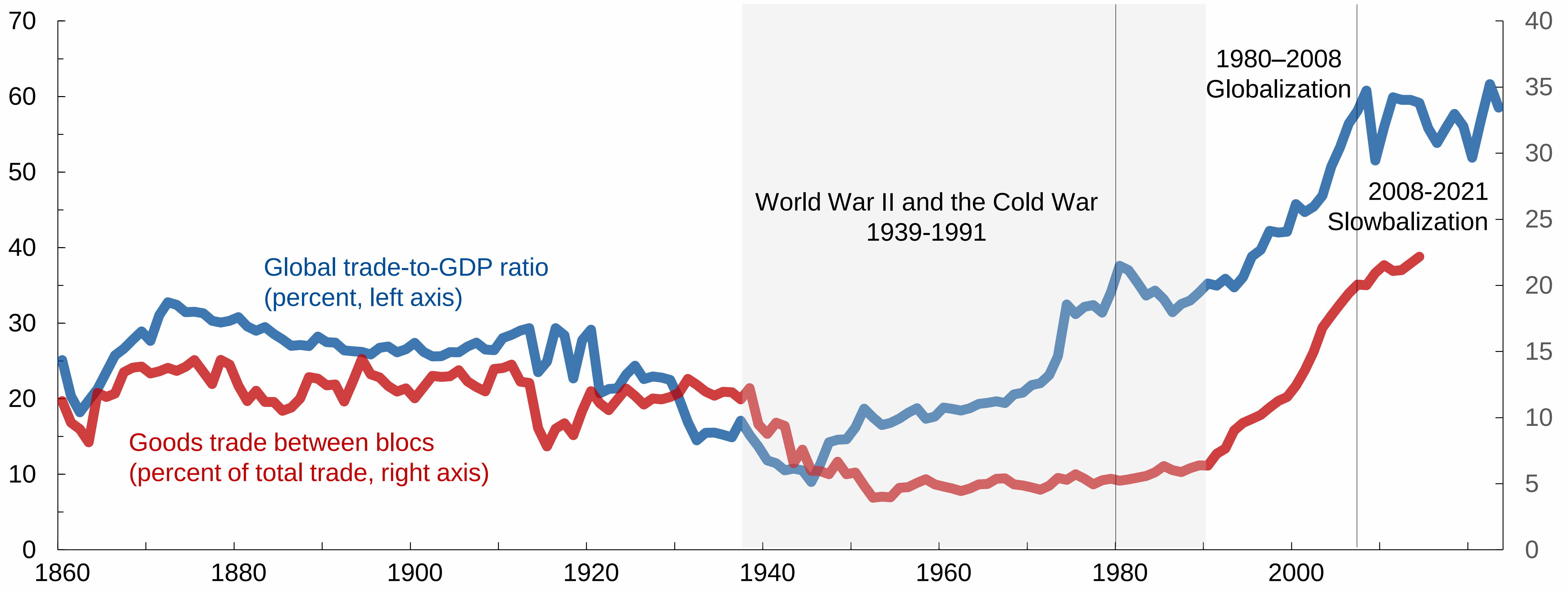
#2. Where are the cracks?

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

Cold War period as a roadmap

Fragmentation need not be accompanied by de-globalization

Trade openness and trade between rival geopolitical blocs during the Cold War
(percent)



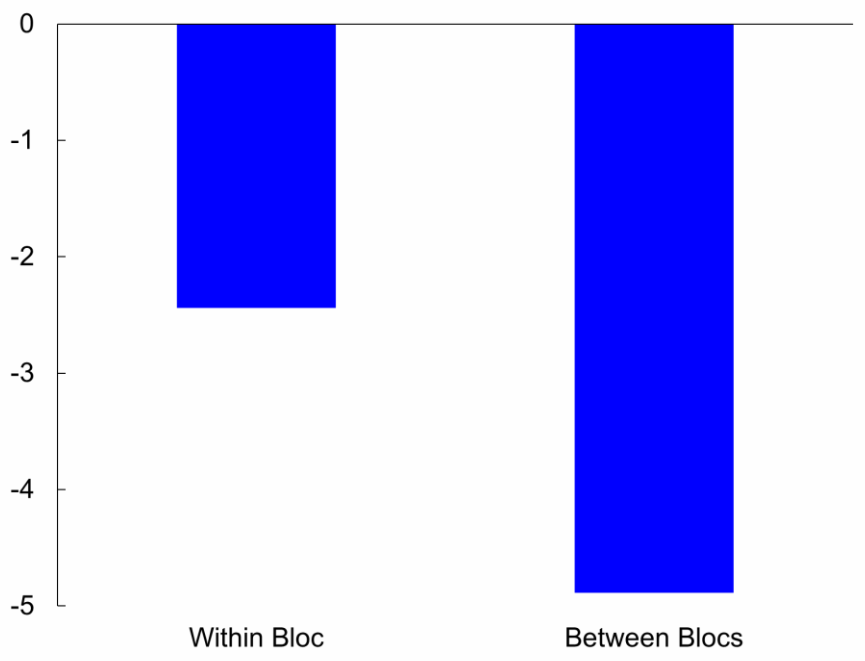
Sources: Fouquin and Hugod (2016), CEPII; Gokmen (2017); Jordà-Schularick-Taylor Macrohistory Database; IMF World Economic Outlook; and IMF staff calculations.
Note: Rival geopolitical blocs during the Cold War are defined based on Gokmen (2017).

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

Emerging fault lines in goods trade

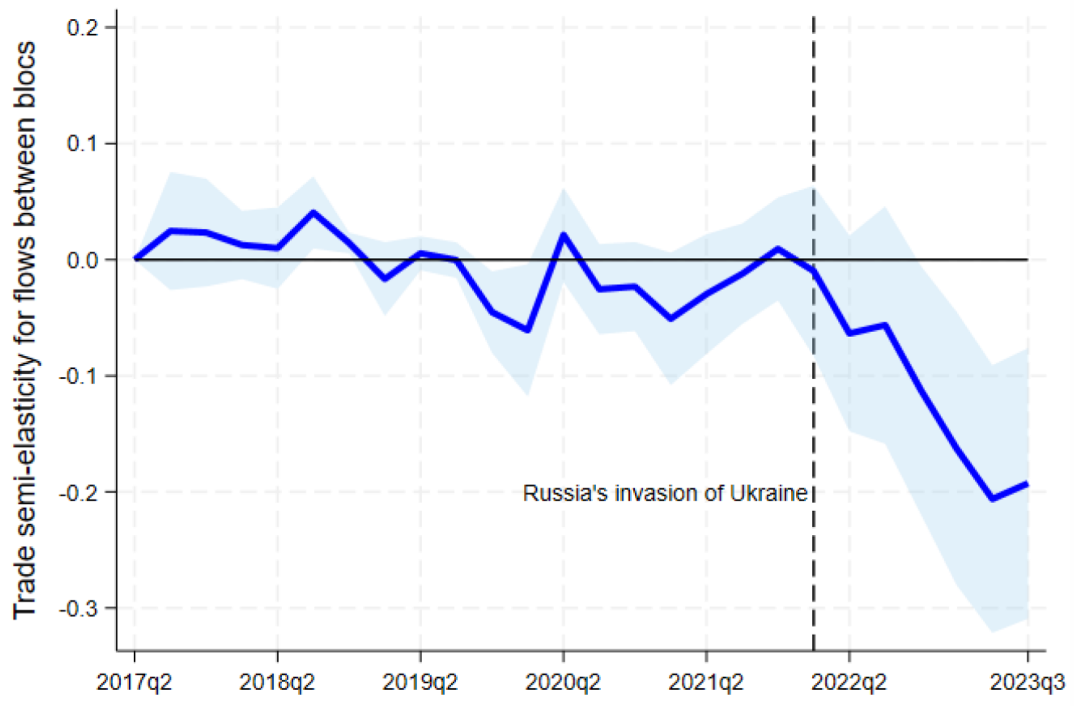
Geopolitical considerations are already affecting trade flows

Change in trade growth post war
(percentage points)



Source: Gopinath et al. (2024), Trade Data Monitor and IMF staff calculations
Note: The chart shows the weighted quarterly trade growth averaged over quarters during 2022Q2 - 2023Q3 minus the equivalent for the period 2017Q1 - 2022Q1 within blocs, and between blocs.

Level of trade between blocs, relative to trade within bloc
(semi-elasticity)



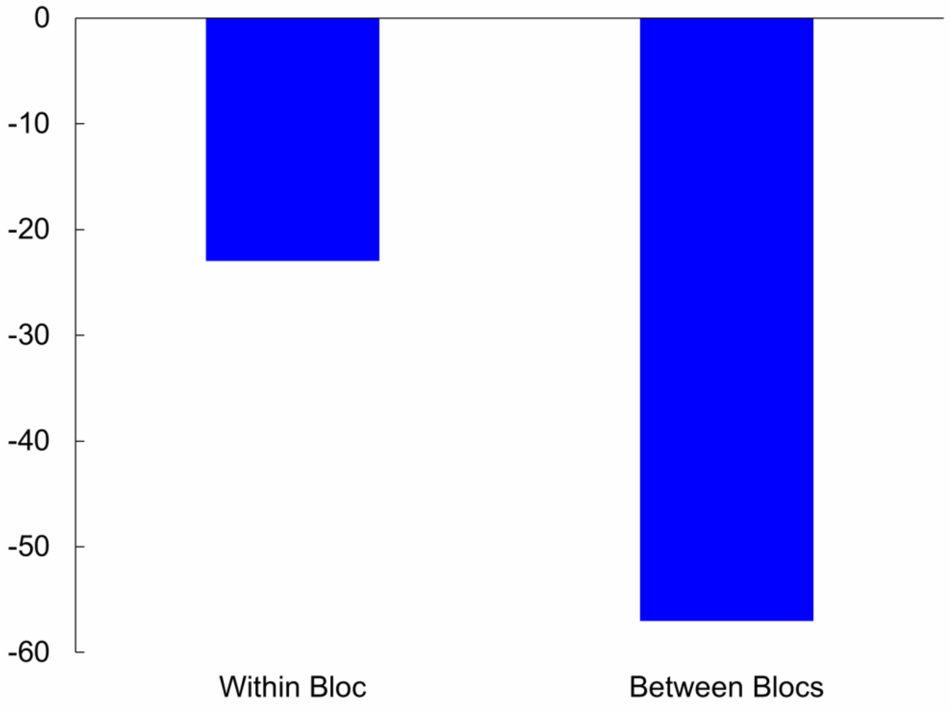
Source: Gopinath et al. (2024), Trade Data Monitor and IMF staff calculations.
Note: Plots the semi-elasticity of trade for flows between blocs, and associated 90 percent confidence bands, estimated with PPML and a fully saturated gravity model. Bloc definition based on Ideal Point Distance (a measure based on voting pattern in the United Nation General Assembly computed by Bailey et al. (2017)).

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

Emerging fault lines in FDI

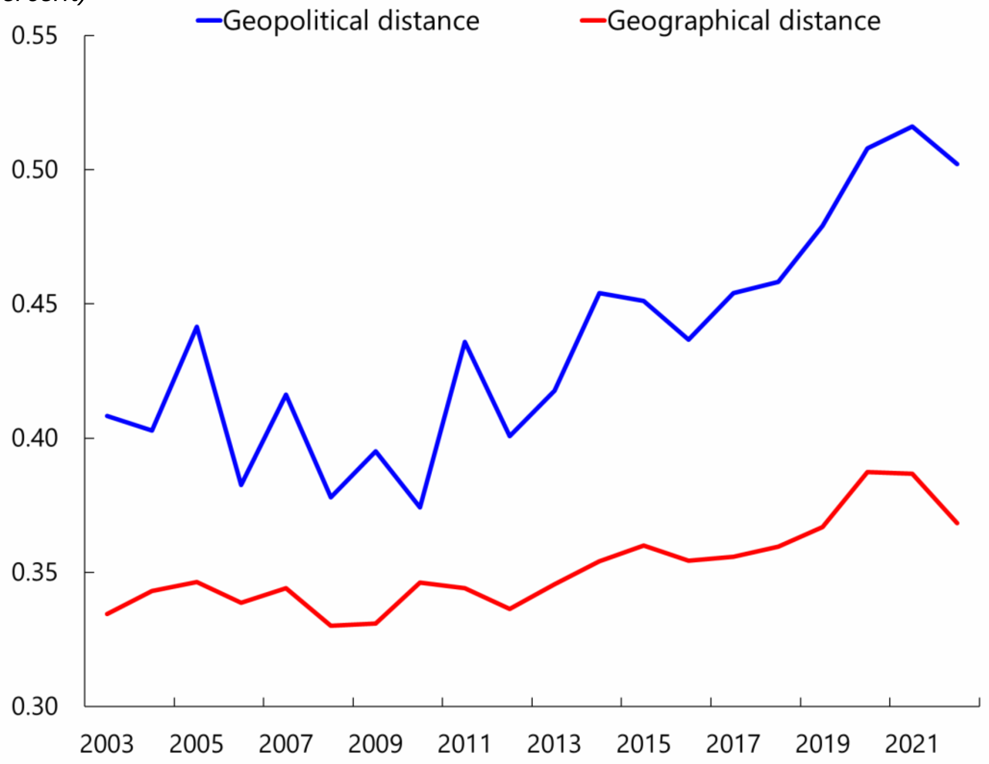
Geopolitical considerations are also affecting FDI

Change in FDI shares post war
(percentage points)



Source: Gopinath et al. (2024), Trade Data Monitor and IMF staff calculations
Note: The chart shows the weighted quarterly trade growth averaged over quarters during 2022Q2 - 2023Q3 minus the equivalent for the period 2017Q1 - 2022Q1 within blocs, and between blocs.

FDI Between Geographically and Geopolitically Close Countries /2
(Percent)



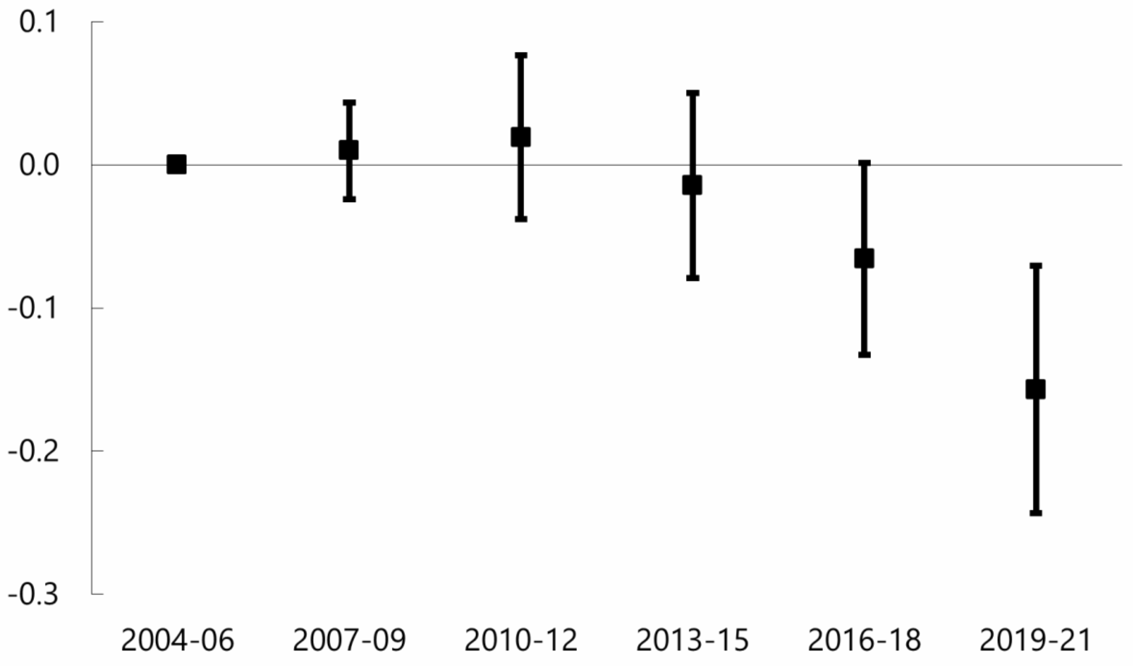
Source: IMF Chapter 4 of the April 2023 World Economic Outlook.
Note: The figure shows the annual share of total foreign direct investments between country pairs that are similarly distant (that is, in same quintile of distance distribution), geopolitically and geographically, from the United States.

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

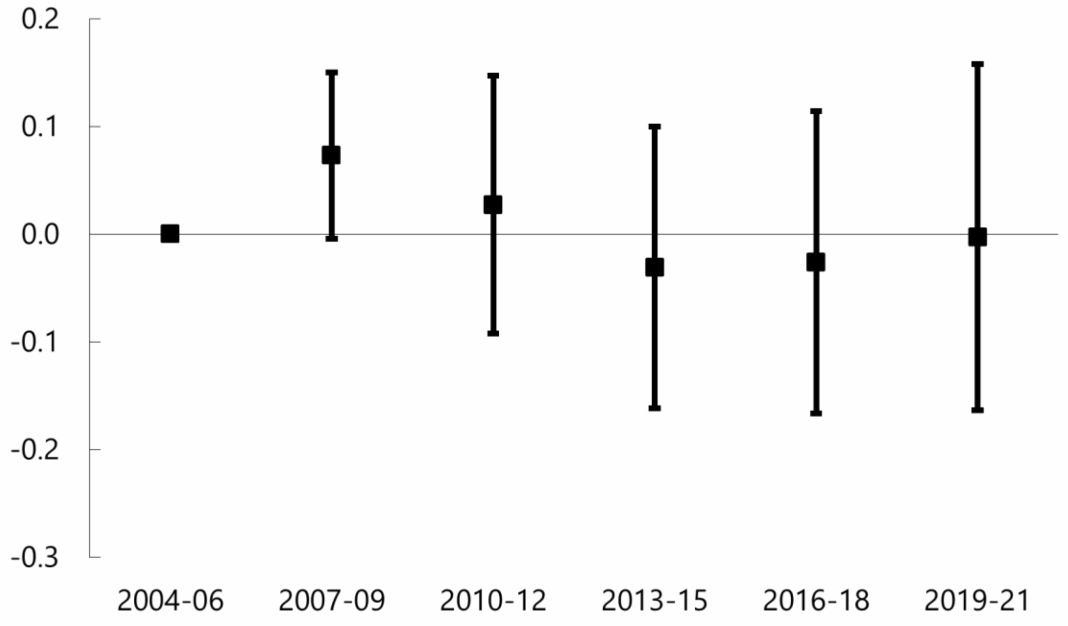
Resilience of services trade so far

Level of trade between blocs, relative to trade within blocs

Goods
(semi-elasticity)



Services
(semi-elasticity)



Source: Li et al. (forthcoming), Trade Data Monitor and IMF staff calculations
Note: For each period t, chart shows coefficient estimate $\hat{\beta}_t$ from a panel gravity regression of the form:

$$M_{ijt} = \delta_{ij} + \delta_{it} + \delta_{jt} + \alpha_t nonaligned_{ij} + \beta_t btwblocs_{ij} + \boldsymbol{\gamma X_{ijt}} + e_{ijt},$$

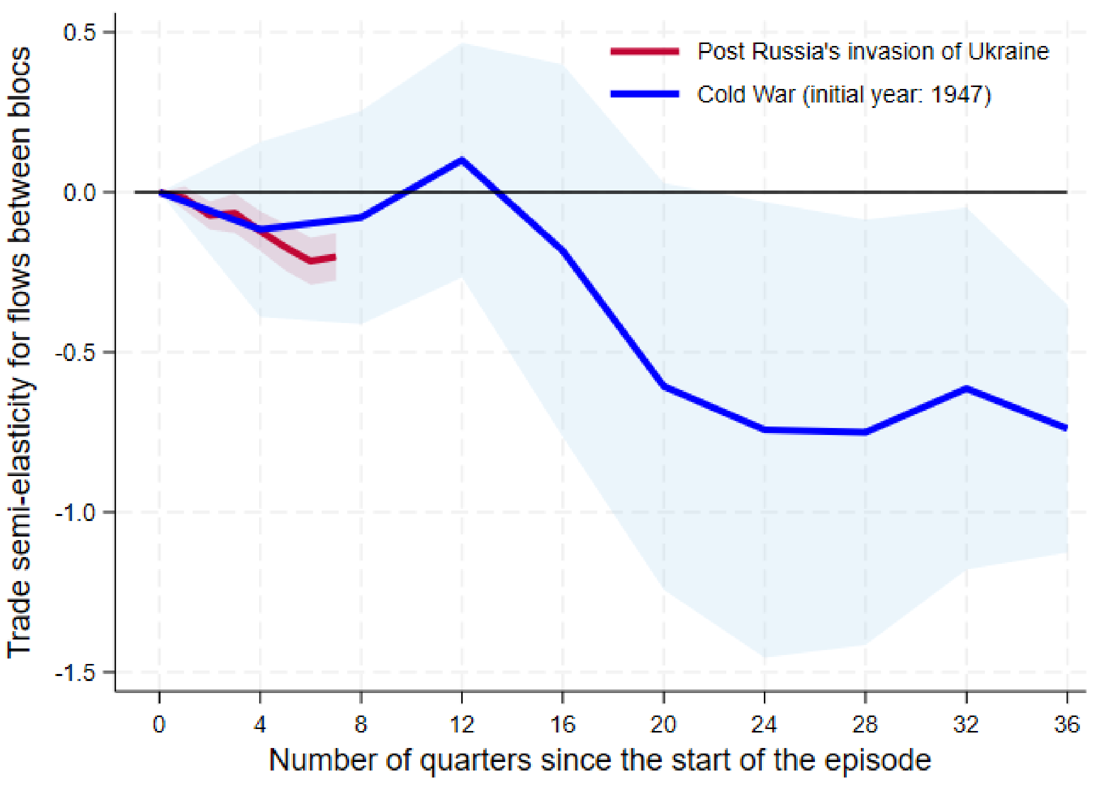
where $\delta_{ij}, \delta_{it}, \delta_{jt}$ are country pair, importer-time and exporter-time fixed effects; $btwblocs_{ij}$ takes value 1 if i and j belong to different geopolitical blocs (0 otherwise); $nonaligned_{ij}$ takes value 1 if either i and j is in the non-aligned bloc (0 otherwise); $\boldsymbol{X_{ijt}}$ contains country-pair-time-varying controls; and e_{ijt} is the error term. Blocs are defined as in Gopinath et al. (2024), with 2004-06 as the reference period. Regression uses three-year averages of data for each period shown. The vertical bars represent 95% confidence intervals, with standard errors clustered at country-pair level.

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

Fragmentation in goods trade now and during the Cold War

Between-bloc fragmentation already appears more significant than at the start of the Cold War

Trade fragmentation, between blocs
(trade semi-elasticity)



Trade fragmentation, with non-aligned
(trade semi-elasticity)

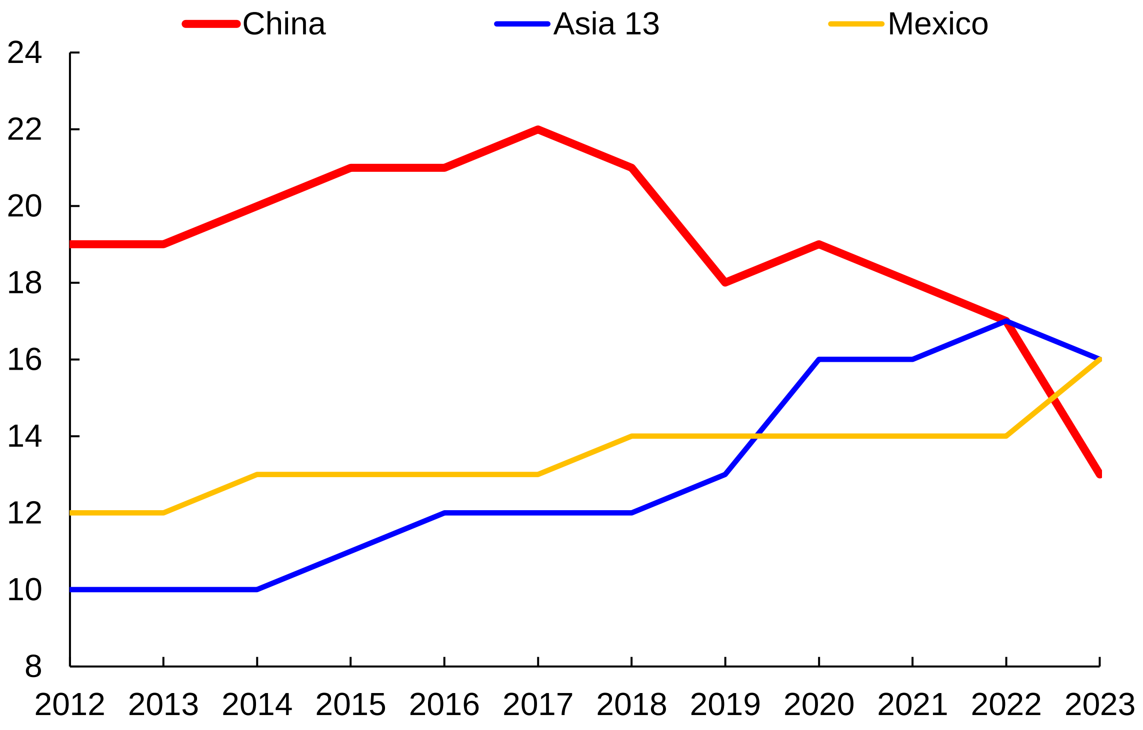
Source: Gopinath et al. (2024), Trade Data Monitor; Historical Bilateral Trade and Gravity dataset (TRADHIST) prepared by Fouquin and Hugot (2016); and IMF staff calculations.
Notes: The charts plot 90 percent confidence bands, with semi-elasticities estimated with PPML and a fully saturated gravity model as in equation 1 of Gopinath et al. (2024). The missing category is trade within blocs. The Cold War bloc definition is based on Gokmen (2017), while the current bloc definition is based on the Ideal Point Distance (a measure based on voting pattern in the United Nation General Assembly computed by Bailey et al. (2017)).

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

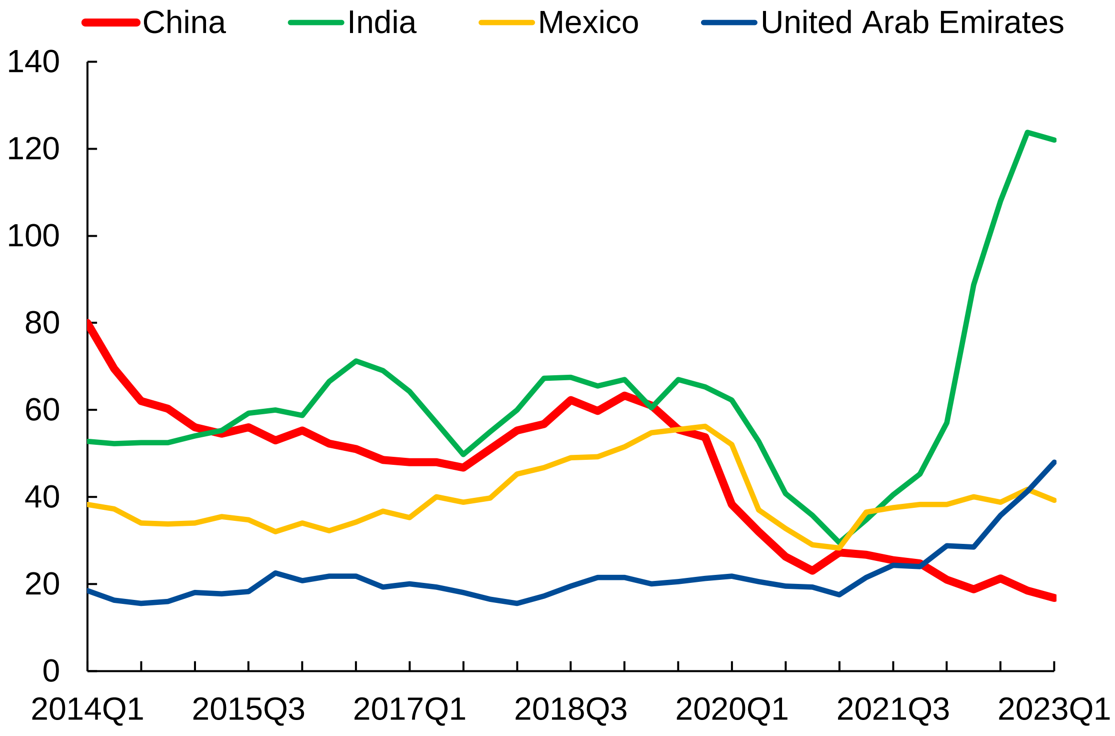
US severing direct links with China

China has lost ground as a source of US imports and destination for US investment

US imports
(percent of total)



US FDI
(count; 4-quarter moving average)



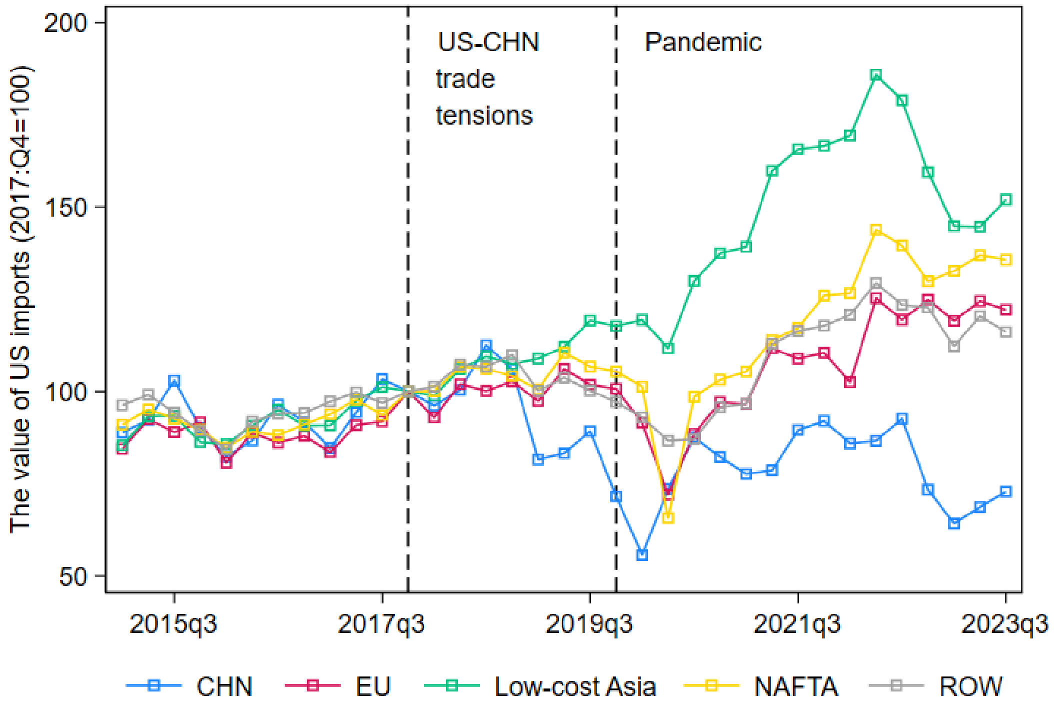
Sources: fDi Markets; and Trade data monitor; and IMF staff calculations.

INTERNATIONAL MONETARY FUND

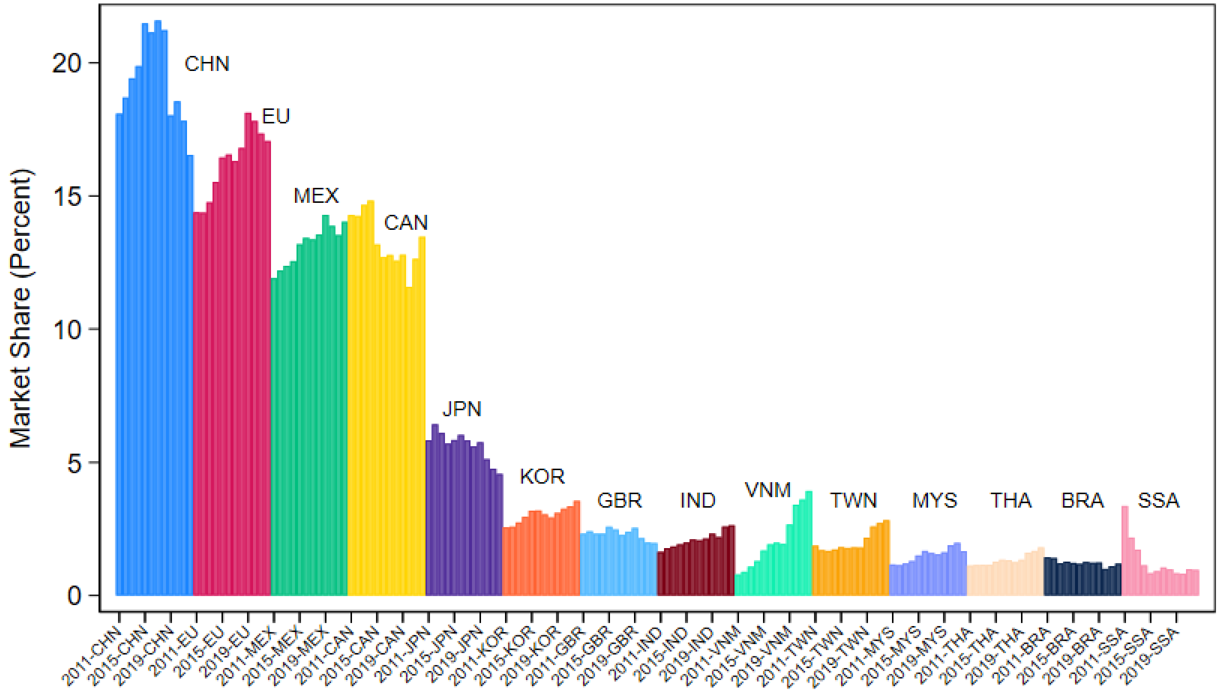
INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

… other countries are stepping in as sources for US imports

Realignment of US imports of tariff-hit products



Import shares of major US trade partners: 2011-2022



Sources: Trade Data Monitor (TDM); and IMF staff calculations.
Notes: Low-cost Asia includes Bangladesh, Cambodia, Hong Kong, India, Indonesia, Malaysia, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand, and Vietnam.

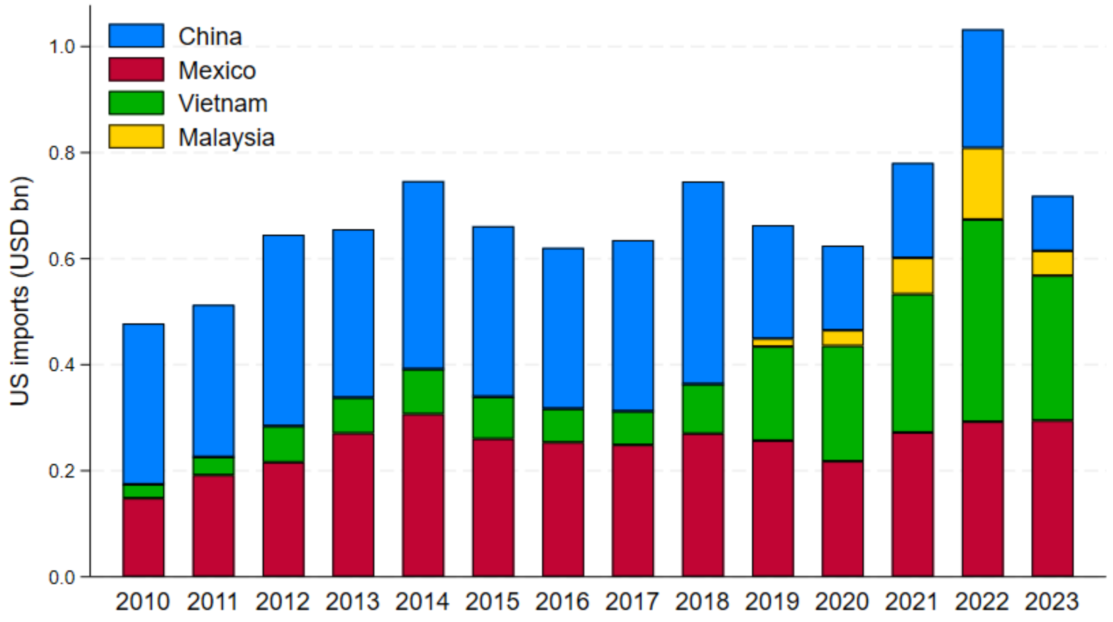
INTERNATIONAL MONETARY FUND

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

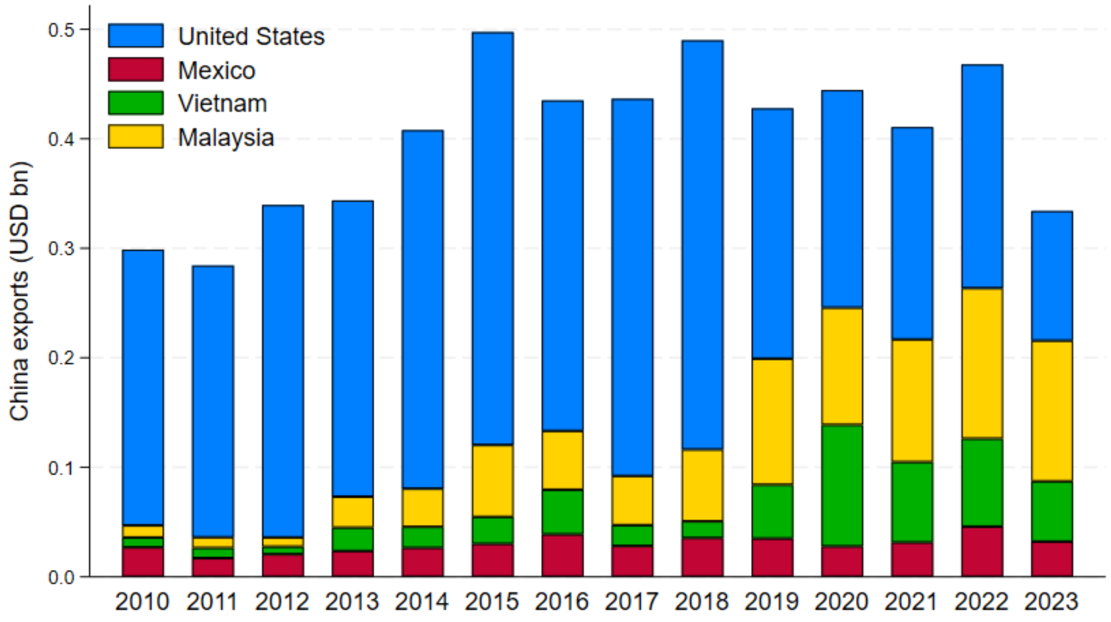
Emergence of "connector" countries

Some goods, exported by China, are being re-rerouted through connector countries

US imports of EV batteries
(USD billion)



China exports of EV batteries
(USD billion)



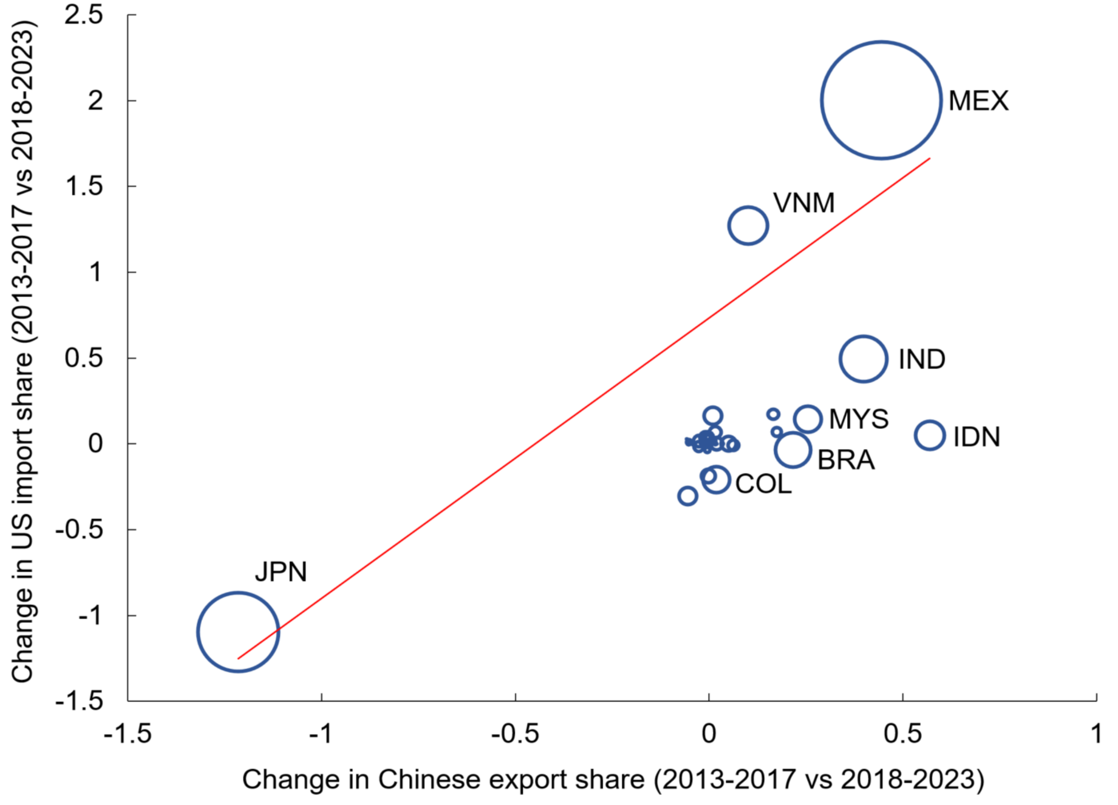
Source: UN Comtrade; and IMF staff calculations.
Notes: HS 6-digit code 850720

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

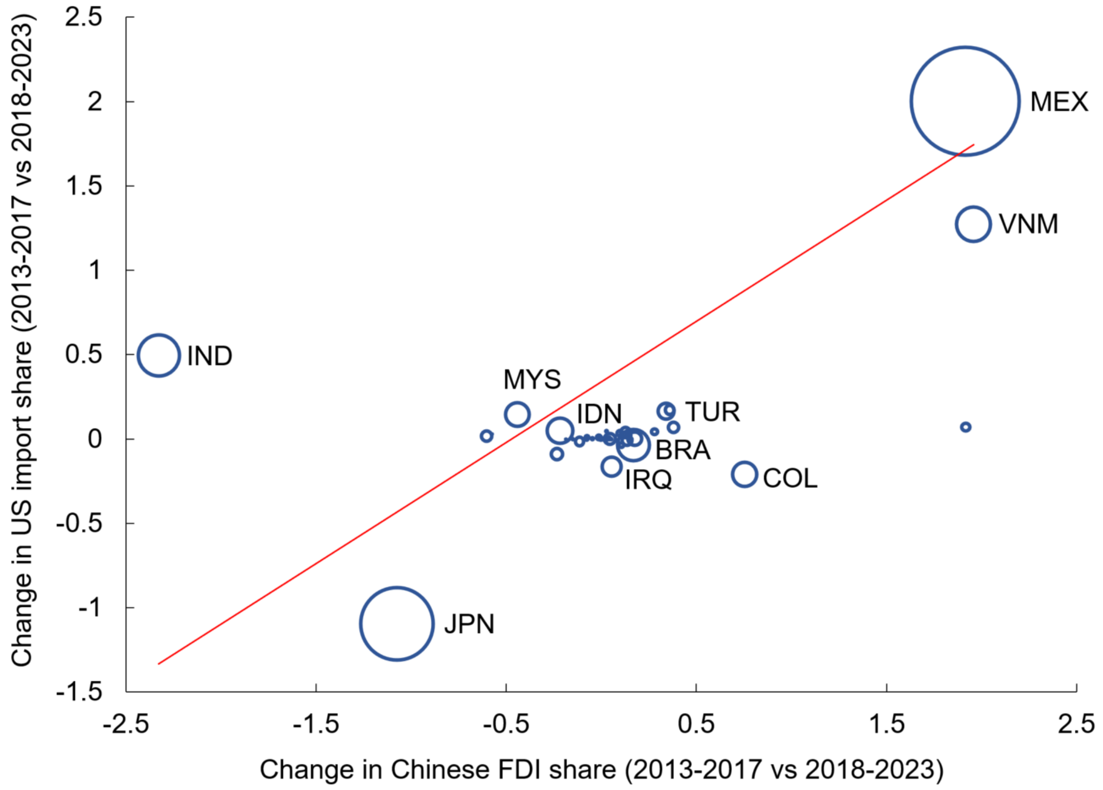
Emergence of "connector" countries

Countries gaining market share in US imports received more FDI and exports from China since 2017

Change in US import share vs. Chinese export shares
(percentage point)



Change in US import share vs. FDI from China
(percentage point)



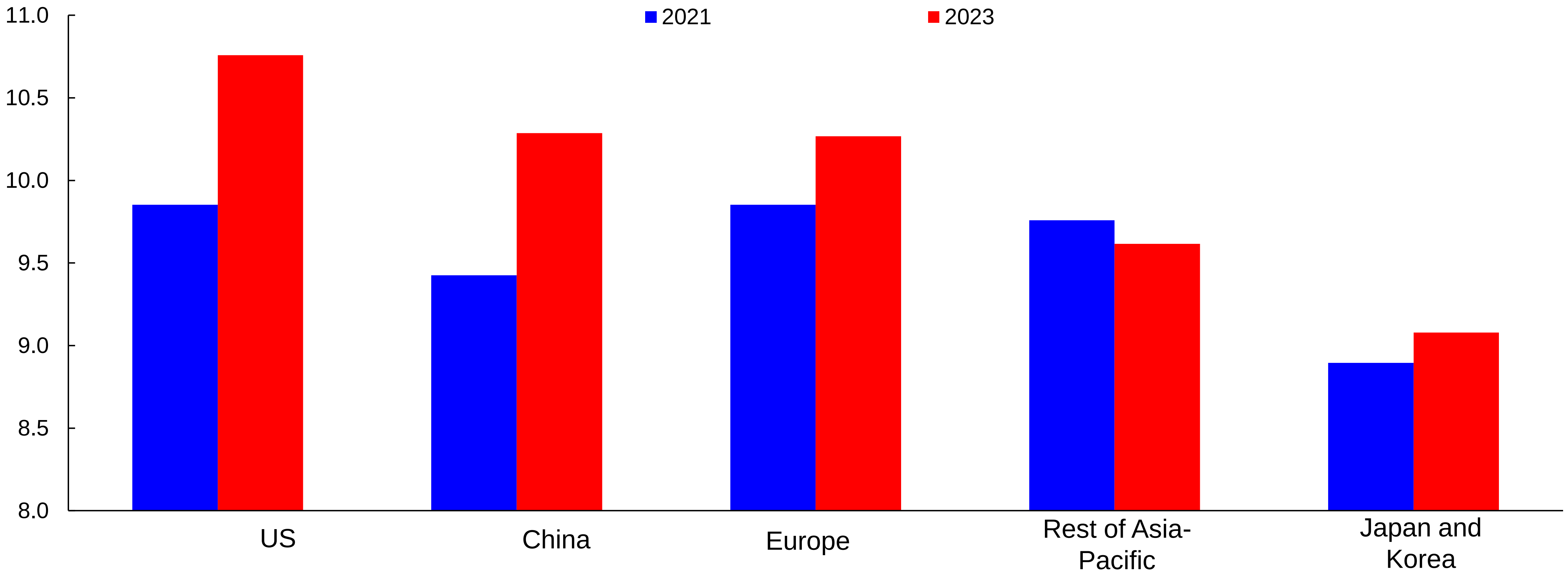
Source: Gopinath et al. (2024), Trade Data Monitor; fDi Markets; and IMF staff calculations.
Notes: Includes only nonaligned countries. LHS: change in U.S. import shares between 2018-23 and 2013-17 against change in Chinese export shares. RHS: change in U.S. import shares between 2018-23 and 2013-17 against change in Chinese outward FDI.

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

Lengthening supply chains

Trade flows are now making additional stops, especially those from China to the US

Distance by location of supplier
(number)



Sources: Qiu, Shin and Zhang (2023). "Mapping the realignment of global value chains." BIS Bulletin No. 78.

INTERNATIONAL MONETARY FUND

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

#3. What could be the costs of fragmentation?

INTERNATIONAL MONETARY FUND

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

Fragmentation: the channels of transmission

- **Trade** restrictions could reduce efficiency gains from specialization, competition and knowledge diffusion, and limit economies of scale
- **Financial fragmentation** could reduce cross-border capital flows, hinder capital accumulation, weaken international risk-sharing and increase macro-financial volatility
- Barriers to **labor flows** could hinder innovation and worsen demographic trends

Temporary adjustments: price pressures and supply shortages

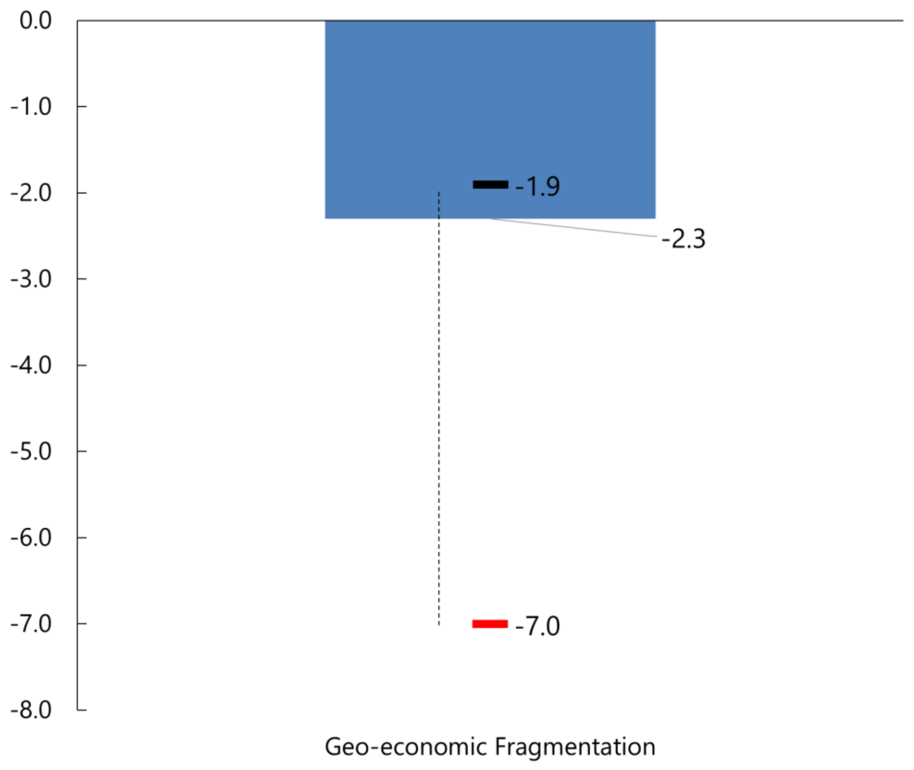
Global cooperation: harder to tackle challenges transcending geopolitical blocs

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

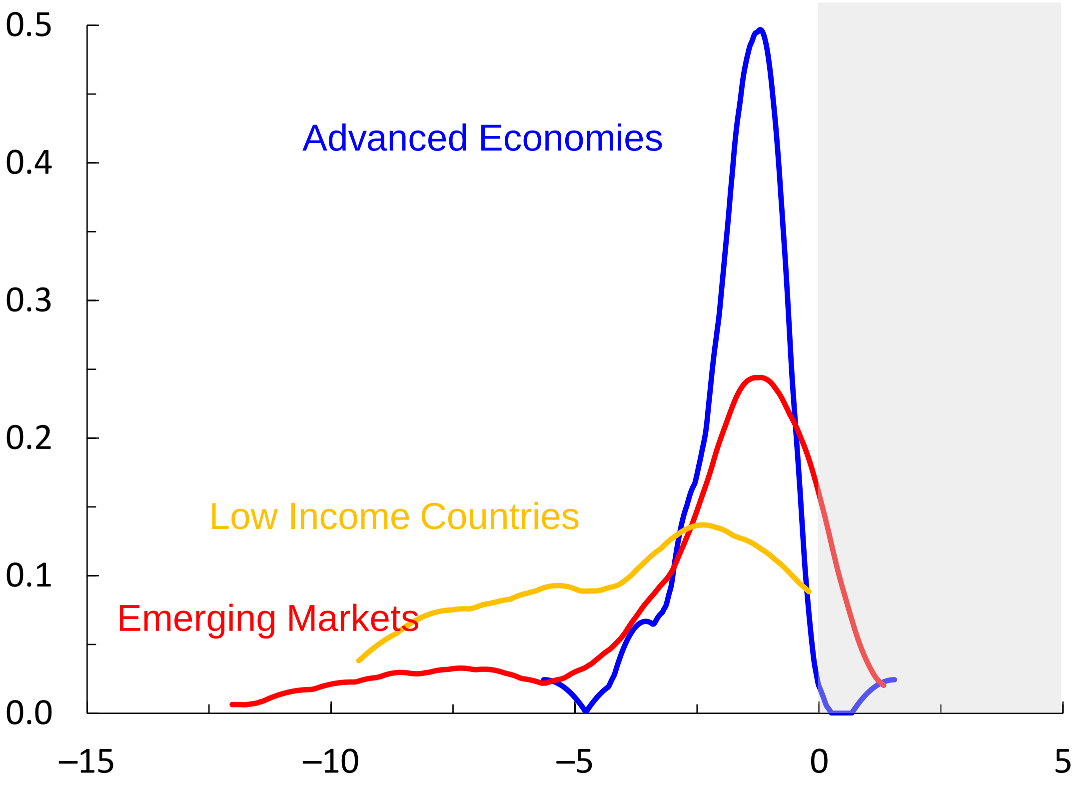
Fragmentation costs could be large

Output losses could be particularly severe for emerging market and developing economies

Range of Simulated Global GDP Changes due to Trade Fragmentation
(Percent Deviation from Baseline)



Trade fragmentation: impact on GDP
(density of percent deviation from baseline by country groups)



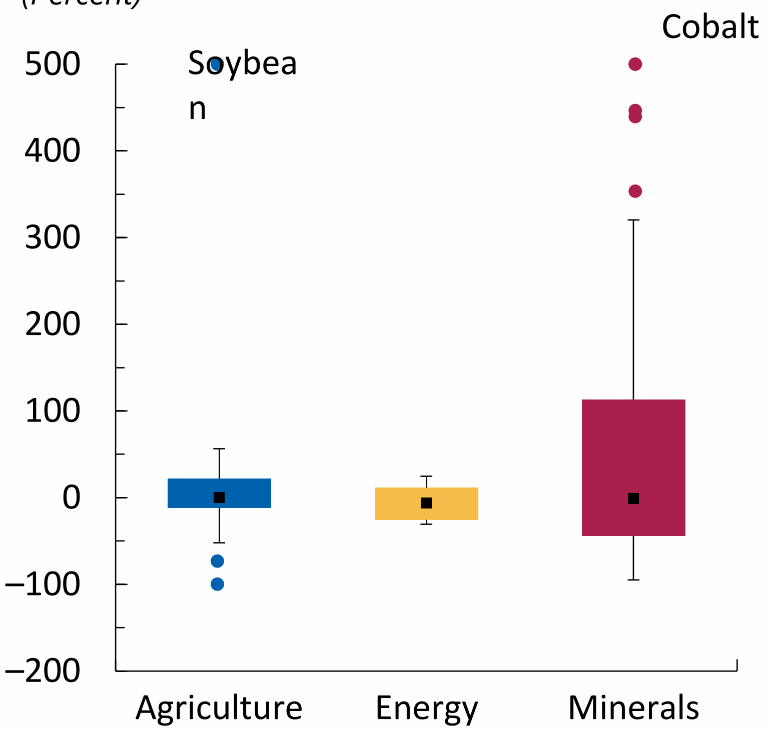
Sources: Bolhuis, Chen, and Kett (2023); Chapter 3 of the October 2023 World Economic Outlook; Chapter 4 of the April 2023 World Economic Outlook; and IMF staff calculations.
Note: In the right chart, country-level losses are aggregated using weights based on GDP at purchasing power parity.

INTERNATIONAL MONETARY FUND
INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

Commodities fragmentation

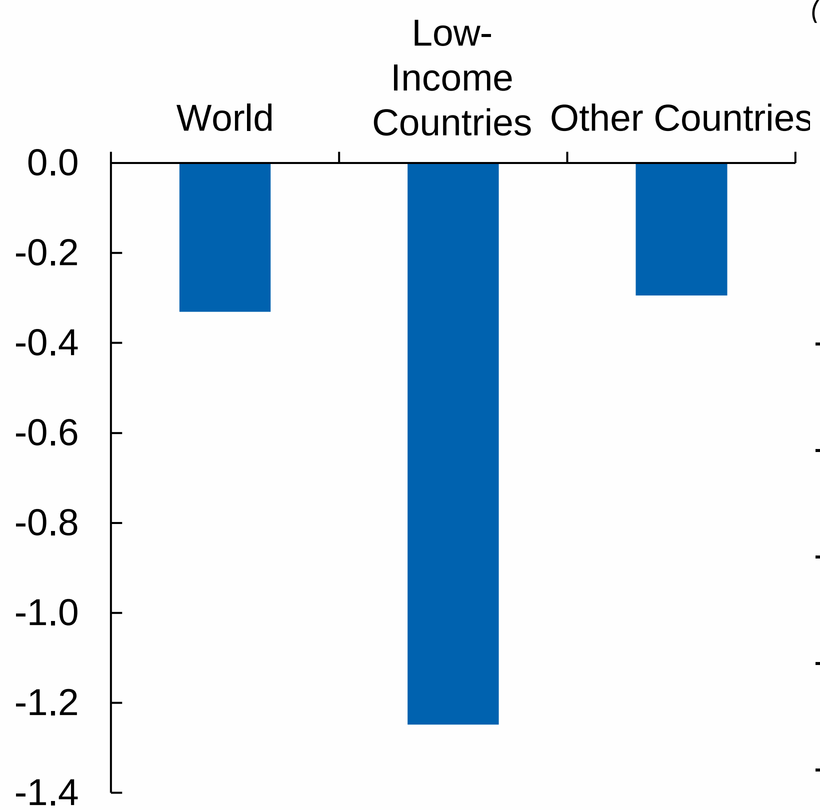
Price Changes Due to Fragmentation in Individual Commodity Markets

(Percent)



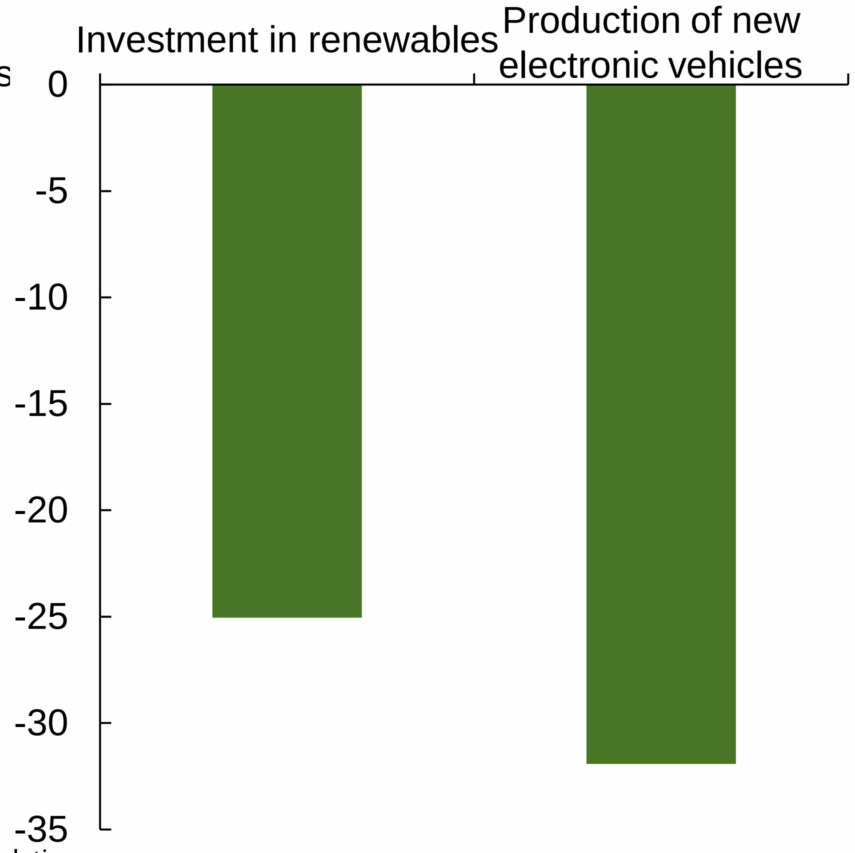
Long-Term Impact on GDP

(Percent Deviation from Baseline)



Fragmentation of Critical Mineral Markets and Energy Transition

(Percent Deviation from Integrated Markets Scenario in 2030)



Sources: Bolhuis, Chen and Kett (2023); Chapter 3 of the 2023 October World Economic Outlook; Alvarez et al. (2023); and IMF staff calculations.
Note: The bars in the middle chart represent the losses in GDP relative to baseline from eliminating trade in all commodities across hypothetical blocs using a multi-country multi-sector trade model augmented to account for the specific features of commodity markets (see Bolhuis, Chen and Kett, 2023). Country-level losses are aggregated using weights based on GDP at PPP. The chart on the right plots simulations produced by the Global Macroeconomic Model for the Green Energy Transition (GMMET). The bars report the change in real investment in renewables and EVs due to fragmentation relative to IEA's net zero emission scenario with integrated copper, nickel, lithium and cobalt markets. Country-level variables aggregated using GHG weights.

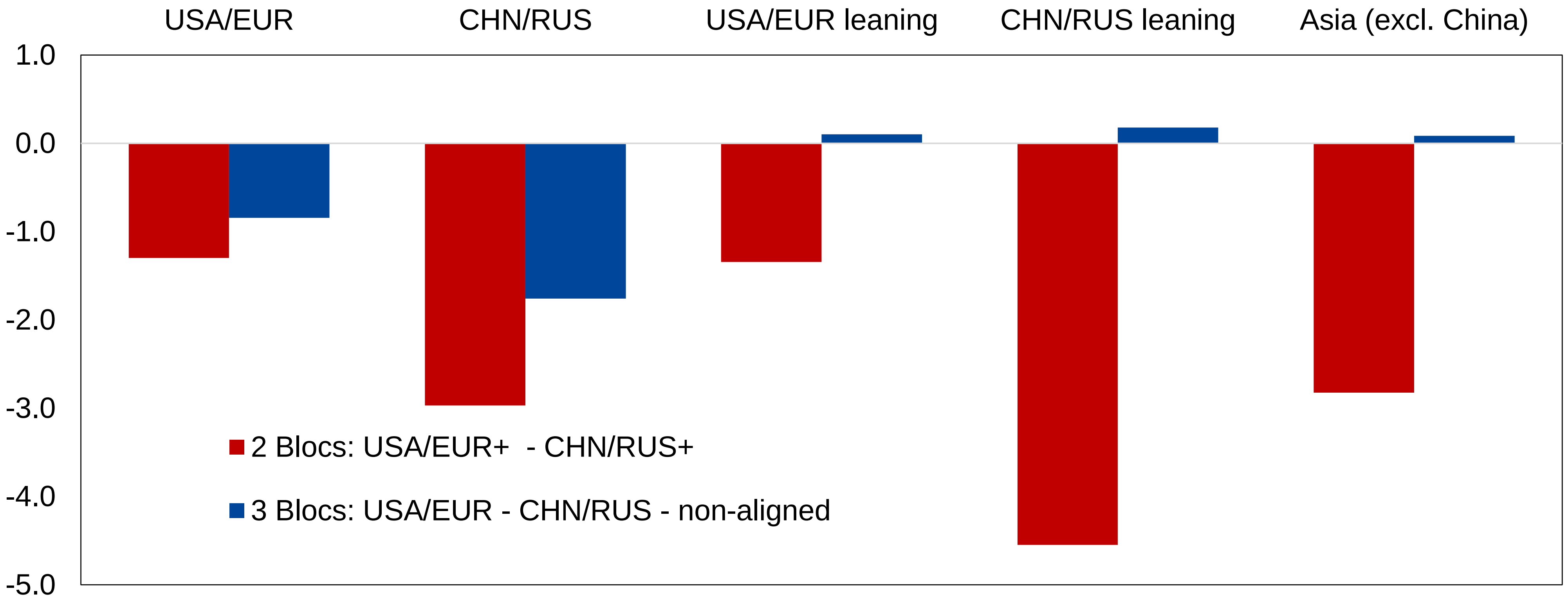
INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

Non-alignment a winning strategy?

Non-aligned economies could cushion the negative effects of fragmentation and benefit in some cases

Trade model simulations: alternative scenarios

(percent deviation of GDP from baseline) 1/



Sources: Bolhuis, Chen, and Kett (2023); Chapter 3 of the October 2023 World Economic Outlook; and IMF staff calculations.
Note: Country-level losses are aggregated using weights based on GDP at purchasing power parity. In the **2-bloc scenario**, countries are allocated across the two blocs based on their UN vote on Russia's invasion of Ukraine, as in Chapter 3 of the October 2023 WEO. In the **3-bloc scenario**, all trade between China/Russia and USA/EUR is eliminated, while the remaining countries continue to trade with all.

INTERNATIONAL MONETARY FUND

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

#4. Principles for policy action

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

Summary and Solutions

Trade links are being reshaped, perhaps weakened

Ideally, we need to have...

- a robust rules-based **global trading system** and
- a resilient **international monetary system**

But reality is far from the ideal…

… we need a **pragmatic approach** to rebuild trust, minimize fragmentation costs, achieve national objectives and tackle global challenges:

- Keep lines of *communication* open and staying engaged
- Work together on areas of *common interest* (e.g., climate, health, food security)
- Work with *groups of interested countries*, while keeping the doors open to others (e.g., services and digital trade)
- Limit *unilateral policy actions* – such as industrial policies -- to address externalities and market distortions

Greater transparency, data sharing and policy dialogue

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.

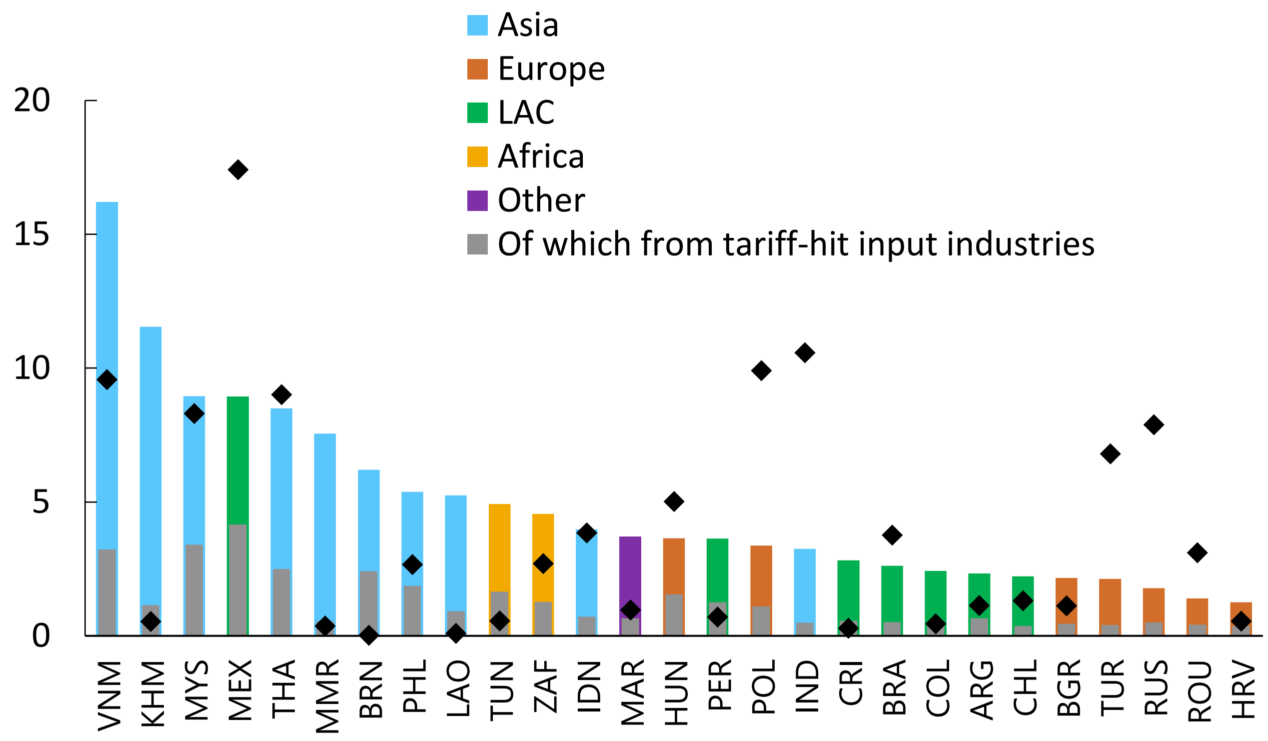
Thank you!

Buckling up to Tariffs: potential spillovers on potential *winners*

Asian economies (excl China) could benefit from the tariff onslaught

Share of manufacturing gross exports' input value added that comes from China

(percent)



Sources: Trade in Value Added (TiVA) 2021ed; and IMF staff calculations

Top exporters (to the US) of Biden tariff-hit products

Country	ISO Code	Export Value (USDbn)	Export Share (%)
Canada	CAN	21.0	12.6
China	CHN	18.4	11.0
Korea, South	KOR	14.7	8.8
Malaysia	MYS	14.2	8.5
Mexico	MEX	11.6	7.0
Taiwan	TWN	9.7	5.8
Germany	DEU	9.6	5.8
Japan	JPN	9.4	5.7
Vietnam	VNM	7.9	4.7
Thailand	THA	7.2	4.3

Sources: US Census Bureau; and IMF staff calculations.

INTERNATIONAL MONETARY FUND

INTERNAL. This information is accessible to ADB Management and staff. It may be shared outside ADB with appropriate permission.