

The Deglobalization Myth: How Asia's supply chains are changing

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Executive summary

Global supply chains have continued to expand, despite talk of deglobalization and nearshoring. Regional sourcing has fallen across most major world regions, suggesting nearshoring may not yet be a prevalent strategy. Since the early 2010s, rising labor costs in China have caused many enterprises to explore alternative manufacturing bases and sourcing strategies to maintain their competitiveness. More recent disruptions such as the US-China trade war, Covid-19 pandemic, and sanctions on Russia have further prompted businesses to re-evaluate the resilience of their supply chains. Not only do they drive up the cost of trading due to higher tariffs and sanctions, they also added policy uncertainties that hinder the smooth and efficient operation of global production networks. These developments have led to various claims about the demise of globalization, the rise of near-shoring, and the decoupling of China from the supply chains of Western companies.

This report presents an up-to-date overview of global and Asian supply chains and assesses these different claims by focusing on data for bilateral cross-border trade of Intermediate Goods (IG), a granular class of products that more accurately represents supply chain componentry than the final goods used in most other analyses.

We find that global supply chains have continued to expand, despite talk of deglobalization and nearshoring. Intra-regional sourcing, measured by the share of IG imports originating from countries within the same region, has fallen across most major world regions, suggesting nearshoring may not yet be a prevalent strategy at the global level.



Despite talk of deglobalization and nearshoring, this study finds that global supply chains have continued to expand.

Trade decoupling remains largely a US-China phenomenon. China's share of IG imports into the US dropping from 18.5% in 2018 to 14.1% in 2022.

On the other hand, we find evidence that decoupling has materialized for China's trade with the US and Japan – China's share of IG imports into the US fell from 18.5% in 2018 to 14.1% in 2022. This share dropped to 11.4% in the first half of 2023. In contrast, China has gained importance as a source of inputs shipped to several Group of Seven (G7) developed economies. For example, between 2018 and 2022, China's share of total IG imports increased from 11.1% to 15.9% in Germany, and from 10.3% to 15.1% in the United Kingdom.

While China remains the center of Factory Asia, the Asia-Pacific's IG trade has been diversifying. A few Asian economies are emerging as "hotspots" of IG trade growth in this volatile and increasingly tense geopolitical global environment. In particular, Vietnam and Indonesia registered double-digit growth in annual IG exports during this period.

High-level comparative analysis of these "hotspot" economies reveals markedly different economic structures and geopolitical orientations. For example, Vietnam has made strides in becoming more important for international sourcing for both the US and China. This reflects not only the needs of Western multinationals but also Chinese enterprises looking to expand production base abroad. FDI inflows from China to Vietnam have surged in 2023 and are now the largest of any country to Vietnam. In contrast, India has become more important for US supply chains, but less important for China's supply chains.

Despite escalating geopolitical tensions, China has become increasingly reliant on Taiwan for its inputs. Taiwan's share in China's IG imports increased from 12.2% to 14% between 2018 and 2022, partly driven by higher demand for advanced semiconductor products during the pandemic that drove up prices for these products. Taiwan produces more than 60% of the world's semiconductors and more than 90% of the most advanced ones.

The diversity of economic structures and US-China orientations across these "hotspot" economies suggests that there is more than one winning strategy to navigate the changing landscape of global supply chains.

Introduction

Companies are seeking to reduce risk in their supply chain configuration by diversifying their supplier bases, establishing more efficient supply chain footprints, exploring alternative production hubs to enhance supply chain visibility and agility.

The shifting dynamics of supply chains, especially in Asia, are an important and topical issue for the global economy. Company sourcing strategies have far-reaching implications, impacting not only the efficiency of businesses but also influencing trade dynamics, economic growth, and competitiveness trends on a global scale.

During the 1990s, when the process of globalization accelerated and production processes became increasingly fragmented across countries, China's rise as the 'Factory of the World' was supported by its cheap and plentiful supply of labor. As wages have increased in recent years, however, Chinese firms have increasingly focused on higher value-added activities through a combination of upgraded factories, technology adoption, and workforce skill enhancements. In turn, supply chains in Asia adapted to these shifting dynamics, with many multinationals exploring alternative sourcing approaches – for example, the so-called "China Plus One" strategy, whereby companies diversified operations by expanding outside of China while still maintaining a presence in the country.

More recent disruptions such as the US-China trade war, the COVID-19 pandemic, and Russian sanctions have further prompted businesses to re-evaluate the resilience of their supply chains. In addition to the rising cost of trade due to higher tariffs and sanctions, these tensions also create policy uncertainties for businesses – which are detrimental to the smooth and efficient operation of global production networks. Companies are seeking to reduce risk in their supply chain configuration by diversifying their supplier bases, establishing more efficient supply chain footprints, exploring alternative production hubs to support changing demand patterns, and embracing digital technologies to enhance supply chain visibility and agility.

In this context, our study seeks to provide new insights into the evolution of supply chains in Asia and globally over the 2018-22 period, and the first half of 2023 where applicable. Specifically, it examines official bilateral trade data for IG to trace cross-border flows of raw materials and intermediate inputs. Collected by official customs agencies, data on IG trade offers up-to-date, comprehensive, and internationally comparable statistics to analyze global production networks. Box 1 further describes the methodology used for this analysis.

The analysis provides a complementary and deeper dive into the critical dimensions of the Hinrich-IMD Sustainable Trade Index (STI). First, it highlights the evolution of trade concentration; in this regard, it extends our recent work for the Hinrich Foundation on the diversification of global trade by analyzing shifts in the country of origin for inputs within the supply chain beyond China and assessing recent claims regarding near-shoring trends.¹ Second, we identify a number of trade growth 'hotspot' countries in Asia and find that they tend to combine a number of different success factors identified by the index, such as FDI attractiveness and technological capabilities. The diversity of these countries underlines the need to adopt a multi-dimensional framework to assessing trade regimes across countries, in line with the findings of the STI.

Methodology

IG is defined as inputs used to produce a final product, excluding primary fuels and lubricants. They range from crops used in food production to textiles, metals, and computer chips needed to manufacture goods. International trade in these products is identified and aggregated by official customs agencies according to the United Nations' Broad Economic Classification (BEC), version 4.

Focusing on trade in IG offers a number of advantages over other methodologies in studying global supply chains. In particular, many economic studies of supply chains often focus on a single sector or country, thus occluding a comprehensive view of global supply chains. While some studies have made use of global inputoutput tables to present a more comprehensive economy-wide view, these analyses are based on outdated information. For example, at the time of writing this report (autumn 2023), the Organisation for Economic Co-operation and Development (OECD) Trade in Value Added database only contains information up to 2018. Although data on Foreign Direct Investments may be more frequently updated, they often lack the bilateral dimension of these flows that would enable an analysis of the evolution of production networks. In contrast to these data sources, customs data (especially imports) offer more recent and comprehensive coverage of formal cross-border trade, which is more suited to our research priorities for this report.

Import data typically has better quality than export data due to the prevalence of duties and taxes on imports, which necessitate customs declarations and the formal recording of these flows. With this in mind, import data was collected from 91 national customs agencies (covering more than 70% of total IG trade in 2018-21). Export flows were then analyzed as the mirror of these import flows. The data was sourced from the United Nations Commodity Trade Statistics Database (UN COMTRADE) and accessed through the World Integrated Trade Solutions (WITS) portal. To understand the composition of IG imports into the US until the first half of 2023, we sourced monthly US import data from UN COMTRADE.

We then used the BEC classifications to identify and select only trade in IG. We applied further cleaning and treatment of the data as necessary, such as aggregating Hong Kong SAR and Macau trade flows into China. Taiwan was identified as "Other Asia, not elsewhere specified" (code 490) in UN COMTRADE. For the analysis of specific topics such as US-China decoupling, we also used export data from G7 countries and China from UN COMTRADE to gain a comprehensive view of the export patterns by these key countries.

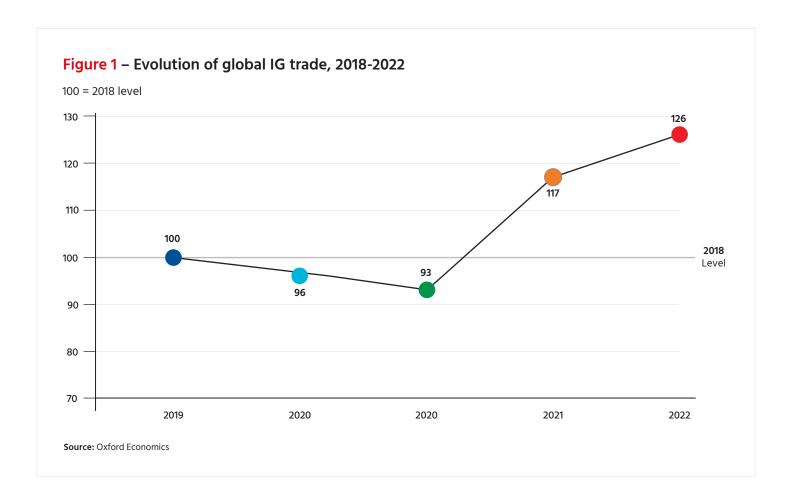
Based on this data for IG trade, we first developed statistical indicators to evaluate the evolution of global and Asian supply chain trade, with a view to testing popular narratives such as decoupling, near-shoring and deglobalization. We then identified growth hotspots in Asia and analyzed their competitive positioning using the Hinrich-IMD STI.

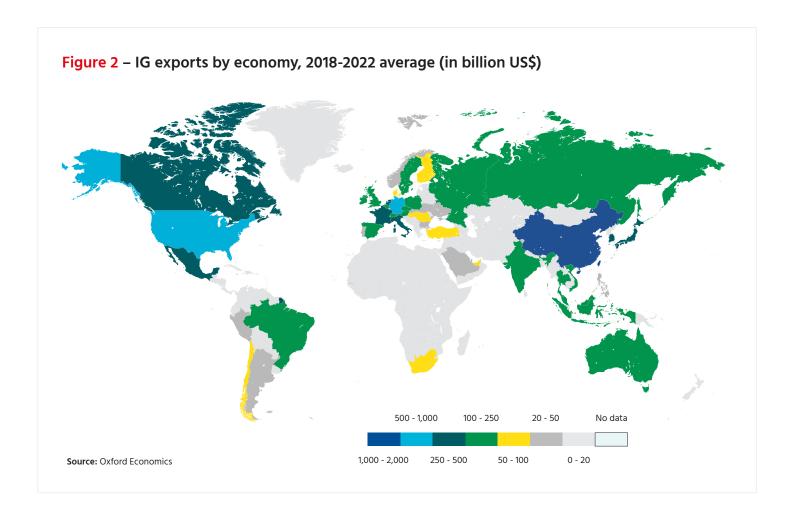
Global supply chains continue their expansion

2.1 Global IG trade has risen despite a difficult period

Our data reveals that global IG trade grew at an average annualized rate of 6% over the period 2018-22. This robust expansion implies that popular narratives around deglobalization and the rolling back of international supply chain networks may be premature, at the least. That said, the trajectory of IG trade was far from linear over this period, reflecting the impact of major world events such as the US-China trade war, the pandemic, and the Russia-Ukraine war. When compared to aggregate trade in goods, IGs accounted for roughly half of total trade flows – a share that has stayed broadly stable over the past decade.

We find that China was the largest importer and exporter of IG in the world over the 2018-22 period (Figure 2). Underpinning this dominance is China's ongoing importance in the final assembly stages of global production as the 'Factory of the World'. At the same time, it also attests to the manufacturing capability of Chinese industries, where local producers are upgrading vertically across value chains to produce more sophisticated and scale-sensitive components. For example, China now accounts for at least half of production of battery cells and more than 70% in some related components.²





2.2 Near-shoring has not materialized at the global level

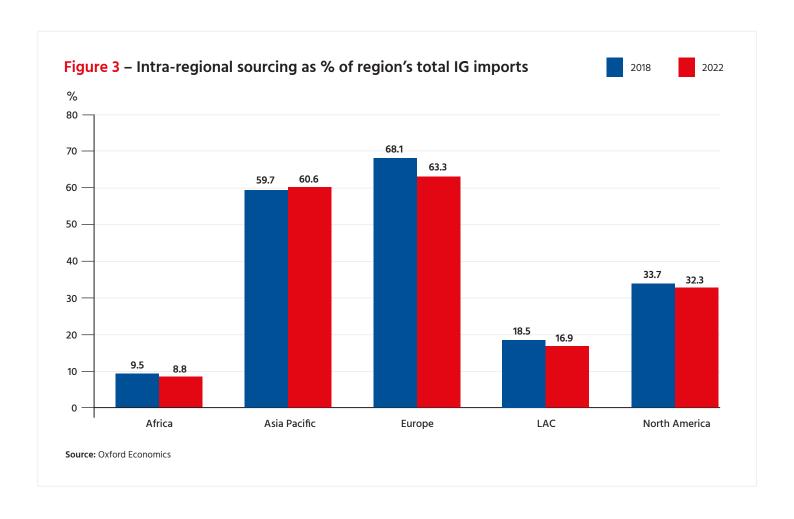
In most regions, producers are sourcing a greater share of their international inputs from outside their own region. Intra-regional sourcing, as measured by the share of intra-regional trade in each region's IG imports, also declined in most regions over the sample period. This pattern holds even when excluding primary products (typically unprocessed natural resources). The Asia-Pacific is the only exception where regional sourcing has increased between 2018 and 2022, but this shift was relatively minor – the intra-regional share of Asia's imports marginally rose from 59.7% in 2018 to 60.6% in 2022. These results refute broad assumptions that global MNEs are already bringing their international supply chains closer to home, with key exceptions.

The apparent absence of large-scale nearshoring may stem from the "stickiness" and time-consuming process of reconfiguring supply chains. This reflects a number of issues:

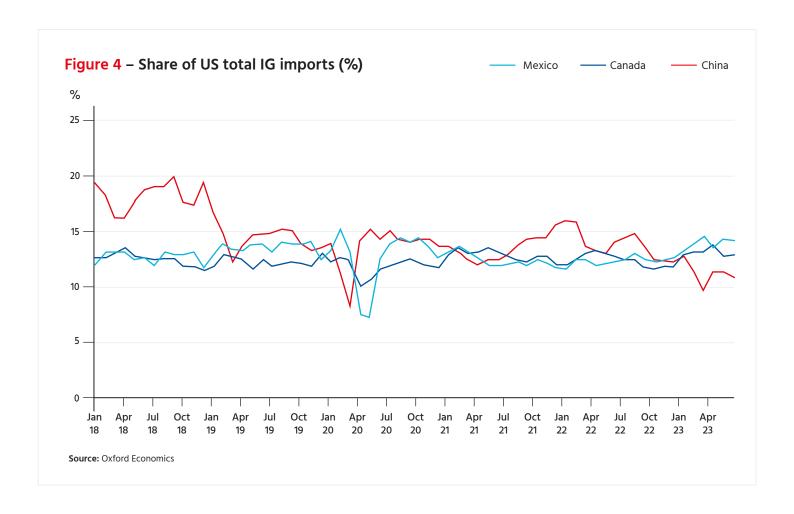
- Supply chains are deeply entrenched and have evolved over decades, with established relationships, contracts, and infrastructure in place. Disrupting these established patterns requires careful planning and negotiation.
- The sheer scale of global supply chains, often spanning multiple countries and continents, introduces logistical challenges that cannot be resolved in short order.

- Reconfiguration entails significant capital investment, which many businesses need time to secure.
- Regulatory and compliance issues can further extend the timeline for supply chain reconfiguration.
- Supply chain adjustments also involve assessing and mitigating potential risks, such as political instability or shifts in consumer demand, which remain fluid and necessitate a gradual and strategic approach by businesses.

These factors increase the set-up cost for companies when considering any switches in their supply chains, increasing the attractiveness of maintaining their existing sourcing strategy. Furthermore, even when the economic conditions for the reallocation of supply chains are ripe, these factors may contribute to delays in realizing such decisions.



The relatively recent pick-up in Mexico's IG exports to the US presents an example of such a lag. Mexico is widely considered to be the best-positioned emerging market to gain from US near-shoring investment, given its proximity, well-developed manufacturing infrastructure, and established trade agreements such as the United States-Mexico-Canada Agreement (USMCA). Using US monthly import data, we find that Mexico's share in US IG imports remained relatively stable between 2018 and 2022 (with the exception of March-May 2020 during the early phase of the pandemic). However, when extending the data to the first half of 2023, we find that the picture changed significantly – since November 2022, Mexico has overtaken China as the top provider of international inputs for the US. Its share thereafter steadily increased from 12.6% in 2022 to 14.5% of US total IG exports by June 2023.



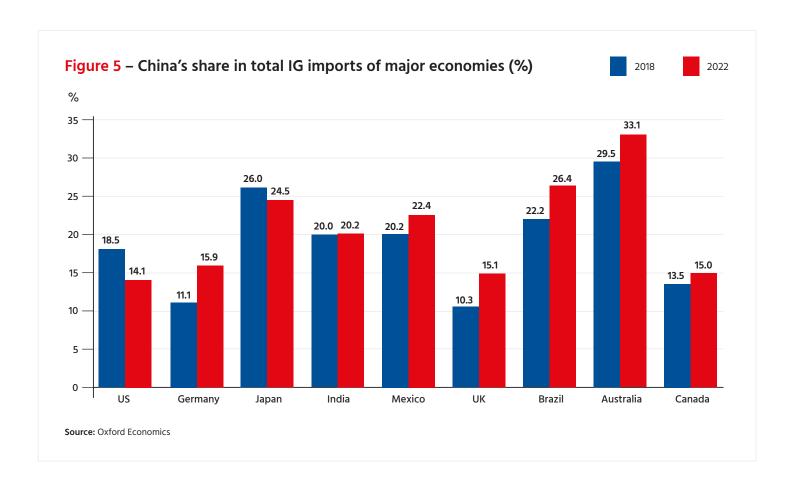
Asia's supply chains are undergoing major changes

The US and Japan have started to decouple from China. In contrast, China's importance as an exporter of production inputs has increased in other major countries.

3.1 China is decoupling - but only from the US and Japan

Our analysis indicates that the US and Japan have started to decouple from China. China's share of IG imports into the US fell from 18.5% in 2018 to 14.1% in 2022. In the first of 2023, this share dropped further to 11.4%. The largest drop occurred in 2018-19 during the tariff escalations of the Trump administration. China's importance for IG imports also dropped in Japan during 2018-22, falling from 26.5% to 24%. This shift reflects Japan's commitment to "de-risking", exemplified by the pledge of G7 leaders in Hiroshima in May 2023. In particular, Japan set up a US\$20 billion fund to attract investment in the semiconductor industry as well as restrict exports of 23 types of semiconductor manufacturing equipment – aligning its technology trade controls with US measures. 4

In contrast, China's importance as an exporter of production inputs has increased in other major countries. Between 2018 and 2022, China's share of total IG imports increased from 11.1% to 15.9% in Germany, from 22.2% to 26.4% in Brazil, and from 29.5% to 33.1% in Australia. Analysis of sectoral trade data suggests that this growth was driven by inputs for electronics, machinery, and chemical products. In the UK, China's share of the UK's IG imports increased from 10.3% to 15.1% over the same period. The UK's reduced reliance on the EU for its inputs following Brexit



was a large contributor to this growth in imports from China. Indeed, the EU's share in the UK's international sourcing has fallen dramatically from 57.2% in 2018 to 43.1% in 2022.

China has also reorientated its exports to other destinations. We find that Vietnam and Malaysia have made the most gains in terms of their shares as destinations for China's IG exports. Several drivers have contributed to this shift. First, downstream activities such as assembly have started to shift outside of China, which reflects the dual pressures of rising labor costs in China and the need to avoid higher US tariffs and financial sanctions imposed on products originating from China. In turn, this has led to an increase in China's IG exports of parts and components which would previously have been traded within China's domestic market. Second, the shift from a 'just-in-time' to 'just-in-case' mode of supply chain optimization among multinational businesses has prompted investment in spare capacity in other countries.

In addition, the composition of China's own international supply chains is changing (Table 1). For example, the role of Korea and Japan in supplying international inputs for China's production has contracted; their share in China's IG import basket dropped by 2.8 and 2.1 percentage points respectively between 2018 and 2022. These lower levels persisted through 2020-22, suggesting that the shifts were structural in nature and not just reflective of the semiconductor business cycle.

Table 1 – Top 15 IG exporters to China in 2022 (as % of China's IG imports)

Economy	2018	2022	Change 2018-22
Taiwan	12.2%	14.0%	+ 1.8%
Vietnam	3.0%	4.2%	+ 1.2%
Indonesia	1.4%	2.4%	+ 1.1%
Australia	5.4%	6.3%	+ 0.9%
Chile	1.4%	1.8%	+ 0.4%
Srazil	3.3%	3.7%	+ 0.3%
Malaysia	4.3%	4.7%	+ 0.3%
(*) Canada	1.4%	1.6%	+ 0.2%
Singapore	3.6%	3.5%	- 0.1%
Thailand	2.7%	2.4%	- 0.2%
Switzerland	2.5%	2.2%	- 0.3%
Germany	5.0%	4.0%	- 1.0%
United States	8.4%	7.5%	- 1.0%
Japan	10.8%	8.6%	-2.1%
South Korea	12.7%	10.0%	-2.8%

Source: Oxford Economics

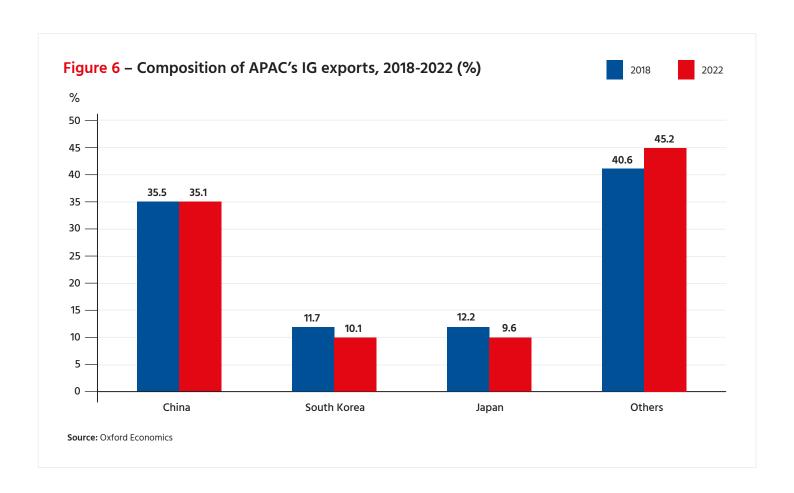
Similarly, the US share in China's IG import basket also dropped from 8.4% in 2018 to 7.5% in 2022.

Despite escalating geopolitical tensions, China is increasingly reliant on Taiwan for its inputs. Taiwan's share in China's IG imports increased from 12.2% to 14% between 2018 and 2022, partly driven by higher demand for advanced semiconductor products during the pandemic. Taiwan produces more than 60% of the world's semiconductors and more than 90% of the most advanced ones. Other countries such as Vietnam, Indonesia, and Australia also gained importance in China's sourcing strategy.

3.2 New supply chain "hotspots" are emerging in Asia

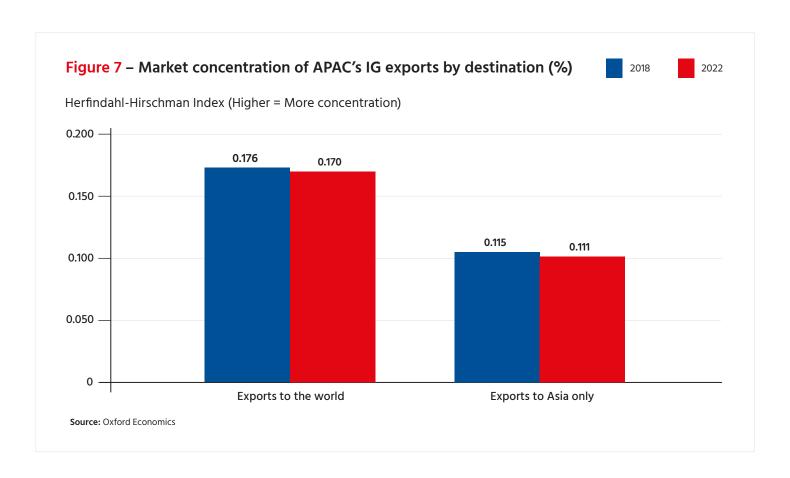
Asia's supply chains have traditionally been dominated by a handful of countries. On the export side, China accounted for 35.5% of the region's IG exports in 2018, followed by Japan (12.2%), and Korea (11.7%) (Figure 6). The dominance of Asia's top three IG exporters has declined over the past five years.

On the import side, China is the main trade partner for nine out of the 11 Asian countries where import data is available for this analysis. However, the share of China, Korea, and Japan in Asia's IG exports has declined from 59.4% in 2018 to 54.8% in 2022.

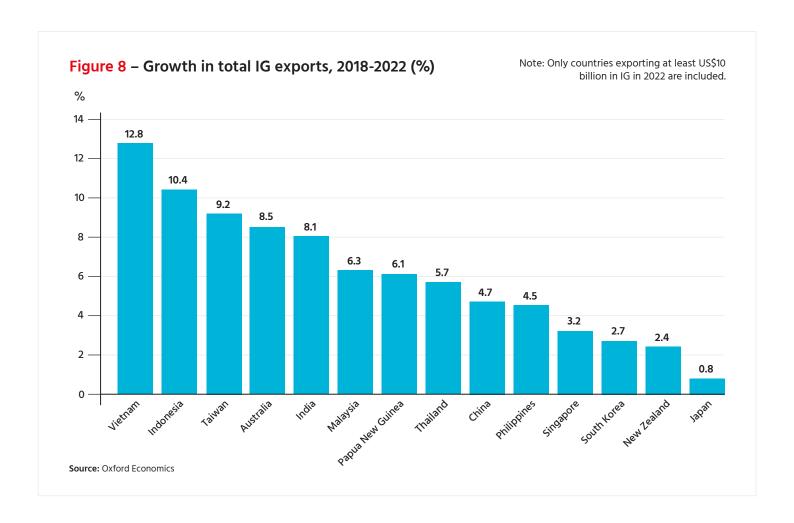


The diversification of Asia's IG trade is also apparent when we calculate the Herfindahl–Hirschman index (HHI), an indicator of market concentration, for the region's IG trade. The HH index for APAC's global IG exports declined between 2018-22, suggesting that IG exports from Asia have become more evenly spread across countries over past five years. For comparison, market concentration for global trade decreased but at a slower pace during this period.

Intra-regional trade has become even more diversified. The HHI score for intra-Asia trade in IG is lower than HHI for Asia's total export, suggesting that the regional market has become a more even playing field than the global market as smaller Asian economies more actively participate in intra-Asia trade. Exporters from smaller economies likely find it easier to compete in regional markets than in extra-regional destinations thanks to the physical and cultural proximity of trading partners, the presence of regional trade agreements, existing business networks, and similarity in levels of product and process standards (such as those related to sanitary and phytosanitary standards).



Amid the diversification of Asia's supply chain networks, Vietnam and Indonesia registered double-digit annual growth in IG exports between 2018 and 2022 (Figure 8). For comparison, the average economy in the Asia-Pacific grew their IG exports at a 5.9% average annual pace over this period. This diversification of IG exports corroborates recent trends in foreign direct investment to Asia, where international investors are increasingly seeking other Asian economies as destinations for greenfield FDI. According to data from UNCTAD⁵, China accounted for 27.7% of greenfield FDI flows into APAC in 2010-2014, but by 2022 this share had fallen to just 4.9% – meanwhile, the share by hotspot countries surged from 33.7% to 56.7% over the same period. India is the main beneficiary as its share of greenfield FDI flows into APAC increased from 10.1% in 2010-14 to 21.1% in 2022.



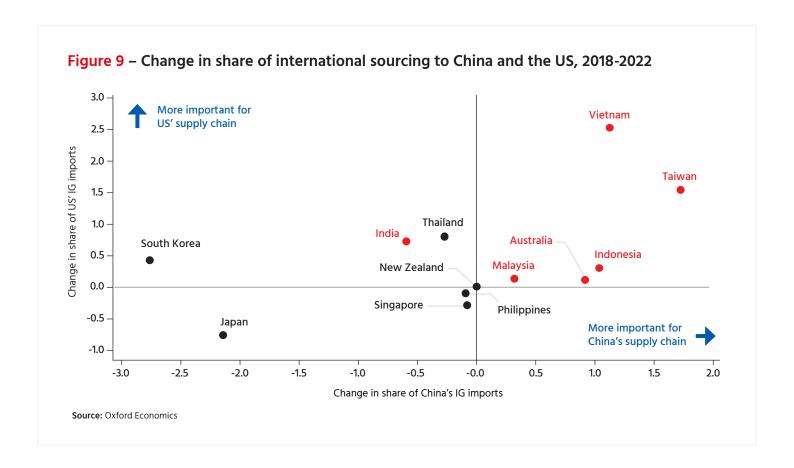
Multiple pathways to supply chain resilience

Seven supply-chain growth "hotspot" economies – Vietnam, Indonesia, Taiwan, Australia, India, Malaysia, and Papua New Guinea – posted higherthan-average growth in total IG exports.

In this section, we focus on the seven supply-chain growth "hotspot" economies: Vietnam, Indonesia, Taiwan, Australia, India, Malaysia, and Papua New Guinea. These countries registered higher-than-average growth in total IG exports.

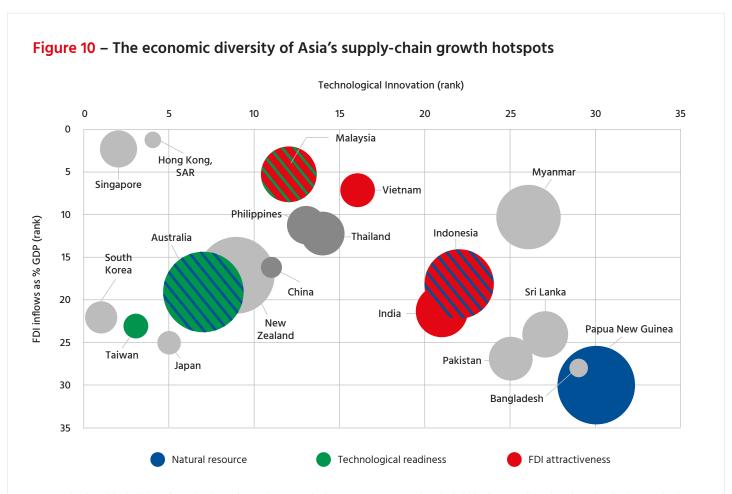
We find that these hotspot economies are following different paths in response the decoupling of US-China supply chains (Figure 9). One common theme is that all economies are making inroads into US supply chains at the expense of China. Academic research⁶ also suggests that the US-China trade conflict increased trade opportunities for other countries. They find that the variation in responses across economies has been driven not so much by product specialization or their exposure to shocks by sector, but rather by country-specific factors. This finding would suggest that the actions of individual countries matter more than their existing production capabilities – representing the importance of national policy in directing opportunities for businesses to invest in new facilities, trade infrastructure, and/or trade and investment facilitation.

At the same time, we find that most of these hotspot economies have also become more important for China's international sourcing strategy. This is indicative that the 'China Plus One' strategy for managing global supply chains is now giving way to something more akin to a 'China Plus One, Two, Three' strategy.



Vietnam and Taiwan stand out among the countries gaining importance in both the supply chains of the US and China. Vietnam's share in US IG imports has increased by 2.5 percentage points, while its share in China's IG imports has increased by 1.2 percentage points. Proprietary research from Oxford Economics based on aggregate trade data (including trade in capital and final goods) suggests that Vietnam has continued to benefit from supply chain reshuffling out of China well into 2023. China's goods import from Vietnam increased by 12.8% between March and September 2023 (seasonably adjusted). Similarly, Taiwan's share in IG imports has increased by 1.2 points in the US and by 1.8 percentage points in China between 2018 and 2022.

A notable exception is India, which is increasingly integrated into US supply chains but has become less important for China's sourcing. This to some extent contradicts India's perceived "multi-aligned" trade and foreign policy, through which India maintains trade and investment ties to multiple parties in the global geopolitical contest including Russia and China.⁷



Note: The size of the bubbles reflects the share of natural resources in the economy's export value. The bubbles for Australia, Indonesia, and Malaysia are striped to reflect the mix of economic strengths in these economies. For example, the green and blue stripes reflect the importance of natural resources (blue) and technological readiness (green) for Australia.

Source: Oxford Economics based on data from Hinrich-IMD Sustainable Trade Index 2023. Data on the share of natural resources in the economy's export value is from LINCTAD State⁸

The diversity of economic structures and orientation toward US-China relations across trading economies suggest that there is more than one strategy to navigate the changing landscape of global supply chains.

With regards to their economic factors, we broadly observe three archetypes of growth hotspots (Figure 10). First, Taiwan possesses highly sophisticated manufacturing capabilities in the semiconductor industry, with companies like TSMC producing a significant portion of the world's chips. Its technological expertise and reliability in this sector make Taiwan indispensable to various industries, including electronics and automotive. Second, India and Vietnam offer an attractive environment for foreign direct investment through a mixture of an abundant and increasingly educated labor force, strategic geographic location, access to markets through trade agreements, and political stability. Third, Papua New Guinea's importance in global supply chains has increased with the heightened demand for its natural resources. Natural resources account for 96.8% of the country's merchandise exports, with nickel being the fastest-growing export product due to its role in new-energy battery production.

Economies may also bring a mixture of domestic policy ingredients for success. Australia combines an abundance of natural resources with a world-class technological ecosystem, spanning a range of sectors including machinery and equipment, chemicals, and construction materials. Both Indonesia and Malaysia are pushing to increase their FDI attractiveness, but Indonesia has a relatively higher share of natural resources in its export basket whilst Malaysia brings stronger technological capability (such as in electronics manufacturing).

Overall, the diversity of economic structures and orientation toward US-China relations across these economies suggest that there is more than one strategy to navigate the changing landscape of global supply chains. These economies are adapting to changing market dynamics, leveraging their unique strengths, and fostering trade relationships to capture new opportunities. Their success demonstrates that in today's fast-changing global economic environment, flexibility and strategic positioning can lead to significant economic gains, regardless of an economy's geopolitical stance.



In today's fast-changing global economic environment, flexibility and strategic positioning can lead to significant economic gains, regardless of an economy's geopolitical stance.

Conclusion

Asia's supply chains will continue evolving due to heightened US-China tension, the revival of industrial policies among Western governments, and the benefit enterprises derive from colocating in areas with a dense industrial network.

Our analysis shows that global supply chains have continued to expand despite talk of deglobalization and nearshoring. Asia's supply chain is undergoing major transformation, with evidence of decoupling for China's trade with the US and Japan, but not with other G7 countries. Meanwhile, regional production networks within Asia have been diversifying – amid the reconfiguration of global and regional production networks, and the declining role of China, Japan, and Korea in intra-regional Asian trade over the past five years.

Going forward, we would expect the geography of Asia's supply chains to continue evolving due to multiple factors. First, heightened US-China tension and tensions over the Taiwan Strait will continue to put pressure on multinational enterprises to prioritize the resilience of supply chains, thus pushing the diversification and relocation of supply chains. Second, the revival of industrial policies among Western governments is creating attractive subsidies for companies to reshore at least parts of their production networks. Third, enterprises benefit from co-locating in areas with a dense industrial network as they can share resources, find better matches in skill sets, suppliers, and customers, and benefit from innovation – external economies of scale will help countries with a critical mass of share in global supply chains to continue attracting further investment and talent, even when labor costs rise.



Asia's supply chain is undergoing major transformation as regional production networks diversify.

Abbreviations

Abbreviation	Definition
APAC	Asia-Pacific economies, as defined by the World Bank
BEC	Broad Economic Categories
EU	European Union
G7	Group of Seven
ННІ	Herfindahl-Hirschman Index
IG	Intermediate goods
OECD	Organisation for Economic Co-operation and Development
STI	Hinrich-IMD Sustainable Trade Index
UN	United Nations
UN COMTRADE	United Nations Commodity Trade Statistics Database
UK	United Kingdom
US	United States
USMCA	United States-Mexico-Canada Agreement
WITS	World Integrated Trade Solutions

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About Oxford Economics

Oxford Economics was founded in 1981 as a commercial venture with Oxford University's business college to provide economic forecasting and modelling to UK companies and financial institutions expanding abroad. Since then, we have become one of the world's foremost independent global advisory firms, providing reports, forecasts, and analytical tools on more than 200 countries, 100 industries, and 8,000 cities and regions. Our best-in-class global economic and industry models and analytical tools give us an unparalleled ability to forecast external market trends and assess their economic, social, and business impact.

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