

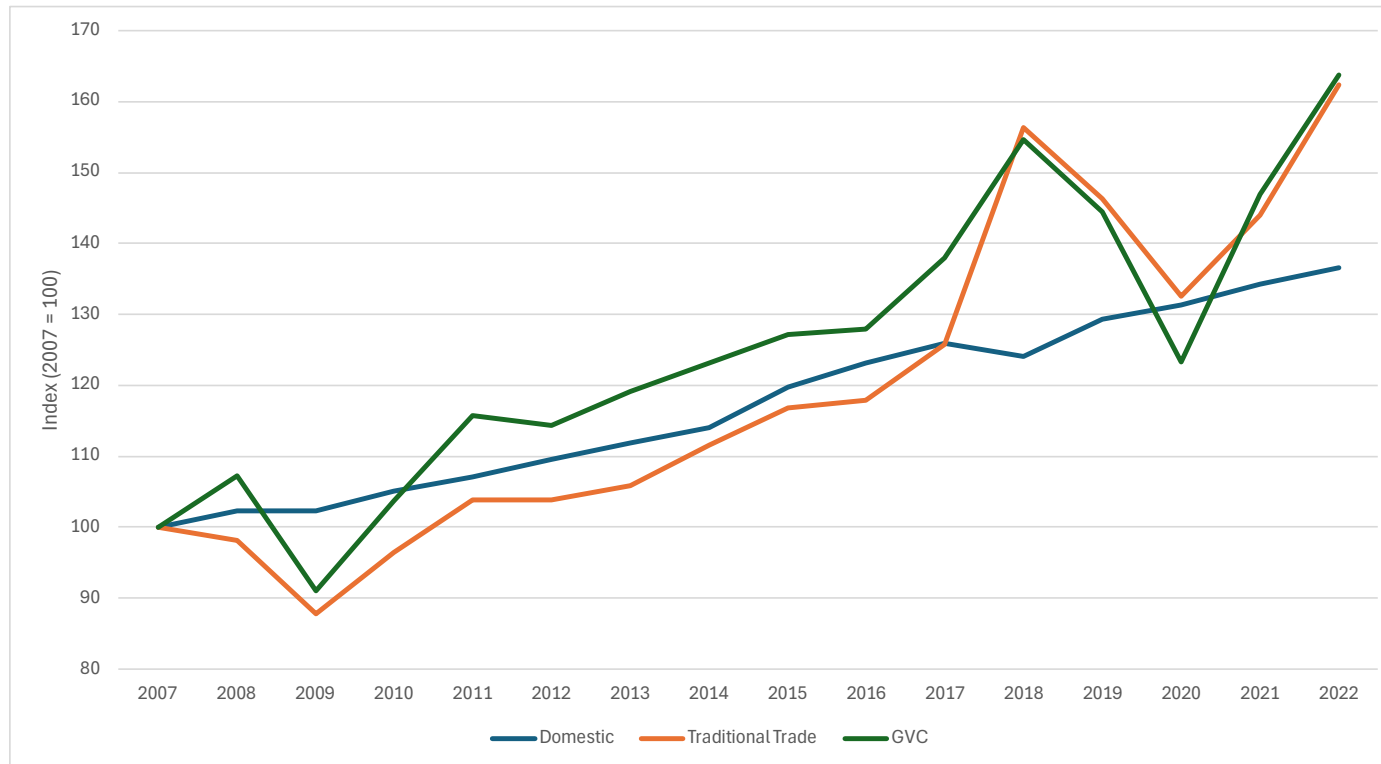
Developments in Asia's GVC Integration in a Global Perspective

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Background

- For more than two decades, GVCs have been considered as the main development paradigm
- But concerns around the stagnation of GVCs, ‘slowbalization’, and the role of, geopolitical tensions
 - Increased geopolitical rivalry (trade wars, armed conflict) and strategic autonomy
 - Shocks
 - Global Financial Crisis
 - COVID-19 pandemic
 - Climate-related extreme weather events
 - Automation technologies
- Aims
 1. Does (ADB) data support the narrative of stagnating GVCs? Do GVC dynamics in Asia differ from those in other regions?
 2. Are there consequences of changing GVC patterns for macro performance?
 - Specifically output growth volatility

Value-added due to GVCs has risen faster than from other sources over much of the past two decades

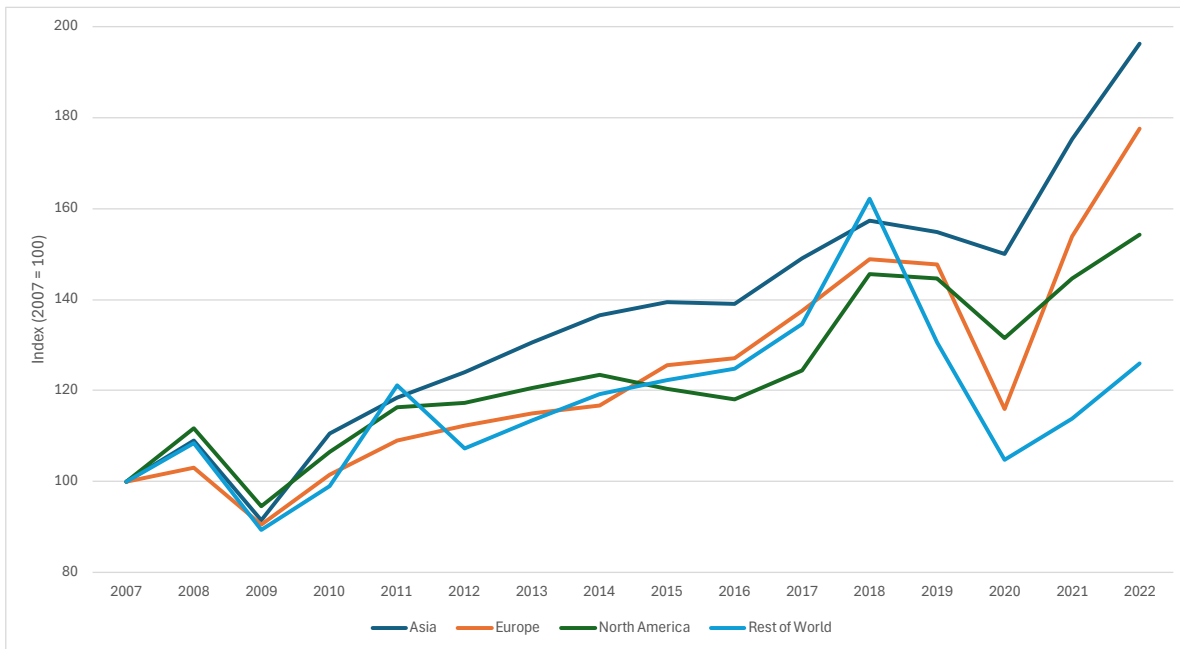


- Decomposition of Wang et al. (2017)
 1. Value-added domestically produced and consumed (no international trade)
 2. Value-added domestically produced and embodied in final product exports (traditional trade)
 3. Value-added embodied in the export (import) of intermediate goods

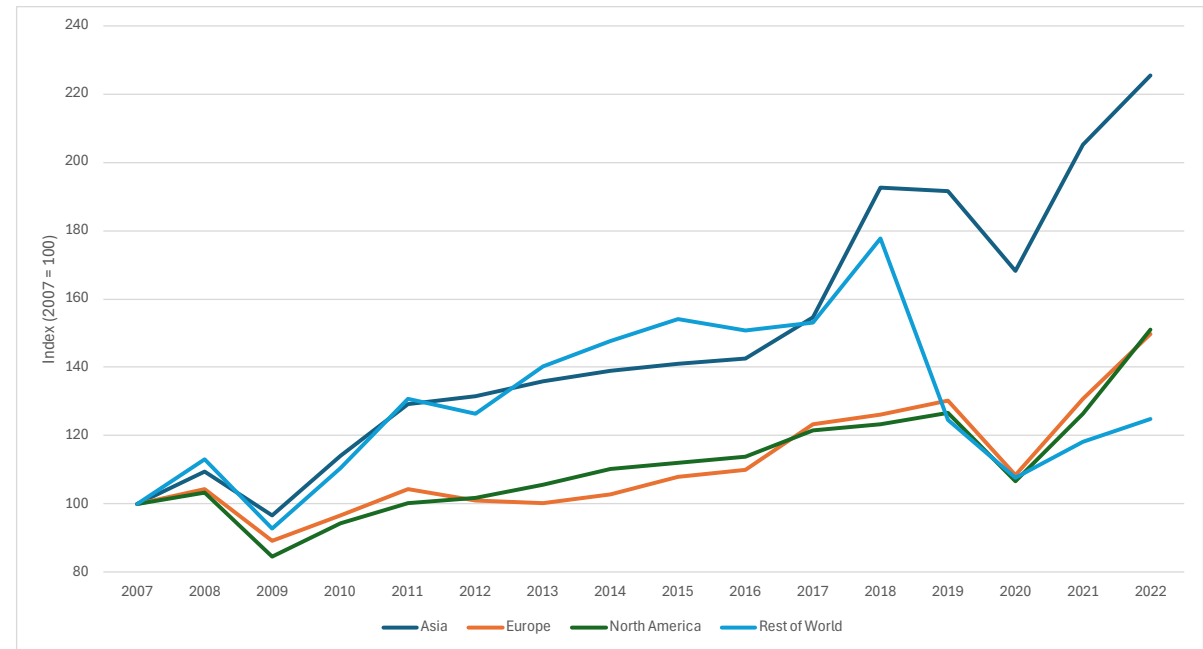
Source: ADB's Multi-Region Input-Output Tables (constant prices)

With Asian economies accounting for a substantial share of this growth

Forward Linkages in GVCs



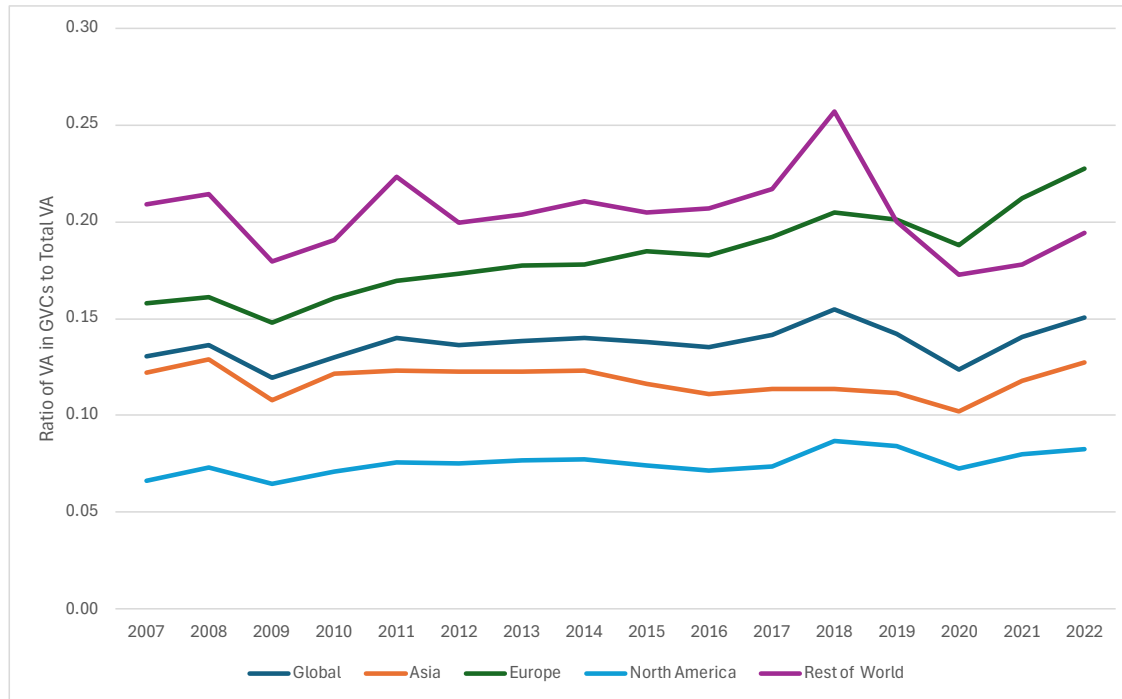
Backward Linkages in GVCs



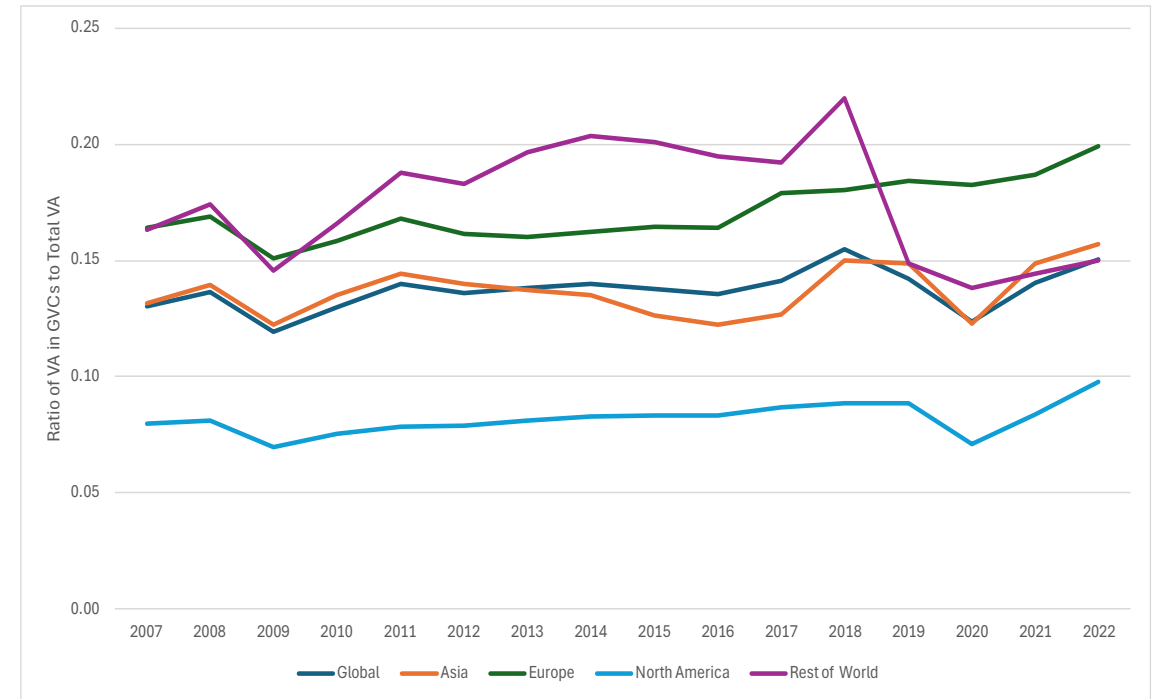
Source: ADB's Multi-Region Input-Output Tables (constant prices)

Geopolitical Fragmentation – Much ado about nothing?

Forward Linkages in GVCs



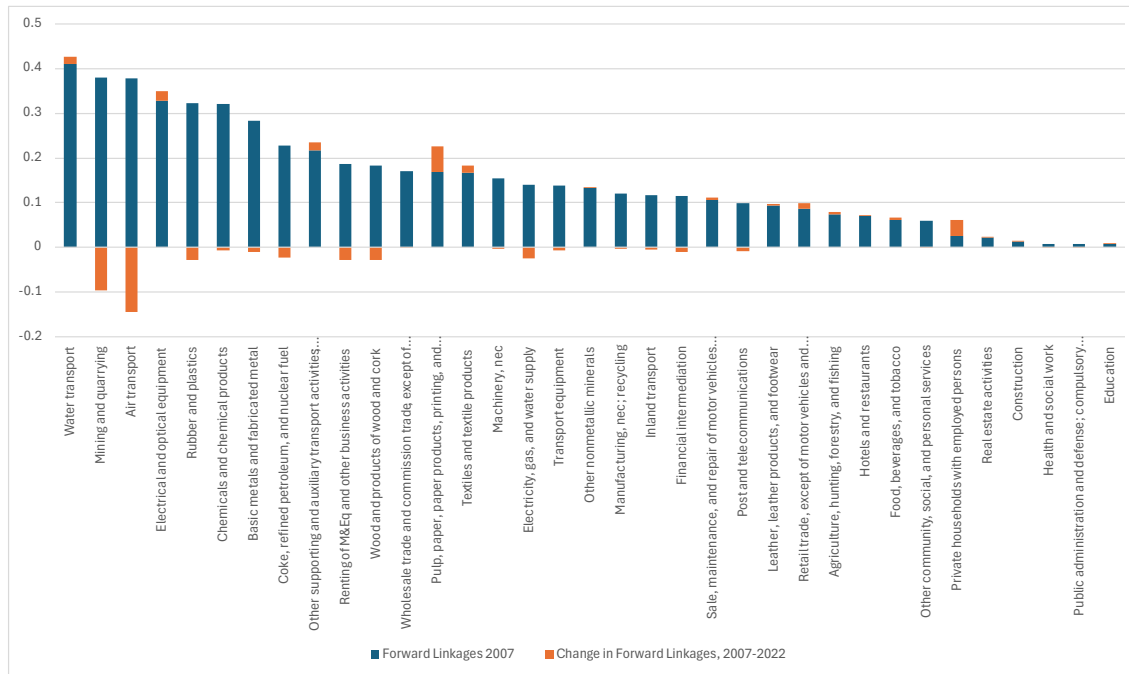
Backward Linkages in GVCs



Source: ADB's Multi-Region Input-Output Tables (constant prices)

With few major changes in Asia's GVC participation at the sector level

Forward Linkages in GVCs



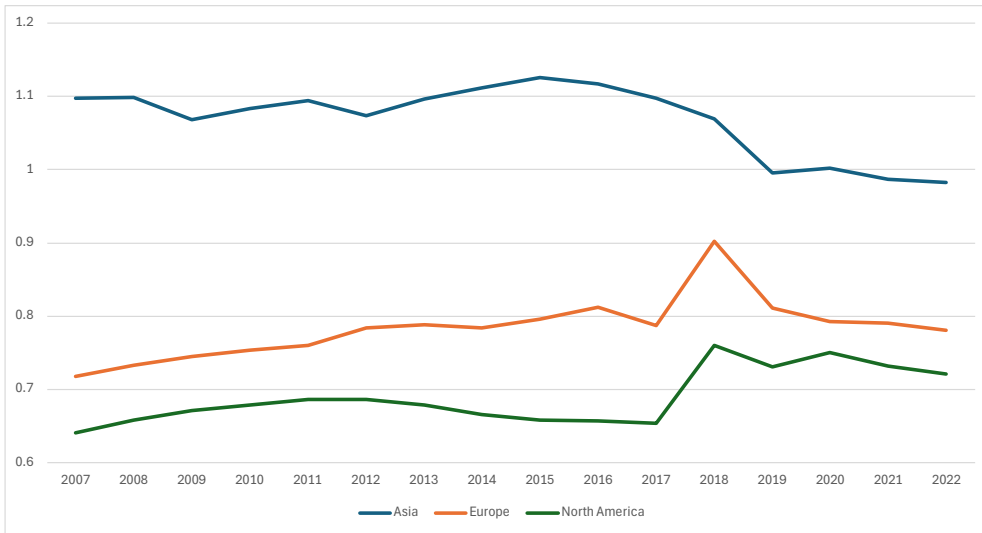
Backward Linkages in GVCs



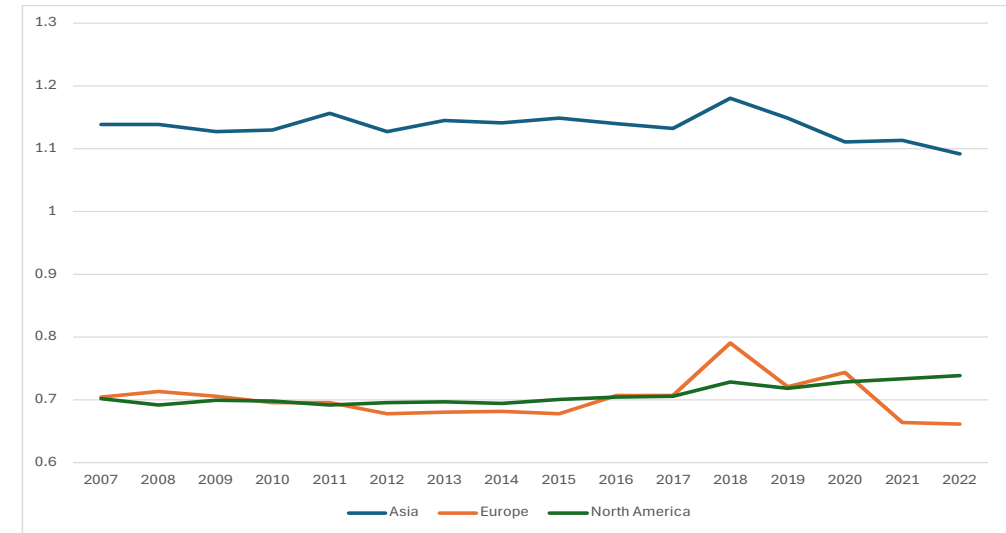
Source: ADB's Multi-Region Input-Output Tables (constant prices)

Asia has a more geographically dispersed GVC network, though signs of regionalization

Forward Linkages in GVCs



Backward Linkages in GVCs



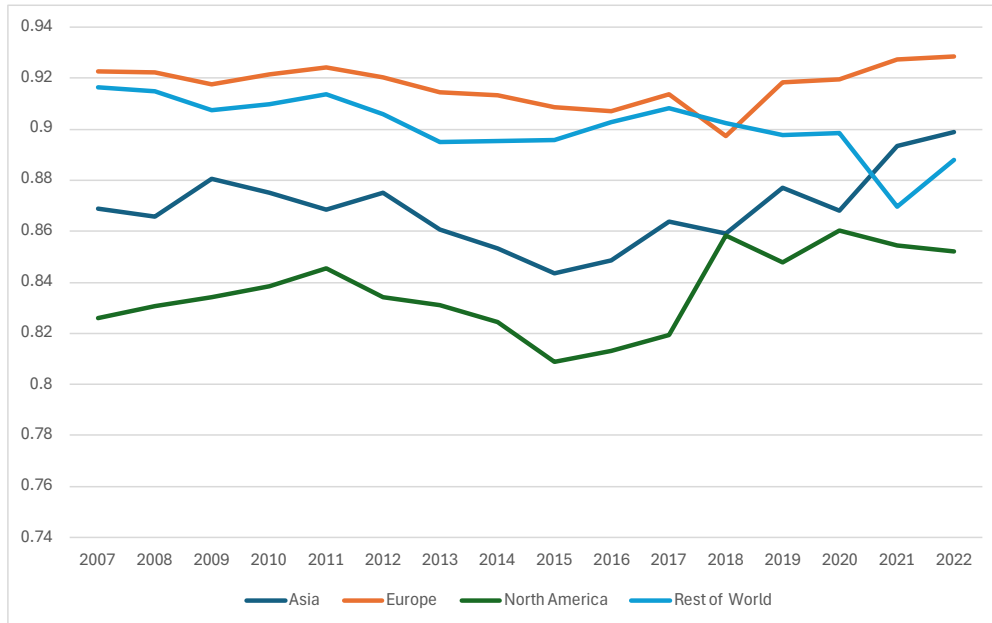
Source: ADB's Multi-Region Input-Output Tables (constant prices)

- Geographical distance in GVCs

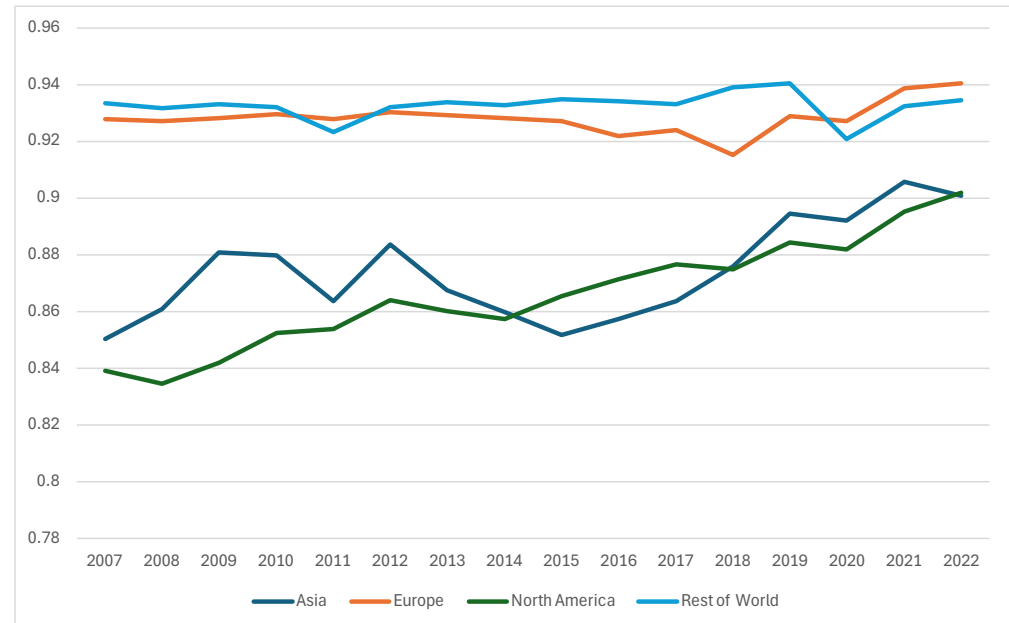
- Constructed as the weighted average distance to partners in GVCs, with weights being the share of GVC partner in total value-added due to GVCs
- Indicator is then standardised by unweighted distance

And Asia has increased the diversification of its GVC partners (from a relatively low level)

Forward Linkages in GVCs



Backward Linkages in GVCs



Source: ADB's Multi-Region Input-Output Tables (constant prices)

- Diversification is calculated as 1 – minus the Herfindahl index, the latter constructed using the shares of GVC partners in total value-added in GVCs

Consequences of Changing GVC Patterns

- GVCs may be a double-edged sword
 - Enhancing productivity, but amplifying effects of shocks (Baldwin & Tomiura, 2020) and contributing to macro volatility (Bonadio et al., 2020)
- Has led to suggestions for increased reshoring, nearshoring, de-risking
 - European Parliament (2021), G7 Communique (2023)
- With others arguing that these threats to GVCs require increased diversification of GVCs
 - ECB (2023), OECD (2020)

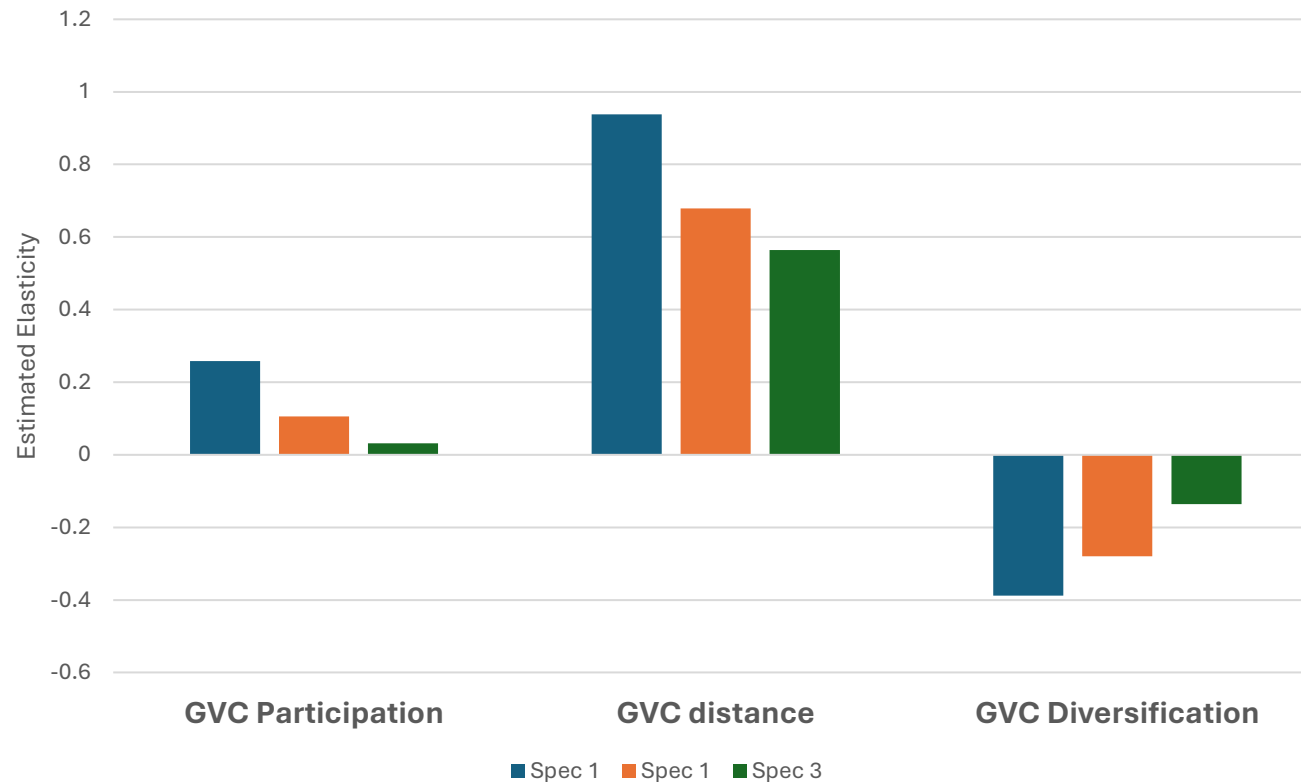
Openness and Macroeconomic Volatility

- Di Giovanni and Levchenko (2009) argue that there are two main effects of openness on volatility:
 - Openness exposes countries to external shocks, a source of macroeconomic volatility
 - Openness is correlated with sector volatility and export specialisations
 - Openness lowers sensitivity of an economy to domestic shocks
 - Openness can change the co-movement between sectors, isolating open sectors from domestic fluctuations
- Theory is similarly ambiguous when considering GVCs specifically
 - D'Aguanno et al. (2021)

Do GVCs and the structure of GVCs impact upon macroeconomic volatility?

- Relate indicators of GVC participation to the volatility of output growth at the sectoral level over the period 2007-2022
- GVC indicators
 - GVC participation rates
 - Geographical distance to GVC partners
 - Is a more geographically spread value chain associated with higher volatility?
 - Diversification of GVC partners
 - Are more diversified GVCs associated with lower volatility?
- Focus is on backward linkages in GVCs

Output volatility is associated with GVC participation and the structure of GVCs matter



- GVC participation rates are positively related to output volatility
- More distant GVC linkages are associated with higher volatility
- More diversified GVC linkages are associated with reduced volatility

Spec 1 = no country or sector fixed effects; Spec 2 = country fixed effects; Spec 3 country and sector fixed effects

Summary

- At the aggregate level, GVC participation rates have been quite resilient to the various shocks impacting the global economy
- Asia's performance in GVCs has also been resilient, though shows different dynamics relative to other regions
 - More backward integrated, which has strengthened over time
 - More globally integrated, though becoming more regionalized
 - Becoming more diversified (from an initially relatively low level)
- Do these dynamics have consequences for macro volatility?
 - Some evidence of higher rates of GVC participation being associated with higher sectoral volatility
 - Composition effect? – Volatility in GVC production is higher than for domestic production
 - More geographically dispersed GVCs can result in higher volatility
 - Having a more diversified set of suppliers in GVCs can reduce volatility