

Part 1

India in the Global Value Chain: Lessons and Opportunities for India-ASEAN Trade

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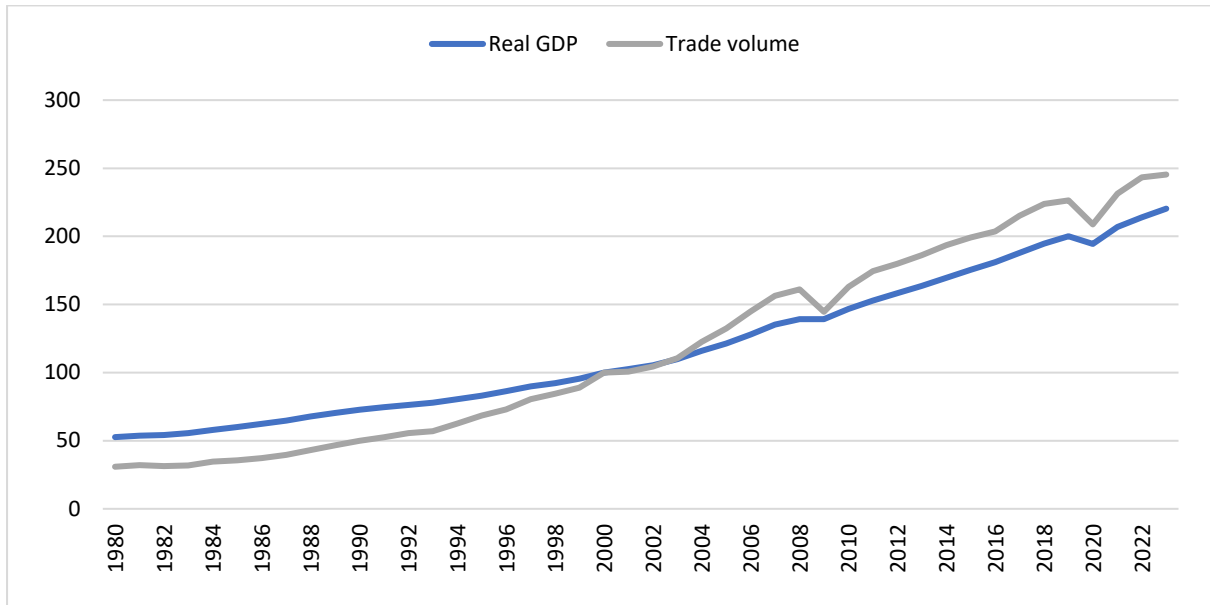
Introduction: Developments in Global Supply Chains

What was thought of as an unstoppable trend – globalisation – has recently halted, if not started reversing. The development of global value chains (GVCs) was adopted by transnational corporations to reduce their costs of production through efficiency gains. GVCs refer to international production sharing, a phenomenon whereby production is broken into activities and tasks are carried out in different countries. The ability of developing economies to tap into their comparative advantages of cheap labour forces through the liberalisation of trade and investment policy, still evolving environmental and labour regulations, has allowed them to gain more productive jobs and capital investment, to raise productivity and to generate wealth. From Eastern Europe to China, and most recently Viet Nam, the process has lifted millions out of poverty. Indeed, GVCs have shaped the world beyond trade, from the increasing importance of efficiency as a key objective of the production process – and the development of new business models to accommodate it – to the surge in foreign direct investment (FDI) to set up production plants overseas to produce parts and components.

Having said that, the globalisation process has decelerated significantly, if not started to reverse (García-Herrero, 2022). Over the history of global trade, two strains can be identified as in Figure 1. The global financial crisis (GFC) over 2008–2009 and the coronavirus disease (COVID-19) pandemic during 2020 and 2021 battered the global trade volume. Worse still, they seem to have changed the secular trend of global trade growth as the compound annual growth rate has slid from 6.1% pre-GFC to 3.3% after and further to 3.0% through the post-COVID-19 years. However, the world's real gross domestic product (GDP) growth only slowed from 3.5% to 3.1% during the same period and even rebounded to 3.2% after exiting COVID-19, thanks to the ultra-lax monetary easing globally.

* I would like to thank Haoxin Mu for his contribution to this paper. All remaining errors are mine.

Figure 1: Index of Global Real GDP and Trade Volume
(2000=100)



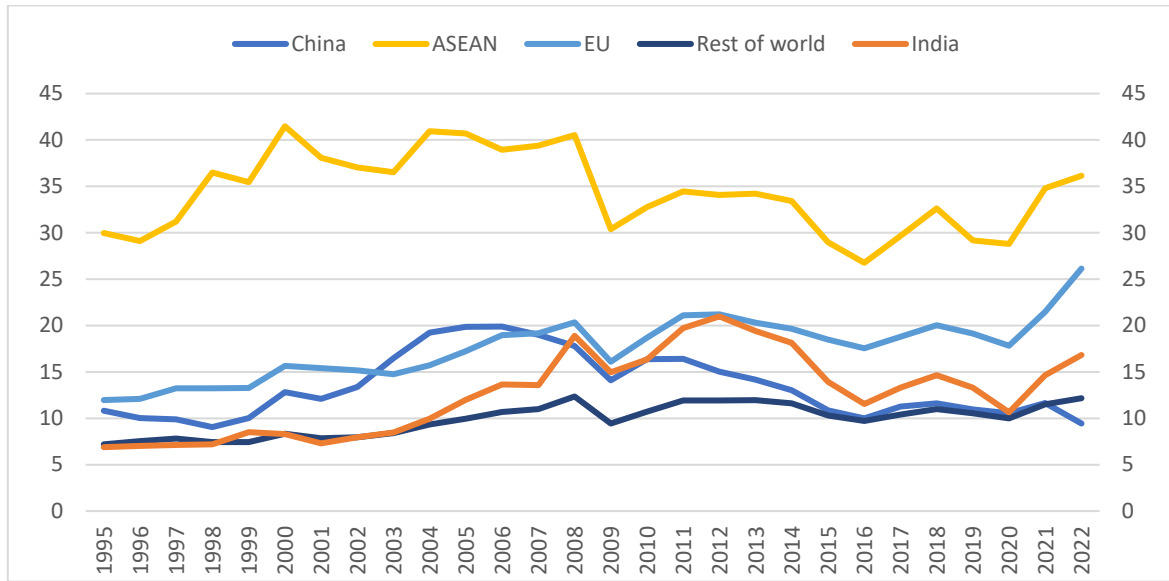
GDP = gross domestic product.

Sources: Natixis; and International Monetary Fund (n.d.), World Economic Outlook Database.

<https://www.imf.org/en/Publications/WEO/weo-database/2024/April> (accessed 23 July 2024).

Likely reasons for this are major participants' scepticism about GVCs and their refraining from further integration as protectionism rises. The slowdown of developed economies such as the United States (US) and the European Union (EU) after the GFC forced developing countries, or the producers in GVCs, to turn to domestic demand for growth, dragging down the pace of globalisation. Protectionism has become more popular because countries seek to protect their domestic producers from import competition as demand wanes everywhere. This has supported overall economic growth, but global trade takes a heavy hit. Figure 2 shows the imports of intermediate goods as a share of GDP, which has generally drifted lower post-GFC for major exporters, especially in emerging markets such as China, India, and the Association of Southeast Asian Nations (ASEAN). It is worth noticing, however, that the share of intermediate goods imports seems to be rising again in some countries and regions since the pandemic began, such as in India, ASEAN, and the EU. Their divergence from China may point to the impact of reshoring and friend-shoring strategies since the disruption of COVID-19 raised alarm about supply chain resilience and overdependence on China.

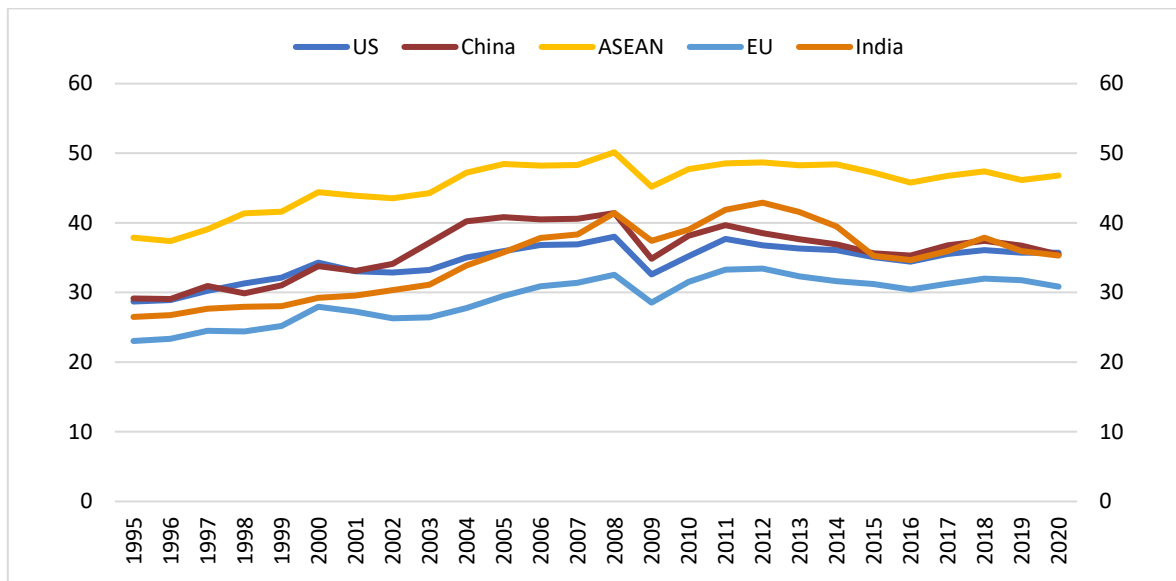
Figure 2: Imports of Intermediate Goods
(% of GDP)



ASEAN = Association of Southeast Asian Nations, EU = European Union, GDP = gross domestic product. Sources: Natixis; and United Nations Conference on Trade and Development (n.d.), Statistical Portal, Data Centre. <https://unctadstat.unctad.org/datacentre/> (accessed 23 July 2024).

With the diminished flow of intermediate goods, the expansion of GVCs has largely halted over the past decade. Figure 3 shows the development of major economies' GVC participation, which is a measure of an economy's integration into GVCs that captures how much content in the country's gross exports has crossed borders (either its own or that of trade partners) at least twice, which rules out the value imported for domestic consumption and leaves only the raw materials and intermediate goods that continue to flow in GVCs. More details on this measure are in the Appendix. As shown in Figure 3, the world's GVC participation has generally trended lower since 2011, echoing the diminishing share of imports of intermediate goods.

Figure 3: Total GVC Participation with the World
(% of gross exports)



ASEAN = Association of Southeast Asian Nations, EU = European Union, GVC = global value chain, US = United States.

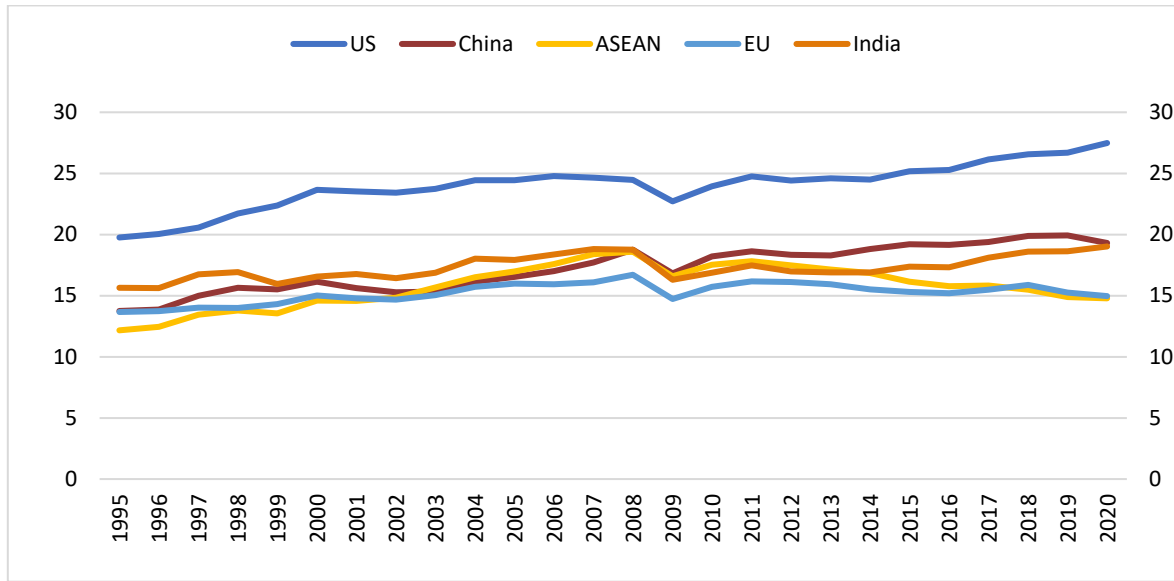
Sources: Natixis; and Organisation for Economic Co-operation and Development, Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

A country's GVC participation can be further decomposed to forward and backward by the source of value added. Forward participation measures the domestic value added in foreign countries' gross exports as a share of the home country's gross exports, and backward participation is the share of foreign value added in the home country's domestic gross exports. When a country's forward participation rises, it means that the country is exporting more domestic value added to GVCs. When backward participation rises, it means that the country is exporting more foreign value added in its exports. Thus, higher forward participation is generally seen as positive because it is generally only possible if a country moves up the ladder in terms of the quality of its exports; in other words when it does not depend as much on other countries' imports to produce manufactured goods which it exports. Higher backward participation is usually associated with the opposite, either producing lower-value goods or being integrated with only a few GVC industries. Figures 4 and 5 present how forward and backward participation have evolved for major GVC participants.

Transversally, the US ranks the highest in GVCs as it exports the highest-value products. China follows next but is being closely followed by India. ASEAN and the EU rank the lowest.

Vertically, the US, China, and India have been rising in the GVC rank with more domestic value added to GVCs, while ASEAN and the EU are falling back.

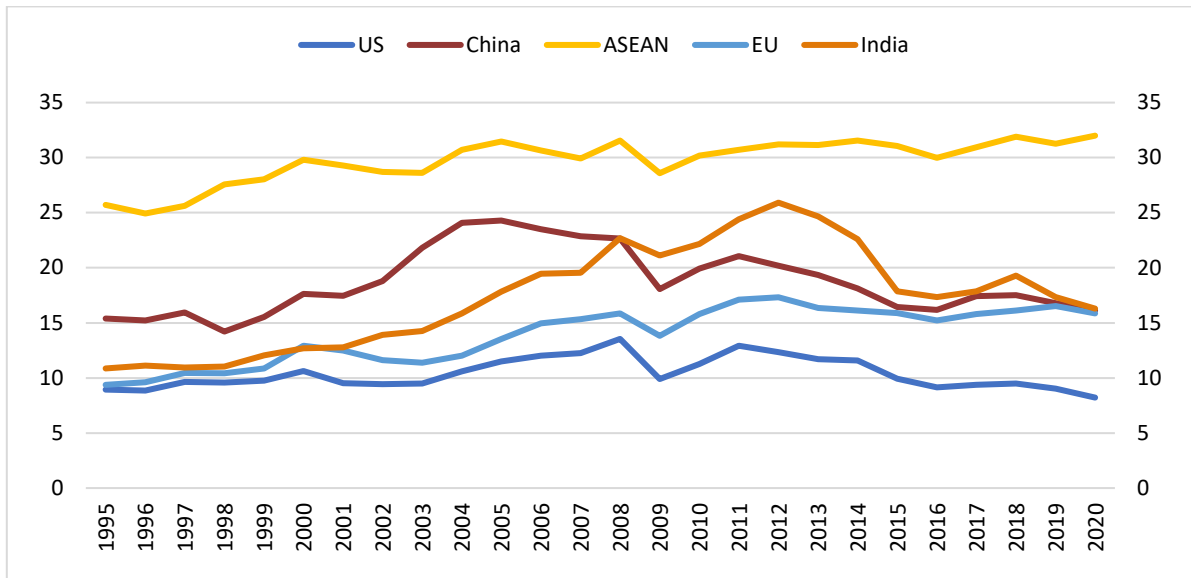
Figure 4: Forward Participation with the World
(% of gross exports)



ASEAN = Association of Southeast Asian Nations, EU = European Union, US = United States.

Sources: Natixis; and Organisation for Economic Co-operation and Development, Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

Figure 5: Backward Participation with the World
(% of gross exports)

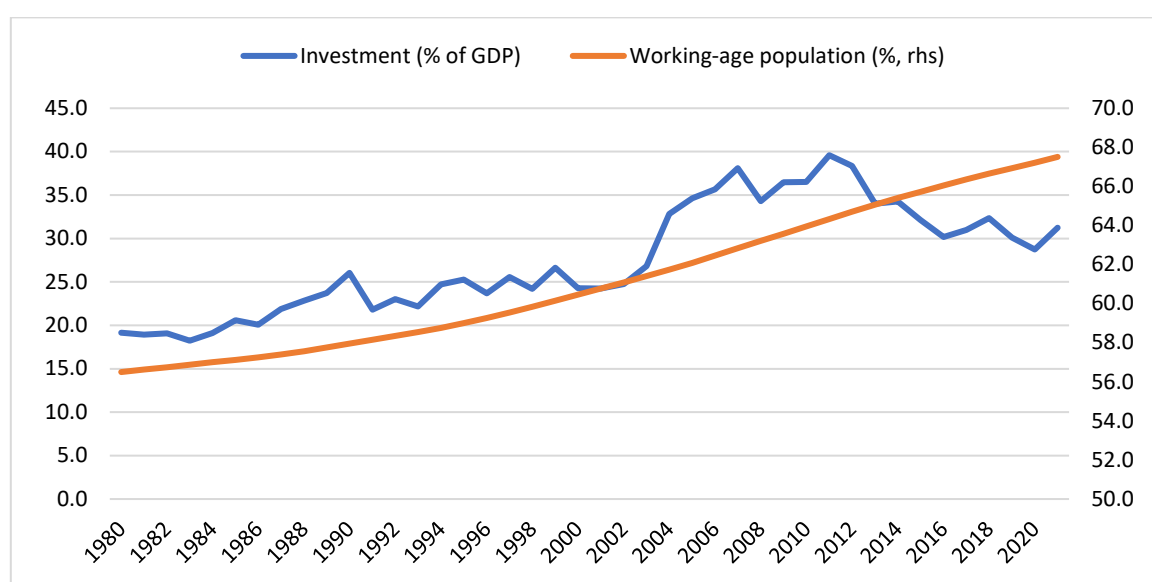


ASEAN = Association of Southeast Asian Nations, EU = European Union, US = United States.

Sources: Natixis; and Organisation for Economic Co-operation and Development, Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

As a rising power in GVCs, India has experienced a major decline in GVC participation since 2012, but it is not all bad news. The decline is mainly driven by a reduction in India's imports of intermediate goods to re-export. In other words, there is less foreign value, and thus more domestic value, embedded in India's exports. Thanks to FDI inflows and domestic capital, India's industrialisation process has sped up since the early 2000s. Investment as a share of GDP surged by 10 percentage points (ppt) during 2000–2010 (Figure 6). India's backward participation thus gained more than 10 ppt as it became involved in more industries of GVCs. However, as domestic consumption rose and the capital return decreased, investment decelerated in the 2010s. The backward participation also declined thanks to the lower commodity prices and India's maturing domestic supply chains, which replaced part of the imported goods.

Figure 6: India's Investment and Working-Age Population



GDP = gross domestic product, rhs = right-hand side axis.

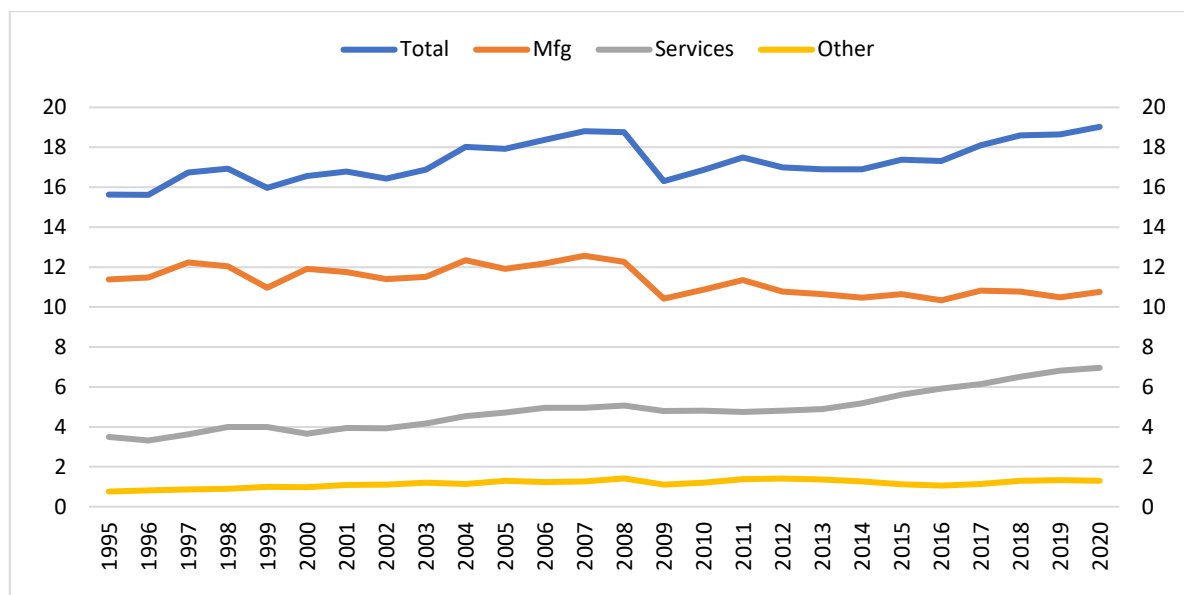
Sources: Natixis; International Monetary Fund (n.d.), World Economic Outlook Database. <https://www.imf.org/en/Publications/WEO/weo-database/2024/April> (accessed 23 July 2024); and United Nations (n.d.), World Population Prospects 2024 <https://population.un.org/wpp/> (accessed 23 July 2024).

A key question is whether India's reduction in backward participation is beneficial for the country? On one hand, it reduces India's dependence on the global market, fosters self-reliance, and promotes domestic companies. On the other hand, it raises the costs of intermediate goods for domestic products, primarily due to high tariffs and other trade-related barriers on imports). For this shift to be sustainable, India would need to lower import tariffs and assess whether domestic producers of intermediate goods can remain competitive against foreign counterparts.

1. Sectoral Trends in India's GVC Integration

In this section, we discuss the development of India's GVC participation by sector.

Figure 7: India's Forward Participation by Sector
(% of gross exports)

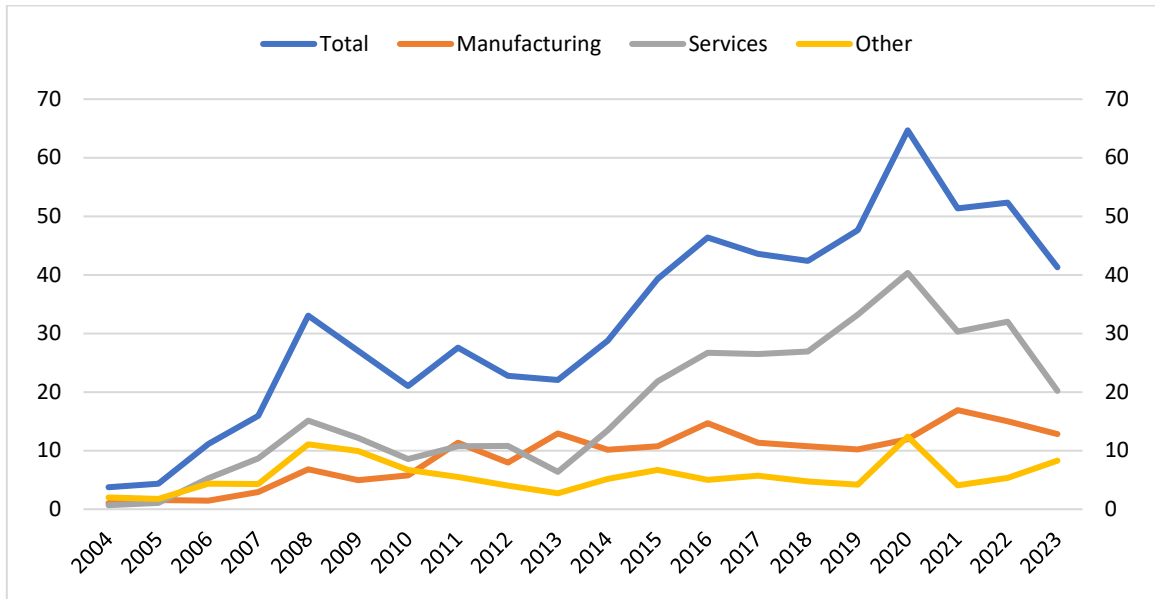


Mfg. = manufacturing.

Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

As in Figure 7, prior to 2008, India's forward GVC participation was on a steady rise with a gain of 3.2 ppt since 1995, where the manufacturing sectors contributed 1.2 ppt and services 1.6 ppt. After the GFC, India's rise in global manufacturing value chains came to a halt due to stalled FDI inflows, but the service sectors were refuelled and have reaccelerated since 2014, mostly thanks to the thriving of the information and communication technology (ICT) sector (Figure 8).

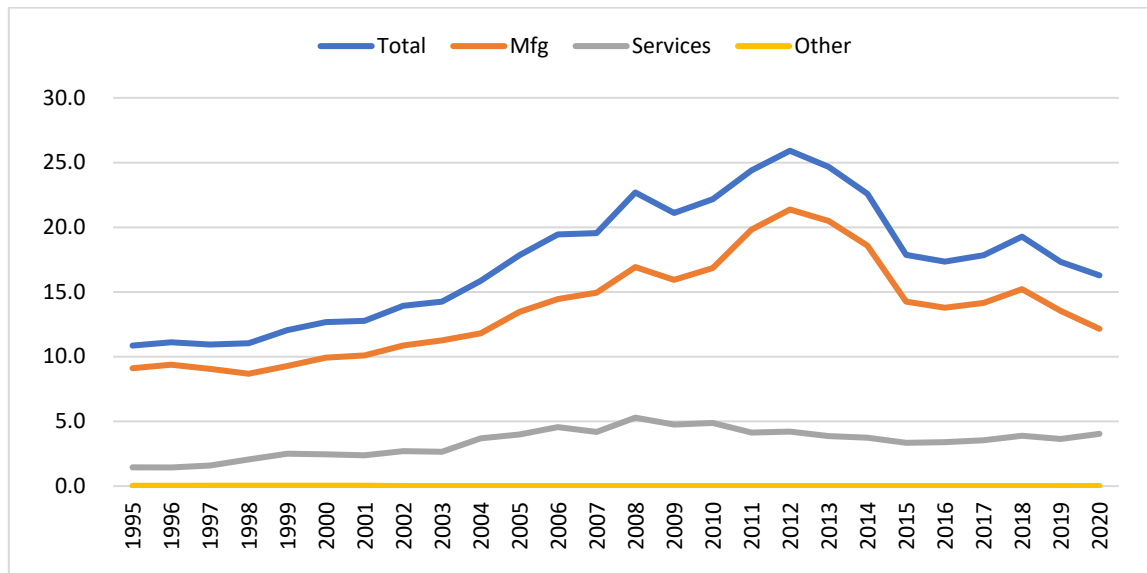
Figure 8: India's FDI
(US\$ billion)



FDI = foreign direct investment.

Sources: Natixis; and India Department for Promotion of Industry and Internal Trade.

Figure 9: India's Backward Participation by Sector
(% of gross exports)



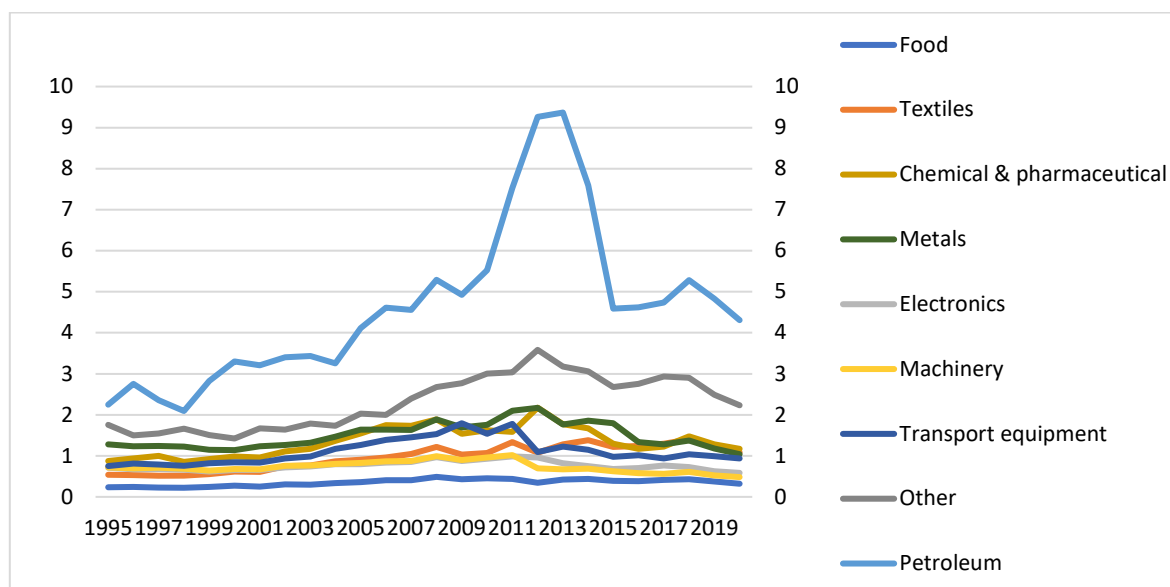
Mfg. = manufacturing.

Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

On the other hand, India has seen a major decline in backward participation driven by the manufacturing sectors, while services have also helped but to a lesser extent (Figure 9).

Before peaking in 2012, India's backward participation had soared since the 1990s as it rapidly integrated into GVCs, but the trend then reversed as India's domestic supply chains started to replace part of the foreign value added for GVCs. The progress of domestication is quite notable in a few industries, such as petroleum refining, metals, chemical, pharmaceuticals, and transport equipment (Figure 10).

Figure 10: India's Backward Participation of Manufacturing Industries
(% of gross exports)

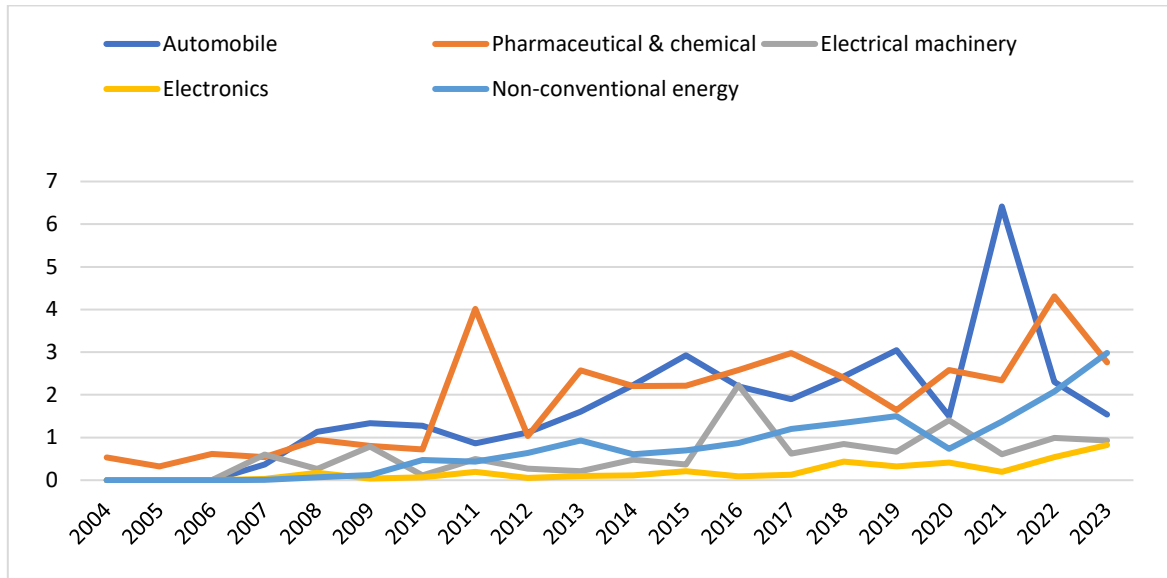


Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

However, the growth of India's forward GVC participation in the manufacturing sectors remains sluggish due to the downbeat FDI.¹ Although the FDI received by India has been on the rise for many manufacturing sectors (e.g. automobile, pharmaceutical, renewables, and electrical and electronics), the FDI values remain underwhelming (Figure 11) with most of the FDI going to the digital sector. As a comparison, ASEAN received FDI of US\$9.5 billion for its electronics industry in 2022, which is in stark contrast to India's US\$539 million (ASEAN, UNCTAD, 2023). As such, most of India's sectors see their exported value added flat or down in recent years, except transport equipment, chemicals, and pharmaceutical manufacturing (Figure 12).

¹ A comparison with ASEAN by industry is available later in this section.

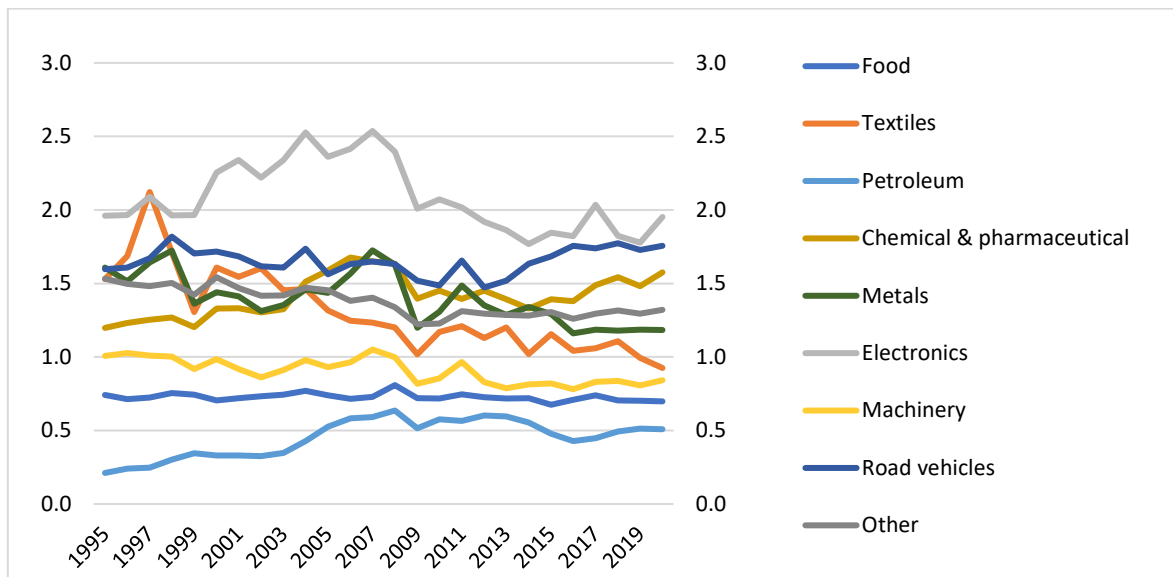
Figure 11: India Manufacturing FDI
(US\$ billion)



FDI = foreign direct investment.

Sources: Natixis; and India Department for Promotion of Industry and Internal Trade.

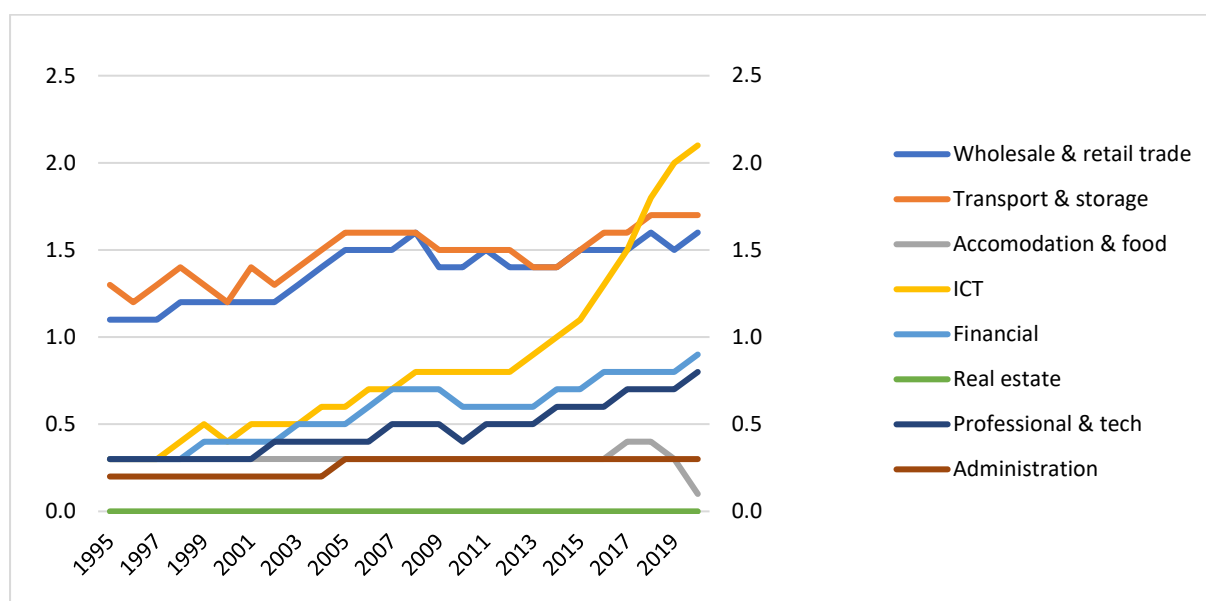
Figure 12: India's Forward Participation of Manufacturing Industries
(% of gross exports)



Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

Nonetheless, we see a more optimistic picture for services as India has utilised its huge young workforce to fuel the development of the domestic service sectors, and progress has been made in most sectors regarding forward participation, such as ICT, financial, and professional services. ICT sector is growing the most in terms of forward participation. In other words, Indian exports of ICT goods for other countries to reexport are one of the most dynamic from 2007 onwards (Figure 13).

Figure 13: India's Forward Participation of Service Industries
(% of gross exports)

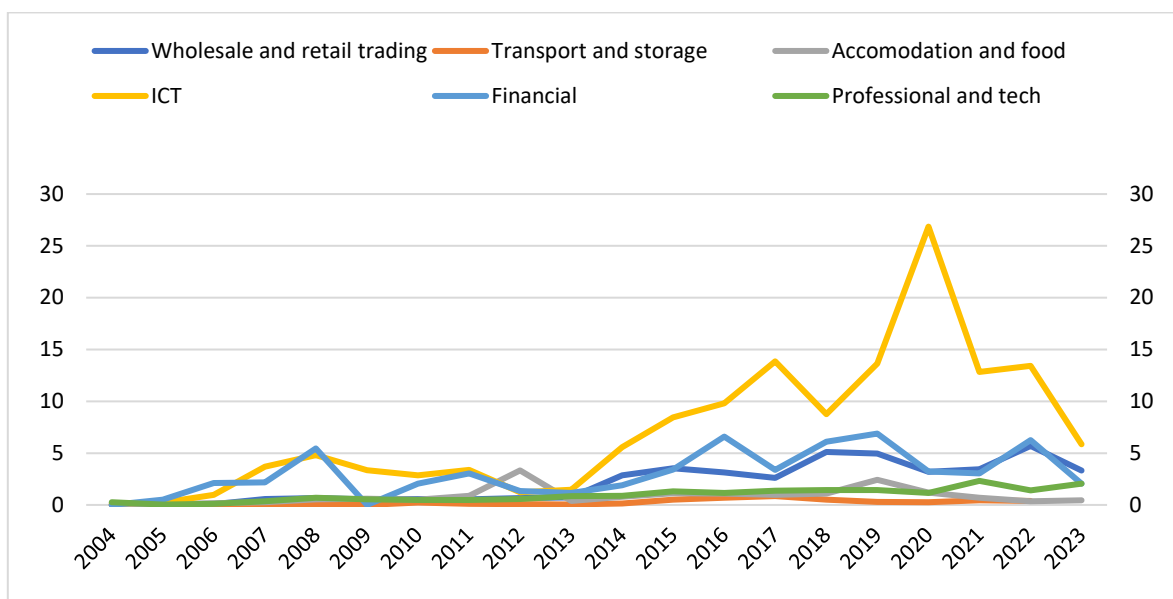


ICT = information and communication technology.

Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

The increasing role of India's ICT sector in the country's integration in the value chain is supported by an important increase in inward FDI in that sector, especially when compared with other sectors receiving FDI (notably manufacturing), which have not seen such a surge in the last few years (Figure 14).

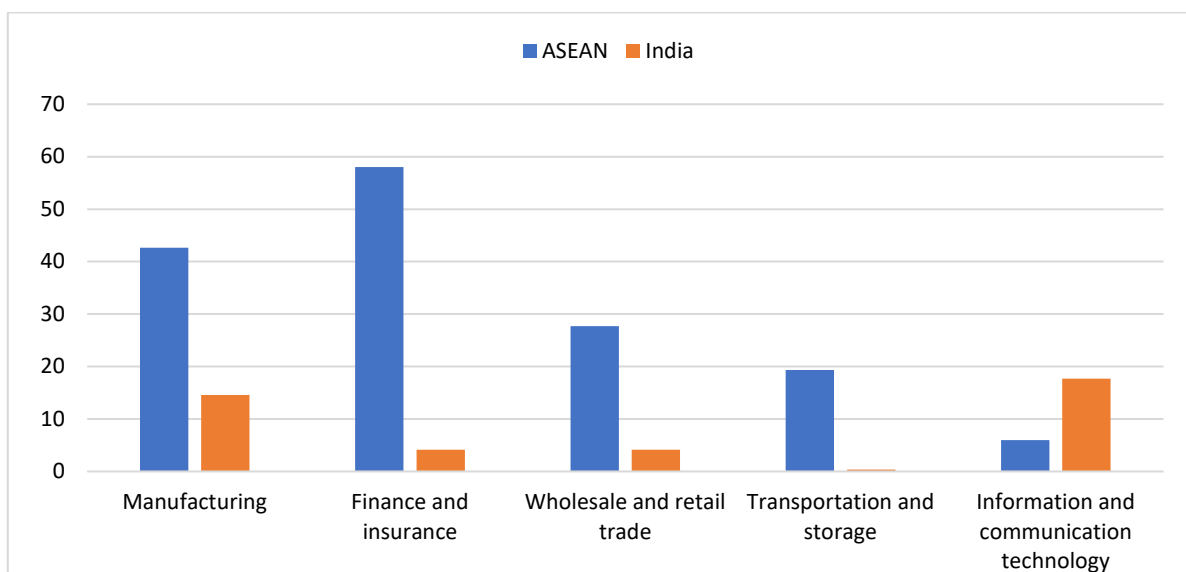
Figure 14: India Services FDI
(US\$ billion)



FDI = foreign direct investment, ICT = information and communication technology.
Sources: Natixis; and India Department for Promotion of Industry and Internal Trade.

It is important to note, though, that India's ICT sector is punching above its weight as far as inward FDI is concerned. A comparison with the FDI attracted by ASEAN shows that India thrives in terms of FDI for ICT: US\$18 billion during 2020–2022 compared with less than US\$7 billion for ASEAN (Figure 15). However, ASEAN has received much more FDI for manufacturing than India (US\$40 billion as opposed to US\$13 billion). The difference is even larger for insurance and banking. Against such a backdrop, focusing only on attracting FDI for ICT might not be enough for India's needs in terms of job creation. Manufacturing FDI creates more jobs across different skill sets (not only ICT experts). In that regard, ASEAN is better placed to create more manufacturing jobs across different skill sets.

Figure 15: FDI by Industry
(US\$ billion, 2020–2022 average)

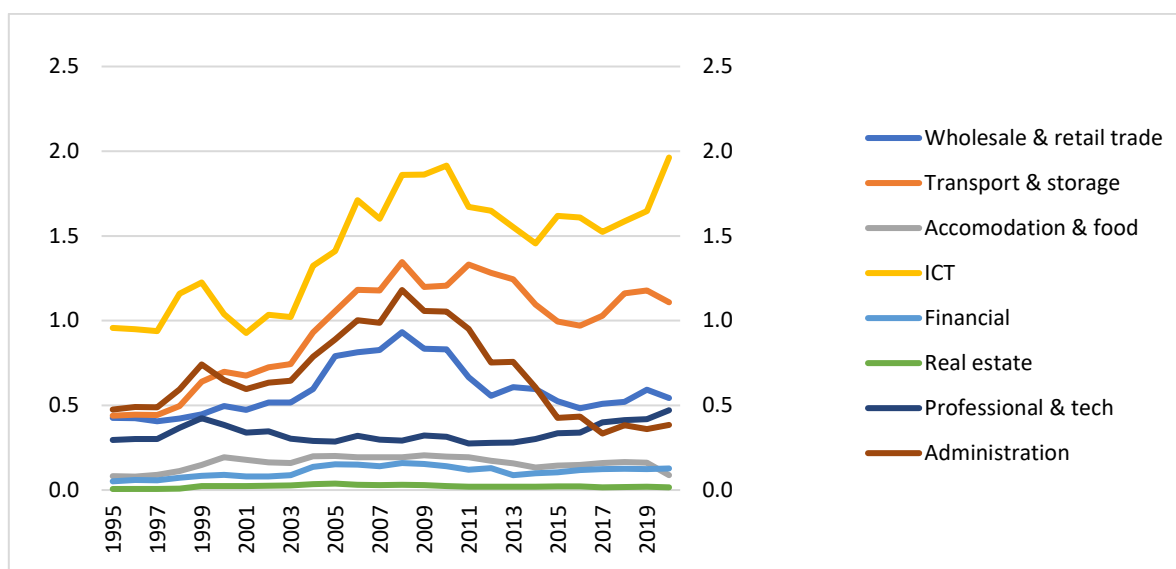


ASEAN = Association of Southeast Asian Nations, FDI = foreign direct investment.

Sources: Natixis (2023); ASEAN and UNCTAD (2023); and India Department for Promotion of Industry and Internal Trade.

In the same vein, backward GVC participation in the service sectors is also largely regressing, except in the ICT sector (Figure 16). This means that India is importing fewer intermediate goods than before to re-export for every sector but ICT. It is hard to argue that this trend, in which India appears to be substituting imports with domestic production, is a consequence of India moving up the ladder as it is not really happening in the sector in which India is most competitive – i.e. ICT.

Figure 16: India's Backward Participation of Service Industries
(% of gross exports)



ICT = information and communication technology.

Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

Overall, India remains a lower-rank participant in GVCs for most manufacturing goods, but it has also built considerable comparative advantage and already exceeded in a few sectors. It currently ranks ninth for the whole manufacturing sector in terms of value added to GVCs, fifth for services, and ninth for all industries if we exclude intra-EU trade. Table 1 summarises the details by industry.

Table 1: India's Value Added in GVC by Industry, 2020

Industry	Value-added (US\$ million)	Share of global value- added (%)	Rank
Total	88,001.7	3.1	9
Manufacturing	47,232.5	2.4	11
Food products, beverages, and tobacco	2,983.1	3.0	9
Textiles, wearing apparel, leather, and related products	3,977.5	4.1	8
Wood and paper products, and printing	994.4	2.8	9
Coke and refined petroleum products	1,988.7	1.2	18
Chemical and chemical products	5,469.0	3.4	9
Pharmaceuticals, medicinal chemical, and botanical products	1,988.7	3.2	8
Rubber and plastics products	1,988.7	3.1	9
Other non-metallic mineral products	497.2	2.2	12
Basic metals	3,480.3	2.3	12
Fabricated metal products	1,491.6	2.6	11
Computer, electronic, and optical products	6,463.4	1.6	15
Electrical equipment	2,485.9	2.3	11
Machinery and equipment n.e.c.	3,977.5	2.8	12
Motor vehicles, trailers, and semi-trailers	5,966.2	2.7	9
Other transport equipment	1,491.6	2.2	14
Business Sector Services	34,802.9	4.7	7
Wholesale and retail trade; repair of motor vehicles	6,960.6	3.9	8
Transportation and storage	7,955.0	3.9	8
Accommodation and food service activities	497.2	3.6	9
Information and communication	9,943.7	7.0	6
Financial and insurance activities	4,474.7	4.3	8
Professional, scientific, and technical activities	2,983.1	4.8	7
Administrative and support services activities	1,491.6	4.3	7

GVC = global value chains, n.e.c. = not elsewhere classifiable.

Note: Data as of 2020.

Source: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

India's manufacturing value added outweighs services but underperforms in terms of share and global rank because transforming the demographic advantage in the service sectors is much easier and faster than in manufacturing, as the former mostly needs professional training while the latter requires costly (and slow) capital accumulation. Within the manufacturing sectors, the pace of development also differs depending on the skill level and capital requirement. High-skill manufacturing usually takes more time than low-skill manufacturing to scale up.

Still, it is worth taking note of some of the manufacturing goods listed above. India has been growing and re-accelerated in recent years in exporting car parts (Harmonised System (HS) code 87), machinery (HS code 84), electrical and electronic parts and components (HS code 85), and transport equipment other than cars (HS code 88) since the early 2000s. It is important for India to gain traction in these products since they require higher production technology and thus carry higher value added compared with labour-intensive goods. During the rise of these industries in India, overseas demand from ASEAN helped significantly as India shipped as much as 25% of total orders for these products to the 10-country coalition. However, as India takes one step further, its export exposure to ASEAN has been dropping since 2014.

Meanwhile, ICT services remain India's most valuable sector in service exports, and its contribution of 7% of global value added in ICT is only lower than that of China (11%) amongst all emerging markets. Transportation and storage, wholesale and retail trading, and financial and professional services are also gaining traction thanks to the push of an uptick in FDI inflows.

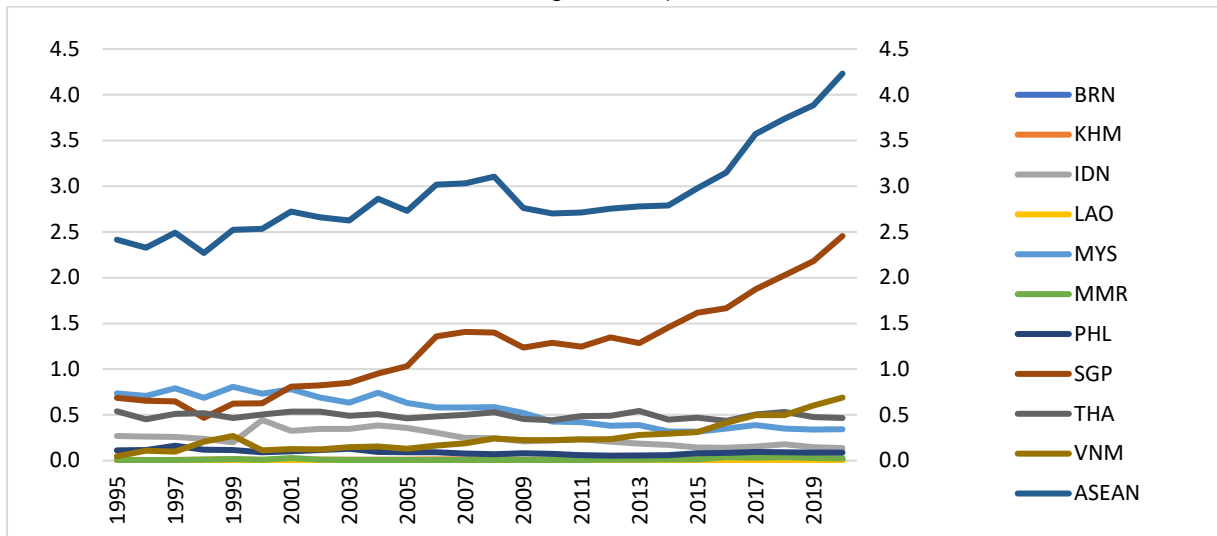
2. Zooming into India's GVC Integration with ASEAN

As the largest trading partner and source of FDI for India, ASEAN is key when analysing the Indian economy. This section discusses India's GVC integration with ASEAN in more detail.

In 2020, India ranked higher in GVCs than ASEAN, meaning that India exported more value added to the world. But that was not always the case since India has received extensive investment from ASEAN, which helped India move up in GVCs to surpass ASEAN. This explains the upward trend in India's forward participation with ASEAN since the 1990s, as suggested by Figure 17.

Meanwhile, India's backward participation has dropped significantly since 2006 when the country cut its imports of crude oil from Malaysia and turned to Saudi Arabia for lower prices after the two signed the Delhi Declaration (Embassy of India, 2006). Following that, Saudi Arabia's share of value added in Indian exports increased from 0.4% in 2005 to 1.5% in 2006, largely replacing Malaysia in India's GVC integration.

Figure 17: India's Forward Participation with ASEAN
(% of gross exports)

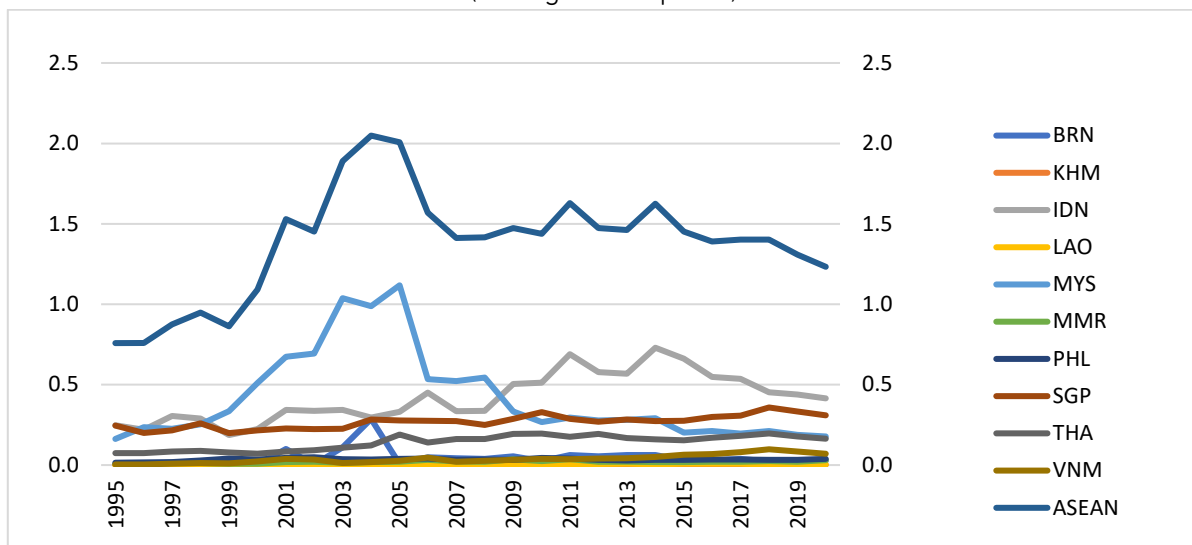


ASEAN = Association of Southeast Asian Nations.

Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

Since then, the rise of India–ASEAN GVC integration has been predominantly driven by Singapore and to a lesser extent Viet Nam, and India has mainly gained on forward participation, meaning that India is moving up in the GVC rank versus the two AMS. Meanwhile, India's backward participation seems to be decreasing with Malaysia and Indonesia as India seeks to diversify its imports of raw materials, while other countries appear to be stable (Figure 18).

Figure 18: India's Backward Participation with ASEAN
(% of gross exports)



ASEAN = Association of Southeast Asian Nations.

Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

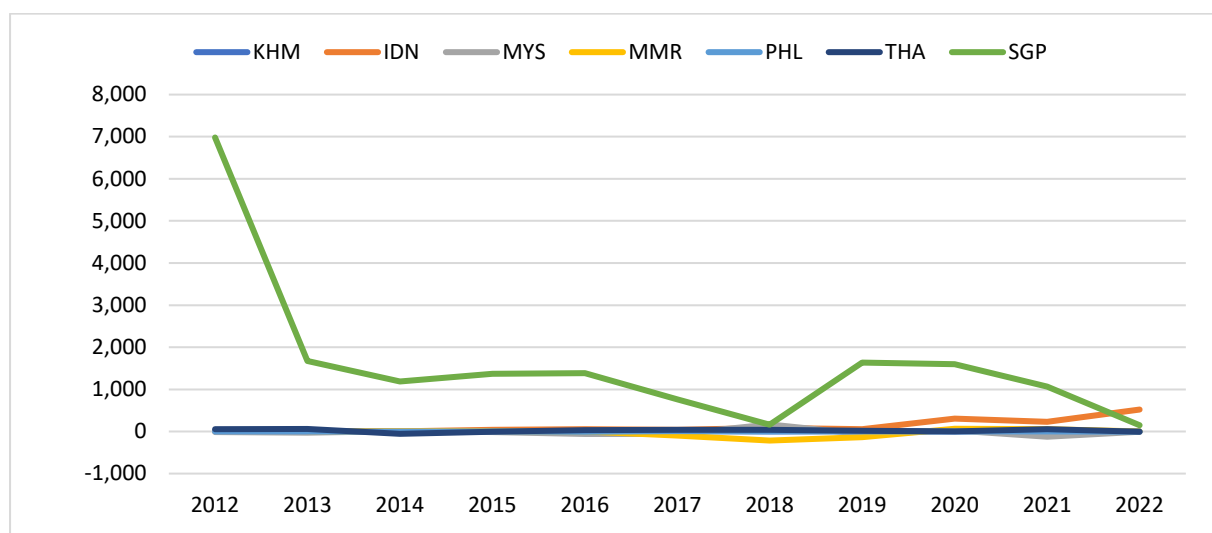
An analysis of India's bilateral GVC integration by country is in the following subsections.

2.1. Singapore

India's forward integration with ASEAN is dominated by Singapore, as it accounts for 96% of the bloc's FDI to India over the last 3 decades. Singapore was also India's second largest foreign investor over 2000–2022 (High Commission of India in Singapore, 2023). Although the industry breakdown of Singapore's investment is not available, the trade structure between the two hints that most of the FDI has been allocated to the petroleum sector as oil's share of India's exports to Singapore surged from less than 1% in 1995 to 51% by 2008. After the GFC, India's petroleum exports decreased in nominal value due to the fall in global oil prices, but the share of petroleum exports remains high at 47% as of 2022. As India's domestic supply chains have improved, India is exporting more manufacturing goods such as power generating engines and various industrial machinery.

Meanwhile, Singapore is also the biggest recipient of India's FDI to ASEAN, most of which is related to finance and insurance (Figures 19 and 20). However, a recent case of money laundering through shell companies in Singapore is putting India's financial FDI under the scanner, risking more vetting from regulators in the future (Devaraj, 2024).

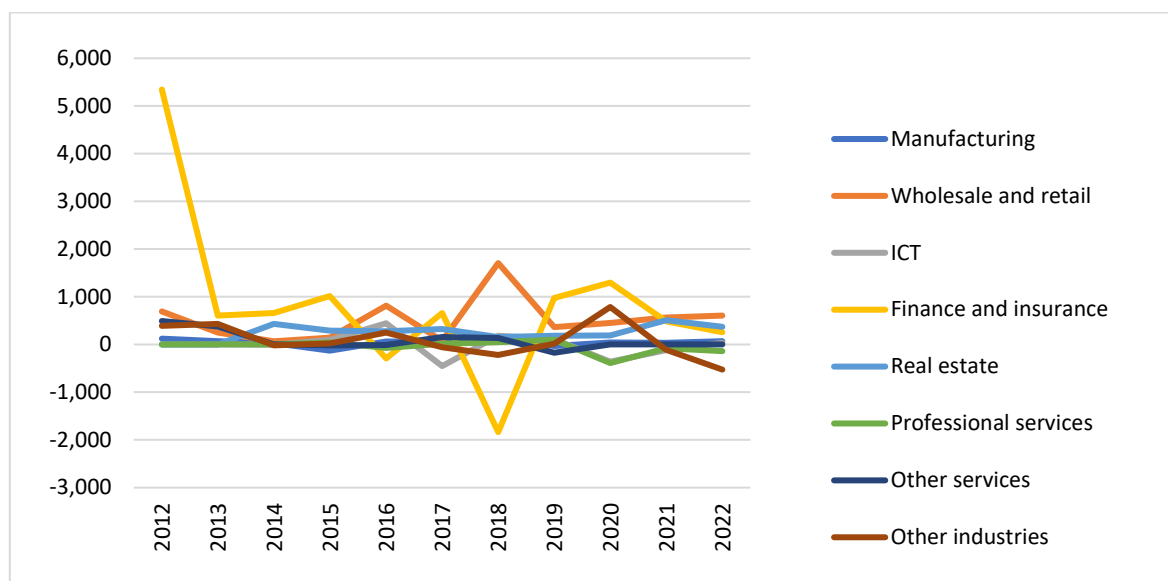
Figure 19: India's FDI Flows to ASEAN by Destination
(US\$ million)



ASEAN = Association of Southeast Asian Nations, FDI = foreign direct investment.

Sources: Natixis; and ASEAN (n.d.), ASEANstats. <https://www.aseanstats.org/> (accessed 23 July 2024).

Figure 20: India's FDI Flows to ASEAN by Industry
(US\$ million)



ASEAN = Association of Southeast Asian Nations, FDI = foreign direct investment, ICT = information and communication technology.

Sources: Natixis; and ASEAN (n.d.), ASEANstats. <https://www.aseanstats.org/> (accessed 23 July 2024).

2.2. Viet Nam

Viet Nam's share in India's GVC partnership had been low before the GFC, but as Viet Nam rises to establish itself as a regional GVC centre, it is becoming increasingly important to India. India's GVC participation with Viet Nam is mainly driven by the forward component, which has accelerated since 2013. Intermediate goods, such as metals, automobile parts, and construction materials, have contributed most of the growth of India's exports to Viet Nam.

As to backward participation, India's reliance on Viet Nam remains low as India lags in the manufacturing GVC. As such, Viet Nam's exports are mostly for India's domestic consumption, and the largest items are electronics such as computers and telecommunications equipment. These products, however, are increasingly relevant given India's ambition to move up the electronics GVC. As Apple's assembling line begins operations in India, more integration is expected between India and Viet Nam in the electronics GVC.

Agriculture is another important sector for the India–Viet Nam partnership. So far, India has stepped up to be a key provider of multiple food types for Viet Nam, such as rice (37%), meat and preparations (25%), and seafood (15%). India is the world's second largest food processor and has issued policies allowing 100% foreign holdings of FDI in food processing industries to attract more foreign investment. As such, investing in India seems to be a lucrative deal for Vietnamese companies considering the South Asian country's world-class farmland size and established market reputation.

2.3. Malaysia

Malaysia used to be the largest oil supplier for India, but that changed quickly when India signed the Delhi Declaration in 2006 with Saudi Arabia for cheaper crude oil imports. Malaysia's significance in India's GVC integration has since been declining. In addition to petroleum, India reduced its imports of computers, semiconductors, and telecommunications equipment from Malaysia after the GFC as Viet Nam offers a cheaper alternative. However, India's imports from Malaysia surged when the two countries signed the Comprehensive Economic Cooperation Agreement in 2011, with palm oil being the biggest contributor – more than doubling in trade value in the following decade.

While gaining ground in forward participation with other ASEAN Member States (AMS), India failed to engrave more value added in Malaysia's exports as the Southeast Asian country has a decent comparative advantage in the industries in which India specialises. In the 2000s, India's exports to Malaysia were scattered amongst metals and food intermediates. After the GFC, petroleum products became the largest item and constitute 25% of India's total exports. However, they are more for Malaysia's domestic consumption than for GVC uses, as suggested by India's continued loss of forward participation with Malaysia.

Still, other sectors have potential in terms of bilateral trade between India and Malaysia, such as chemicals, as India has become the world's second largest exporter of agrichemicals. This will have implications for Malaysia, which has been importing vast quantities of organic chemicals from India.

2.4. Indonesia

Indonesia is another important source of raw materials for India, as it supplies 46% of India's palm oil and 30% of its coal, which make up 70% of India's imports from Indonesia. India's backward participation with Indonesia rose quickly before 2014 as palm oil is crucial to India's industrial system, but it has since been declining as India has diversified its palm oil imports to Malaysia, Brazil, Argentina, and Thailand. Meanwhile, India's increasing coal imports are barely reflected in GVCs as India consumes most of them domestically.

On the other hand, India's exports to Indonesia nearly tripled when it signed a multilateral free trade agreement (FTA) with the bloc. Besides the largest items (petroleum products and sugar), India has been exporting more manufacturing goods (e.g. automobiles and ships) thanks to Indonesia's growing transportation demand. Pharmaceuticals is another beneficiary of India's rising exports to Indonesia – increasing fivefold in the past decade and still accelerating.

2.5. Thailand

India's GVC integration with Thailand first picked up in the early 2000s when India increased its imports of a wide group of commodities and manufactures from Thailand, such as plastics and chemicals, automobile parts, and electrical machinery. As India's

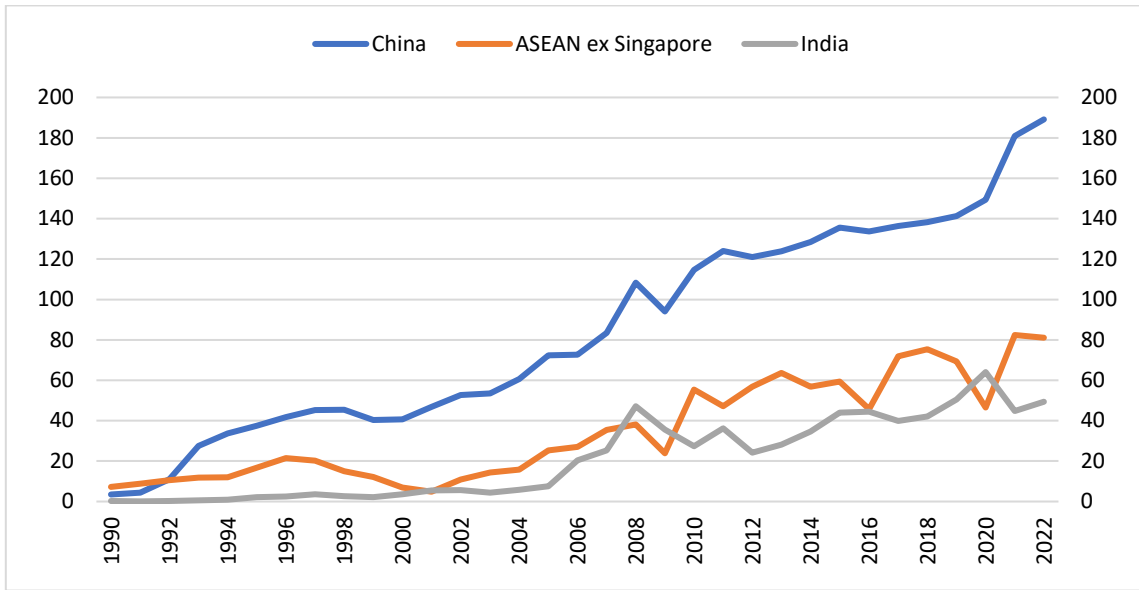
domestic supply chains were boosted by FDI, Thailand's value added fell, but it was then offset by India's increased imports of palm oil to reduce dependence on Indonesia. However, automobiles remain an important sector for India's imports from Thailand as the Early Harvest Scheme between the two covers several auto parts (e.g. gearboxes) that feed into India's auto industry. In fact, India's reliance on Thailand for automobiles and automobile parts rose to 6.5% in 2022 from 5.5% in 2012.

India's forward participation with Thailand has been kept stable at 0.5%, and its constitution has not changed significantly. Nearly 20% of Thailand's imports from India are pearls and precious stones, and the second largest item (also the fastest-growing item) is vehicle engines, whose share soared from 3% to 12% over the past decade.

However, Thailand's economic stature has diminished as its weight amongst AMS continues to fall in terms of GDP and trade volume. The general demographic advantage in other AMS is also absent in Thailand as its population is ageing, with a rising dependency ratio and shrinking working-age population. Thailand's low concentration index for exports shows that it lacks a dominant industry with a big enough comparative advantage to help it climb up GVCs. Thus, Thailand will have to exert greater effort to ramp up investment to upgrade its domestic industry, either by attracting foreign capital or utilising domestic resources. Thailand will also need to maintain the rising share of investment in GDP, which improved from 23% in 2020 to 28% in 2022.

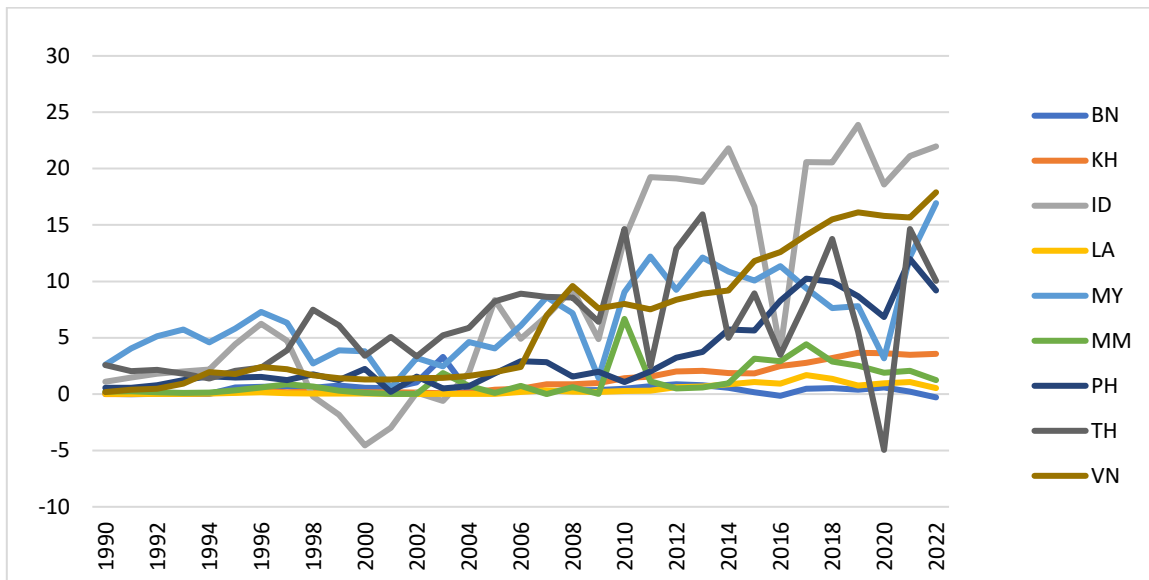
Historically, Southeast Asia was little more than Asia's source of raw materials, ranging from mineral fuels to soft commodities, but the turning point came when continued globalisation unleashed the economic potential of Southeast Asian countries through cheaper transportation costs, lower tariffs, wider market access, and the transfer of the technologies needed to upgrade their domestic supply chains from FDI. Earlier than India, the influx of FDI to ASEAN began to rise in the 1990s, with Malaysia, Indonesia, and Thailand being the most popular destinations before the Asian financial crisis (Figure 21 and 22). The shock of the Asian financial crisis decimated ASEAN FDI, but it rebounded quickly as the globalisation process sped up. Viet Nam, and later the Philippines, began integrating into GVCs. However, ASEAN's role in GVCs remained as mostly a low-skill manufacturer if not a commodity source due to its disadvantage in terms of the size and quality of its labour force versus China. As a result, most AMS fell downstream of China in industrial integration, and their GVC participation thus hinges on backward contents while the forward participation is largely halted.

Figure 21: Asia FDI Inflow
(US\$ billion)



ASEAN = Association of Southeast Asian Nations, FDI = foreign direct investment.
Sources: Natixis; and United Nations Conference on Trade and Development (n.d.), Statistical Portal, Data Centre. <https://unctadstat.unctad.org/datacentre/> (accessed 23 July 2024).

Figure 22: ASEAN ex Singapore FDI Inflow
(US\$ billion)

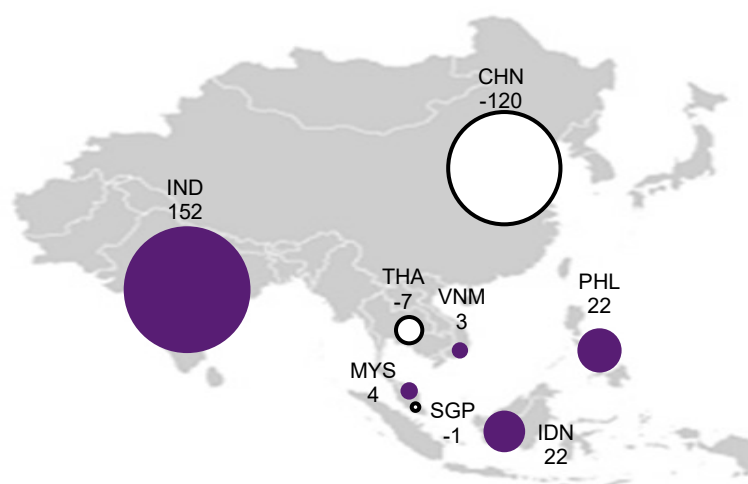


ASEAN = Association of Southeast Asian Nations, FDI = foreign direct investment.
Sources: Natixis; and United Nations Conference on Trade and Development (n.d.), Statistical Portal, Data Centre. <https://unctadstat.unctad.org/datacentre/> (accessed 23 July 2024).

That said, as China's advantageous labour force has peaked and started ageing, China's lead in GVCs faces questions. As shown in Figure 23, China is projected to lose 120 million of its working-age population, or 12% of its current labour force, in the 2 decades following 2024, which will gradually eliminate China's comparative advantage in cheap

and efficient labour and pressure China to transfer its labour-intensive sectors abroad. Meanwhile, foreign investors will consider the great demographic shift taking place in Asia and may reroute their FDI destinations, bringing opportunities to younger economies such as India, Indonesia, and the Philippines (Figure 23).

Figure 23: Working-Age Population Growth, 2024–2040
(million)



Sources: Natixis; and United Nations (n.d.), World Population Prospects 2024, <https://population.un.org/wpp/> (accessed 23 July 2024).

Having said that, other dimensions beyond labour size are key to investors. By factoring in the quality of labour and regulatory restrictiveness, our proprietary metric (Garcia-Herrero et al., 2022) assesses Asian countries' attractiveness for FDI and is summarised in Table 2. India leads the emerging markets in Asia thanks to its rapid working-age population growth, decent labour quality, and laxer FDI regulations. It is ranked first for labour-intensive sectors and second for capital-intensive sectors, only behind Malaysia and even higher than China.

Table 2: Ranking of Emerging Asian Markets' Attractiveness for FDI

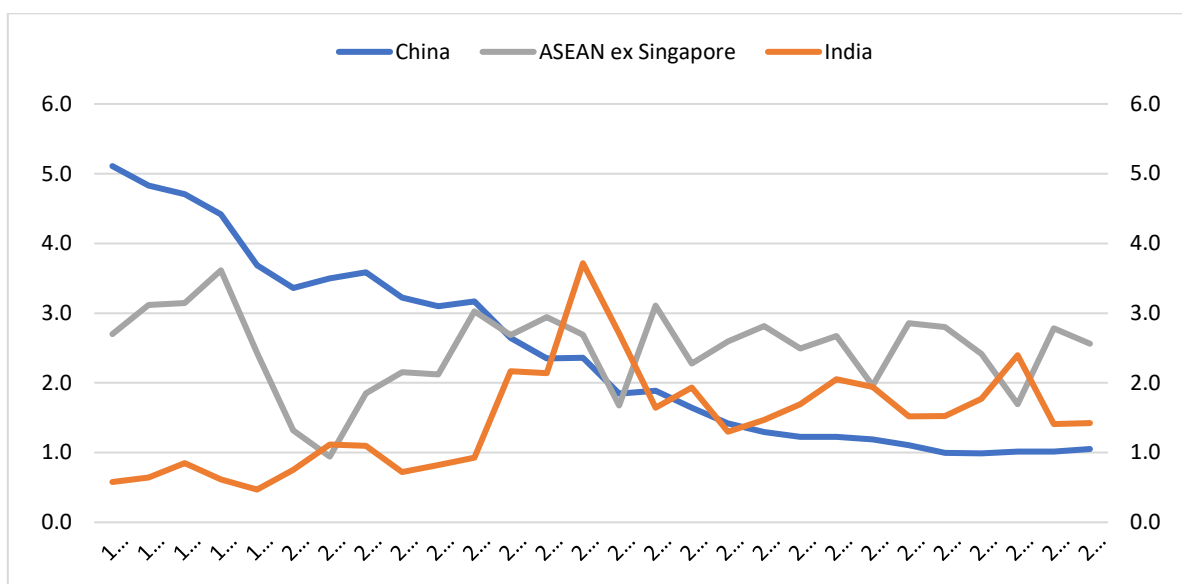
Country	Ranking		Quantity and Quality of Labour		Cost of Labour	Regulatory Restrictiveness
	Labour-intensive sectors	Capital-intensive sectors	Labour growth (2020 to 2040, %)	Labour quality score (standardized)	Wages for manufacturing worker (US\$ per month)	FDI inflow restrictiveness (0 to 1, 0 = no restriction)
IND	1	2	17.5	-0.4	330	0.2
PHL	2	4	27.7	1.4	248	0.4
VNM	3	7	5.5	-1.0	277	0.1
BGD	4	6	17.0	-2.3	127	0.4
IDN	5	5	14.0	-0.2	374	0.3
CHN	6	3	-11.2	1.9	607	0.2
MYS	7	1	17.8	3.6	430	0.3

FDI = foreign direct investment.

Sources: Natixis.

Still, India has not yet transformed its labour advantage to an actual lead in FDI inflows, as the share of GDP has stagnated since the GFC and continuously lagged ASEAN, especially in the manufacturing sectors (Figure 24). Although India receives higher inflows in absolute value compared with individual AMS, together they outnumber India by more than twice as shown in Figure 25.

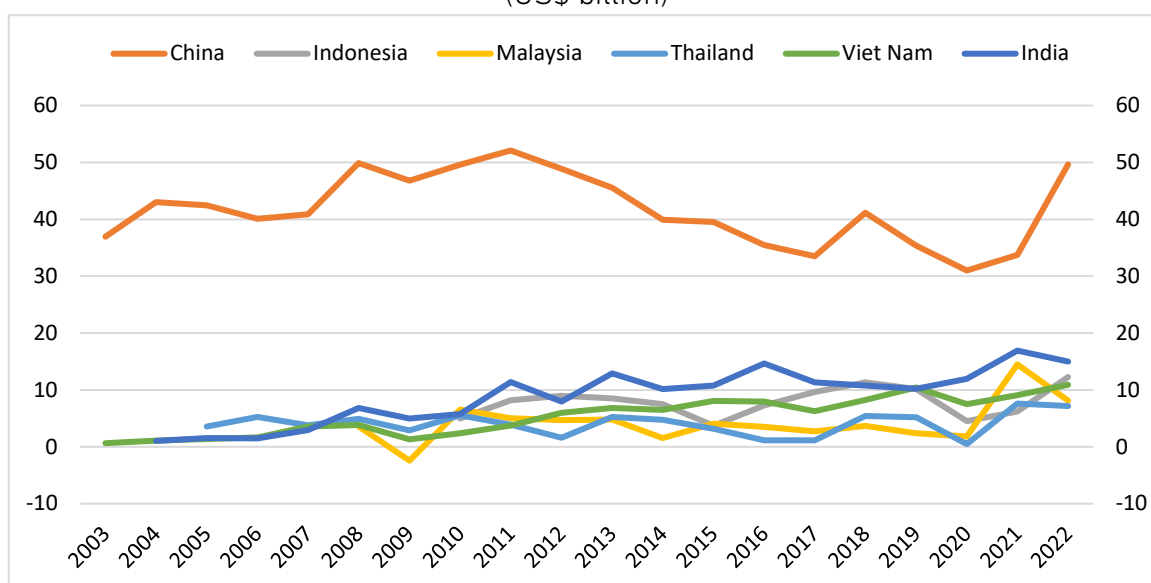
Figure 24: FDI Inflows
(% of GDP)



ASEAN = Association of Southeast Asian Nations, FDI = foreign direct investment, GDP = gross domestic product.

Sources: Natixis; and United Nations Conference on Trade and Development (n.d.), Statistical Portal, Data Centre. <https://unctadstat.unctad.org/datacentre/> (accessed 23 July 2024).

Figure 25: Manufacturing FDI Inflows
(US\$ billion)

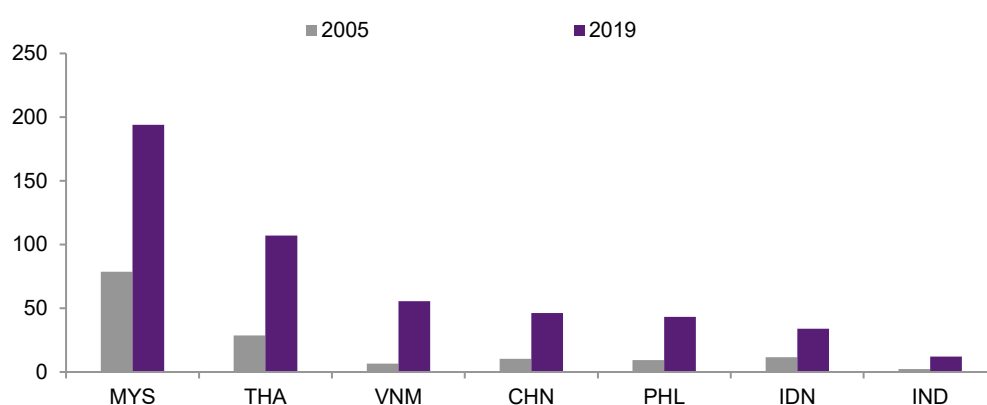


FDI = foreign direct investment.

Sources: Natixis; and CEIC (n.d.), <https://www.ceicdata.com/en> (accessed 23 July 2024).

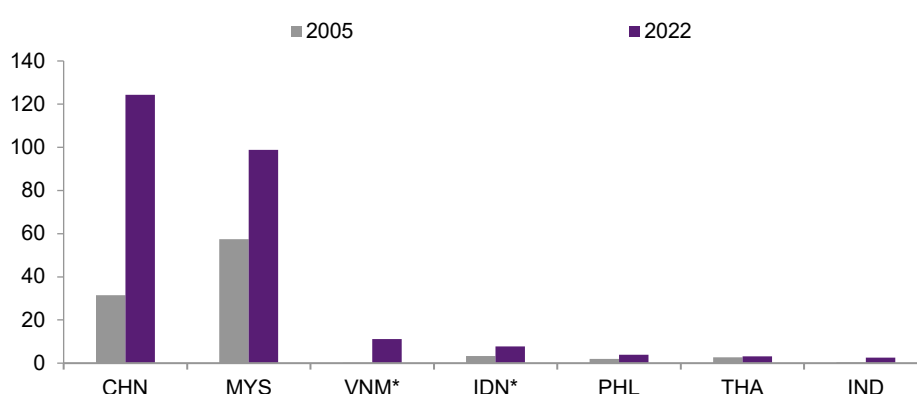
This may relate to India's lagging in a few infrastructure fields that are key to the manufacturing sectors showcased in Figures 26–29. The first is inland transportation, including air and highway capacities, as India ranks low in Asia's emerging markets. The efficiency of electricity supply is another major issue, as manufacturing sectors require a cheap and stable power source. India also lags in promoting high-speed internet connections, which may create new bottlenecks for the development of ICT and other tech sectors that will be key in moving up the GVCs. In fact, infrastructure has become a high priority as the government approved the high-stake Gati Shakti Plan in 2021 for multimodal connectivity to all economic zones in India.

Figure 26: Air Passengers
(per 100 people)



Sources: Natixis; and World Bank (n.d.), World Development Indicators. <https://databank.worldbank.org/source/world-development-indicators> (accessed 23 July 2024).

Figure 27: Expressway Length
(km/million people)



km = kilometre.

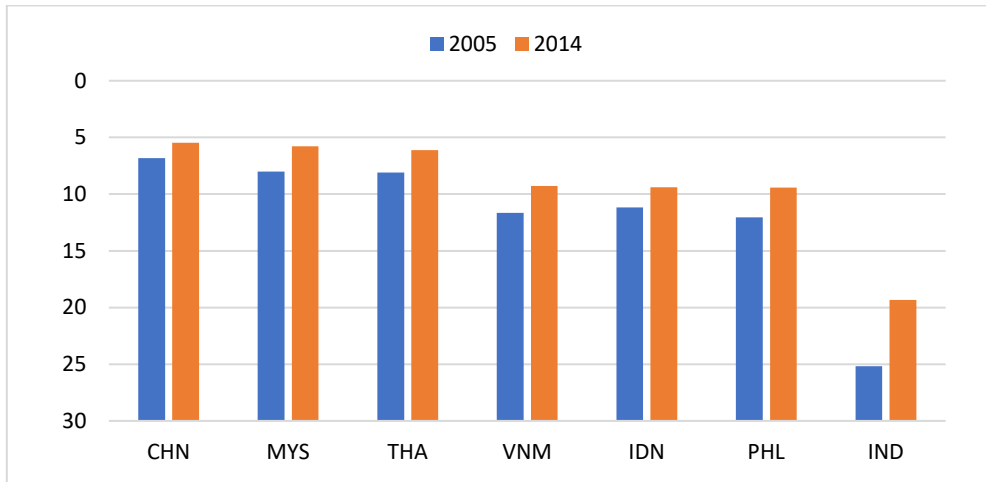
* Data for Viet Nam and Indonesia are as of 2019.

Sources: Natixis; ASEAN (n.d.), ASEANStats. <https://www.aseanstats.org/> (accessed 23 July 2024); China National Bureau of Statistics.

<https://data.stats.gov.cn/easyquery.htm?cn=C01> (accessed 23 July 2024); and World Bank (n.d.), World Development Indicators.

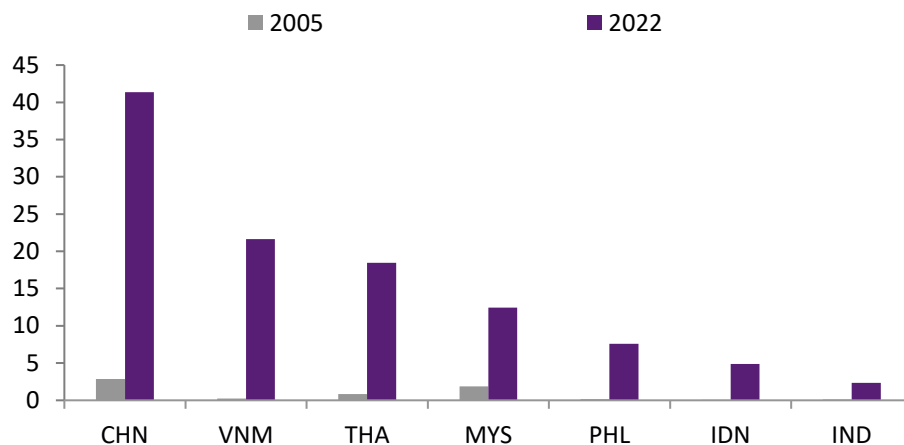
<https://databank.worldbank.org/source/world-development-indicators> (accessed 23 July 2024).

Figure 28: Electric Power Transmission and Distribution Loss
(% of output, inverted)



Sources: Natixis; and World Bank (n.d.), World Development Indicators. <https://databank.worldbank.org/source/world-development-indicators> (accessed 23 July 2024).

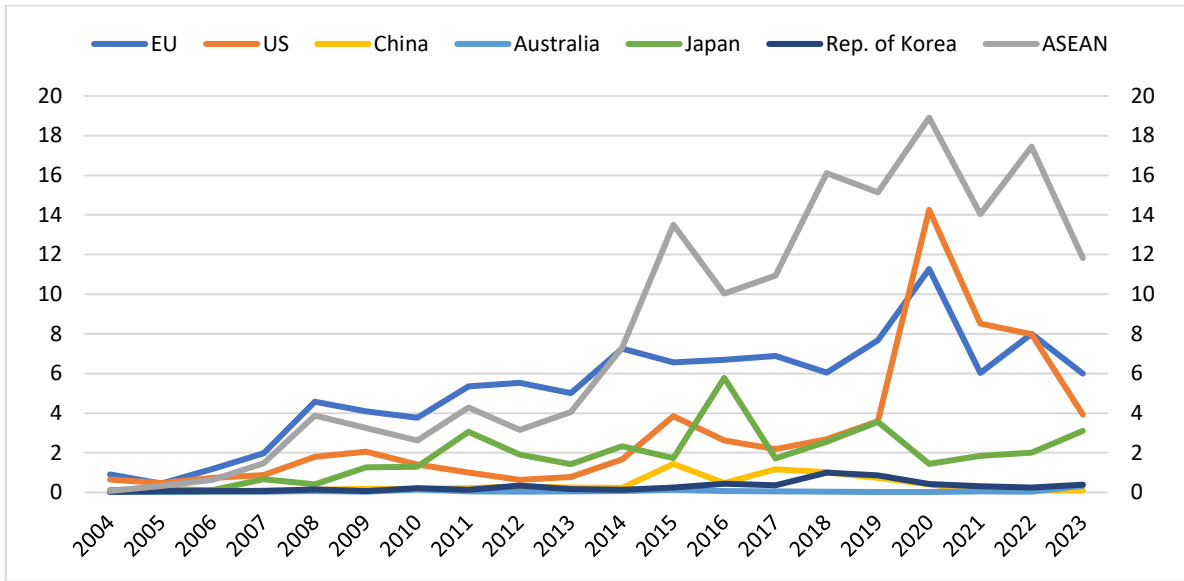
Figure 29: Fixed Broadband Subscriptions (per 100 people)



Sources: Natixis; and World Bank (n.d.), World Development Indicators. <https://databank.worldbank.org/source/world-development-indicators> (accessed 23 July 2024).

Another factor may come from the geo-economic front. China's absolute lead in the globalisation process so far has shaped Asian supply chains in its favour. Both Northeast and Southeast Asia are closely integrated as China connects them with its lengthy coastline, and AMS that are geographically close to China's manufacturing centres (Zhejiang, Jiangsu, and Guangdong) were firstly integrated with China in GVCs, such as Malaysia, Thailand, and Viet Nam. While India is bound with China by land, the barrier of the Himalayas makes large-scale trades economically infeasible. Because of this, AMS have been receiving more FDI than India, especially from East Asian countries like China, Japan, and the Republic of Korea (henceforth, Korea), as shown in Figures 30–32. In contrast, India's FDI mainly comes from ASEAN, the EU, and increasingly the US.

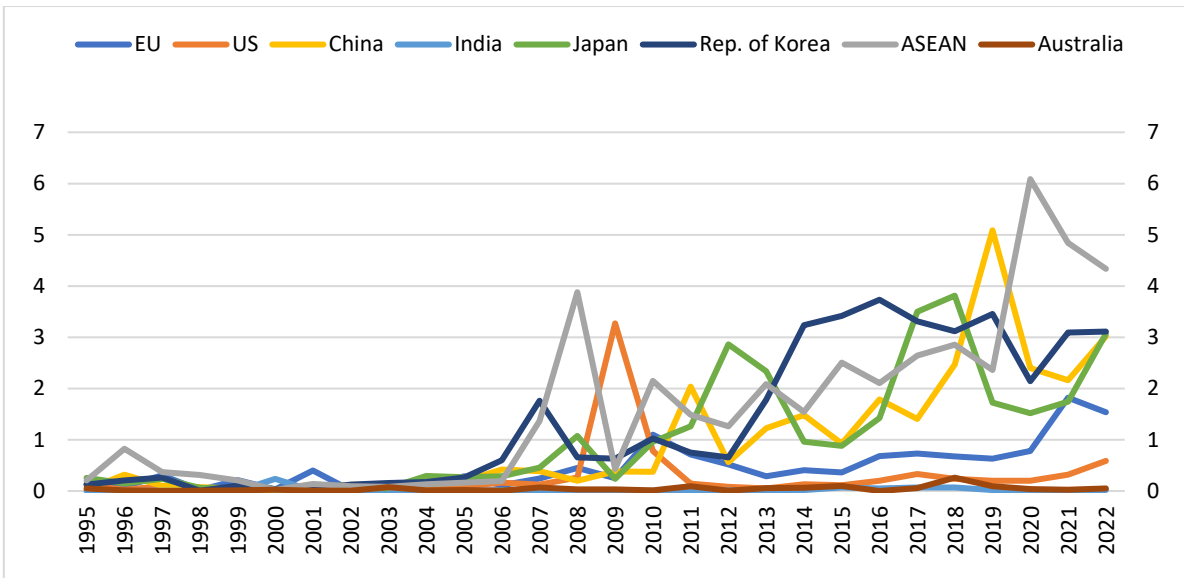
Figure 30: India's FDI Inflows by Source
(US\$ billion)



ASEAN = Association of Southeast Asian Nations, EU = European Union, FDI = foreign direct investment, US = United States.

Sources: Natixis; and India Department for Promotion of Industry and Internal Trade.

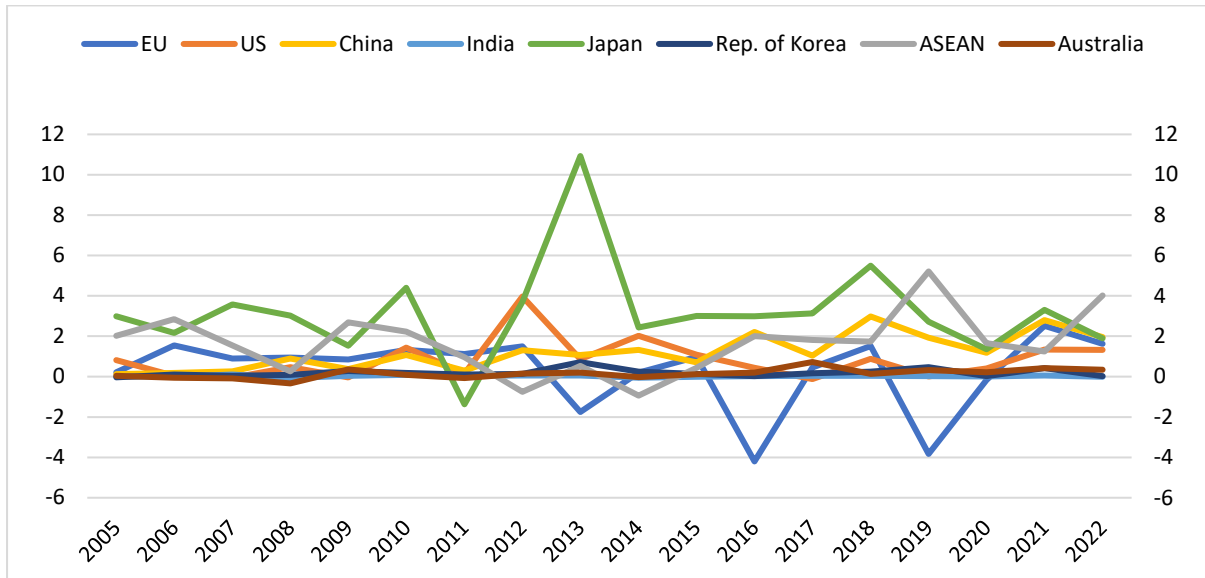
Figure 31: Viet Nam's FDI Inflows by Source
(US\$ billion)



ASEAN = Association of Southeast Asian Nations, EU = European Union, FDI = foreign direct investment, US = United States.

Sources: Natixis; and Vietnam General Statistics Office.

Figure 32: Thailand's FDI Inflows by Source
(US\$ billion)



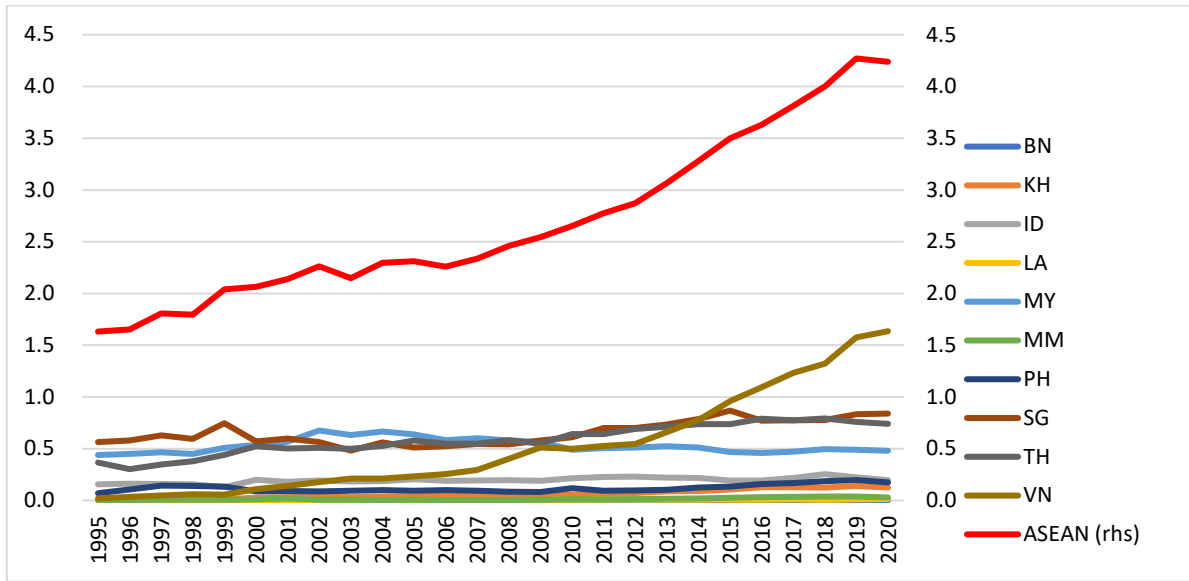
ASEAN = Association of Southeast Asian Nations, EU = European Union, FDI = foreign direct investment, US = United States.

Sources: Natixis; and Bank of Thailand.

The prevailing trend of de-risking supply chains away from China means more opportunities for India as its potential outsizes any country in ASEAN, and even the whole bloc. This is due to India's geographic and demographic advantage as its huge population size, geography, abundant land resources, and proximity to major commodity sources (the Middle East, Africa, and Southeast Asia) make it a particularly attractive location for manufacturing supply chains.

That said, India may face challenges in attracting FDI from China considering the misalignment of the two countries' geopolitical interests. To China, Southeast Asia is a better target for outsourcing lower-end manufacturing industries since none of these economies are comparable to China in size. The limits of their land and labour size mean that none of them will be able to develop a full-industry supply chain like China, so they will not likely form any potential rivalry with China. As such, ASEAN has been increasingly integrated with China in terms of GVC participation (Figures 33 and 34).

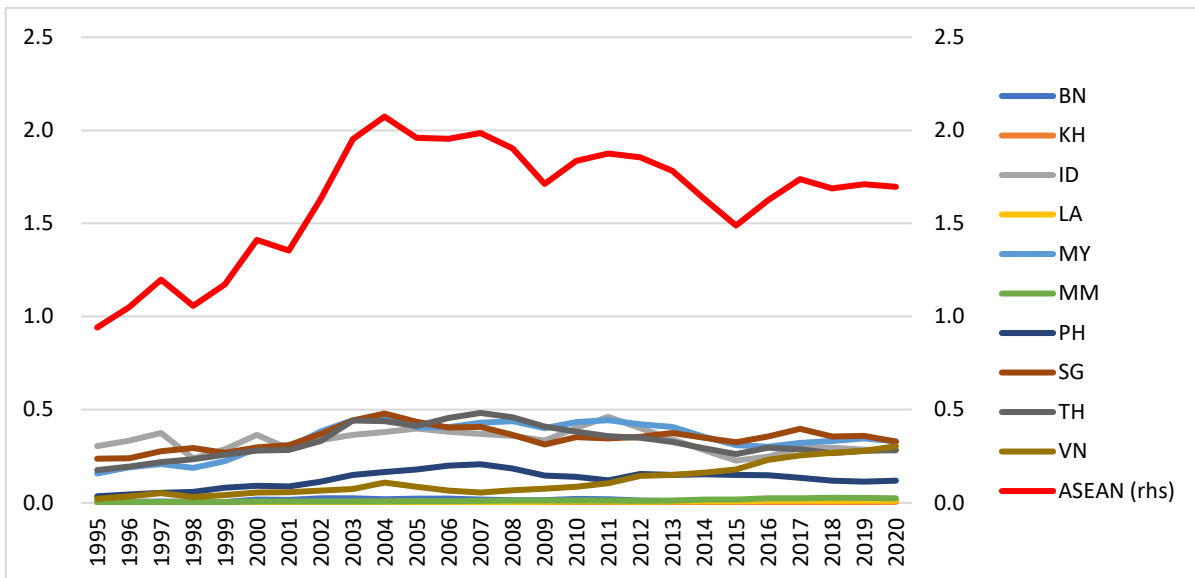
Figure 33: China's Forward Participation with ASEAN
(% of gross exports)



ASEAN = Association of Southeast Asian Nations.

Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

Figure 34: China's Backward Participation with ASEAN
(% of gross exports)



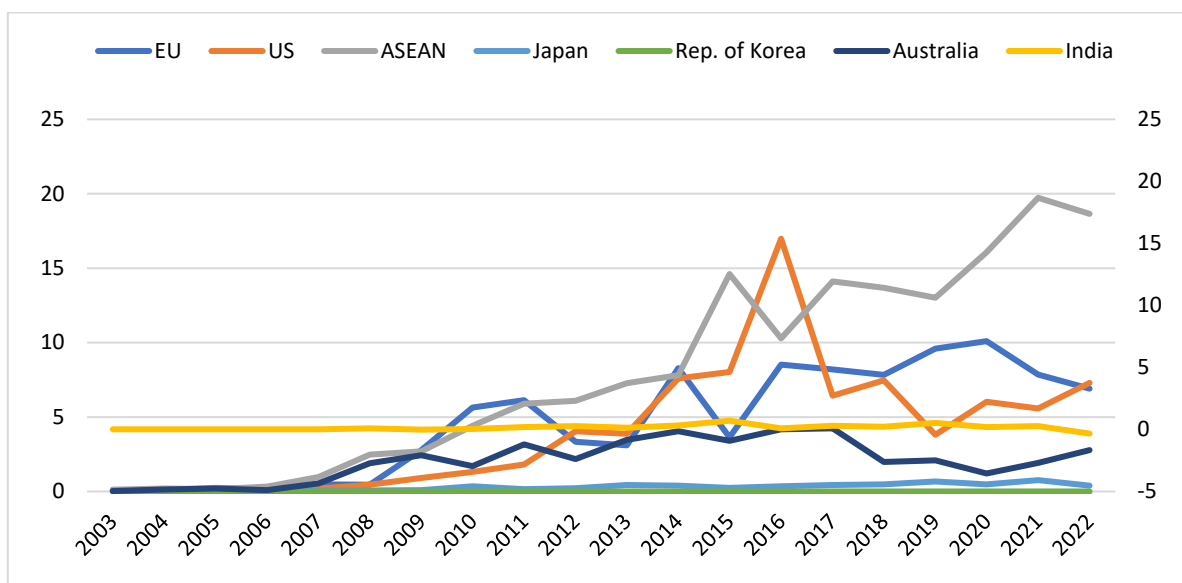
ASEAN = Association of Southeast Asian Nations.

Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

India is different. As mentioned, India has greater potential for developing the manufacturing sectors, which means that it is a bigger threat to China, especially as

foreign investors seek to diversify their stake in China because China is not yet prepared to upgrade its entire supply side to higher-end products. In fact, since the early 2010s, China has been investing in Southeast Asia to avail of cheaper labour costs and circumvent sanctions from the West. This trend seems to be accelerating as Chinese FDI to ASEAN continues is surging (Figure 35). Meanwhile, China has barely invested in India, and this is likely to continue.

Figure 35: China's Outward FDI by Destination
(US\$ billion)



ASEAN = Association of Southeast Asian Nations, EU = European Union, FDI = foreign direct investment, US = United States.

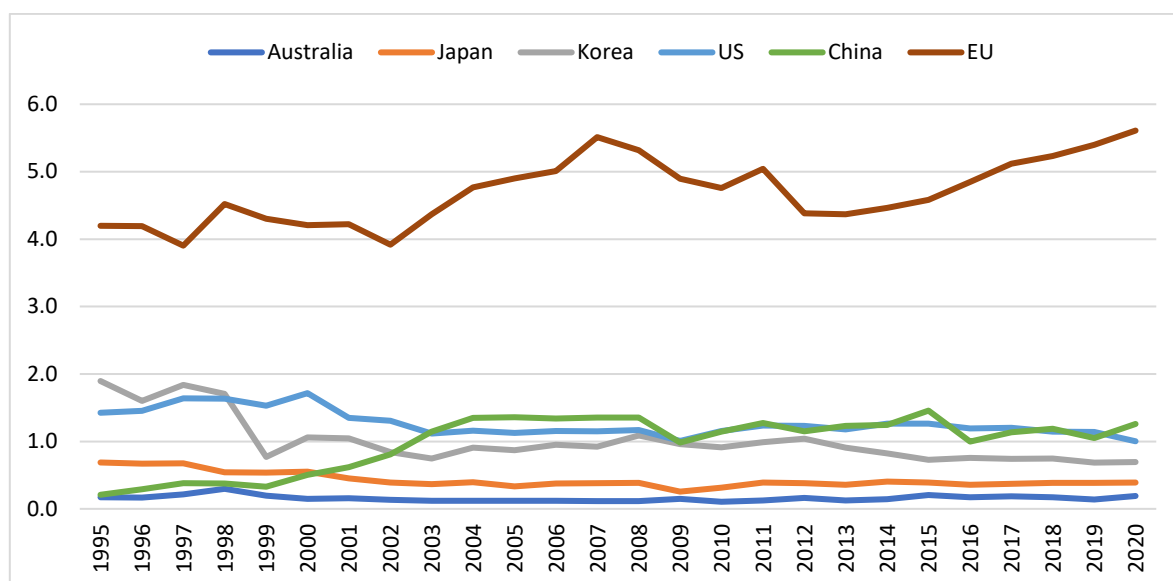
Sources: Natixis; and China Ministry of Commerce.

Therefore, attracting enough FDI will be key to India's moving up the ladder and increasing its forward participation in the global supply chains. This will be harder if Chinese FDI is not allowed to enter but there are also other options. So far, ASEAN has been India's largest investor, followed by the EU and the US as well as Japan. All four of India's largest investors are very interested in increasing their investment in India, and obviously as well as China. It is worth noting that ASEAN's FDI to India surged rapidly after 2014 thanks to the ASEAN-India trade and investment agreements, which suggests that India may need to engage with more trade partners for trade and investment deals beyond ASEAN. Potential cooperation is discussed in the next section.

3. India's GVC Integration with Other Major Economies Globally

Amongst the world's major economies, the EU has the highest (and rising) GVC integration with India, driven by India's forward components in EU exports. This is because of the EU's investment in India, which has been the main source of India's FDI. Meanwhile, India's forward participation with other economies remains low and even seems to be decreasing (Figure 36).

Figure 36: India's Forward Participation by Partner
(% of gross exports)

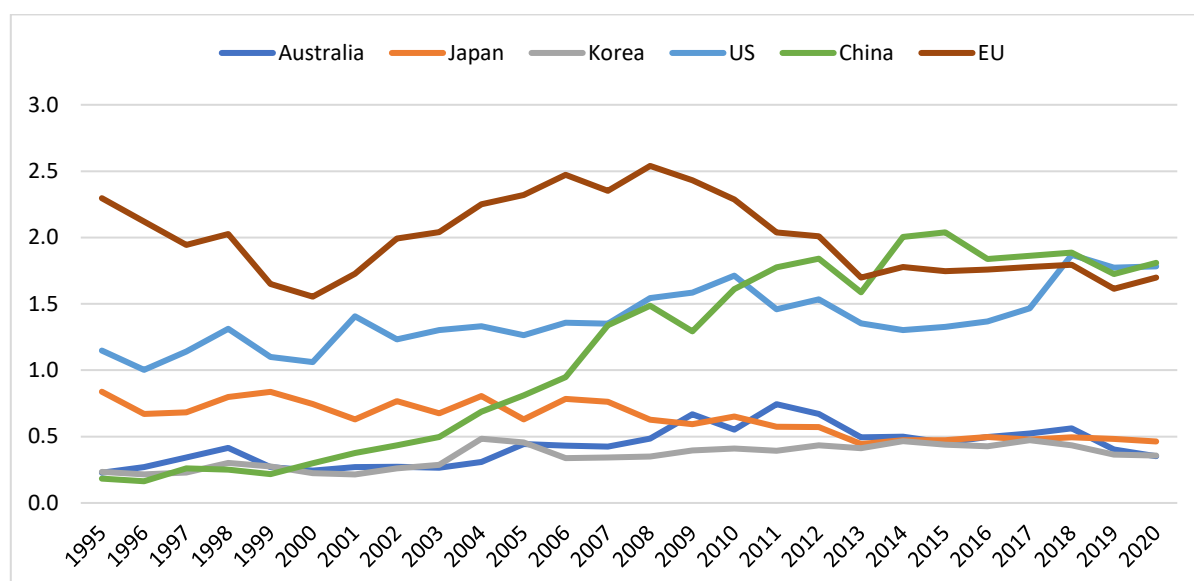


ASEAN = Association of Southeast Asian Nations, EU = European Union, FDI = foreign direct investment, US = United States.

Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

For backward participation, India has been largely reducing its reliance on foreign value added from several key partners as it has substituted imports with domestic products, due to the very high barriers to imports (from import tariffs to quotas and other measures). China and the US are the only two exceptions, which does not surprise since they have been continuously rising in the GVC rank – China by manufacturing exports and the US by intellectual property. Amongst others, the EU sees the largest decrease in value integrated in India exports as India moves up in relation to it, and other countries (e.g. Japan, Korea, and Australia) are also experiencing a slow but gradual decline. Figure 37 illustrates these trends.

Figure 37: India's Backward Participation by Partner
(% of gross exports)



ASEAN = Association of Southeast Asian Nations, EU = European Union, FDI = foreign direct investment, US = United States.

Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

Overall, the EU remains the most important trade and investment partner given its steadily increasing trade and FDI flows. India is an ideal upstream supplier for Europe considering the low shipping costs and India's gigantic labour size, especially in the current context of de-risking away from China. India has been pushing forward its trade relationship with Europe and signed the Trade and Economic Partnership Agreement with the European Free Trade Association, which includes Iceland, Liechtenstein, Norway, and Switzerland, on 10 March 2024. Although none of the four members is in the EU, this is undoubtedly a great leap forward for Europe–India ties. To continue moving up in GVCs, India needs more deals like this, and the United Kingdom and the EU will be key.

Apart from Europe, there are increasing possibilities of cooperation within the Indo-Pacific region, which refers to the traditional Asia-Pacific countries plus India. In May 2022, 14 member countries –Australia, Brunei Darussalam, Fiji, India, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore, Thailand, the US, and Viet Nam – signed the Indo-Pacific Economic Framework (IPEF). The framework aims to promote dialogue between members on four pillars: trade, supply chains, decarbonisation, and tax and anti-corruption. Although the IPEF is not like trade agreements that widen market access, it opens the door for closer trade partnerships and investment flows.

With the exclusion of China, the IPEF clearly hails the de-risking mantra, so India should leverage it to firm up its ties with the members in terms of trade and investment. For example, despite having signed FTAs with Japan and Korea, their FDI to India has not

picked up significantly, and India will need to step up investment partnerships with the two developed markets for more higher-end FDI to bolster its GVC impact. The US will also be an important source of tech FDI, as its investment in India has surged since 2020, albeit gradually falling back. Apple's investment in new assembly lines in India is a good example, and India should sustain it by offering more favourable policies and improving labour quality and infrastructure facilities. Partnerships with Australia and the United Arab Emirates should also be considered, as they signed trade deals with India in 2022.

By sector, commodities (e.g. petroleum oil, pearls, and precious metals) and base metals (e.g. iron and aluminium) still comprise most of India's exports to major partners. Manufacturing exports are more spread out but cluster in lower-skill groups (e.g. textiles and chemicals). Medicaments, telecommunications devices, and automobile parts are the shining spots for India's manufacturing, though they still have a long way to go to add more value added to GVCs. A summary of India's largest export items to major trade partners is shown in Table 3.

Table 3: Top Goods in India's Exports to Major Partners, 2022

Item	Category	Value (US\$1,000)	Share (%)	Item	Category	Value (US\$1,000)	Share (%)
US				EU			
TOTAL ALL PRODUCTS		80,230,193		TOTAL ALL PRODUCTS		73,457,375	
Pearls, precious & semi-precious stones	Commodity	10,146,148	12.6	Petroleum oils or bituminous minerals > 70 % oil	Commodity	13,491,370	18.4
Medicaments (incl. veterinary medicaments)	Manufacture	6,554,640	8.2	Telecommunication equipment, n.e.s.; & parts, n.e.s.	Manufacture	3,781,913	5.1
Petroleum oils or bituminous minerals > 70 % oil	Commodity	5,626,395	7.0	Pearls, precious & semi-precious stones	Commodity	3,144,753	4.3
Jewellery & articles of precious materia., n.e.s.	Manufacture	3,500,475	4.4	Medicaments (incl. veterinary medicaments)	Manufacture	2,380,518	3.2
Made-up articles, of textile materials, n.e.s.	Manufacture	2,828,236	3.5	Aluminium	Commodity	2,322,923	3.2
Articles of apparel, of textile fabrics, n.e.s.	Manufacture	2,094,038	2.6	Organo-inorganic, heterocycl. compounds, nucl. acids	Manufacture	1,840,787	2.5
Parts & accessories of vehicles of 722, 781, 782, 783	Manufacture	2,071,805	2.6	Articles of apparel, of textile fabrics, n.e.s.	Manufacture	1,574,717	2.1
Crustaceans, mollusks and aquatic invertebrates	Commodity	1,966,731	2.5	Parts & accessories of vehicles of 722, 781, 782, 783	Manufacture	1,375,738	1.9
Women's clothing, of textile fabrics	Manufacture	1,606,417	2.0	Women's clothing, of textile fabrics	Manufacture	1,313,217	1.8
Manufactures of base metal, n.e.s.	Manufacture	1,487,389	1.9	Footwear	Manufacture	1,260,406	1.7
UAE				Australia			
TOTAL ALL PRODUCTS		31,322,728		TOTAL ALL PRODUCTS		8,207,843	
Petroleum oils or bituminous minerals > 70 % oil	Commodity	7,982,417	25.5	Petroleum oils or bituminous minerals > 70 % oil	Commodity	4,211,273	51.3
Jewellery & articles of precious materia., n.e.s.	Manufacture	3,157,930	10.1	Medicaments (incl. veterinary medicaments)	Manufacture	346,038	4.2
Pearls, precious & semi-precious stones	Commodity	2,355,534	7.5	Pearls, precious & semi-precious stones	Commodity	195,867	2.4
Telecommunication equipment, n.e.s.; & parts, n.e.s.	Manufacture	2,314,458	7.4	Made-up articles, of textile materials, n.e.s.	Manufacture	179,843	2.2
Residual petroleum products, n.e.s., related mater.	Commodity	805,560	2.6	Jewellery & articles of precious materia., n.e.s.	Manufacture	163,278	2.0
Pig iron & spiegeleisen, sponge iron, powder & granu	Manufacture	485,318	1.5	Rotating electric plant & parts thereof, n.e.s.	Manufacture	154,061	1.9
Articles of apparel, of textile fabrics, n.e.s.	Manufacture	438,572	1.4	Articles of apparel, of textile fabrics, n.e.s.	Manufacture	127,030	1.5
Rice	Commodity	432,987	1.4	Insectides & similar products, for retail sale	Manufacture	126,841	1.5
Ships, boats & floating structures	Manufacture	416,908	1.3	Railway vehicles & associated equipment	Manufacture	118,770	1.4
Paper and paperboard	Manufacture	411,831	1.3	Manufactures of base metal, n.e.s.	Manufacture	113,692	1.4

Korea				Japan			
TOTAL ALL PRODUCTS		7,497,726		TOTAL ALL PRODUCTS		5,699,962	
Petroleum oils or bituminous minerals > 70 % oil	Commodity	2,508,984	33.5	Petroleum oils or bituminous minerals > 70 % oil	Commodity	385,345	6.8
Aluminium	Commodity	1,152,152	15.4	Crustaceans, mollusks and aquatic invertebrates	Commodity	339,356	6.0
Lead	Commodity	244,191	3.3	Pearls, precious & semi-precious stones	Commodity	301,254	5.3
Organo-inorganic, heterocycl. compounds, nucl. acids	Manufacture	225,468	3.0	Organo-inorganic, heterocycl. compounds, nucl. acids	Manufacture	296,697	5.2
Feeding stuff for animals (no unmilled cereals)	Manufacture	224,352	3.0	Aluminium	Commodity	296,564	5.2
Pig iron & spiegeleisen, sponge iron, powder & granu	Manufacture	209,842	2.8	Pig iron & spiegeleisen, sponge iron, powder & granu	Manufacture	294,193	5.2
Wheat (including spelt) and meslin, unmilled	Commodity	198,080	2.6	Parts & accessories of vehicles of 722, 781, 782, 783	Manufacture	226,744	4.0
Parts & accessories of vehicles of 722, 781, 782, 783	Manufacture	138,884	1.9	Insectides & similar products, for retail sale	Manufacture	193,574	3.4
Textile yarn	Manufacture	132,808	1.8	Telecommunication equipment, n.e.s.; & parts, n.e.s.	Manufacture	179,265	3.1
Carboxylic acids, anhydrides, halides, per.; derivati.	Manufacture	93,617	1.2	Nitrogen-function compounds	Manufacture	120,909	2.1

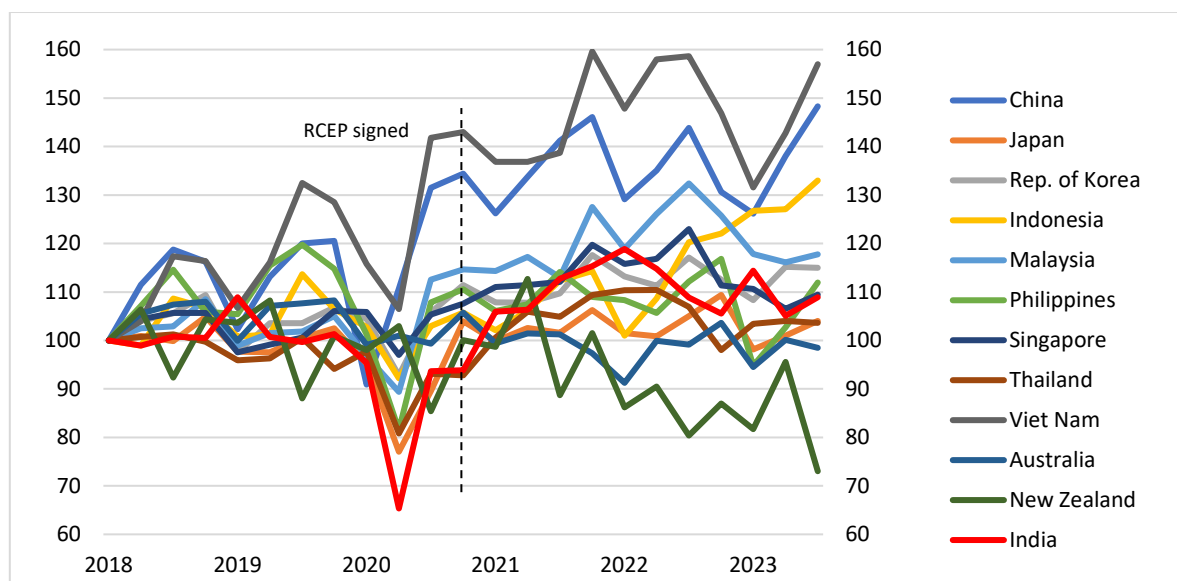
EU = European Union, n.e.c. = not elsewhere classified, n.e.s. = not elsewhere specified, UAE = United Arab Emirates, US = United States.

Sources: Natixis; and United Nations Conference on Trade and Development (n.d.), Statistical Portal, Data Centre. <https://unctadstat.unctad.org/datacentre/> (accessed 23 July 2024).

4. Lessons from the Regional Comprehensive Economic Partnership (RCEP)

In 2020, 15 countries signed the RCEP, which has surpassed the EU to become the world's largest FTA. India was a party to the negotiations but exited before agreement was reached on the final terms. Although the COVID-19 pandemic makes it difficult to study the impact of signing the deal on members' trade growth, we can see that most countries have experienced decent growth in their trade volume as of the third quarter (Q3) of 2023 (Figure 38). Viet Nam and China are the biggest winners given their comparative advantage in manufacturing goods, and Indonesia also outperforms thanks to the surging commodity prices in mineral fuels and food oils. Malaysia and Korea were impacted by the downturn in the semiconductor cycle and have thus seen a contraction in their exports since mid-2022. Other members have gone through a more severe decline due to structural weaknesses in their exports. Compared with RCEP members, Indian exports performed moderately since surging oil prices eroded India's competitiveness in the export of petroleum products.

Figure 38: RCEP Export Volume
(Q1 2018=100, SA)

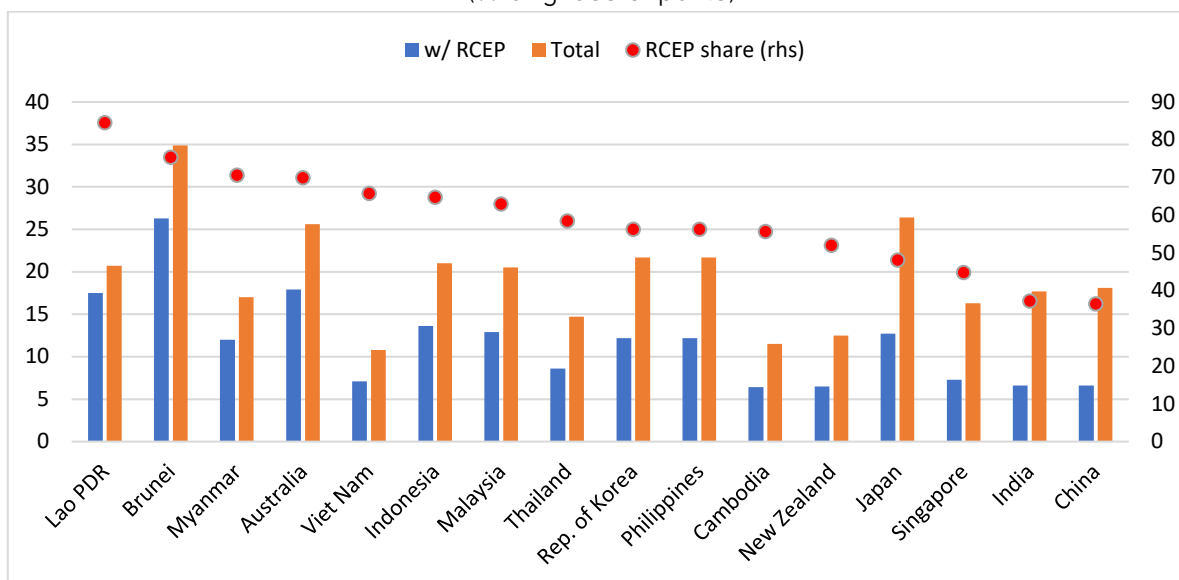


Q = quarter, RCEP = Regional Comprehensive Economic Partnership, SA = seasonally adjusted.
Sources: Natixis; and United Nations Conference on Trade and Development (n.d.), Statistical Portal, Data Centre. <https://unctadstat.unctad.org/datacentre/> (accessed 23 July 2024).

The integration of RCEP members into the GVC differs significantly, particularly for forward participation (i.e. export of intermediate goods for other countries to re-export). As shown in Figures 39 and 40, economies that are smaller or have simpler structures (e.g. the Lao People's Democratic Republic (Lao PDR), Brunei, and Myanmar) and

commodity exporters (e.g. Australia and Indonesia) tend to be more attached to regional value chains, while more diversified economies and manufacturers are less dependent in terms of regional integration (e.g. China, Japan, and Korea).

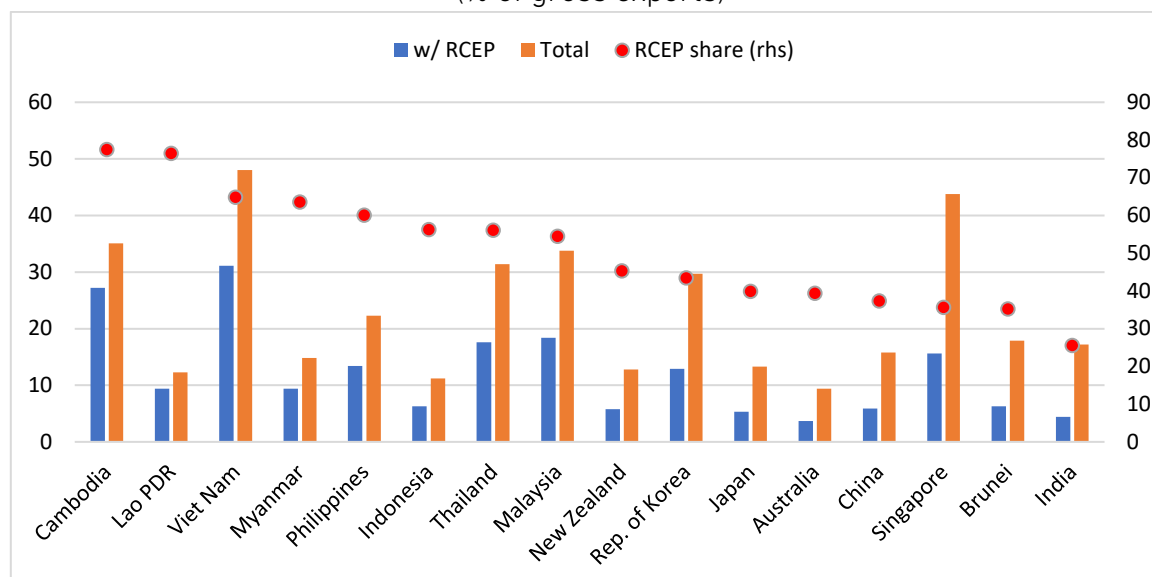
Figure 39: RCEP Members' Forward Participation
(% of gross exports)



RCEP = Regional Comprehensive Economic Partnership, rhs = right-hand side axis.

Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

Figure 40: RCEP Members' Backward Participation
(% of gross exports)



RCEP = Regional Comprehensive Economic Partnership, rhs = right-hand side axis.

Sources: Natixis; and Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database. <https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html> (accessed 23 July 2024).

India's reliance on RCEP value chains has so far been minimal versus the members even before the deal was struck, which to some extent justifies India's opting out of the agreement. However, given the structurally slowing growth in Europe, India may need to diversify its trade partnership portfolio for continued prosperity in the external sector and higher value added to GVCs. Currently, RCEP countries purchase 18% of India's exports and provide 35% of India's imports, which means considerable upside potential for India. But before tapping into this huge market with a full-package FTA, India may need more preparatory work on attracting FDI to upgrade its industries and ascend in the regional industrial integration.

5. Conclusions

India has been rising quickly in terms of integration with the value chain even though the growth of exports has remained quite stagnant, at least as a share of global trade. However, India's integration with the value chain has been quite asymmetric. On the one hand, its imports of intermediate goods to re-export (backward participation) have gone down while its exports of intermediate goods for other countries to re-export have increased. This is particularly the case when it comes to India's bilateral trade relations with ASEAN. The fact that FDI between ASEAN and India is growing should help to enhance supply chain linkages between the two areas although FDI should increase for manufacturing, rather than for services, as is mostly the case now.

From 2010 to 2020, India's GVC integration with ASEAN increased the most – by 1.3% of its gross exports – followed by 0.3% with China and the EU. Thanks to ASEAN's FDI to India, the progress in ASEAN–India GVC integration is dominated by India adding more value to ASEAN's exports, or India's forward participation with ASEAN.

However, an imbalance is seen in India's GVC ascent between the manufacturing and service sectors. Well positioned in the great demographic shift in East Asia, India has utilised its rich labour force to shore up the exports of value added in services, but the manufacturing sectors have lagged despite higher labour attractiveness compared with ASEAN, as reflected in the underwhelming FDI inflows. Still, India has seen progress in exporting more manufacturing goods thanks to the partnership with ASEAN, such as auto parts, machinery, and chemicals and pharmaceuticals.

India will need to improve in infrastructure that is key to manufacturing industries to attract more FDI, which could be more difficult than for ASEAN given China's reluctance to invest in India due to geo-economic costs and geopolitical concerns. The EU has been lending a hand, but more is needed. Finalizing the ongoing negotiations between the EU and India for an FTA should help. Therefore, ASEAN will continue to be a key strategic partner on this front as the two are complementary in supply chains.

Regarding the RCEP that India exited, it is hard to assess with accuracy how the agreement has benefited the parties due to COVID-19. That said, India's current reliance

on and integration with the members are low, which offers upside potential in terms of cooperation. Still, to prevent moving downstream, India will need to continue to upgrade its domestic supply chains with both its own resources and FDI inflows into manufacturing.

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Appendix

Data Description and Definitions

Definitions

Products that are traded internationally are composed of inputs from different countries and sectors around the world, creating global production chains. Conventional measures of international trade (e.g. gross exports and imports) do not capture these complex relationships.

Studying the global macroeconomy with its country and cross-sectoral linkages, by using global input–output data, has become a widely used approach since the pioneering work of Hummels, Ishii, and Yi (2001). Broadly speaking, the input–output accounting structure comprises all economic transactions between the possible combinations of producing sectors and countries, differentiating between production used for further processing (i.e. intermediate demand) and production used for final consumption or investment (i.e. final demand).

Global value chain (GVC) analysis refers to the study of how value added is generated and distributed through global production chains (from upstream to downstream activities), making use of the relationships defined in the input–output framework.

The degree to which a country is integrated into GVCs is usually captured by a metric called GVC participation, which is the sum of two components: foreign value added in exports (FVA or backward participation) and domestic value added in exports (DVX or forward participation). In other words, GVC participation accounts for value added generated in a country that crosses at least two borders in international trade relative to gross exports. In terms of specialisation, a country that is backwardly integrated in a GVC corresponds to an economy that relies on foreign inputs for its exports to the rest of the world and is positioned downstream within value chains, while a country that is forwardly integrated into GVC supplies inputs to other economies for their exporting activities and is positioned upstream within value chains.

Participation or integration into value chains can also be applied to narrower economic areas or bilateral relations between countries. For instance, a regional value chain corresponds to transactions between members of a common economic area. The forward and backward participation of each country within the regional value chain could be evaluated with the aforementioned metrics.

Alternatively, if a regional bloc is considered as a single economy, the regional participation in a GVC accounts for both the use of inputs sourced out of the regional bloc that are later exported out of the common area (i.e. backward participation) and the supply of inputs to a non-member for its exports to a third country (i.e. forward participation).

A global production chain encompasses participating activities from different sectors. Accordingly, the sectoral characterisation of GVC participation can be defined in many ways. The criterion used is centrality and takes as a reference the sector of the exporting activity located midstream in the value chain, i.e. the sector that uses foreign supplies for exports when analysing backward participation and the sector to which supplies are sold for re-export in the case of forward participation.

Alternatively, the sectoral composition of GVC participation can be analysed considering the sector where the value added being traded across borders was originally generated, i.e. the sector selling supplies used for exports in a different country, both in terms of backward and forward participation. However, this approach looks very similar to the standard analysis of sectoral specialisation in bilateral gross trade.

Data

Annual data in nominal United States (US) dollars are sourced from Organisation for Economic Co-operation and Development (n.d.), Trade in Value Added (TiVA) Database (<https://www.oecd.org/en/topics/sub-issues/trade-in-value-added.html>, accessed 23 July 2024). Country coverage includes, amongst others, all 27 European Union (EU) member countries, the United Kingdom (UK), the US, China, Japan, India, the Republic of Korea, and eight of the 10 Association of Southeast Asian Nations (ASEAN) Member States (i.e. Brunei Darussalam, Cambodia, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam).

Sectoral data correspond to two-digit codes from United Nations (2008). Sectors are first defined broadly and divided into three categories: manufacturing activities (ISIC codes 10–33); business services (45–82); and other activities (including agriculture, mining, utilities, construction, and public services). Manufacturing activities are then disaggregated into food products (10–12), textiles (13–15), petroleum products (19), chemicals and pharmaceuticals (20–21), metals (24–25), electronics (26), machinery and equipment (27–28 and 30), motor vehicles (29), and other activities (other manufacturing). In turn, business services are disaggregated into trade activities (45–47), transport (49–53), information and communication technology services (58–63), and other activities (other business services).