



EUROPEAN CENTRAL BANK

EUROSYSTEM

# Navigating a fragmenting global trading system: insights for central banks

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AFA Panel: Geopolitical Fragmentation  
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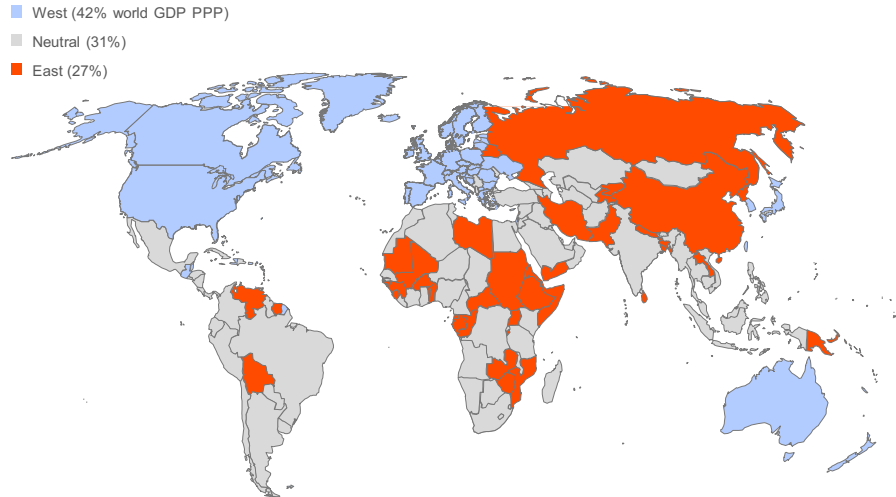
# Outline

- Based on “*Navigating a fragmenting global trading system: insights for central banks*”, *Occasional Paper Series*, No 365, ECB.
- Explores major re-alignments of global trade due to non-tariff barriers
- Not a conjunctural analysis of tariff policies

# Defining geo-economic trade fragmentation

Policy-driven reversal of global trade integration motivated by domestic economic policy objectives and geopolitical as well as strategic considerations

## Basic setup: three geopolitical blocs

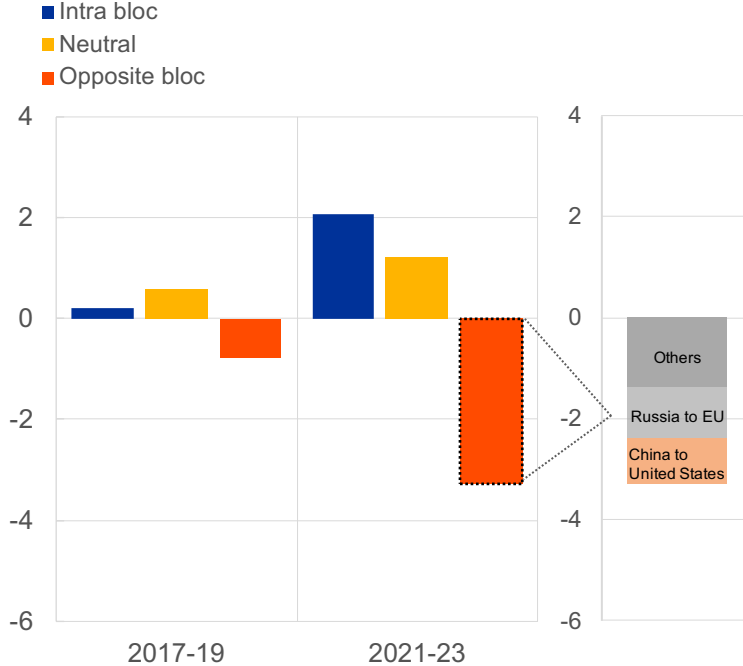


Notes: The allocation of countries to blocs is based on the geopolitical index developed by den Besten et al. (2023). This index is based on the voting patterns of countries at the United Nations General Assembly (UNGA) and includes additional measures of political alignment and economic ties between countries.

# Ongoing selective decoupling along geopolitical lines

## Western bloc's import shares

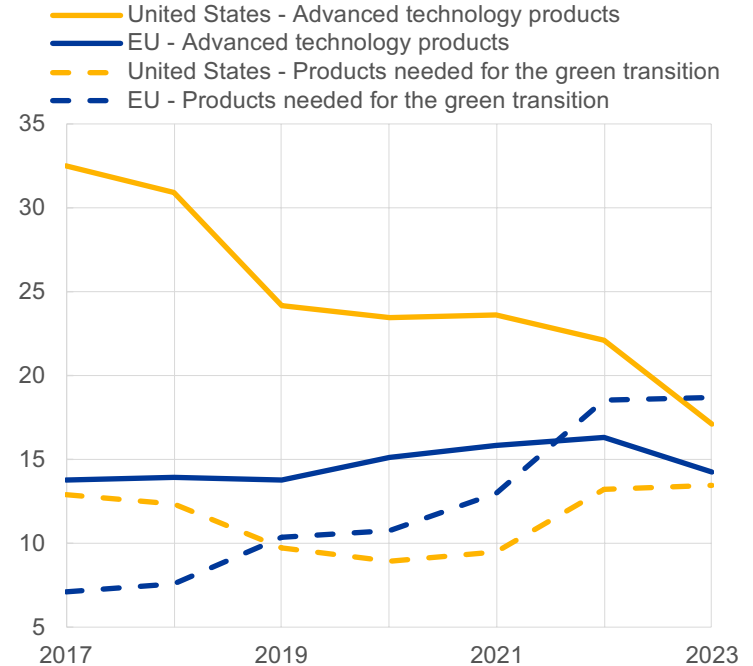
(percentage points; percentage points change)



Sources: Conteduca et al. (2024) and Trade Data Monitor (TDM).

## Share of imports from China by product category

(percentage)

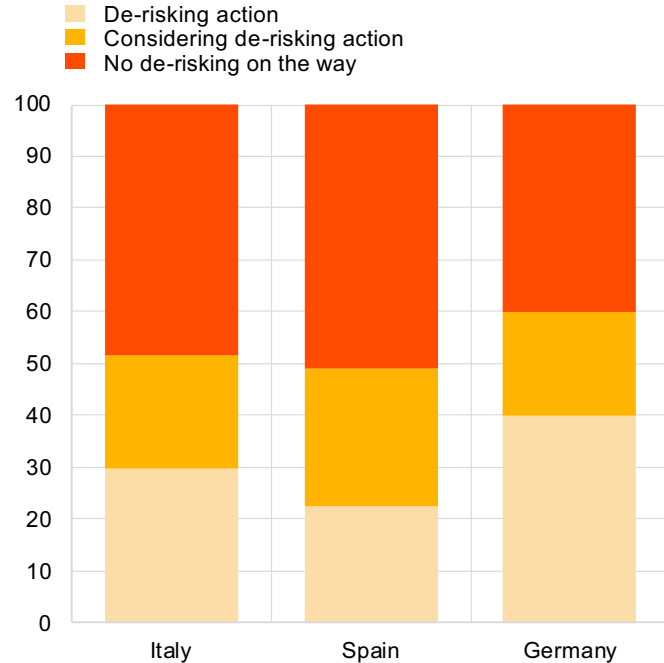


Sources: Conteduca et al. (2024) and Trade Data Monitor (TDM).

# Firms are de-risking from China, mainly via EU-shoring

## Actions taken to reduce exposure to China

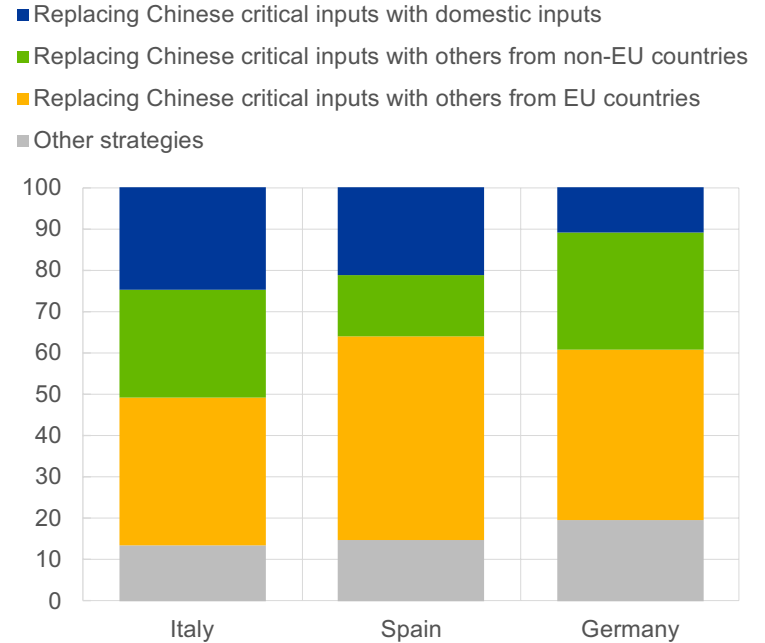
(percentage of firms relying on critical Chinese inputs)



Sources: Banca d'Italia, Deutsche Bundesbank and Banco de España. Manufacturing firms only.

## De-risking strategies implemented

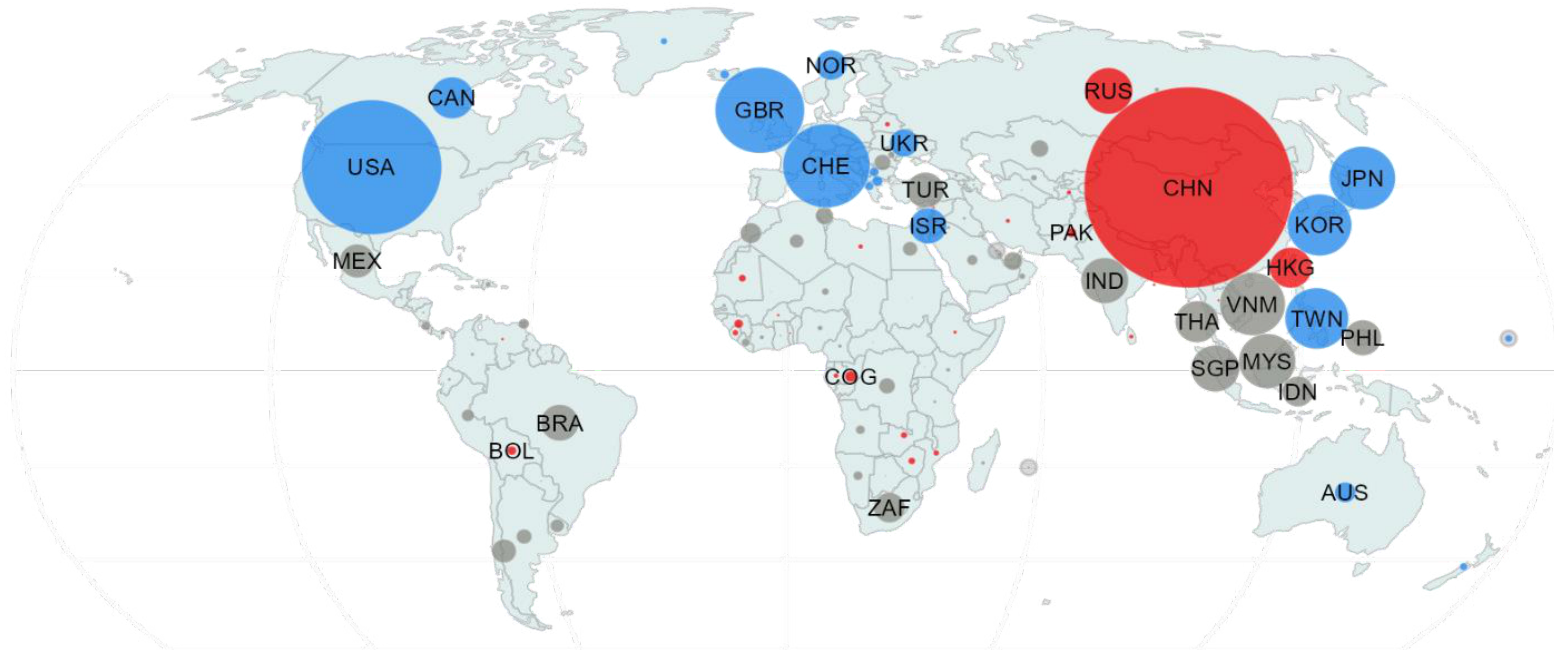
(percentage of firms taking de-risking actions)



Sources: Banca d'Italia, Deutsche Bundesbank and Banco de España. Manufacturing firms only.

# Halving the supply of critical inputs from high-risk countries

## EU imports of key inputs from non-EU countries, by partner alignment

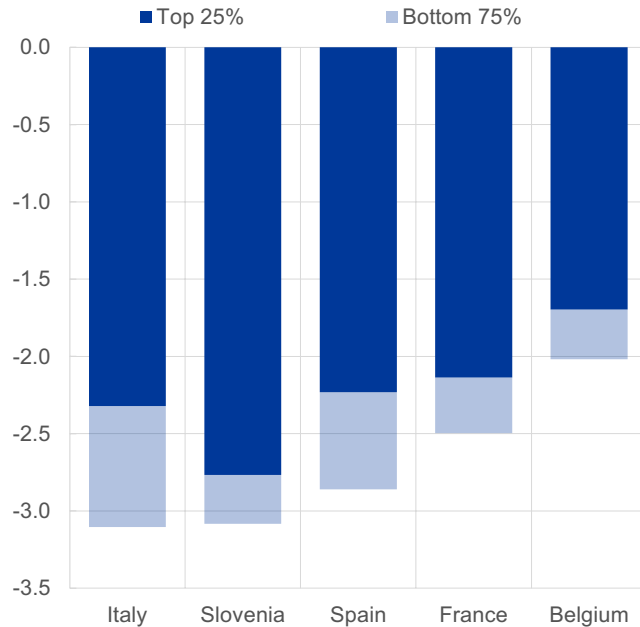


Sources: Author elaborations based on CEPII BACI 2022 data.

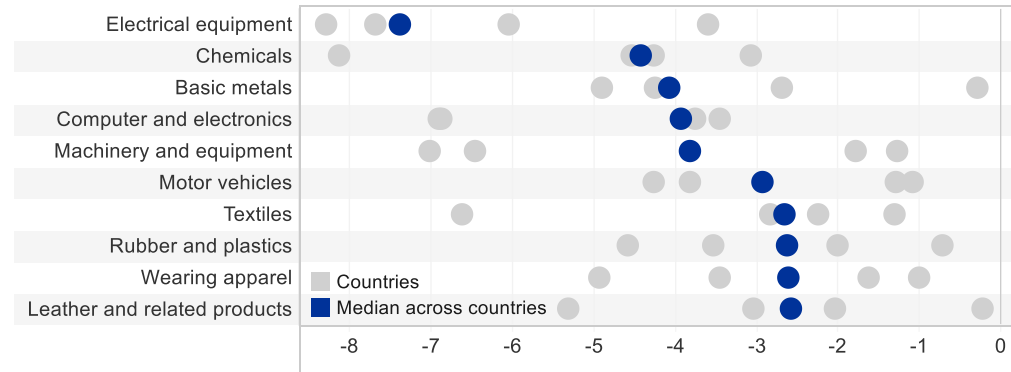
Note: The size of the circles represents the relative share of each non-EU country's exports of foreign critical inputs (FCI) in EU imports of FCI from all non-EU countries.

# Shortages of critical inputs have widely diverging effects

## Change in manufacturing value-added (percentage change)



## Change in value-added, by sector (percentage change)



Sources: Author elaborations based on Panon et al. (2024).

Notes: The bars show value-added change for a 50% drop in foreign critical input supply from China-aligned countries. Firm size measured as value-added of exposed manufacturing firms.

Sources: Author elaborations based on Panon et al. (2024).

# Trade fragmentation scenarios

## *Assumptions underlying scenarios of trade fragmentation*

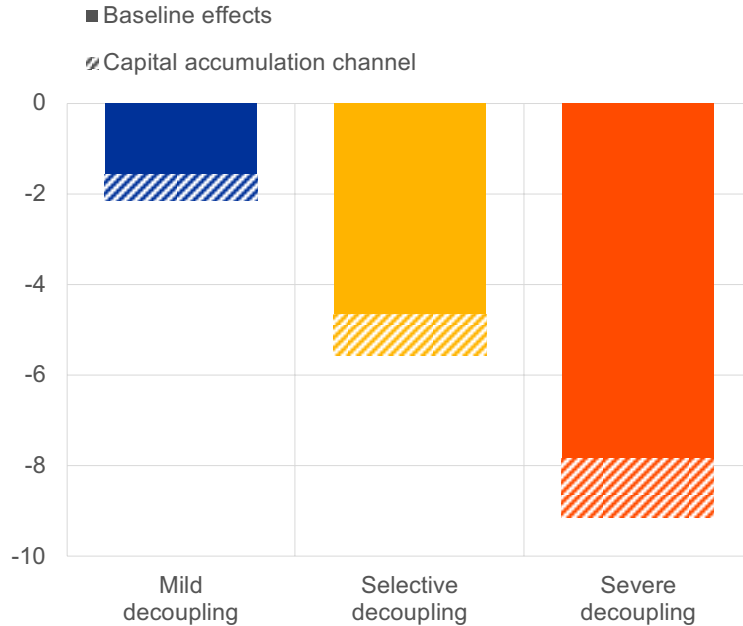
<b>Scenario</b>	<b>Sectors affected</b>	<b>Type of shock</b>
<b>Mild decoupling</b>	All sectors	Partial trade restrictions
<b>Selective decoupling</b>	Products whose supply is more prone to being weaponised	Full trade ban for affected products
<b>Severe decoupling</b>	All sectors	Full trade ban



# Trade fragmentation entails sizeable output losses

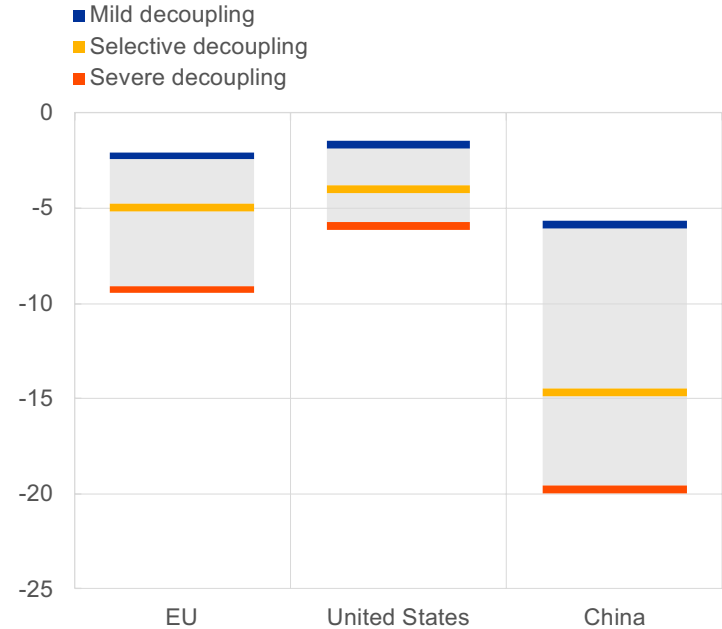
## Global real GDP

(percentage deviation from steady state)



## Real GDP by region

(percentage deviation from steady state)



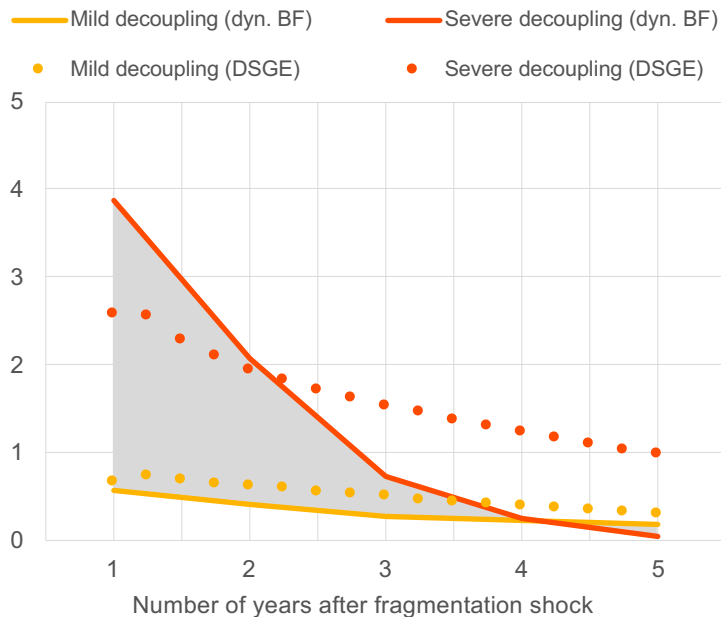
Sources: Baqaee and Farhi (2024), Conteduca et al. (2025), OECD TIVA, EORA, Quintana (2024) and authors' calculations.  
 Notes: Non-linear impact simulated through 25 iterations of the log-linearised model. The impact from capital accumulation is based on Quintana (2024).

Sources: Baqaee and Farhi (2024), Conteduca et al. (2025), OECD TIVA, EORA, Quintana (2024) and authors' calculations.  
 Notes: Non-linear impact simulated through 25 iterations of the log-linearised model. Values include the additional impact from capital accumulation channel. The EU aggregate includes results for EFTA countries due to model-based aggregation.

# Inflationary effects of trade fragmentation subside gradually

## Global inflation

(annual percentage changes, percentage deviation from no fragmentation)

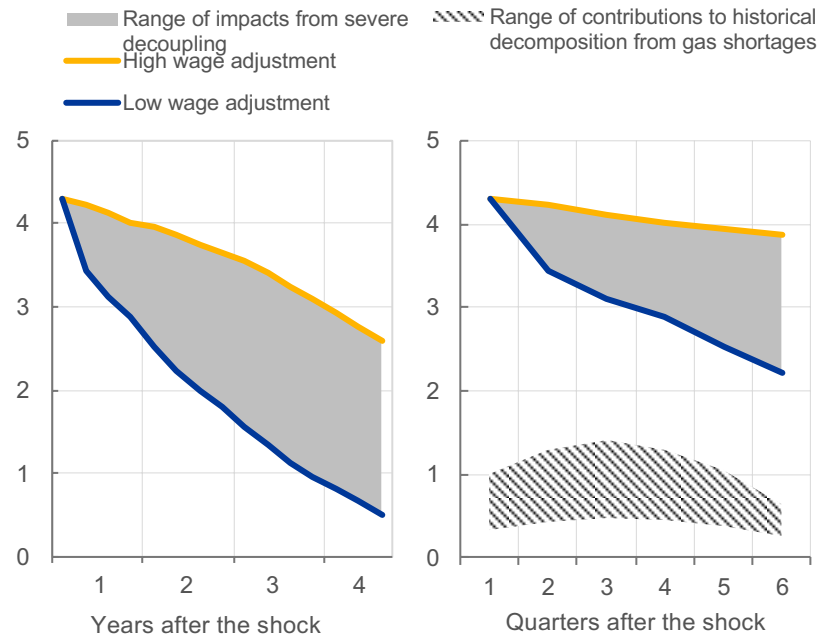


Sources: Quintana (2024), Lechthaler and Mileva (2024), OECD TIVA, EORA, and author calculations.

Note: "Dyn. BF" refers to the dynamic extension of the Baqaee-Farhi model by Quintana (2024a) and "DSGE" refers to the Dynamic Stochastic General Equilibrium model by Lechthaler and Mileva (2024).

## Euro area year-on-year core inflation

(left: p.p. deviations from baseline; right: p.p. deviations from baseline and p.p. contributions to historical decomposition)



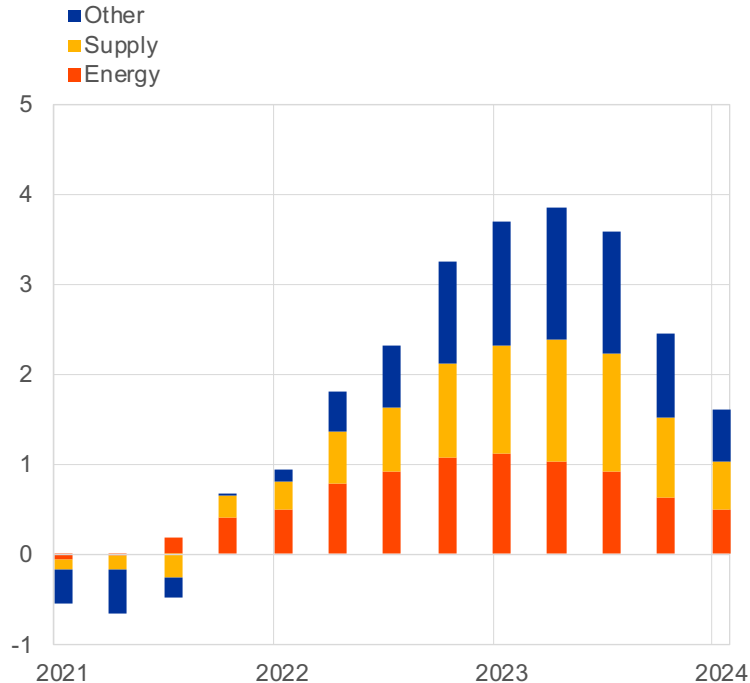
Sources: Left panel: Quintana (2024a), right panel: Quintana (2024), Barbura et. al. (2023) (lower bound), Alessandri and Gazzani (2023) (upper bound).

Note: For the empirical estimated (right panel) the period covered is Q3 2022 – Q4 2023.

# Recent inflation surge and sectoral supply shocks

## Euro Area HICP core inflation

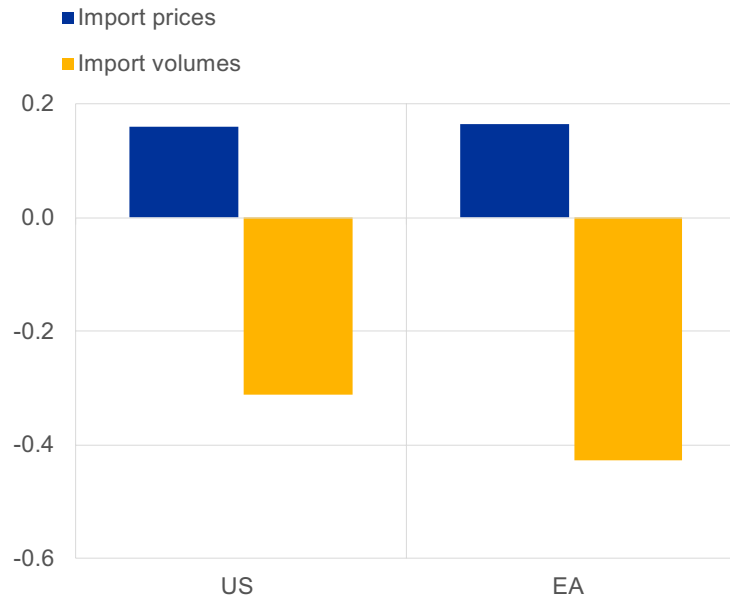
(annual percent changes, deviations from the mean implied by the model)



Source: Bańbura et al. (2023).  
Latest observation: 2024 Q1

## Geopolitical shocks as supply shocks

(output: trough response, percentage; prices: peak response, percentage)



Source: Khalil et al. (2024)  
Notes: The chart reports effects for the US and the euro area from increasing a trading-partner's GPR index by 50% on imports and import prices from this country.

# Four policy implications

2

## **Avoid broad-based protectionism**

...because while resilience is a legitimate concern, tit-for-tat trade war is welfare-reducing and does not fully eliminate interdependencies

3

## **Adopt targeted policies**

...to account for heterogeneity across sector, firms, regions

4

## **Fragmentation matters for monetary policy**

...*during the transition*: larger, more frequent supply shocks;  
*in the long run*: reduced diversification through trade increases volatility and inflation

# Four insights for central banks

2

## Look beyond aggregate trade data

...by using granular trade data and a disaggregated approach to monitor fragmentation

3

## Conduct regular business surveys

...for a timely understanding of firm's exposure to fragmentation risks

4

## Enhance understanding of EU interdependencies

...as the full extent of detailed interdependencies is still unknown; enhanced cooperation among NCBs and other EU institutions is desirable

## Richer set of analytical tools

...is necessary to assess impact of fragmentation shocks on activity and prices

# Conclusions

- Geopolitical fragmentation a major topic for central banks
- Model analysis: many choices in selecting and calibrating scenarios
- ECB Governing Council: uncertain impact of trade frictions on inflation; downside risk to output