Global Value Chain Reshoring: Overview and Impact on Trade

Jong Woo Kang
Principal Economist for Regional Cooperation and Integration
Economic Research and Regional Cooperation Department
Asian Development Bank

RCI-Policy Open Dialogue Webinar #22 | 14 July 2021

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Drivers of Supply Chain Reshoring

- Trade conflict between the United States (US) and the People's Republic of China (PRC) have encouraged policy makers, especially in the US, to consider reshoring policies.
- Recent events such as the lockdowns due to the COVID-19 pandemic may cause companies to consider reshoring their supply chains as well, although we have yet to see the data in 2020.

Motivations of Reshoring

- Even before the pandemic, policy makers and businesses alike had revisited the rationale behind the off-shoring strategy, driven mainly by cost and operational efficiency.
- (Middle-income countries) Technological progress has enabled many middle-income economies to move up the technological ladder, and consequently to produce key intermediate goods themselves instead of relying on foreign imports.
- (Advanced countries) The development of robotics and artificial intelligence also motivates advanced economies to bring their production facilities closer to customers, tailoring their products to consumer preferences.
- Concerns about the quality of products and services outsourced had also been on businesses' minds. In this sense, COVID-19 and the trade war have accentuated motivation for reshoring rather than triggering it.
- After all, the reshoring trend will likely persist, although its exact form and size is difficult to predict from the reflections on vulnerabilities of global supply chains, just-in-time inventory management systems, and vast spillover effects of the crunch in certain segments of supply chains (e.g., recent shortages in microchips and semiconductors).

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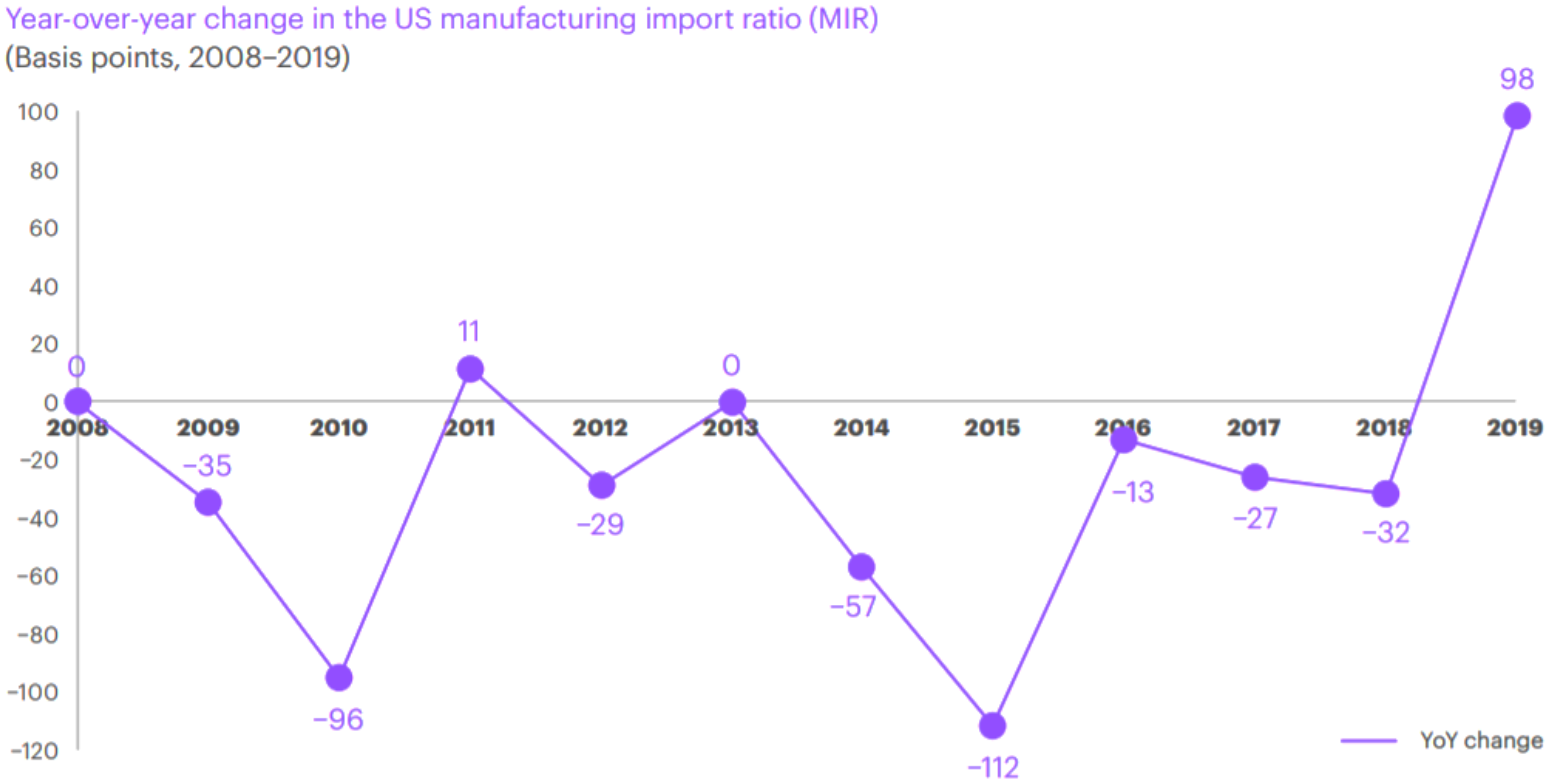
Progress of Supply Chain Reshoring

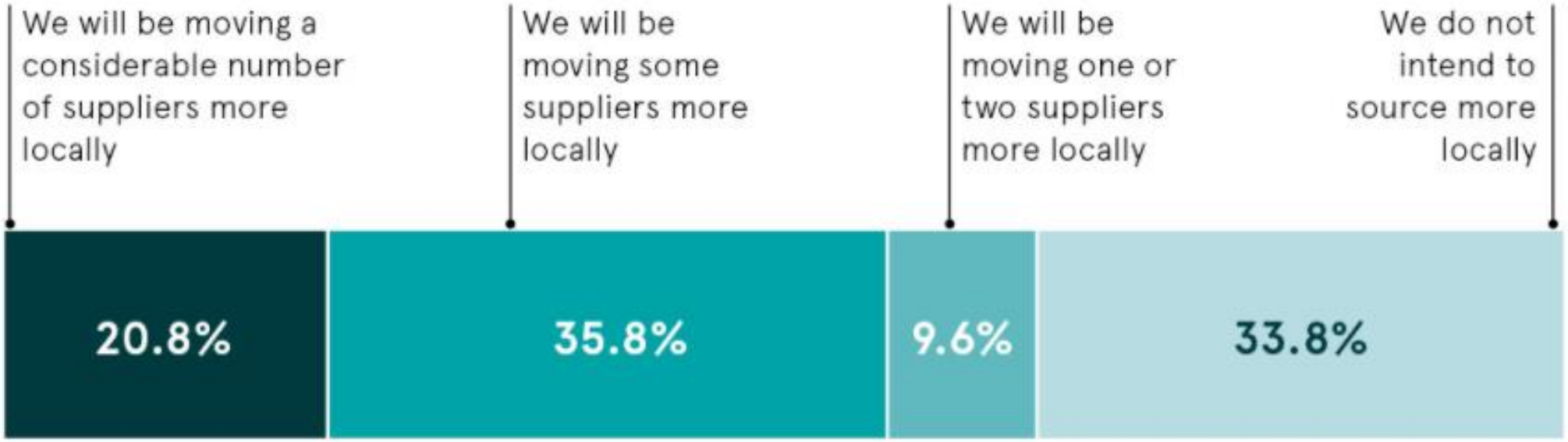


Source: Kearney

- In 2019, the Kearney reshoring index for the US shows an increase of 98 basis points.
- Decline in US manufacturing imports from the PRC due to the trade war, which dropped by 17% from 2018 to 2019 is pointed out as the potential source.

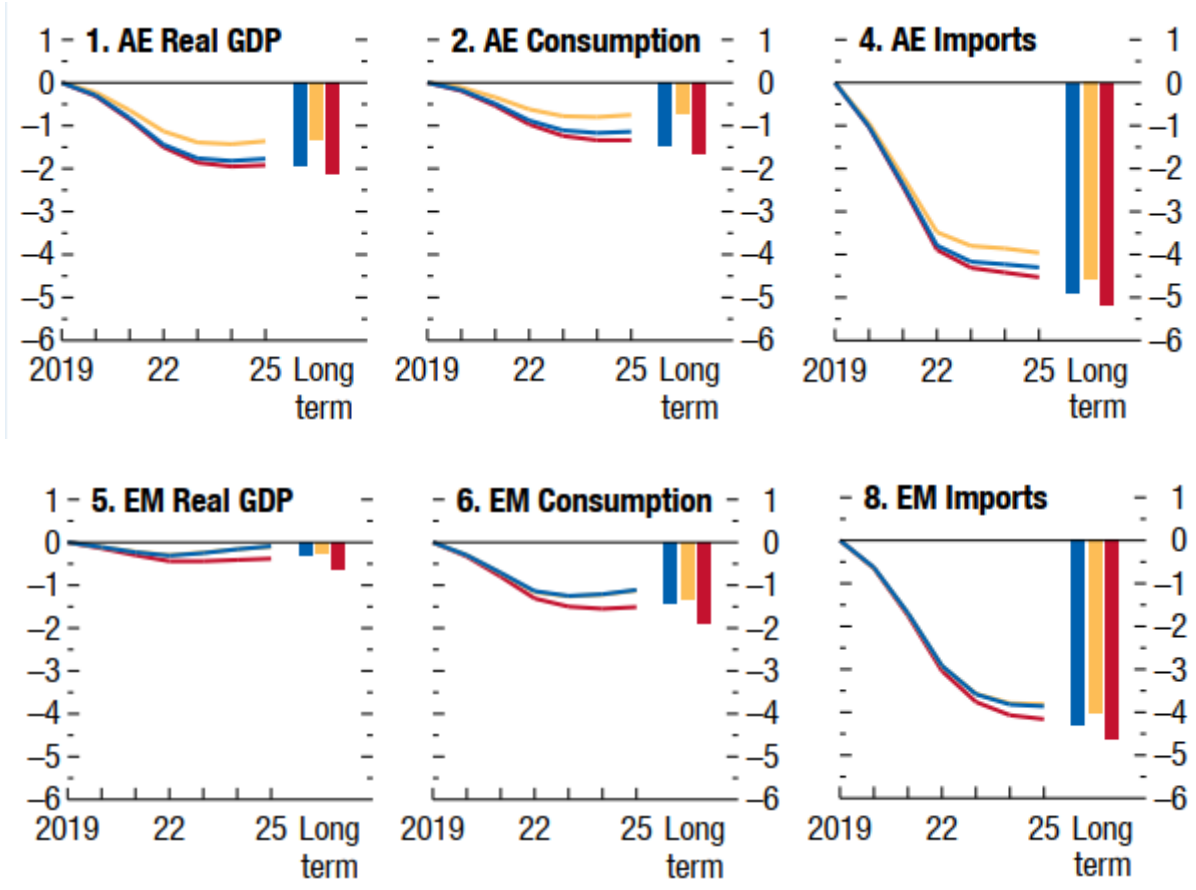
Survey based estimation

- According to Thomas survey report in August 2020, 69% of companies across North America manufacturing and industrial sectors are likely to bring manufacturing production and sourcing back to their region.
- Another survey report by Raconteur in September 2020 found that 66.2% of firms globally are considering reshoring to some degree.



Source: raconteur.net

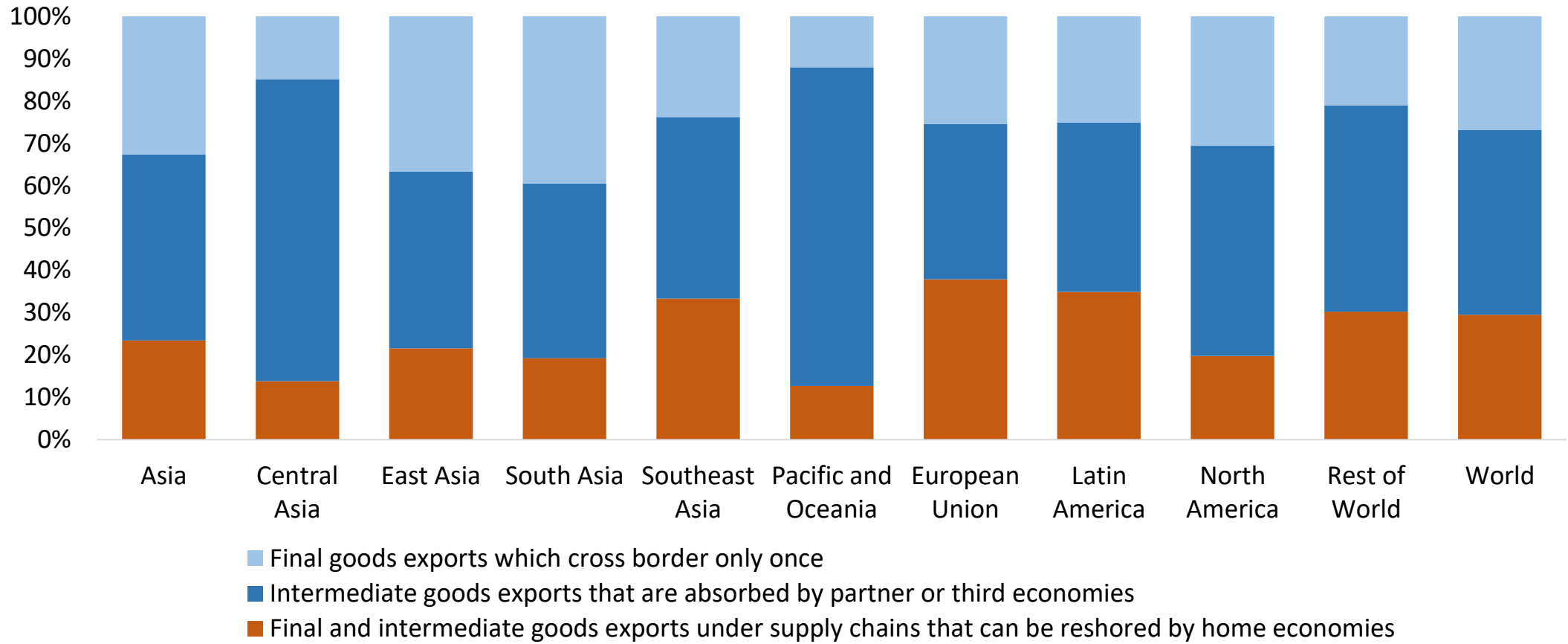
Simulation-based estimation (IMF WEO 2019)



Source: IMF staff estimates.
Note: AE = advanced economy; EM = emerging market.

- Used Global Integrated Monetary and Fiscal Model to estimate the impact of reshoring on output, consumption, trade, and investment.
- If the US, the euro area, and Japan reshore enough production that their nominal imports decline by 10%, advanced economies could experience a 1%–2% decline in output, and emerging economies about 0.5%.

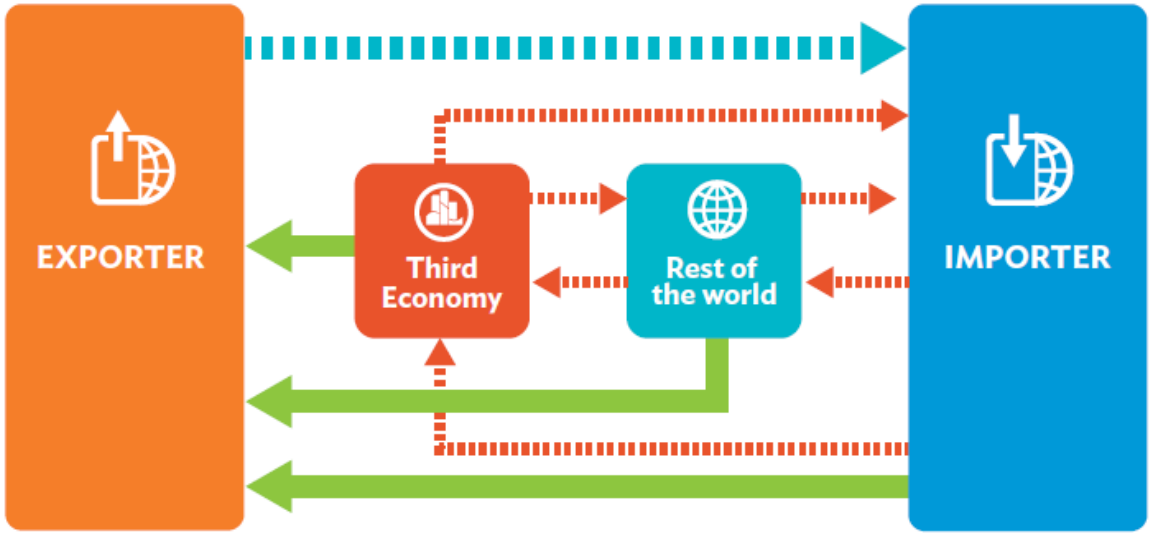
Global Value Chain Decomposition of 2019 Gross Exports



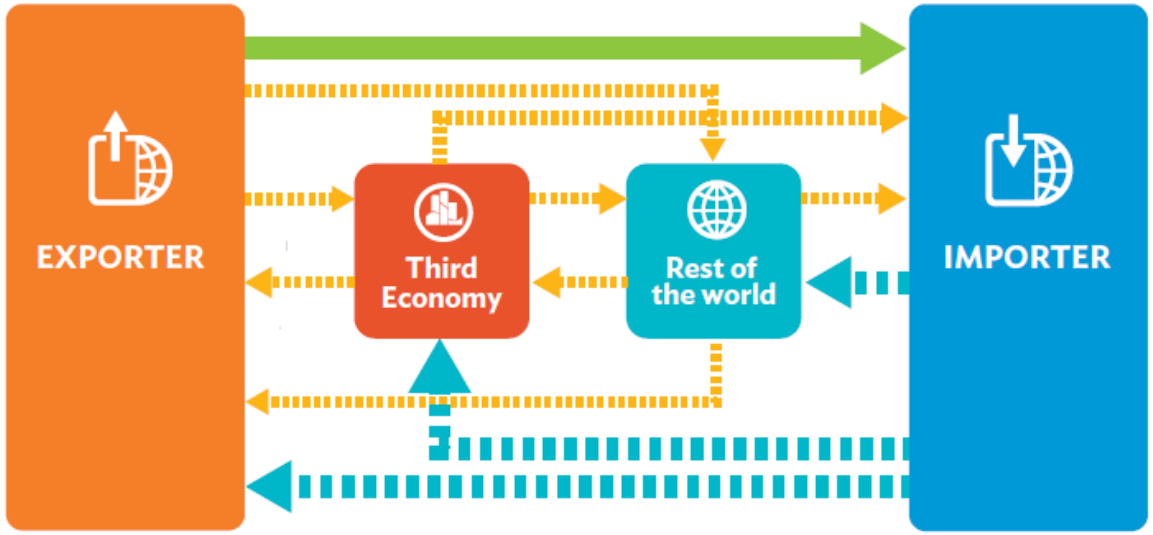
Notes: Exports under supply chains that can be reshored by the home economy include goods with foreign value-added and returned domestic value added. This also includes goods considered as double counted, in which its production involves a back-and-forth movement between the exporter and its direct partner. North America refers to Canada and the United States; Latin America refers to Brazil and Mexico; Pacific and Oceania refers to Fiji and Australia. Please see Appendix 3 for full list.
Sources: Asian Development Bank (ADB) calculations using data from ADB. Multi-Regional Input-Output Tables; and methodology by Wang, Wei, and Zhu (2013).

Backward and Forward Linkages of GVC

Backward Global Value Chain Linkages



Forward Global Value Chain Linkages



Export of supplies to produce intermediate goods for further processing

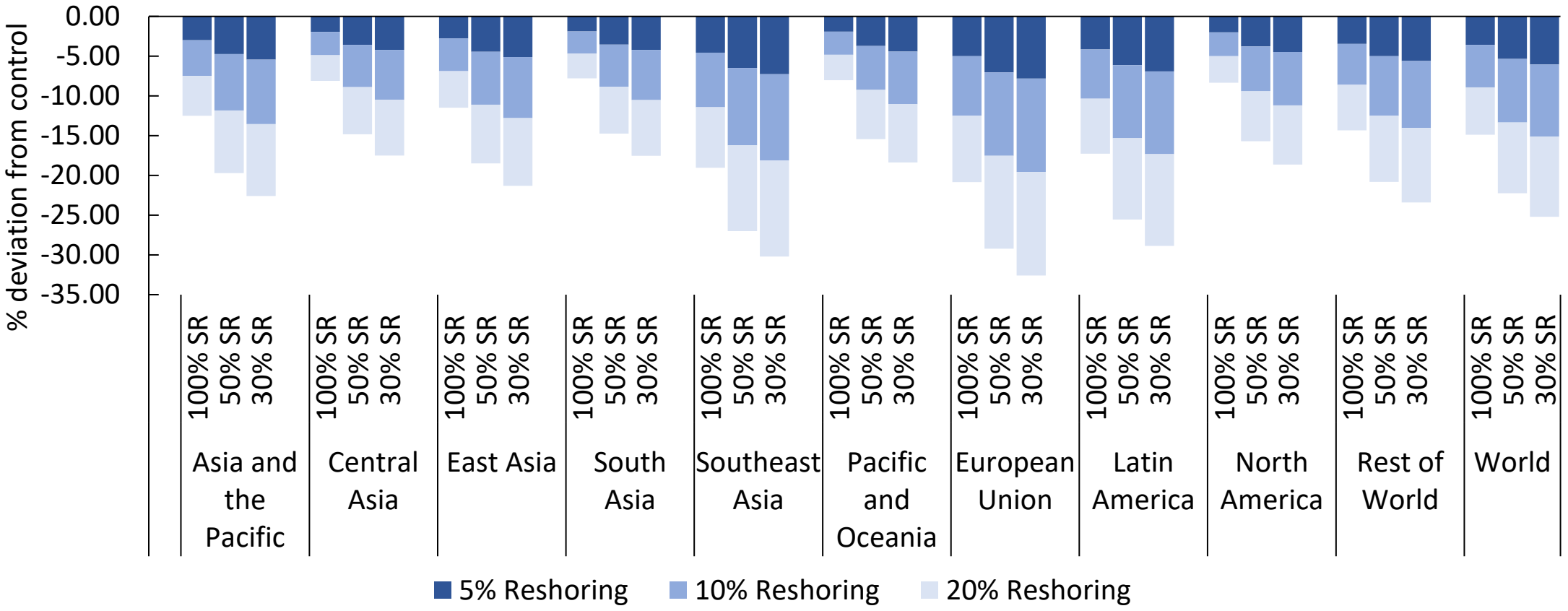
Export of goods for final consumption after crossing borders three times during the production chain, originating from the exporter

Export of Intermediate goods used for further processing

Export of final or intermediate goods using processed intermediate goods

Source: ADB 2021.

Impact of Reshoring on Imports (%)



SR = substitution rate.

Notes: Reshoring rate refers to the share of imported intermediate goods and outsourced production that the main exporter will cut-off. Substitution rate refers to the capacity of local manufacturers to produce enough intermediate goods to compensate for the cut-off of imported intermediate goods and outsourced production. North America refers to Canada and the United States; Latin America refers to Brazil and Mexico; Pacific and Oceania refers to Fiji and Australia.

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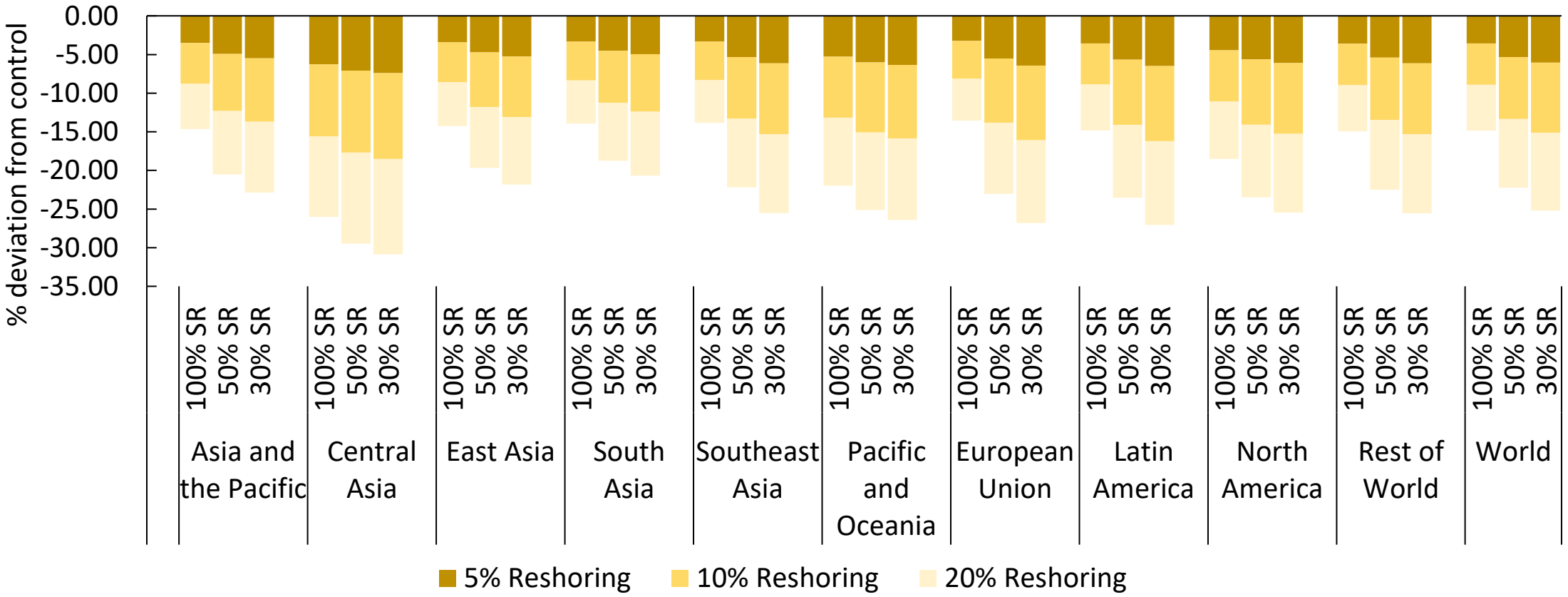

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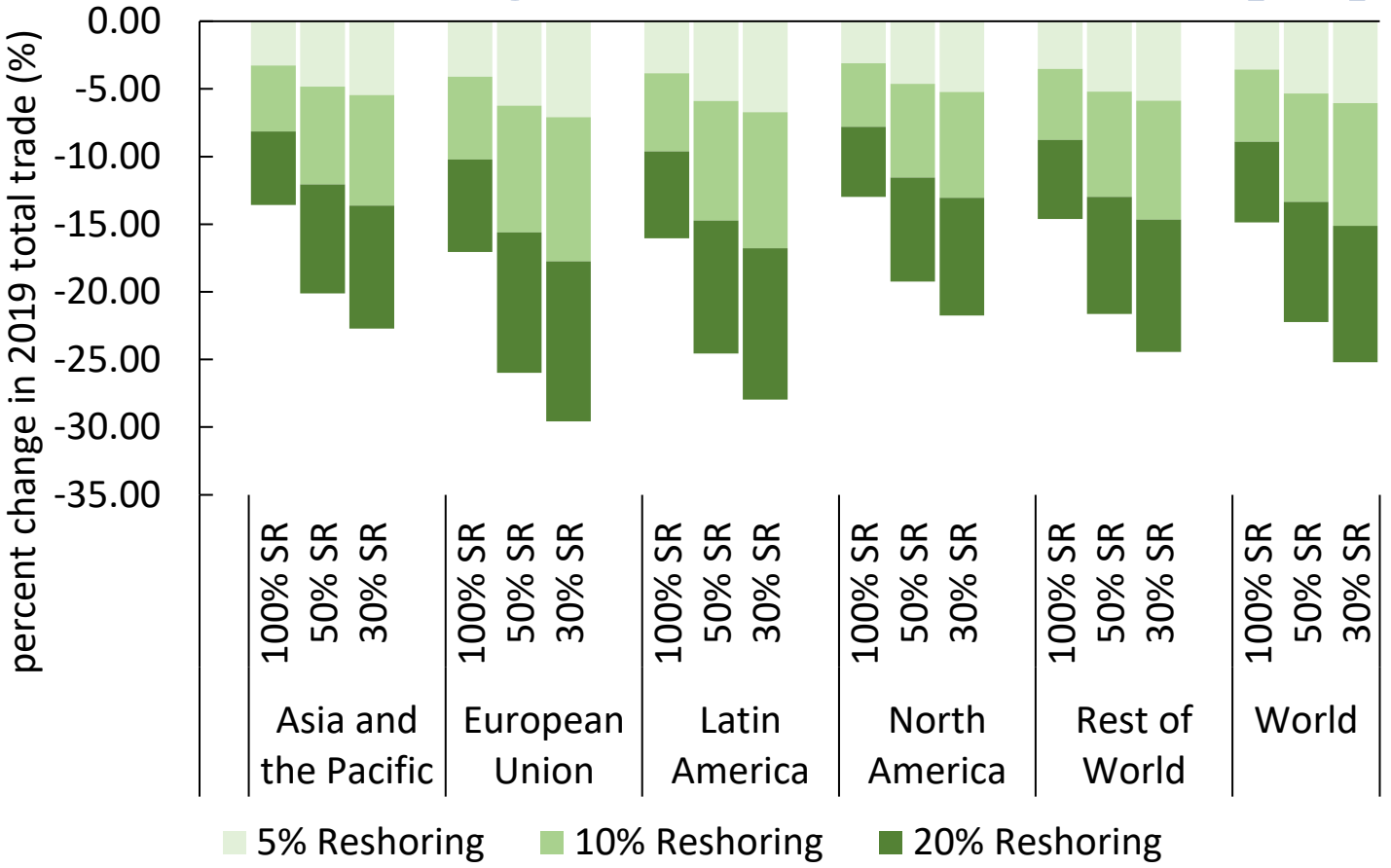
Impact of Reshoring on Total Trade (%)



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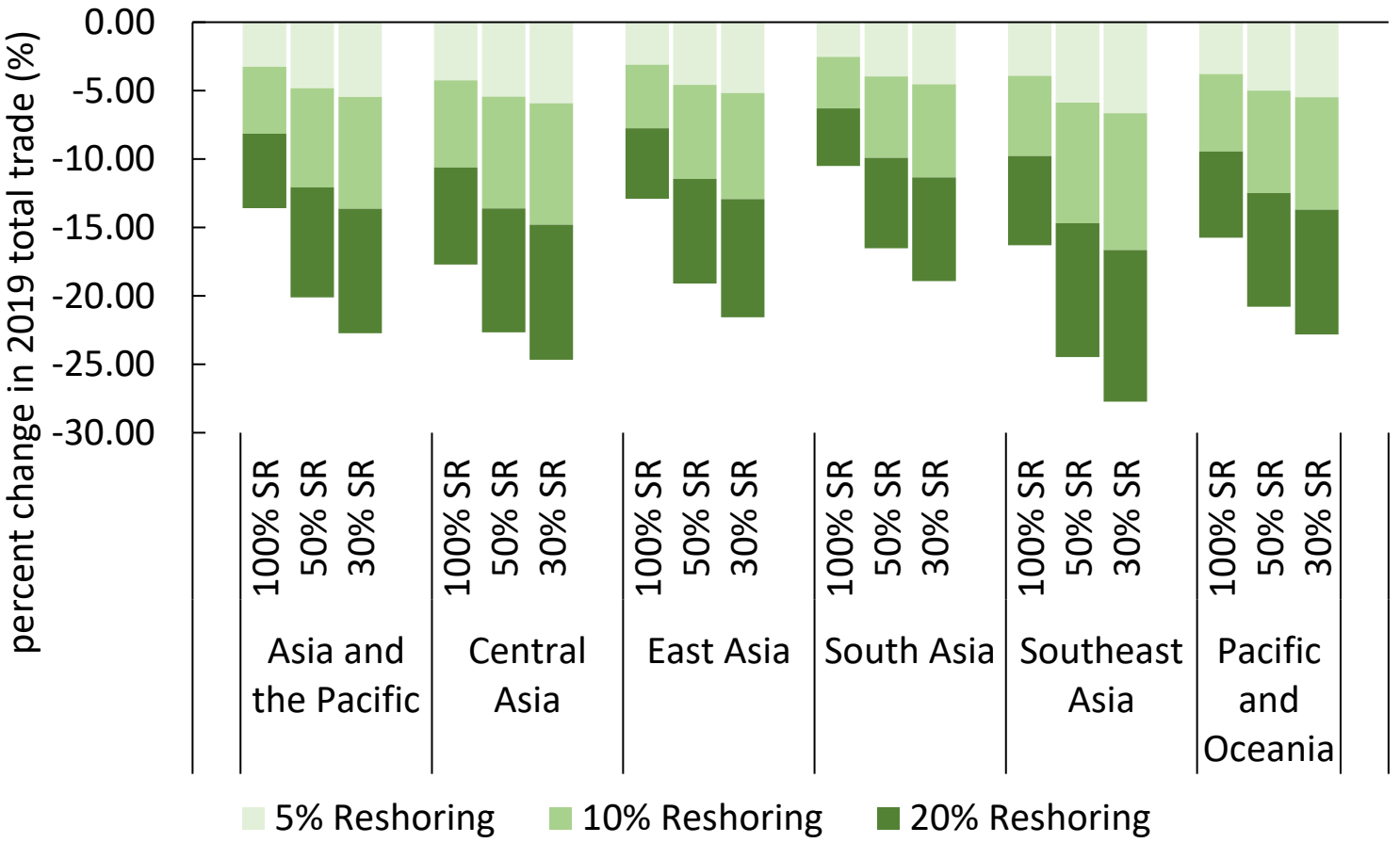

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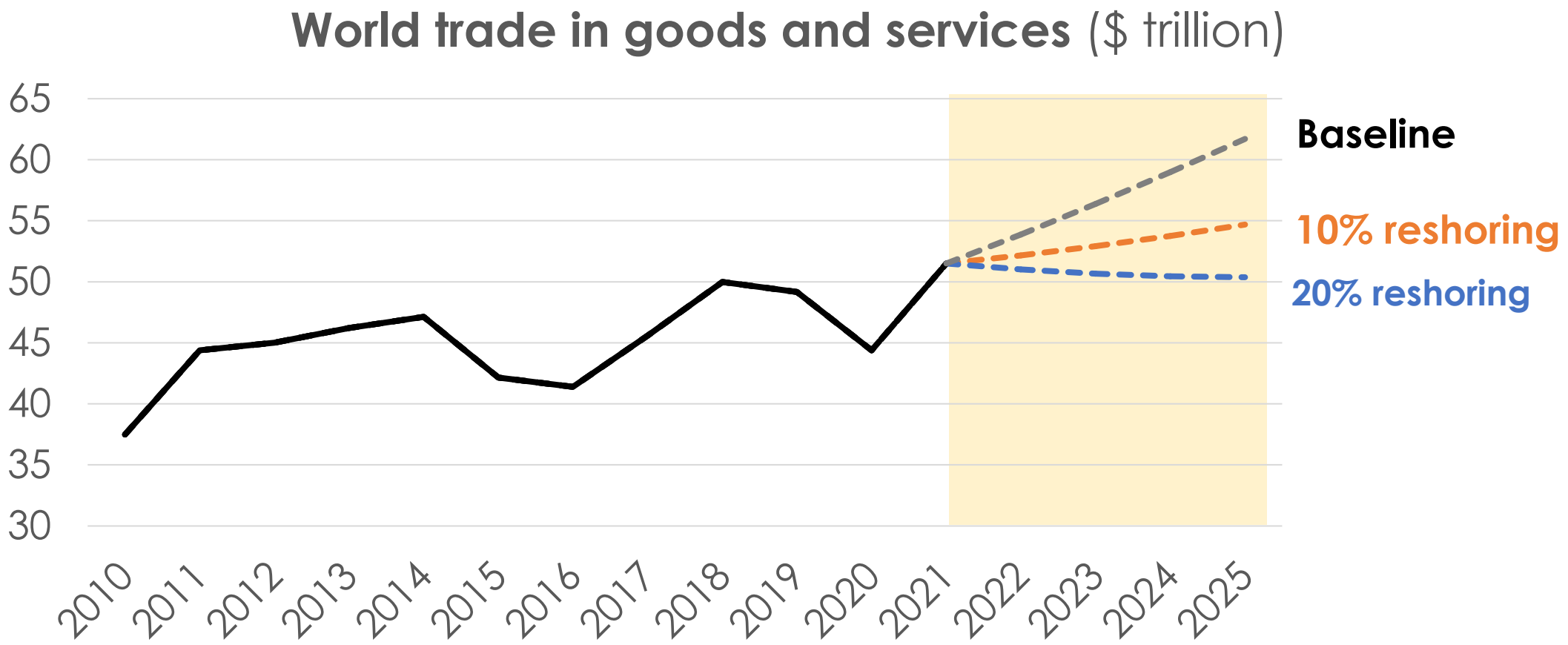
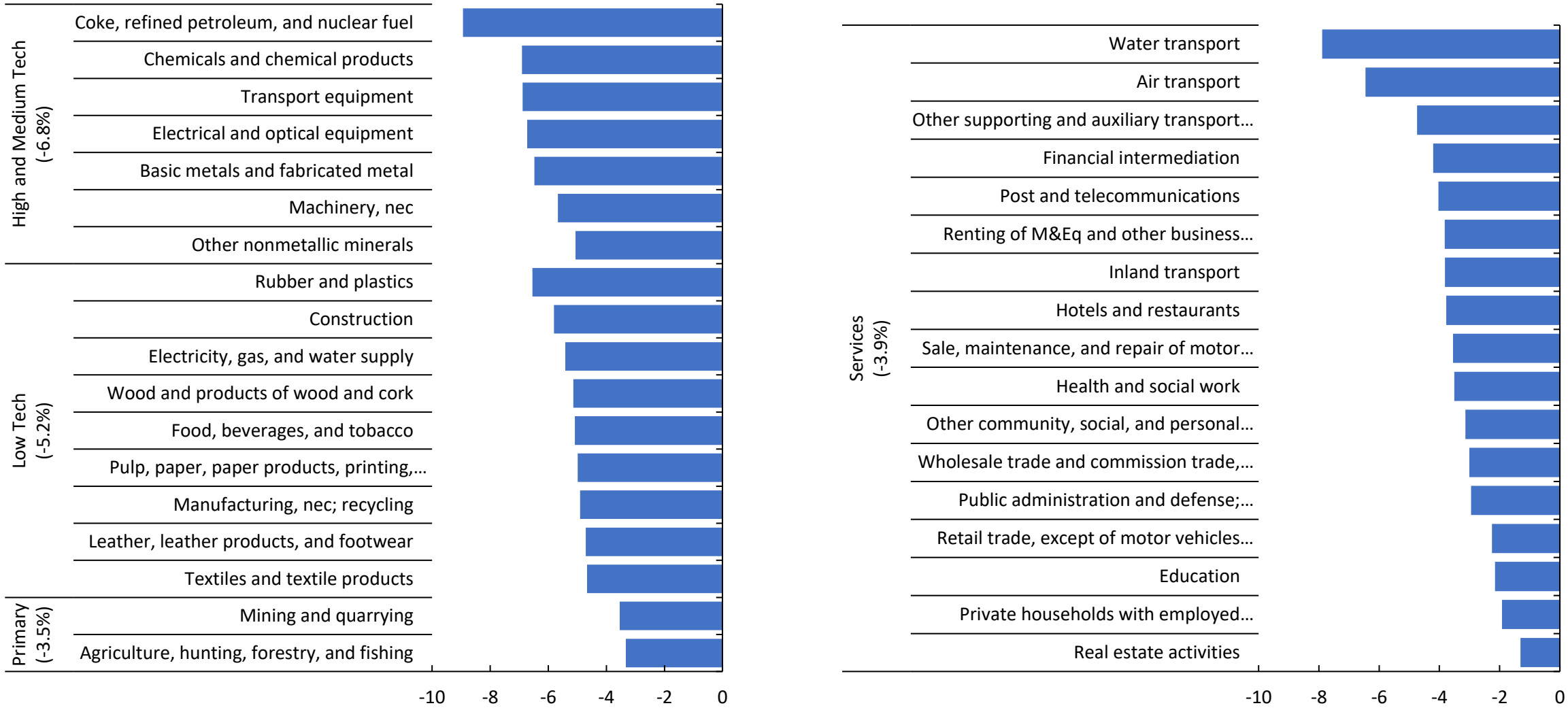
Estimated impact of supply chain reshoring on trade



Notes: Based on assumption of 50% substitution rate, which means that 50% of reshored capacity is replaced by domestic production. Reshoring rate (10% and 20%) refers to the share of imported intermediate goods for further processing for exports and outsourced production that the main exporter will cut-off. IMF World Economic Outlook April 2021 forecasts were used to estimate world trade in goods and services for 2021 and average trade growth in 2010-2021 for the baseline 2022-2025 period.
Sources: ADB calculations using data from ADB. Multi-Regional Input-Output Tables based on methodology by Wang, Wei, and Zhu (2014); International Monetary Fund. World Economic Outlook April 2019 and October 2020 Databases; and World Bank. World Development Indicators.

Decline in Total Trade per Industry (%)



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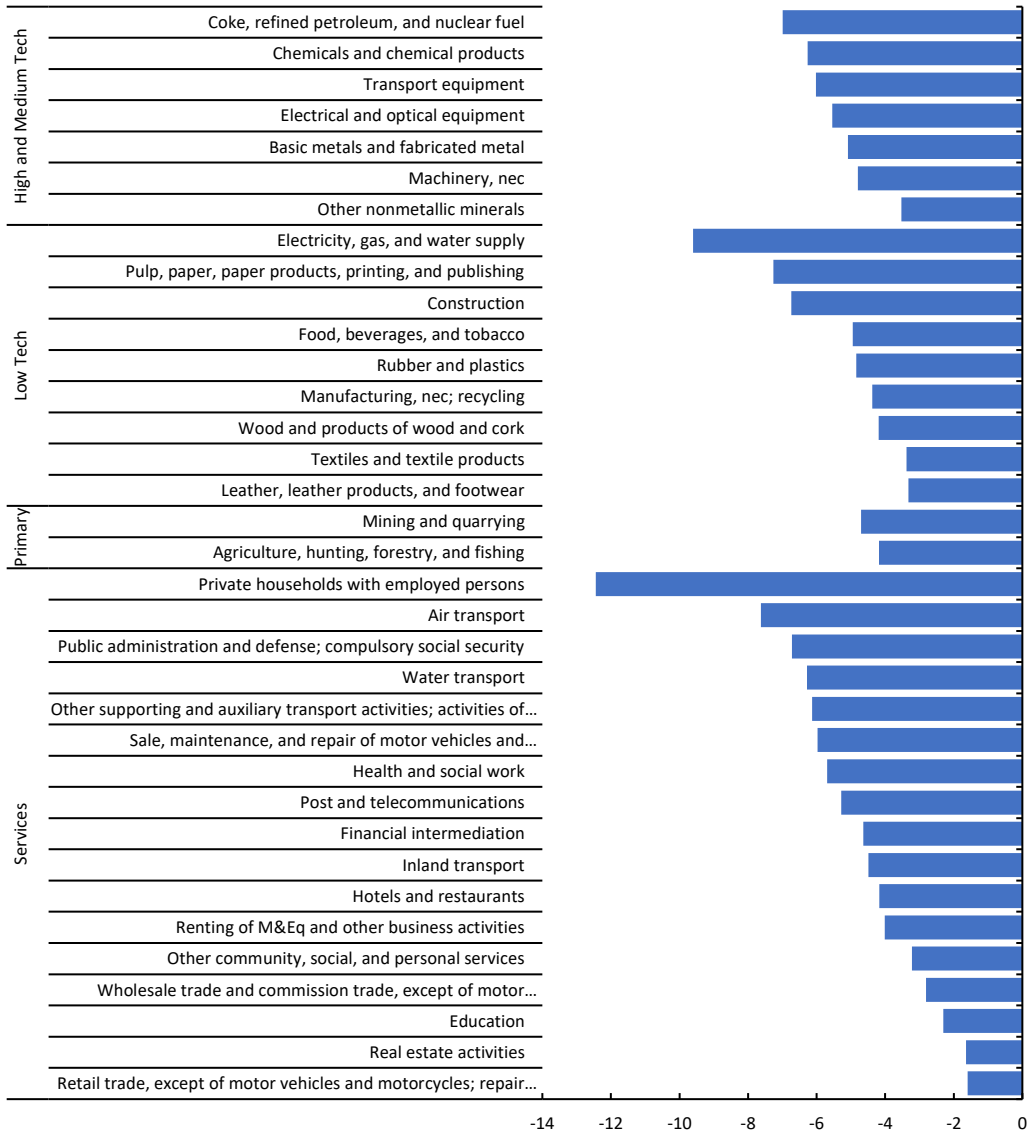
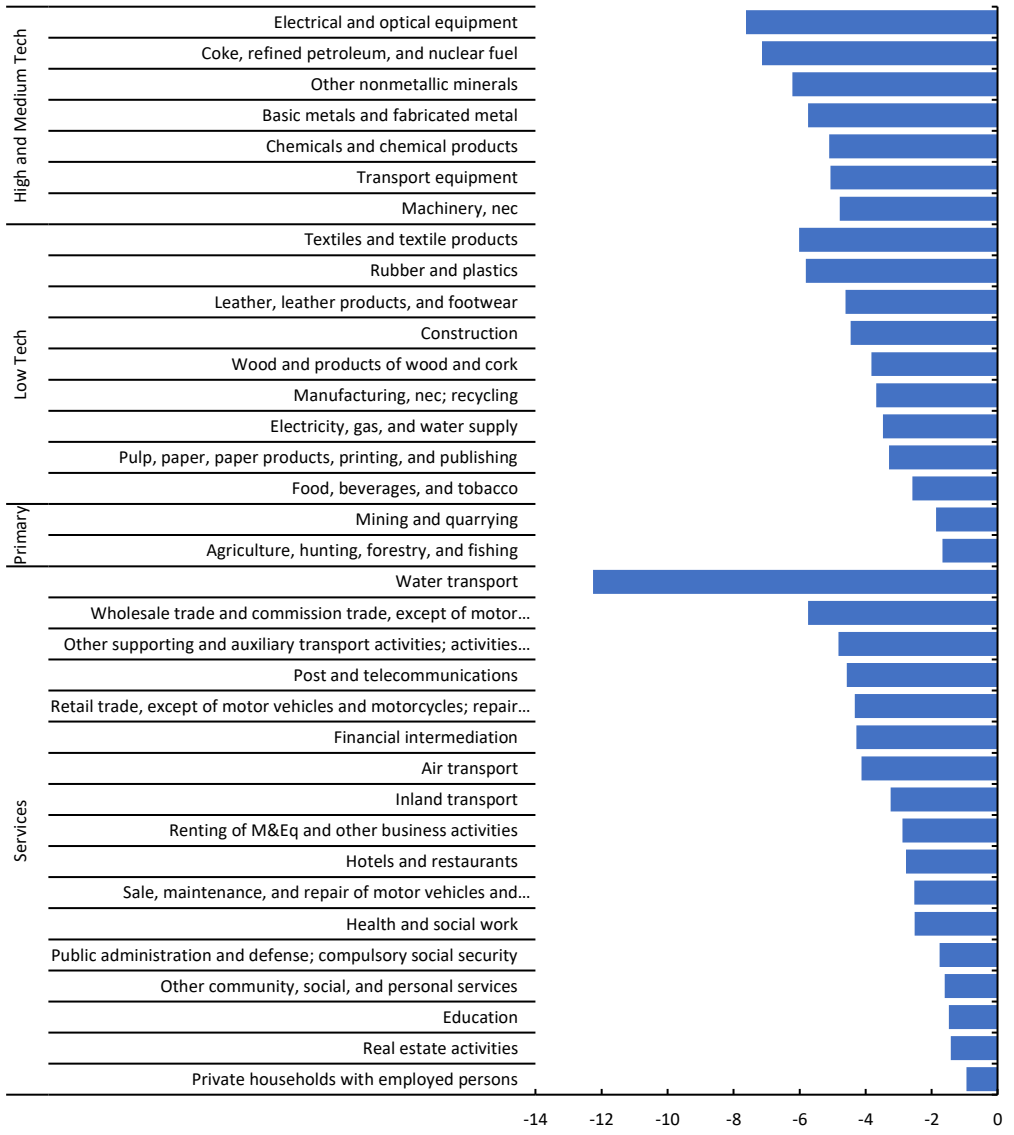
Decline in Asia's Exports and Imports per Industry (%)

Decline in Asia's Exports (%)



Decline in Imports (%)



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Conclusion

- Recent events, including trade conflicts and COVID-19 lockdowns, have prompted policy makers and businesses to consider reshoring of supply chains to mitigate the adverse effects of these trade shocks.
- Using the ADB's MRIO Tables to simulate the direct and spillover effects of reshoring, estimates suggest that reshoring by 5%–10% can lead to a 5.3% to 13.3% decrease in global trade from its base value.
- Impact will be heterogeneous across sectors and regions depending upon the depth of supply chain linkages.

Thank you!

ERCD/ERCI team