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2023 Asian Expert Series

Part 3 of 4

Unlock the value in Asia's supply chains

Asia plays a key role in global value chains. Supportive policies and country comparative advantages will see Asia's global and regional production share expand over time. The region is also equipped to reap benefits from the rise of new sectors such as digital, renewables, and electric vehicles.

Since 2013, global supply chains have undergone a slow realignment, triggered by changes in demand patterns, and the emergence of new capabilities across the globe. These structural shifts went largely unnoticed till the onset of the 2018/19 US-China and Japan-Korea trade wars which exposed the fragility of the supply chain landscape; the semiconductor industry was most impacted.

Soon after, COVID-19 caused major manufacturing and supply disruptions. As countries faced difficulties to secure critical medical supplies and other essential products, goverments were forced to re-evaluate manufacturing strategies to decrease concentration risks. Multinationals wanting to reduce their reliance on China (the world's factory for decades) started adopting the "China Plus One" strategy.

ASIAN BENEFICIARIES

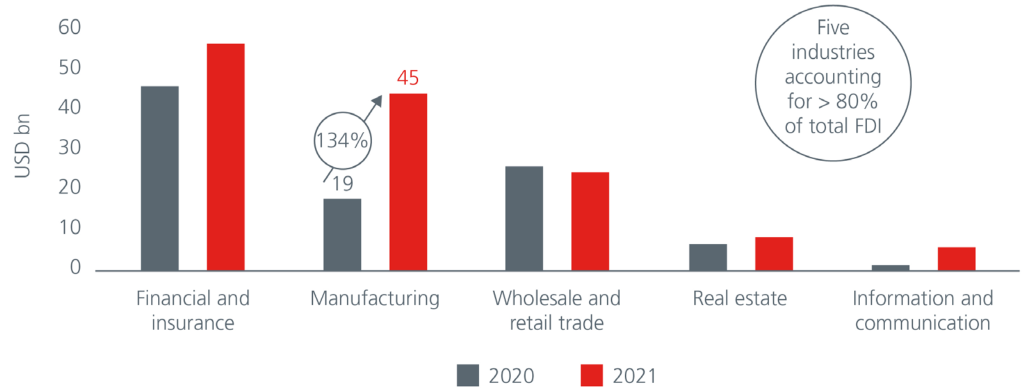
Over the years, Asian countries have emerged as manufacturing hubs mainly due to the lower cost factor and the availability of skill and semi-skilled workforce. Location, favourable demographics, new manufacturing capabilities, and digitalisation favoured the ASEAN bloc to be that "plus one". The ASEAN Economic Community, a single market and production base enabling free flow of goods, services, investment, and skilled labour has also underpinned the region's manufacturing sectors since 2016.

Foreign direct investments (FDI) into ASEAN have grown steadily, reaching a record high of USD 174bn in 2019 from USD120bn in 2013. In 2021, it rebounded to 2019's pre-pandemic level due to the diversification of manufacturing supply chains and new investments. Within the manufacturing sector, electric vehicles, electronics, biomedical and pharmaceuticals received the most inflows. See Fig 1. Most of the FDI went to the finance industry, underpinned by banking and fintech activities while the region's growing digital economy attracted investments in the information and communication sectors.

Beyond ASEAN, India has also emerged as a potential manufacturing hub for several sectors, owing to the government's 'Make in India' initiative. FDI into manufacturing sectors increased by 76% year-on-year in FY 2021-22 (USD 21 bn). India's mobile production has been a big beneficiary of the supply chain shifts; mobile manufacturing has grown 4x in the last 5 years. Apple has begun making iPhone 14s in India last year. Samsung has setup its factory in India, which is its largest manufacturing facility.

Source: [1]https://www.mckinsey.com/mgi/overview/in-the-news/the-emergence-of-new-consumer-segments-and-implications-for-companies-in-asia-and-thailand [2]World Economic Forum. Future of Consumption in Fast Growth Consumer Markets: ASEAN. 2020 [3]https://www.mckinsey.com/featured-insights/asia-pacific/beyond-income-redrawing-asias-consumer-map [4] https://www.weforum.org/agenda/2020/02/ageing-global-population

Fig 1: Foreign direct investment inflows by industry in ASEAN



Source: ASEAN Secretariat, ASEAN Investment Report 2022

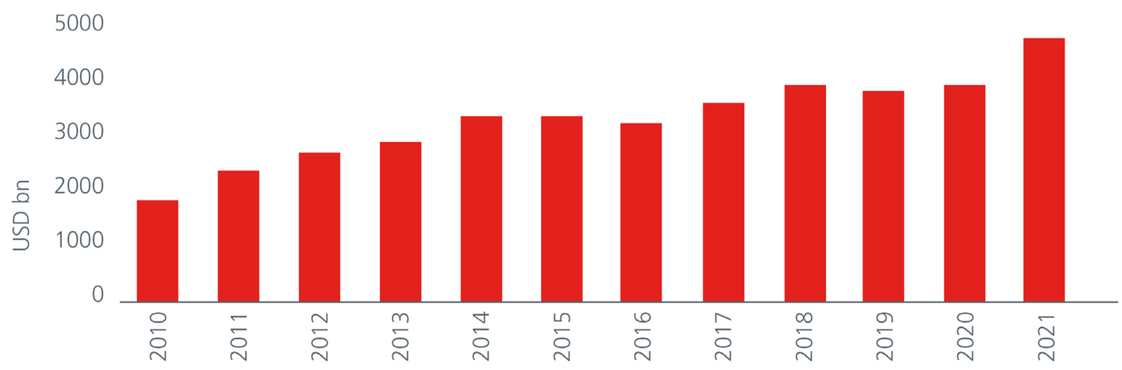
Meanwhile Taiwan's vertically and horizontally integrated tech supply chain, especially for semiconductors (foundry, back-end packaging, and testing), is a key beneficiary of the supply chain realignment. The country has 60-70% foundry capacity, >50% back-end packaging and testing and is amongst the top-5 globally for tech assembly capacity. In addition, Taiwanese companies are also poised to become major suppliers of components such as connectors, printed circuit boards, vapors etc. for cloud and hyperscale data centres around the world.

CHINA STILL MATTERS

Notwithstanding the new pockets of manufacturing that are emerging across Asia, China is unlikely to lose its status as the world's factory. There are many reasons to retain manufacturing in China; its large and growing market, excellent infrastructure and connectivity, and networks of suppliers are key competitive strengths. Replicating China's comprehensive model of factories across a range of sectors is a daunting task. Companies must assess the different regulatory frameworks, customs requirements, and the availability and reliability of suppliers outside China.

Meanwhile China has been moving up the manufacturing value chain towards higher-end equipment and industrial goods such as components/intermediate goods that go into final products in the consumer electronics, aerospace, and automotive sectors. See Fig 2. Huge investments in technology, big data, robotics, and artificial intelligence are facilitating

Fig 2: Value added manufacturing in China



Source: World Bank 2022.

China's move up the value chain. China too has an edge in the rising renewables sector, boasting a dominant share in the key manufacturing stages of solar panels.[1]

ASIA'S ROLE IN GLOBAL VALUE CHAINS

Global value chains (GVCs) account for approximately 50% of global trade today.[2] A GVC refers to a series of production stages carried out in different countries, with each stage adding value. Participation in GVCs enables countries to utilise their comparative advantage. GVCs have been a driver of growth, jobs and living standards in many emerging markets.

As GVCs became more entrenched, Asia's status as a significant manufacturing hub rose. The most integrated economies in the GVCs are Singapore Vietnam, Malaysia, and Taiwan with GVC participation rates of 50% and above.[3] See Fig 3. Singapore and Vietnam import contents over 40% which are then passed through the value-added chain before being re-exported. On the other end are large economies such as Indonesia, Japan, and China which can source much of their inputs domestically.

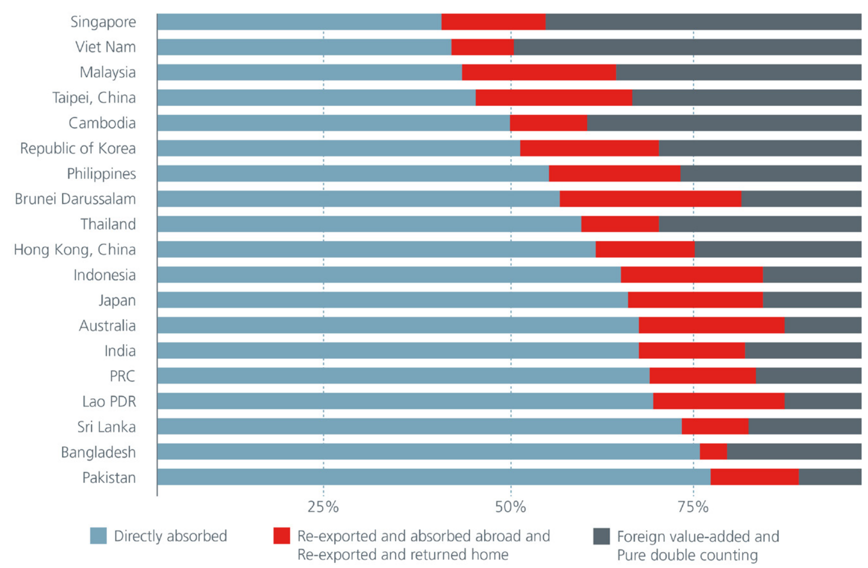
Beyond specific characteristics and endowments, policies also determine the degree of a country's engagement in GVCs i.e., the Regional Comprehensive Economic Partnership (RCEP) free trade agreement between ASEAN and China, Japan, South Korea, Australia, and New Zealand which came into force in January 2022. The RCEP will hasten and lower the cost of movement of finished goods/inputs and investments between ASEAN and other Asian markets. With this, multinationals will find it beneficial to build out more supply chains that can leverage the differentiated strengths across Asia.

BUILDING RESILIENCE IS KEY

Despite calls for reshoring of GVCs post the COVID-19 shock, the World Bank maintains that GVCs play an important role in cushioning economic shocks. The key is to make supply chains more resilient whilst still capturing the efficiency gains arising from each country's comparative advantage. A survey[4] of affiliates of multinationals operating in over 20 developing countries show that about 60% have turned to digital technologies to optimise capacity and improve logistics.

COVID-19 accelerated technological adoption amongst companies and reinforced the importance of speed of delivery via smart logistics. Supply chains have grown broader and more complex over time, thereby reducing visibility, and making businesses more susceptible to shocks. According

Fig 3: Value added category in Asia and Pacific's exports, 2020



Source: Asian Development Bank estimates based on Multiregional Input–Output Database, 2021.

Source: [1]https://www.iea.org/news/the-world-needs-more-diverse-solar-panel-supply-chains-to-ensure-a-secure-transition-to-net-zero-emissions. [2]World Bank, 2020. [3]GVC participation rate is defined as the sum of backward and forward integration. Backward integration refers to value added of inputs that were imported in order to produce intermediate or final goods/services to be exported. Forward integration refers to the domestic value added contained in intermediates (goods or services) exported to a partner economy that re-exports them to a third economy as embodied in other products. [4]World Bank and OECD (2021) and Lund et al. (2020).

to a KPMG report, investing in a cloud-based digital transformation strategy was a key trend for supply chains in 2022.[5] Future supply chains and smart factories must create end-to-end visibility via the collection of accurate cloud data to support real-time decisions to respond to fast-changing customer preferences.

SUSTAINABILITY WILL BE INTEGRAL

Global supply chains account for roughly 80% of the planet's carbon emissions and one-fifth of the world's carbon emissions come from the manufacturing sectors. Supply chains' emissions are on average over 11 times higher than operational emissions.[6] Given that Asia is more vulnerable to climate change than other regions, regulators and key stakeholders will likely press for more to be done to monitor and reduce Scope 3 emissions[7].

Accurately capturing Scope 3 emissions is hard due to sparse and inconsistent data. Still, companies in the region are increasingly integrating sustainability into their strategies. Sustainability reporting rates are rising across the region.

WAYS TO TAP THE OPPORTUNITY

Tap the growing supply chain opportunities across the region via the key players in each country's competitive sectors. For example, Malaysia's electrical and electronics sector will continue to benefit from its well-developed semiconductor supply chain; the country has a 13 percent share of global chip assembly, testing and packaging. Meanwhile Vietnam is seeing investments into electronics, textiles, and fishery sectors. Singapore's higher value-added manufacturing sectors will also be direct beneficiaries in addition to its banking and finance sector reaping indirect benefits from new financing.

Over in Thailand, the automotive sector is benefitting from the transition to electric vehicles (EVs), supported by well-developed supply chains. Indonesia is also set to capture the EV transition opportunity given that it has one of the highest nickel and copper reserves in the world which are the key raw materials used to produce the EV lithium-ion battery packs.

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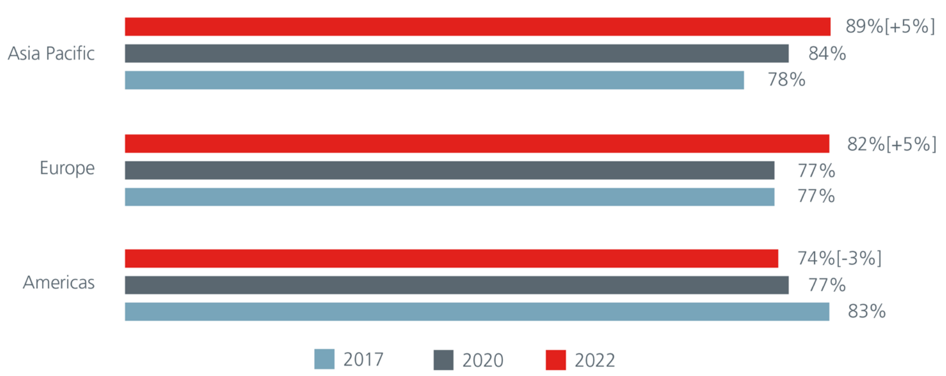
This is the third in our series of 4 articles where we provide insights into Asia and the region's consumer, supply chains and resources.

Fig 4: Sustainability reporting rates by region



Source: KPMG Survey of Sustainability Reporting, September 2022. Survey done on 5,800 companies across 58 countries. Companies chosen were top 100 companies by revenue.

Source: [5]https://home.kpmg/xx/en/home/insights/2022/12/the-supply-chain-trends-shaking-up-2023.html. [6]https://www.weforum.org/impact/carbon-footprint-manufacturing-industry/. [7]Scope 3 encompasses emissions refer to those that are not produced by the company itself, but by others that are up and down its value chain.

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