

A wireframe landscape background in shades of gray, featuring a grid of lines that create a sense of depth and perspective, resembling a topographical map or a digital terrain.

REGIONAL ECONOMIC OUTLOOK

ASIA AND PACIFIC

SPILLOVERS FROM CHINA'S TREND GROWTH THE IMPACT OF DE-RISKING STRATEGIES

OCTOBER 24, 2023

Roadmap

1 Context

2 De-risking as re-shoring & friend-shoring

3 Model-based spillovers accounting for GVCs

4 Export restrictions and quality downgrading

REO Chapter on Spillovers from China's Medium-Term Growth

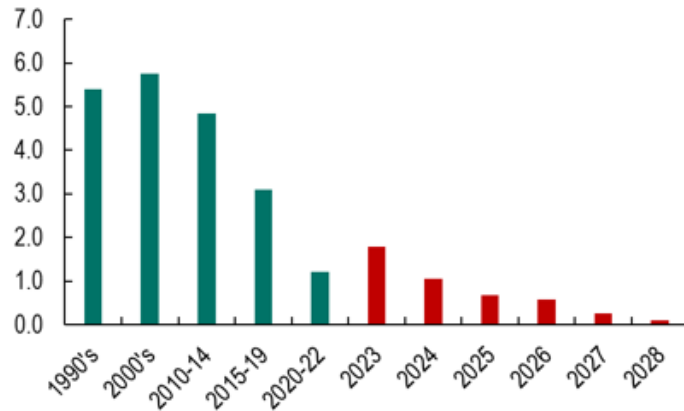
Current WEO projections imply China's long-running economic overperformance will end...

... with particularly large implications for Asian economies...

... motivating the REO studying spillovers from medium-term risk scenarios.

2. China: Residuals from Unconditional Convergence Regression

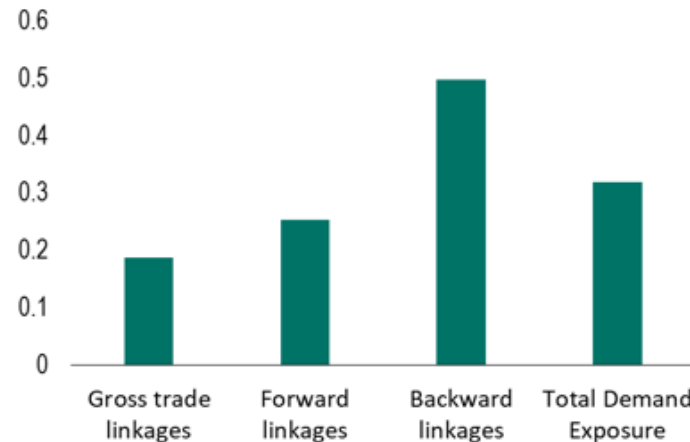
(Percentage points)



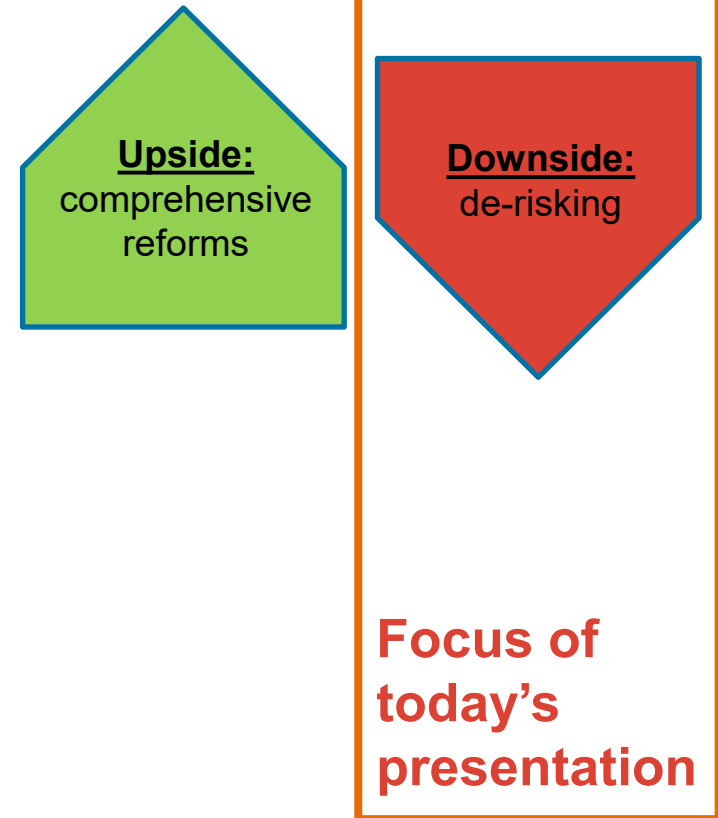
Source: World Economic Outlook, PWT and IMF staff calculations. Note: For 1991 to 2019, plots the residual for China for a standard unconditional convergence growth regression where real GDP growth rate is regressed on lagged pc GDP PPP (log). For 2020 to 2028, computes out of sample residuals based on latest WEO projections for GDP growth.

Figure 3.3. Impact of Greater Linkages with China on Growth

(Percentage points impact on growth of moving from non-APD to APD level exposure for each variable)



Source: Eora, World Economic Outlook database, and IMF staff calculations.



Context for De-Risking Scenario

- In-between ‘de-risking’ scenario in the aggregate:
 - Signs of companies increasingly taking de-risking into account.
 - Visible in greenfield FDI & mergers (Aiyar, Malacrino and Presbitero, 2023),
 - ... in detailed trade data for the U.S. (Goldberg et al, 2023; Alfaro and Chor, 2023)...
 - ... and in official policy documents:
“[...] *de-risking is urgently needed. However, we are not pursuing a decoupling of our economies.*” Strategy on China, Government of Germany.

Model-based de-risking simulations

- Potential for sharp fragmentation in certain sectors to restrict access to (high-quality) inputs:
 - Proliferating export bans for certain sectors: U.S. on semiconductors; bans on some mineral exports (Indonesia, China)—see ¶15 in July G20 surveillance note.

Quality-downgrading estimates

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De-Risking: Definitions

- Two dimensions of de-risking:
 - Friend-shoring: change in composition across foreign input sources.
 - Re-shoring: changes between domestic and foreign sourcing.
- Focus on China-OECD.

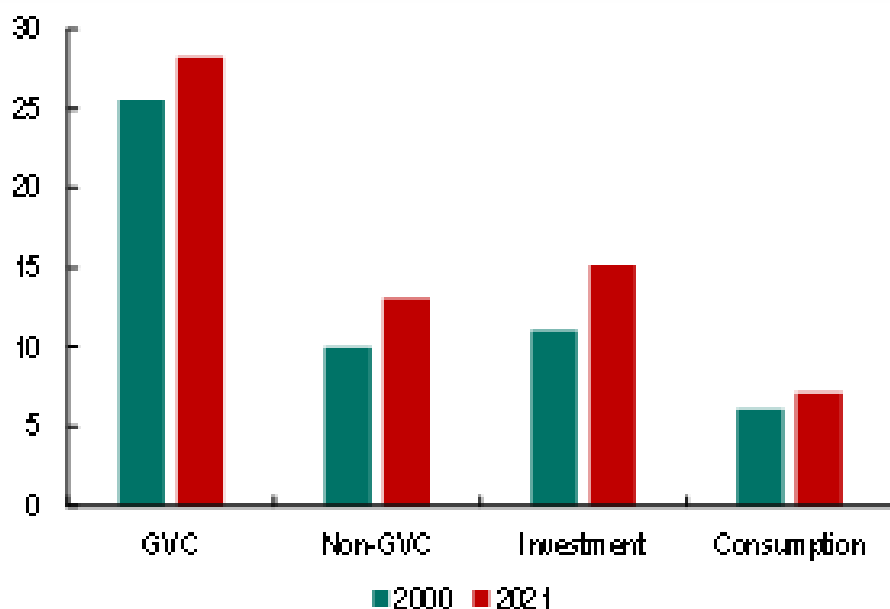
De-Risking: Calibration

Use NTBs to reverse integration that took place along these two dimensions since year 2000

Reverse two-decade integration along re-shoring margin...

1. Foreign Sourcing as Share of Total Sourcing

(OECD countries, percent, by type of goods and services trade)

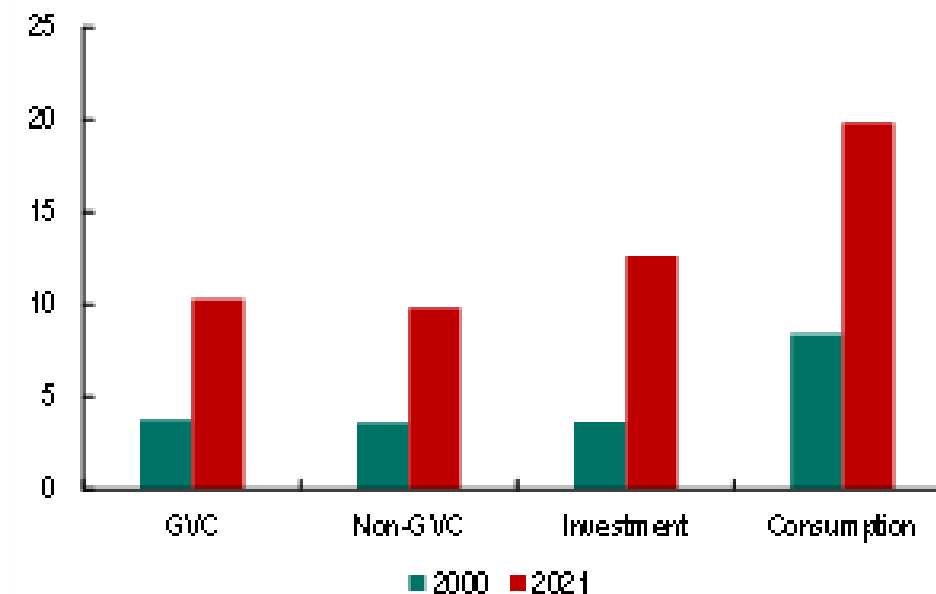


Source: EORA GVC and IMF staff calculations.

... and along friend-shoring dimension.

2. Sourcing from China as Share of Foreign Sourcing

(OECD countries, percent, by type of goods and services trade)



Source: EORA GVC, and IMF staff calculations.

Roadmap

1 Context

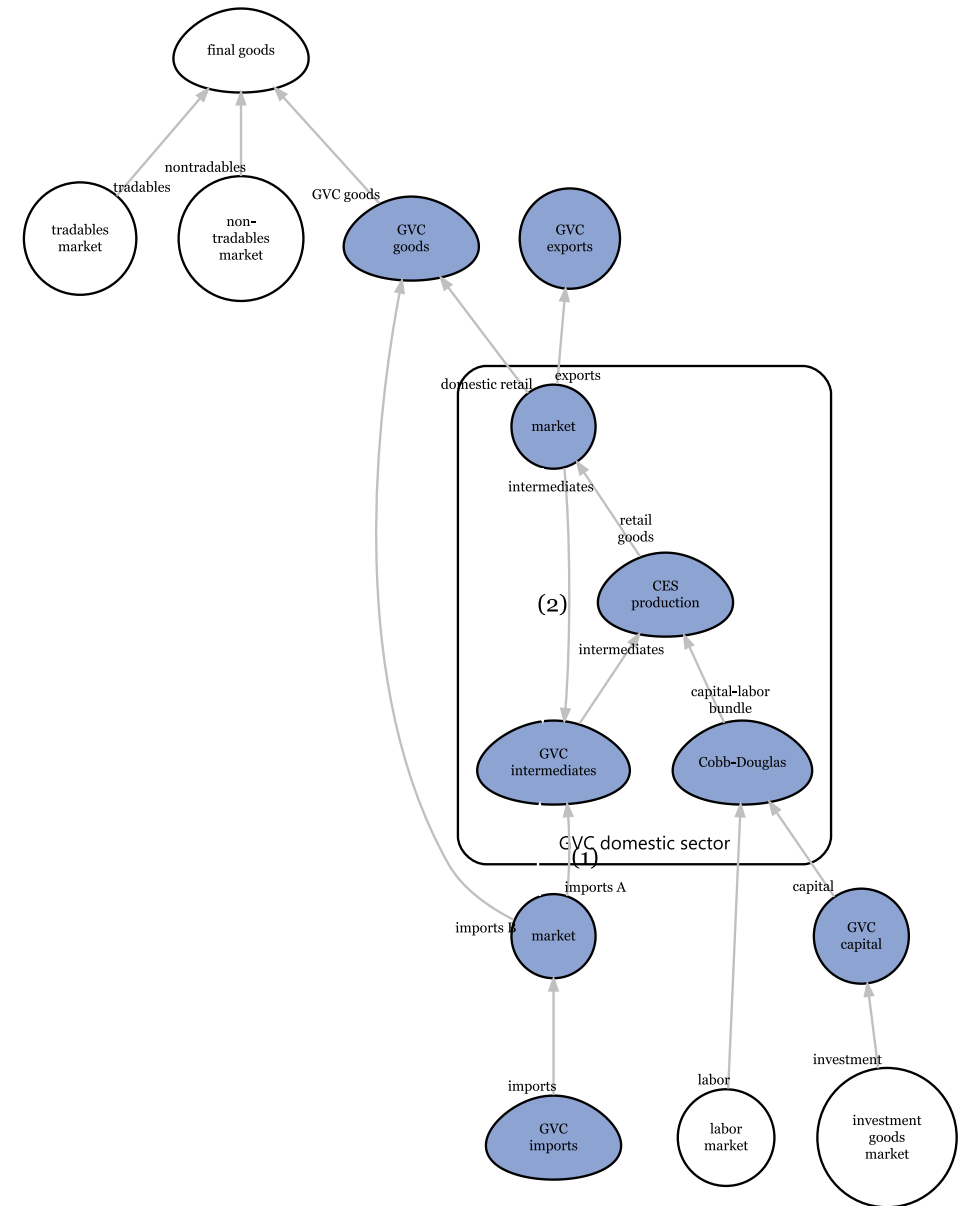
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Model: GIMF with Global Value Chains

- Standard GIMF with one new feature.
- Tradables can be part of global value chains to produce a GVC good.
- Essentially, GVC goods are produced using labor and capital and other GVC goods, both imported and domestic.
- GVC goods (both domestic and imported) are inputs with tradable goods along with nontradables to produce domestic final goods (for consumption and investment).

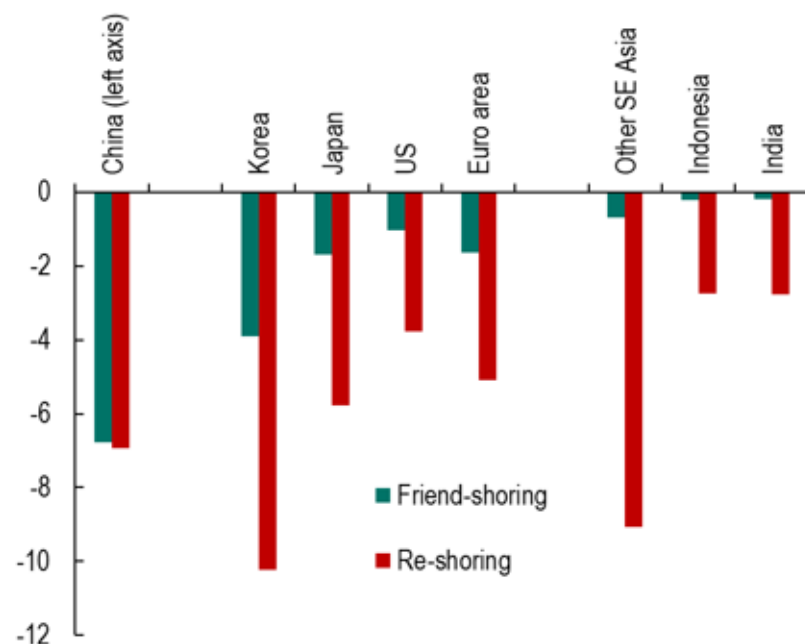


Simulation Results

Trade-diversion benefits from friend-shoring are offset by global slowdown that results from it, while re-shoring is (outside of China) even more damaging.

2. GDP Losses from Friend-Shoring and Re-Shoring Scenarios

(GDP levels, percent deviation from baseline)



Source: EORA GVC, and IMF staff calculations.

- ~Equivalently: for each percentage point of re-shoring and friend-shoring, long-term global GDP losses are roughly of 1.5 and ¼ percent, respectively.

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Export Restrictions and Quality Downgrading

- Recent export restrictions have increasingly targeted access of countries to high-quality inputs.
 - E.g. restrictions aimed at curtailing at higher-end chips, result in slower AI models
- Evaluating the effect of these export restrictions requires a framework to estimate *quality* differentials at a detailed product level.
- We do that using detailed trade data for ~200k products at HS 10 digits over 2002-2018.
- Roughly: compare market shares conditional on price (Khandelwal, 2010).

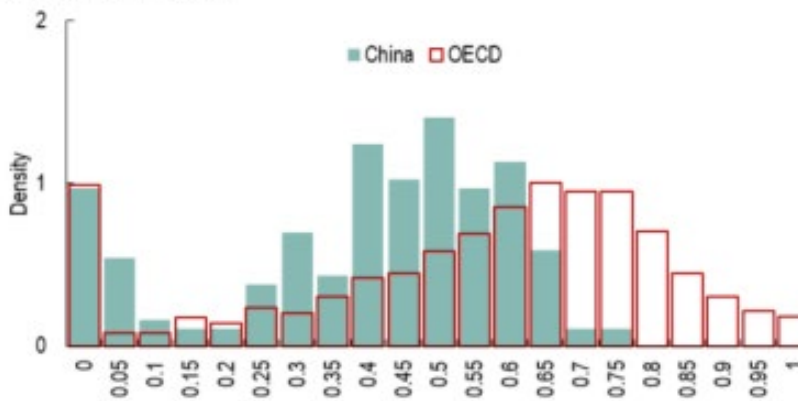
Export Restrictions and Quality Downgrading

The median estimated Chinese product quality in semiconductors is ~one-third lower than the median quality for the OECD...

...but quality frontier is highly product-specific, including in sectors where cooperation is critically needed...

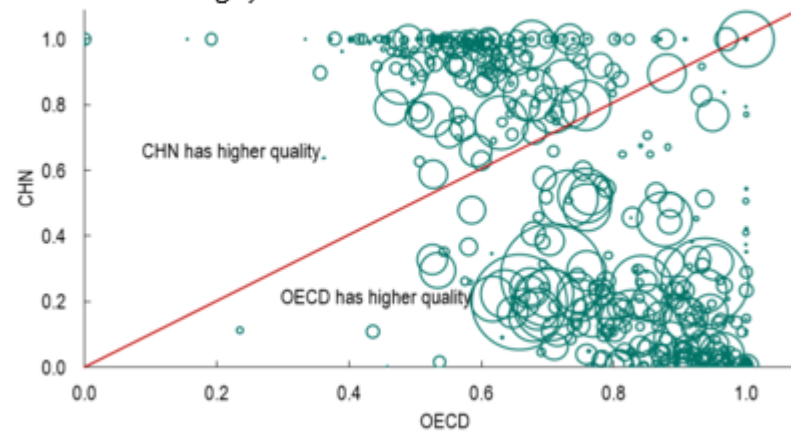
... and with large losses for both sides, even after accounting for possible third-country substitution.

Quality Estimates for Semiconductors (2015-2018 subsample)



Sources: USA Trade Online and IMF staff calculations.
Note: OECD = Organisation for Economic Co-operation and Development.

Quality estimates for environmental goods (2015-2018 average)



Quality downgrading from loss of access to others' inputs (In percent, accounting for ROW sourcing)

