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Beyond China: Asia's next manufacturing powerhouse

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Preface

The global economy is highly integrated. Free trade networks, infrastructure developments, global mobility and technology are just some factors which have supported the globalisation journey over the past 30 years. China joining the World Trade Organisation (WTO) in 2001 helped consolidate China's position as the global manufacturing epicentre.

Economies are arguably more connected than at any other point in history. Nevertheless, the evolving geopolitical landscape is reversing some of this global interconnectivity. This is especially true for manufacturing industries. Many countries and companies are looking to evolve their supply chain networks by moving manufacturing and production 'closer to home'. For example, domestic policies such as the US' CHIPS and Science act, Germany's Supply Chain Act, and the UK's Critical Import Council are driving near/re/friendshoring.



In Asia Pacific (APAC), this near/re/friend shoring trend is manifesting in the China+1 strategy. This is a diversification strategy where companies add additional manufacturing bases outside of China. The objective is to hedge against supply chain disruptions by reducing reliance on a single country.

The relocation of manufacturing outside of China has had a relatively small impact to the share of Chinese exports as a percentage of global exports¹. The impact has been mostly felt at the destination country, especially those in Southeast Asia (SEA) and India. This has led to rising manufacturing opportunities across these geographies. Governments recognise these opportunities and are implementing a greater number of policies which aim to boost their local manufacturing industries.

Companies are starting to respond, but they need to be flexible given the ongoing volatile landscape. Land selection and the capital used will be key in determining success factors for companies. Alternative funding and new leasing options are becoming more readily available. These are enabling manufacturers to set up quickly and to pivot as needed if and when global trade and supply chains shift again.

¹ UNCATD

02

Manufacturing in SEA and India

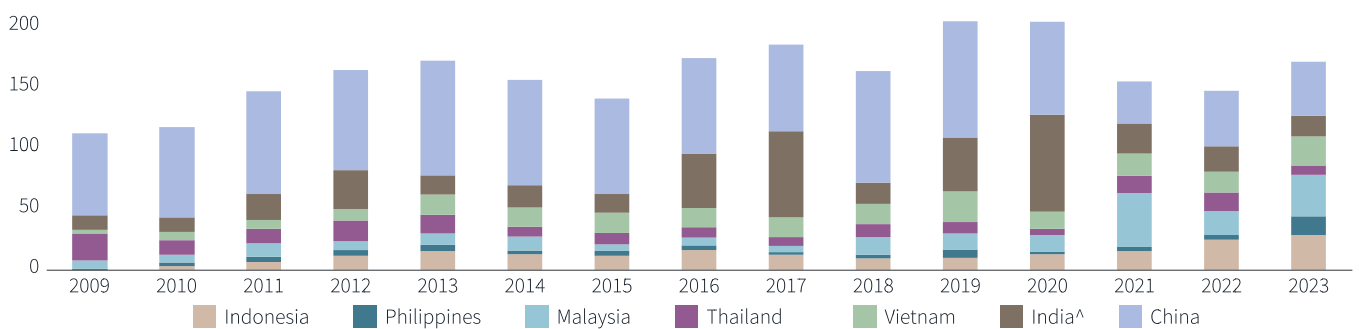
The global manufacturing foreign direct investment (FDI) movement has been shaped by a complex interplay of economic, technological, and geopolitical factors. Companies need to carefully evaluate various factors such as costs, market access, infrastructure, labour, and governmental

support before determining their global manufacturing investment strategies.

This evolving landscape has created significant opportunities in SEA and India. This is reflected in significantly rising FDI levels – see Figure 1.

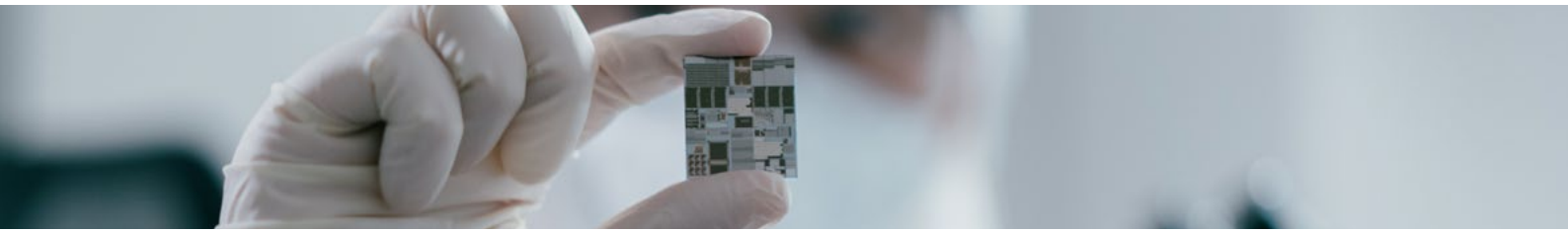
Figure 1

Regional manufacturing FDI over the years (USD billion)



^India: The manufacturing FDI in India includes all investments in manufacturing sectors and excludes Computer Software & Hardware, Transportation, Construction Activities, Hospital and Diagnostic Centres, Hotel & Tourism, Information & Broadcasting, Service Sectors and Trading.

Source: Malaysian Investment Development Authority (MIDA), Philippines Statistics Authority, Bank of Thailand, Indonesia Investment Coordinating Board, Vietnam Ministry of Planning and Investment Department for Promotion of Industry and Internal Trade (DPIIT), Govt. of India, Statista, Press Research



The driving force behind this trend is not only the need for supply chain diversification, but also to capitalise on the strong fundamentals of this region. These fundamentals include a large population and labour pool, favourable

costs, and various incentives (see Table 1). From a manufacturing investment perspective, these factors position SEA and India as major manufacturing hubs for global markets.

Table 1

Macro fundamentals drivers

| | Total GDP (nominal, USD bil.) | Population (mil. ppl) | Middle income pop.^ (mil. ppl) | Total labour force (mil. ppl) | Manufacturing labour cost (2023, USD/hour) | Logistics Performance Index (LPI) score 2023 | Goods exports (USD bil.) | Shared Free Trade Agreements (FTAs) |
|--------------------|-------------------------------|-----------------------|--------------------------------|-------------------------------|--|--|--------------------------|-------------------------------------|
| China | 17,784 | 1,426 | 700 | 983 | 5.6 | 3.7 | 3,274 | RCEP |
| vs | | | | | | | | |
| SEA+India* | 7,141 | 2,039 | 913 | 1,384 | 1.2 | 3.3 | 2,249 | RCEP AFTA-India |
| India | 3,488 | 1,433 | 551 | 975 | 2.0 | 3.4 | 465 | RCEP AFTA-India |
| Indonesia | 1,371 | 278 | 172 | 189 | 1.1 | 3.0 | 188 | RCEP AFTA |
| Malaysia | 400 | 34 | 30 | 24 | 4.4 | 3.6 | 226 | RCEP AFTA CPTPP |
| Philippines | 437 | 117 | 58 | 76 | 1.4 | 3.3 | 104 | RCEP AFTA |
| Singapore | 501 | 6 | 6 | 4 | 21.0 | 4.3 | 766 | RCEP AFTA CPTPP |
| Thailand | 515 | 72 | 42 | 49 | 2.7 | 3.5 | 220 | RCEP AFTA |
| Vietnam | 429 | 99 | 53 | 67 | 1.6 | 3.3 | 280 | RCEP AFTA CPTPP |

Source: Oxford Economics, EIU, World Bank, 2023 Update

* LPI and Manufacturing labour cost for SEA+India are weighted averages based on exports and population, respectively.

^ Middle income households (MIH) are defined by JLL as those households with an annual income of US\$20,000 or above in 2015 PPP terms. The middle income population is determined by considering the average household size in each country together with the MIH criteria.

Financial value drivers

Rising cost in China over the past decade has been the accelerator of this shift towards diversification. The continuous influx of capital has nearly tripled the China wage between 2010-2020 according to data from the Economist Intelligence Unit

(EIU). Higher demand for industrial land has also pushed up land prices. Consequently, these costs in China are up to two times higher compared to some SEA countries and India (with the exception of Singapore and Malaysia which are service-based economies).

Figure 2

Industrial land price (USD/sqm)*

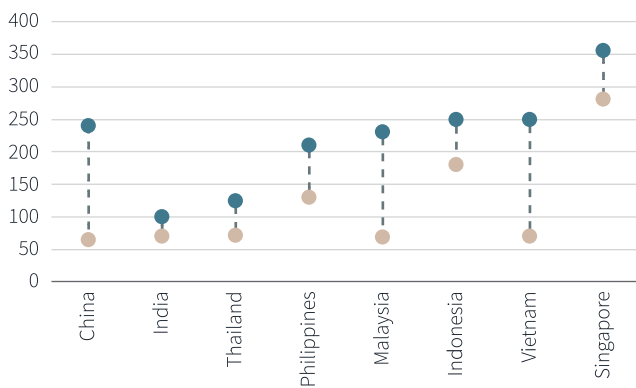


Figure 3

Construction cost (USD/sqm)^

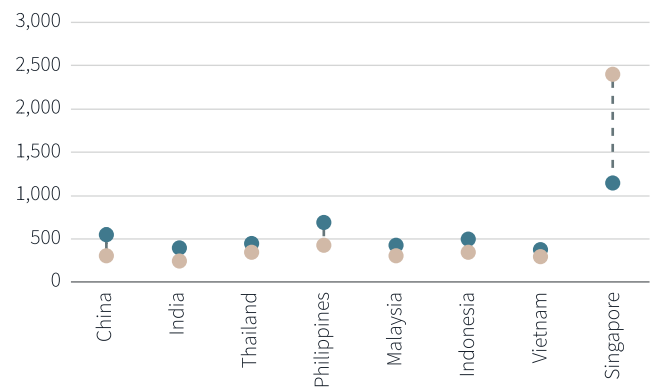


Figure 4

Manufacturing wage (USD/hour)

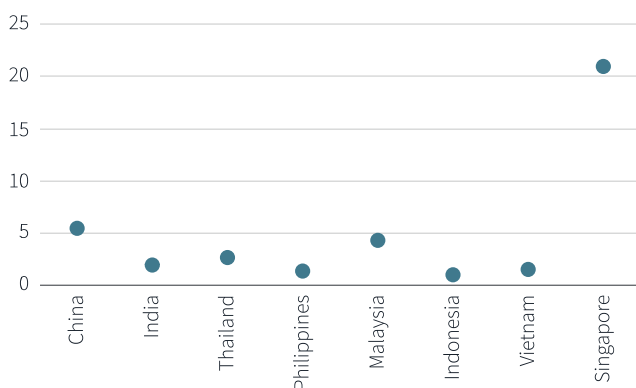
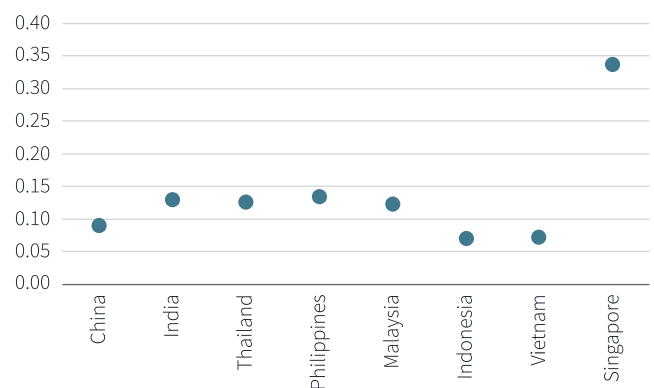


Figure 5

Electricity-Business use (USD/kWh)



Source: Arcadis, EIU, Globalpetrolprices, Statista, JLL estimate

* Land prices range is typical range in major industrial clusters of each country. Singapore land price is for Jurong area, plot ratio 1.4.

^ Construction cost applies to either large cities in each country or major industrial clusters.

Note: Cross geography data may not be fully comparable because of different methodologies and sources. Local currency to USD exchange rates also need to be taken into account.

Non-financial value drivers

Factors such as skilled labour, infrastructure, environmental regulations, proximity to suppliers and customers, and political stability contribute significantly to a factory's long-term success and sustainability. Careful evaluation of these non-cost or qualitative factors is crucial to make an

informed decision and lay a strong foundation for future growth.

In the table below, JLL has examined these non-financial factors to gauge the potential opportunities and constraints of each geography.

Table 2

Non-financial indicators snapshot

| | Infrastructure | | | Labour forces | | Business environment | | Localisation rate* |
|-------------|---|---------------------------------------|--------------------------------------|--|--------------------------------------|--|---|--------------------|
| | Logistics performance index score (higher better) | Quality of roads rank (higher better) | Quality of port rank (higher better) | Labour productivity ('000 USD/person/year) | Labour availability (million people) | Ease of doing business (higher better) | JLL Transparency Index, 2022 (lower better) | |
| China | 3.7 | 4.6 | 4.5 | 22 | 983 | 78 | 2.54 | High |
| India | 3.4 | 4.5 | 4.5 | 4 | 975 | 71 | 2.73 | High |
| Indonesia | 3.0 | 4.2 | 4.3 | 6 | 189 | 70 | 2.86 | High |
| Malaysia | 3.6 | 5.3 | 5.2 | 21 | 24 | 82 | 2.61 | Medium |
| Philippines | 3.3 | 3.7 | 3.7 | 8 | 76 | 63 | 2.91 | Medium |
| Singapore | 4.3 | 6.5 | 6.5 | 102 | 4 | 86 | 1.96 | Low |
| Thailand | 3.5 | 4.4 | 4.1 | 8 | 49 | 80 | 2.63 | Medium |
| Vietnam | 3.3 | 3.4 | 3.8 | 7 | 67 | 70 | 3.36 | Low |

Source: Oxford Economics, World Bank, Euromonitor, JLL Index, World Economic Forum, updated to latest data available

Note: The 'high', 'medium', and 'low' classification is a qualitative assessment based on the geographies assessed in the table.

* OECD's domestic value added (DVA) data is used as a proxy for localisation rates assessment. It's important to note that DVA is influenced by country size (i.e. typically larger countries typically using more domestic inputs due to their scale) and top export sectors (i.e. countries specialising in natural resources or agricultural products tend to have higher reliance on domestic inputs compared to countries focused on manufacturing). Therefore, the findings should be considered as expert opinions and used as a preliminary reference point only.

03

Country snapshots



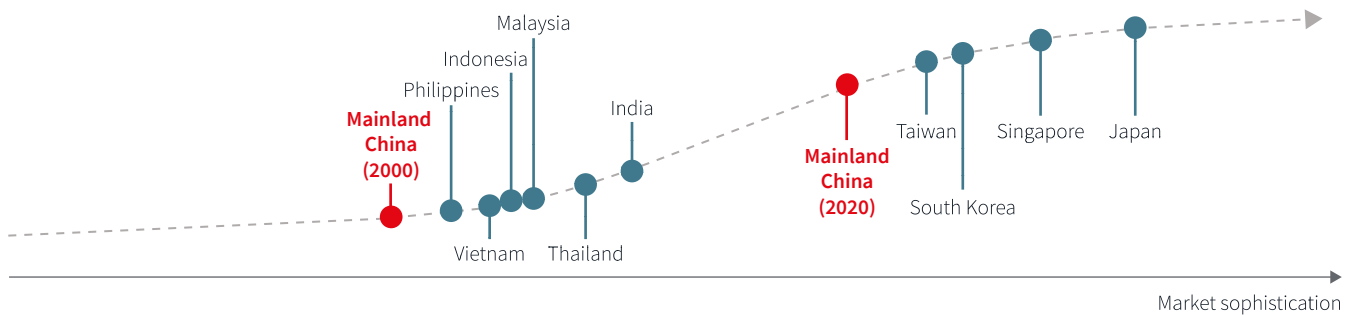
As manufacturers contemplate establishing manufacturing facilities in SEA and India, a key question arises: **Which country should they select?**

While each country in the region presents its own unique benefits and challenges, this section delves into the current landscape and examines what each country has to offer. Directly, there will be greater opportunities in investing and developing manufacturing facilities. Indirectly, there will be greater need for logistics facilities and implications for future logistics hubs.

Figure 6

Typical manufacturing market characteristics

| | Nascent-growth | Mature | Advanced |
|---|--|--|---|
| Product and value added | Mostly basic with some intermediate Basic <ul style="list-style-type: none"> • Woodwork • Textiles • Paper and printing | Mostly intermediate with some basic Intermediate <ul style="list-style-type: none"> • Heavy machinery • Refining • Automobiles (combustion engine cars) | Mostly high-tech with some intermediate High tech <ul style="list-style-type: none"> • Biotech • Pharmaceuticals • Petrochemical |
| Resourcing | Mostly labour-intensive | <ul style="list-style-type: none"> • More capital-intensive and less labour-intensive • More automation | <ul style="list-style-type: none"> • Low labour content • High capital • High automation and robotics |
| Manufacturing real estate product typology | <ul style="list-style-type: none"> • Low density • Close to port/airport, major infrastructure node • Low specialisation of buildings | <ul style="list-style-type: none"> • Medium density with some low density • Some clustering • Some built to suit | <ul style="list-style-type: none"> • High density with some medium density • Clustering of industry sectors; separation of polluted and non-polluted industries • Built to suit • Redevelopment of older factories close to residential into other higher value uses amid city urbanisation |
| Ownership | <ul style="list-style-type: none"> • Owner-occupied • Government-owned land with annual rental | <ul style="list-style-type: none"> • Some third party owned • Government sells industrial land for development | <ul style="list-style-type: none"> • Government sells industrial land for development - professional industrial or logistics developers • REITs |



Source: JLL



India

Where are the opportunities?

| Industry | Overview | Key products |
|---|---|--|
| Electronics² | Expected CAGR of 6.8% from 2023 to 2030, reaching USD 124.9 bn by 2030. FDI amounted to ~USD 539.9 mn in FY 22-23 (1.2% of India's total FDI) | <ul style="list-style-type: none"> • Smartphones • Camera • Locks & security • Cooking essentials • Home appliances |
| Automotive³ (Electric vehicles) | India is the world's third-largest automobile market. Further, the EV market is expected to grow at an estimated CAGR of 8.1% between 2022 and 2027. FDI amounted to ~USD 1.9 bn in FY 22-23 (4.1% of the total FDI) | <ul style="list-style-type: none"> • Cars • Multi-utility vehicles • Light weight commercial vehicles |
| Renewable energy⁴ | India's renewable energy market is projected to reach nearly USD 35.6 bn by 2028, reflecting a CAGR of around 5.4% from USD 20 bn in 2022. FDI into the non-conventional energy sector totalled ~USD 2.5 bn in FY 22-23 | <ul style="list-style-type: none"> • Wind power • Solar power |
| Semiconductor⁵ | Currently valued at USD 23.2 bn, the market is set for strong growth given the investments into AI technology | <ul style="list-style-type: none"> • Silicon wafers • Hard disk drives • Print heads • Batteries • RF filters |
| Pharmaceutical⁶ | Forecast to grow from USD 41 bn in 2021 to USD 130 bn by 2030. India accounts for 60% of global vaccine production. FDI totalled ~USD 2.1 bn in FY 22-23 | <ul style="list-style-type: none"> • Vaccines • Drug ingredient production • Instruments and test kits |

Sources:


²Grandviewresearch.com

³Mordor Intelligence

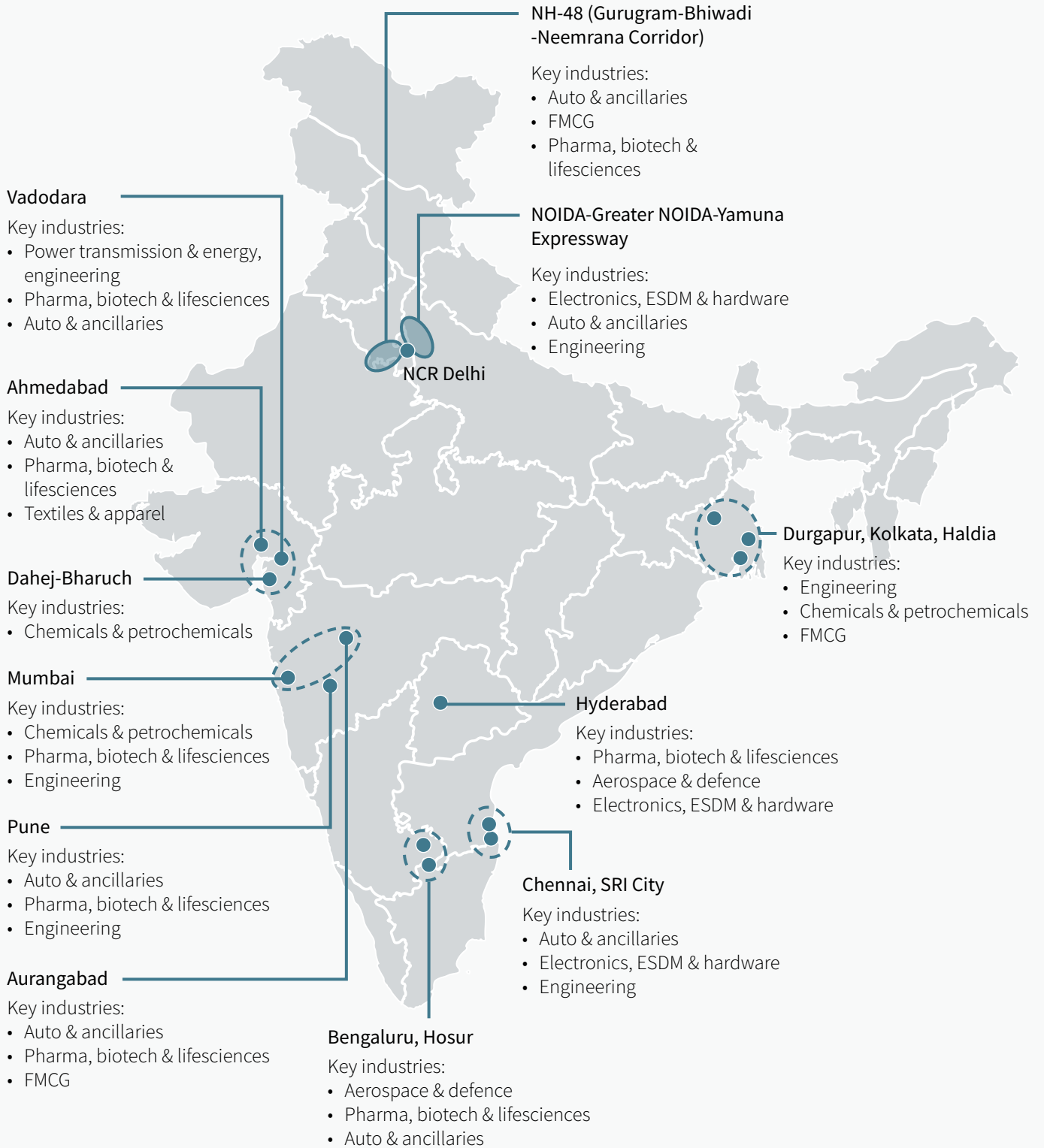
⁴IMARC Research

⁵Invest India

⁶Economic Survey 2022-23

 Where are the key industrial clusters?

Top 10 industrial clusters in India



Source: JLL



What policies are driving manufacturing?

Make in India initiative: Launched in September 2014 to facilitate investment, foster innovation, build best-in-class infrastructure and to make India a hub for manufacturing, design and innovation. In May 2020, the PM launched the Atmanirbhar Abhiyan Package, paving the way for Make in India 2.0 – which evolved from 1.0's 'one-size-fits-all' approach for all identified sectors, to a clear focus on select sectors. The Make in India 2.0 initiative focuses on 15 manufacturing sectors and 12 service sectors.


Production Linked Incentives (PLI): India shifted gears from investment-linked incentives to production sales-linked incentives. The government has allotted USD 31 bn of incentives - across 15 sectors - to be distributed through a fair EOI evaluation process by different ministries. The ministry has given approvals to more than 700 manufacturing companies of international & national repute under this scheme for investments in BF & GF manufacturing units.

India Semiconductor Mission (ISM): This is a specialised and independent business division within the Digital India Corporation of Govt. of India that aims to build a vibrant semiconductor industry and broader ecosystem. It was launched in December 2022 with the aim to promote India's emergence as a global hub for electronics manufacturing and design.

Industrial Corridor Development Programme: In order to accelerate growth in manufacturing, the Government of India adopted the strategy of developing industrial corridors in partnership with state governments. As part of National Industrial Corridor Programme, eleven industrial corridors are being developed in four phases.

National Logistics Policy (NLP): This policy was launched in September 2022, and aims to lower the cost of logistics and to make performance on par with developed nations. This will help boost economic growth, provide employment opportunities, and make Indian products more competitive in global markets.



 Who's investing?

| Company | Sector | Investment size (USD Mn.) |
|---|----------------------|---------------------------|
| Tata Electronics + PSMC (Taiwan) | Semiconductor | 14,162 |
| Nissan, Renault | Automotive | 3,048 |
| Adani Energy | Energy | 2,940 |
| Pou Chen | Footwear | 280 |
| VinFast | Automotive | 2,000 |
| Daikin | Consumer electronics | 600 |
| Micron | Semiconductor | 825 |
| Boeing | Aerospace | 192 |
| Hyundai Motors | Automotive | 742 |
| Exide Battery Giga Factory | EV battery | 720 |
| Nestle | Food and beverage | 609 |

Source: JLL, various company and/or government announcements and news articles





Indonesia

 Where are the opportunities?

| Industry | Market trend commentary | Key products |
|---|---|---|
| Base metals, metallic items, non-machinery and equipment | A major producer of nickel and other minerals, growing demand for nickel has created a competitive ecosystem in the value chain of lithium batteries and electric vehicles. | <ul style="list-style-type: none"> • Electronics and equipment • Satellite ground equipment • Cement • Interior materials • Nickel mining and ore smelting |
| Chemicals and pharmaceuticals | Pharmaceuticals are poised for growth, expanding to more than USD 4.5 billion in annual revenue by 2028. Additionally, manufacturing chemicals and chemical products are projected to generate USD 35.5 billion in revenue by 2024. | <ul style="list-style-type: none"> • Construction chemicals • Agrochemicals • Petrochemical • Healthcare, life science, electronics • Medicines, supplements, care products • Formaldehyde, resin, emulsion adhesives • Mortar, gypsum, abrasive materials |
| Paper and printing | One of the top 20 paper producers globally. The printing industry is also strong, catering to various sectors such as publishing, advertising, packaging, and commercial printing. | <ul style="list-style-type: none"> • Printing products • Textile, pulp and paper, plastics • Pulp, paper, and tissue |
| Food | The industry received approximately USD 2.3 billion in FDI in 2023. The country's large population and growing economy serves as growth factors for the food sector. | <ul style="list-style-type: none"> • Dairy products • Food and food service • Livestock feed production • Condiments • Cereal, chilled food, baby food, broth |
| Motor vehicles and other transportation | The largest automotive market in SEA, Indonesia ranks as the second-largest production centre in the region, after Thailand. The EV market is predicted to surpass USD 20 billion by 2030. | <ul style="list-style-type: none"> • Energy storage systems • Equipment manufacturing • Automotive spare parts • Electric vehicles (EV) • Vehicles and related equipment |


Source: JLL, BKPM 2023 Report

Where are the key industrial clusters?



*Key industries are based on the National Master Plan for Industrial Development (RIPIN)

Source: JLL

 What policies are driving manufacturing?


Incentives for battery-based electric motorised vehicles: Government incentive support in the form of government-borne value-added tax (VAT).

Investment tax incentives: Available through Special Economic Zones (SEZ), and other free trade or similarly zoned areas. In general, there are four incentive types: tax holidays, tax allowance, import duty exemption, and super tax deduction.

“Making Indonesia 4.0” strategy: Launched in 2018, this initiative aims to implement new manufacturing technologies in the most vital sectors of Indonesia, including automotive, food and beverage, electronics, and chemical.

100% ownership for foreign investment in certain sectors: ‘Presidential Regulation No. 10 of 2021’ allows 100% foreign ownership in some key industries (if some conditions are met) including logistics, e-commerce, and cold storage.

Net-zero commitment by 2050: Indonesia has launched a Long-Term Strategy for Low Carbon and Climate Resilience 2050 (Indonesia TS-LCCR 2050). The aim is to reduce greenhouse gas (GHG) emissions through programmes such as onsite renewables and procurement, decarbonisation strategies, and embodied carbon considerations.

 Who's investing?

| Company | Description |
|--|---|
| Neta | Neta has initiated the process of accepting orders for the Neta V EV and is gearing up for local production in 2024. |
| PepsiCo | Acquired 60,000 sqm of land in Cikarang, West Java. A USD 200 million commitment over 10 years. |
| LG Chem and Huayou | LG Chem (South Korea) has signed a memorandum of understanding with China-based Huayou Group to construct an acid-leaching plant and a precursor plant in Indonesia. |
| Ford Motor, Huayou, and Vale Indonesia | A USD 4.5 billion nickel processing plant project named Pomalaa Blcok High-Pressure Acid Leaching (HPAL) will be built in Kolaka, Southwest Sulawesi. |
| Gotion Indonesia and PT Anugrah Neo Energy Materials (ANEM) | ANEM and Gotion Indonesia Materials have agreed to build a high-pressure acid leaching (HPAL) plant to produce materials used in batteries for EVs in Sulawesi. |
| CATL | Ningbo Contemporary Brunp Lygend Co., Ltd. (CBL) signed a tri-party framework agreement with PT Aneka Tambang (ANTAM) and PT Industri Baterai Indonesia (IBI) to cooperate on the Indonesia EV Battery Integration Project. |
| Hon Hai, Gogoro, IBC, and Indika | Hon Hai Technology Group (Foxconn) has signed a Memorandum of Understanding (MoU) with the Indonesian Ministry of Investment/BKPM, IBC, Indika, and Gogoro to jointly develop a new energy ecosystem in Indonesia that focuses on electric battery, electric mobility, and associated industries. |

Source: Various company and/or government announcements and news articles

Note: This is not an exhaustive list – only selected investments shown



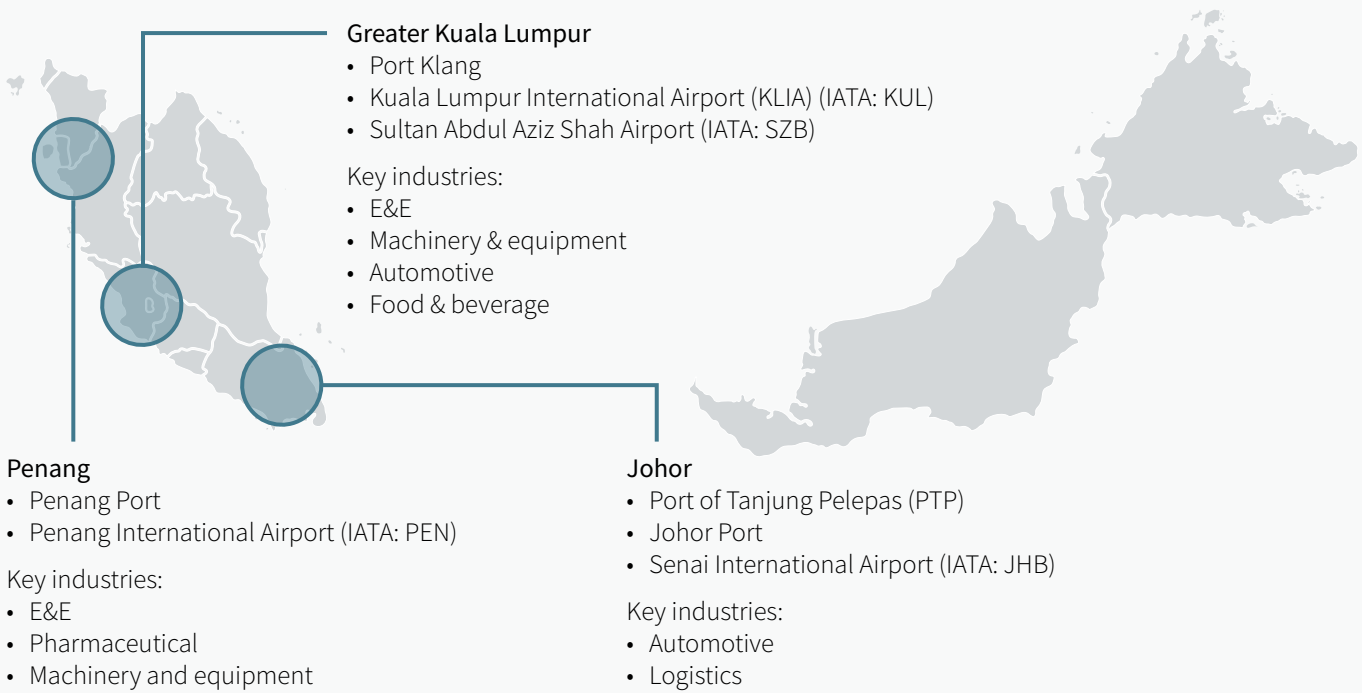
Malaysia

Where are the opportunities?

| Industry | Overview | Key products |
|--|--|--|
| Rubber | Malaysia plays an important role in the rubber industry in SEA. It is also the sixth-leading producer of natural rubber in APAC. | <ul style="list-style-type: none"> • Gloves • Tyres • Thread • Automotive components • Seals & O-rings |
| Machinery and equipment (M&E) | From January to July 2022, Malaysia experienced a significant 25.5% increase in machinery and equipment (M&E) exports, reaching USD 8.34 billion y-o-y. | <ul style="list-style-type: none"> • Industrial machinery • Electrical equipment • Construction and mining machinery |
| Food | Malaysia wants to be one of the largest global suppliers of Halal products. The Global Islamic Economy Indicator forecasts that the global halal market will expand from USD 2.09 trillion in 2021 to almost USD 3.27 trillion by 2028. | <ul style="list-style-type: none"> • Processed and canned foods • Dairy products • Beverages • Snack foods |
| Chemical | The industry contributes 6% to the nation's GDP and employs 292,969 workers, 12.5% of the total manufacturing employees. | <ul style="list-style-type: none"> • Petrochemicals • Oleochemicals • Plastics and polymers • Agrochemicals |
| Transportation | Malaysia has attracted many global automotive manufacturers to operate their flagship facilities in the country, including the first Porsche assembly plant outside of Germany, several regional distribution centres such as Volkswagen, Mercedes Benz, BMW, and Volvo's regional EV hub. Other manufacturers like Proton, Perodua, and Honda have also established manufacturing facilities in Malaysia, which is poised to become a regional hub for the EV industry. | <ul style="list-style-type: none"> • Automobiles • Motorcycles • Commercial vehicles • Electric vehicles and components |
| Electronics and electrical | Now one of the largest export-oriented industries in the country. It contributes 38% to Malaysia's total exports and 78% to the net trade surplus. | <ul style="list-style-type: none"> • Consumer electronics • Electrical appliances • Electronic components • Semiconductors |

Source: JLL, various 3rd party sources

Where are the key industrial clusters?



Source: JLL

What policies are driving manufacturing?


New Industrial Master Plan 2030 (NIMP 2030):

Industrial master plan that lays out a clear course for Malaysia between 2023 and 2030 to keep the country's manufacturing industry and its related services competitive on a global level. The NIMP 2030 aims to capitalise on rising global trends, supply chain disruptions, the present geopolitical scenario, digitalisation, and environmental, social and governance (ESG) considerations.

Moving to sustainability. The 12th Malaysia Plan (2021 to 2025), outlines the country's commitment to achieving net-zero greenhouse gas emissions by 2050. Currently, Malaysia holds the top ranking in SEA in the Energy Transition Index (World Economic Forum).

National Fourth Industrial Revolution (4IR)

Policy: Policy to increase manufacturing productivity; elevate the contribution of the manufacturing sector to the economy; strengthen innovation capacity and capability; and increase the number of high-skilled workers.

 Who's investing?

| Company | Sector / product(s) | Investment size (USD Mn.) |
|--|---|---------------------------|
| Infineon | Semiconductor | 7,000 |
| Intel | Semiconductor | 7,000 |
| Micron | Semiconductor | 2,000 |
| Lumileds Malaysia Sdn Bhd | Semiconductor | 5,400 |
| INV New Material | Lithium battery plant | 672 |
| Enovix Corporation Technology (M) Sdn Bhd | Advanced silicon battery | 1,200 |
| SBH Kibing Solar | Solar photovoltaic glass | 630 |
| EVE Energy Co. Ltd | Cylindrical lithium-ion batteries | 422 |
| LONGi Malaysia | Electronics and electrical | 273 |
| Masdar | Renewable energy projects | 8,000 |
| Alton | Consumer and commercial tools, appliances, and floor care | 420 |
| Texas Instruments Malaysia Sdn. Bhd | Semiconductor devices and high-performance integrated analogue circuits | 1,600 |


Source: Various company and/or government announcements and news articles

Note: This is not an exhaustive list – only selected investments shown






Philippines

 Where are the opportunities?

| Industry | Market trend commentary | Key products |
|------------------------------------|--|---|
| Semiconductor | The Philippines is one of the seven countries that the USA partnered with in line with their CHIPS Act, which aims to expand and diversify the US' semiconductor supply chain. | <ul style="list-style-type: none"> • Assembly and testing services • Integrated circuits • RF/microwave |
| Electronics and electricals | Semiconductor and Electronics Industries in the Philippines Foundation, Inc. (SEIPI) reported an all-time high of electronics export of USD 49.1 billion in 2022. | <ul style="list-style-type: none"> • Consumer electronics • Industrial electronics • Telecommunication equipment |



 Where are the key industrial clusters?

Economic zones in Luzon

Has 58 key manufacturing economic zones spread across Northern and Southern Luzon, as well some areas in Metro Manila.

Key industries:

- Paper
- Clothing apparel
- Food
- Electronic
- Metal products

Economic zones in Visayas

Has 10 key manufacturing economic zones located in Cebu, Leyte, and Negros Occidental

Key industries:


- Food
- Motor vehicles
- Clothing
- Electronic
- Chemical products

Economic zones in Mindanao

Has 10 key manufacturing economic zones located in Davao del Norte, Misamis Oriental, South Cotabato, and other parts of Mindanao.


Key industries:

- Food
- Chemical products
- Furniture
- Plastic
- Basic metal products

 What policies are driving manufacturing?

Build Better More Programme: The current administration’s infrastructure development programme seeks to expand the previous administration’s “Build, Build, Build” programme that will push high-impact infrastructure projects,

boosting efficiency and production in the country. In 2024, the administration proposed a PHP 1.418 trillion (USD 24.4 billion) budget for essential infrastructure projects focusing on improving connectivity within and outside Metro Manila.

 Who’s investing?

| Company | Description |
|---------------------------------|--|
| Sercomm Philippines | Networking equipment manufacturer expanded by 20,000 sqm which will produce wireless telecommunication devices such as 5G and fiber products. |
| Ogura Clutch Philippines | Relocated from Calamba, Laguna to LIMA Estate, the new facility covers over 16,000 sqm which will cover the distribution and manufacturing functions of the company. Ogura is the world’s largest producer of electromagnetic clutches and brakes. |
| Knoll Packaging | The new factory opened with 8,000 sqm space fully equipped with a full rooftop solar array, rainwater collection, and a low carbon footprint. |
| Glovax Lifescience Corp | Glovax partnered with Eubiologics, and started building a PHP 7.5 billion (USD 130 million) vaccine facility in Taysan, Batangas. |
| D&L Industries Inc | A PHP 10.5 billion (USD 183 million) plant listed as chemical and food manufacturer in Batangas. |
| Brother Industries | An 87,000 sqm expansion of the manufacturing facility. The company is known for its printers, as well as other products like All-in-Ones, labelling systems, and other consumables. |

Source: Various company and/or government announcements and news articles
 Note: This is not an exhaustive list – only selected investments shown





Singapore

 Where are the opportunities?

| Industry | Overview | Key products |
|-----------------------------------|--|---|
| Electronics and electrical | Singapore's largest manufacturing industry accounting for around 41% of total manufacturing output in 2023. | <ul style="list-style-type: none"> • Silicon wafers • Hard disk drives • Print heads • Batteries • RF filters |
| Chemical | The chemicals industry cluster which includes petroleum, petrochemicals and specialty chemicals, contributed around 23% of total manufacturing output in 2023. | <ul style="list-style-type: none"> • Refined oil products • Petrochemicals • Resins • Specialty chemicals |
| Precision engineering | The precision engineering industry cluster accounted for 12.8% of total manufacturing output in 2023. | <ul style="list-style-type: none"> • Critical components (e.g. lasers, optics, motors, sensors, precision pumps and valves) • Semiconductor, test & measurement, light emitting diode (LED), additive manufacturing and machining tools |
| Biomedical | In 2023, the industry cluster contributed 9.6% of Singapore's total manufacturing output. | <ul style="list-style-type: none"> • Vaccines • Small molecules (ingredients that go into the production of drugs) • Instruments and test kits |
| Transport engineering | The transport engineering sector contributed to 7.8% of Singapore's total manufacturing output in 2023. | <ul style="list-style-type: none"> • Automotive parts • Electric vehicles • Offshore platforms • Marine-related parts • Aircraft-related parts |

Source: Singstat, JLL Research

Where are the key industrial clusters?



Source: MapIT, URA, JTC, JLL Research

What policies are driving manufacturing?

Pioneer Industries (Manufacturing) Incentive: Granted to eligible companies that establish new-in-Singapore “pioneering” activities. Qualifying firms will enjoy a corporate tax exemption on the income derived from the manufacturing of the pioneer product(s). The government extended the scheme to 31 December 2028.

Development and Expansion Incentive for Manufacturing: Encourages companies to undertake high value-add manufacturing activities in Singapore. Eligible firms will enjoy a

concessionary tax rate on the income derived from qualifying manufacturing activities in Singapore. The government also extended this scheme to 31 December 2028.

Enterprise Innovation Scheme: Enhances tax deductions for businesses engaged in activities such as research and development (R&D), registration of intellectual property and innovation carried out with polytechnics and Institutes of Technical Education. The scheme will be available between 2024 and 2028.

Who's investing?

| Company | Description |
|-------------------------|---|
| BioNTech | BioNTech acquired Novartis Singapore Pharmaceutical Manufacturing's GMP manufacturing site to establish its first mRNA facility in Singapore. It's also the first step in BioNTech's plans to establish a regional hub in the APAC region. |
| Sanofi | Sanofi broke ground for a first-of-its-kind Evolutive Vaccine Facility (EVF) in Singapore, as part of a EUR 900 million (USD 969 million) investment over five years to create two new EVFs (the other in France) globally. |
| Ardentec | Ardentec broke ground for a new test facility in Singapore's Woodlands Industrial Park, investing more than SGD 250 million (USD 185 million) in the new six-storey facility ("Fab2"). |
| Soitec | Soitec broke ground on its Singapore fab extension in Pasir Ris Wafer Fab Park to grow its global semiconductor wafer production capacity. |
| JIOS Aerogel | JIOS Aerogel commissioned a new factory in Singapore for electric-vehicle battery components, located at the JTC Chemicals Hub in Tuas. |
| Pall Corporation | Pall Corporation broke ground for a new USD 100 million manufacturing facility in Singapore as part of initial large-scale investment to drive expansion in the APAC region. |
| Cariflex | Cariflex broke ground at a 6.1 ha site in Jurong Island for the world's largest and Singapore's first polyisoprene latex plant. The combined investment for the first phase and pre-investment of necessary infrastructures for the second phase is over USD 350 million. |
| UMC | UMC announced new 22nm wafer fab in Singapore, with a planned investment of USD 5 billion. |
| Dyson | Dyson announced the setting up of a new advanced manufacturing plant for next generation batteries in Tuas, Singapore. |
| GSK | GSK broke ground for its SGD 343 million (USD 253 million) state-of-the-art vaccines facility expansion at Tuas, Singapore, which will manufacture drug substances for GSK's vaccines that protect against Hepatitis B. |

Source: EDB, JLL

Note: This is not an exhaustive list – only selected investments shown






Thailand

 Where are the opportunities?

| Industry | Overview | Key products |
|---|--|--|
| Electrical and electronics (E&E) | Producers from Taiwan and China have entered Thailand in recent years to diversify their supply chain network. | <ul style="list-style-type: none"> • Washing machines • Refrigerators • Air conditioners • Hard disk drives • PCB |
| Automotive | Thailand is moving towards the EV market with the goal to be an EV hub. China-based automotive players (Changan and BYD) have recently entered Thailand's market. Thailand is home to around 27 motor vehicle makers and 18 motorcycle makers. Most of the carmakers are MNCs. | <ul style="list-style-type: none"> • Passenger cars (ICE/EV) • Motorcycles • Vans • Trucks |
| Food and Beverage | Thailand is well-known for food and beverage manufacturing. Thailand was the third-largest exporter of chicken and chicken meat products in 2023, exporting over 100,000 tonnes and improving from the fourth rank in 2022. | <ul style="list-style-type: none"> • Rice • Fresh and frozen meat products • Canned tuna • Casava • Canned pineapple • Sugar • Seasonings |
| Rubber | Thailand accounted for around 33% of the world's natural rubber production (top-ranked globally). Thailand's rubber consumption share was 7% (third globally). | <ul style="list-style-type: none"> • Tires • Rubber gloves • Hoses • Elastics • Condoms |

Source: JLL, Board of Investment (BOI), Office of Industrial Economics (OIE)

 Where are the key industrial clusters?

Northern – Chiang Mai, Lamphun, Lampang, Phayao

- Key industries:
- Textile and garment
 - Electrical and electronics
 - Food processing
 - Automotive and auto parts

Central – Suphanburi, Lopburi, Nakhon Sawan, Ratchaburi, Samut Songkram

- Key industries:
- Food processing, agro processing
 - Construction materials
 - Chemical and petrochemical

Western Vicinity – Nonthaburi, Nakhon Pathom, Samut Sakhon

- Key Industries:
- Electrical and electronics
 - Agro processing
 - Food/seafood processing

Northeastern – Khon Kaen, Nakhon Ratchasima, Ubon Ratchathani

- Key industries:
- Agro-processing and food
 - Textile and garment
 - Rubber and plastic products
 - Construction materials

Northern Vicinity – Ayutthaya, Pathum Thani

- Key industries:
- Automotive
 - Food processing
 - Electrical and electronics

EEC – Chacheongsao, Chonburi, Rayong

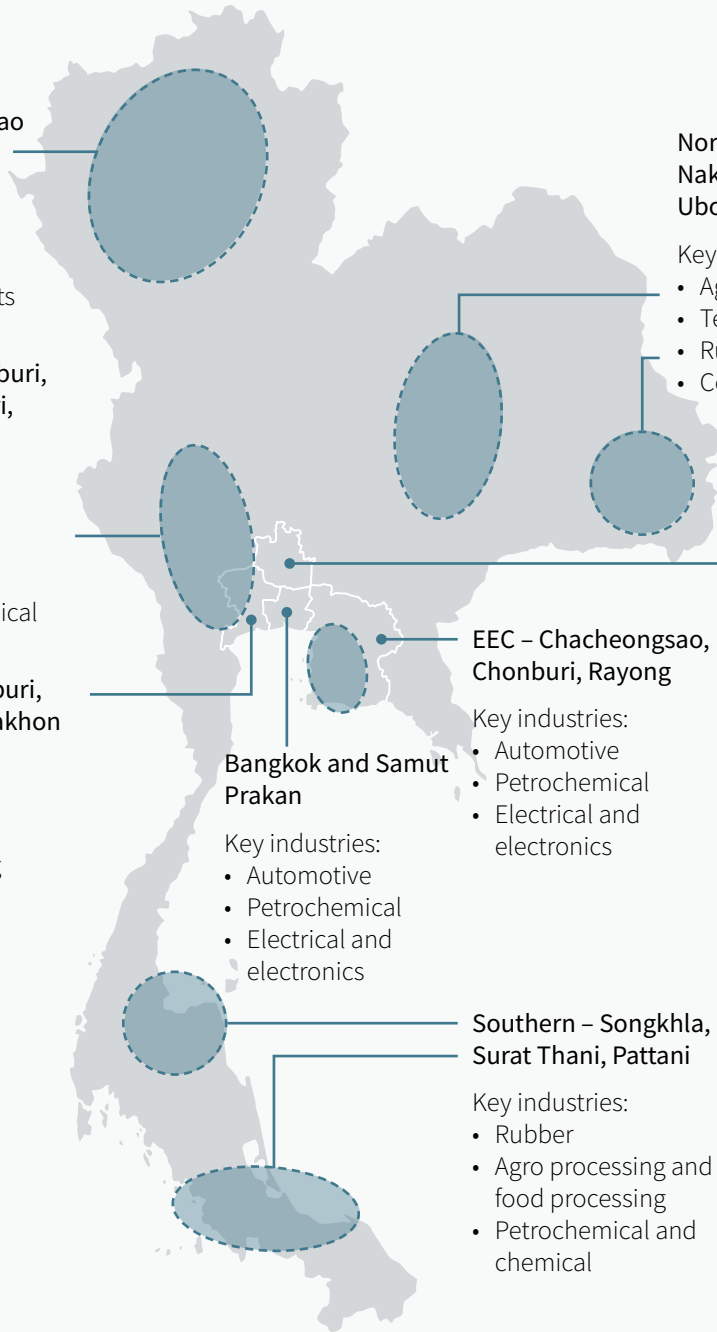
- Key industries:
- Automotive
 - Petrochemical
 - Electrical and electronics

Bangkok and Samut Prakan

- Key industries:
- Automotive
 - Petrochemical
 - Electrical and electronics

Southern – Songkhla, Surat Thani, Pattani

- Key industries:
- Rubber
 - Agro processing and food processing
 - Petrochemical and chemical



Source: JLL



What policies are driving manufacturing?

Board of Investment (BOI) incentive package:

Incentives for key industries such as electrical and electronics, automotive, petrochemical, and chemical. For example, BOI incentives in E&E focus on high-value production in the supply chain by providing greater incentives such as 10-year CIT exemption for front-end semiconductor production.

30@30 Strategy and the EV 3.5 policy: Promote the growth of EV manufacturing. By 2030, the government aims to increase EV production to at least 30% of the total automotive production. Moreover, EV distributors and manufacturers will receive extra tax benefits such as excise tax and

import duty exemptions in order to lower the price of EVs and encourage the transition to EVs.

Public organisations activities: The E&E Intelligence Unit (EIU) and National Electronics and Computer Technology Centre (NECTEC) are the key government stakeholders that work in collaboration with investors to enhance the E&E industry.

Draft of National Energy Plan B.E.2566-2580 (2023-2037): One focus of the draft is the liberalisation of the energy business to promote more competition and renewable energy production.



Who's investing?

| Company | Sector | Investment size (USD Mn.) |
|---|----------------------------|---------------------------|
| Sri Trang Gloves (Thailand) Public Company Limited | Rubber | 8.2 |
| Quanta Computer | Electrical and electronics | 13.8 |
| Lotus Bakeries | Food and beverages | 12.6 |
| Unimicron Corp (TWN) | Electrical and electronics | 36.2 |
| Zhen Ding Tech | Electrical and electronics | 281.6 |
| Changan Auto Southeast Asia Co., Ltd. | Automotive | 249.6 |

Source: Various company and/or government announcements and news articles

Note: This is not an exhaustive list – only selected investments shown




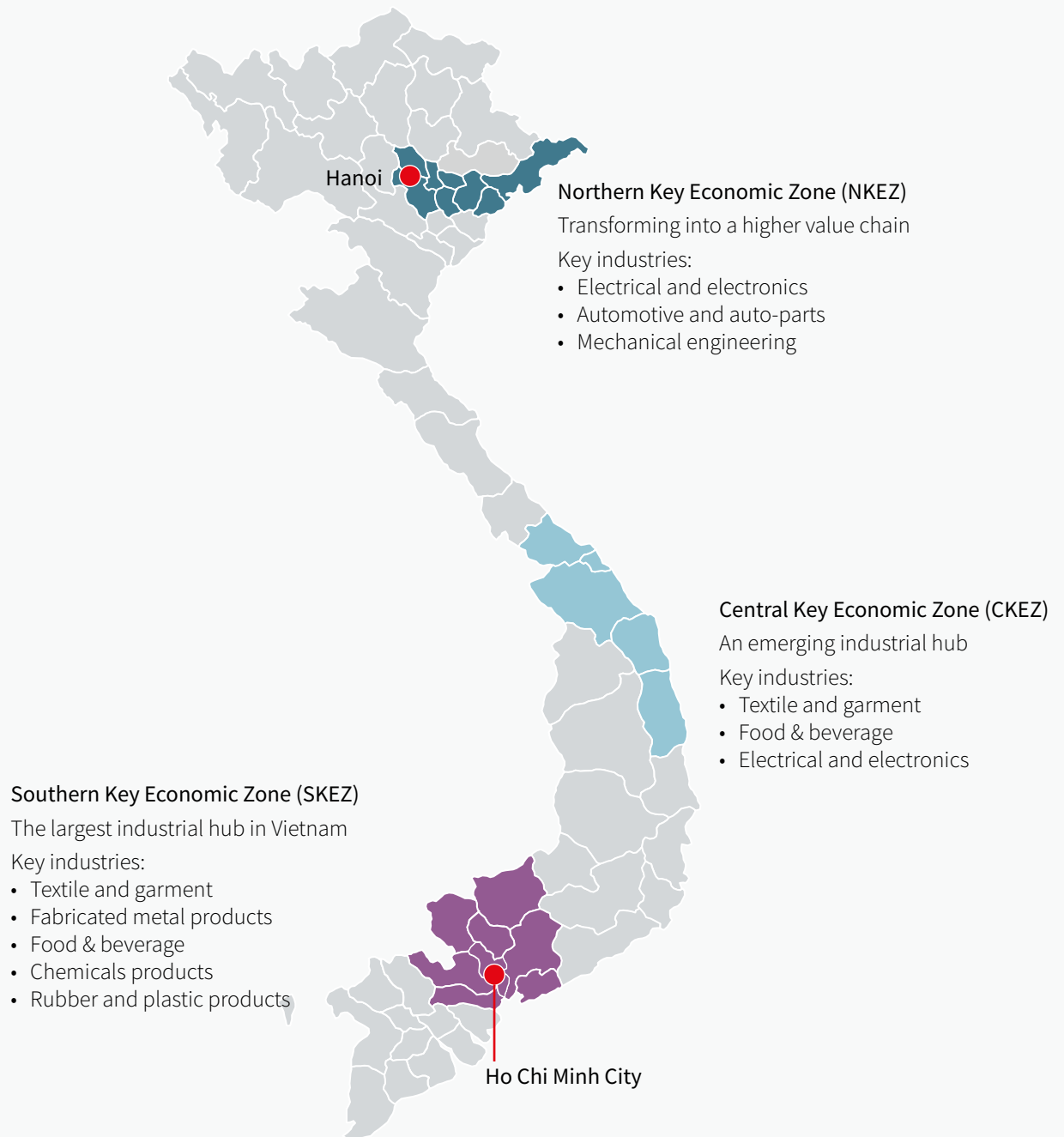
Vietnam


Where are the opportunities?

| Industry | Overview | Key products |
|------------------------------------|---|---|
| Computer and electronics | This is the largest sector in Vietnam, accounting for 17.8% of the country's manufacturing output. In 2023, Vietnam exported USD 57.3 billion in electronic devices, computers, and computer parts, as well as USD 52.4 billion in phones and related components, accounting for 31% of total country exports that year. Vietnam has advanced from 47th rank in 2001 to be one of the world's top 10 electronics exporters in 2021. | <ul style="list-style-type: none"> • Phones • Computers • Semiconductor • Microchips |
| Chemicals | The industry is poised to play a crucial role in Vietnam's economic development and is expected to grow at a compound annual growth rate of 8.7% from 2024 to 2028. | <ul style="list-style-type: none"> • Soap and detergent • Fertiliser • Pesticides and agrochemical • Basic chemicals • Industrial gas |
| Fabricated metal products | Total export value of USD 16.3 billion in 2023. This industry is forecasted to grow at a CAGR of 8.7% from 2024 to 2028. | <ul style="list-style-type: none"> • Steel • Aluminium • Copper • Zinc • Iron • Non-ferrous metals |
| Rubber and plastic products | USD 25 billion in 2022 and expected to grow at a CAGR of 8.6% from 2023 to 2027. | <ul style="list-style-type: none"> • Plastic packaging • Rubber and plastic components • Plastic household • Rubber and plastics materials (PVC, PE, PP, PET) |
| Garment and textile | The third-largest garment and textile exporting country in the world. In 2023, export value reached ~USD 40.3 billion (to over 100 markets). This is expected to rise to USD 44 billion by end-2024. | <ul style="list-style-type: none"> • Protective equipment for workers • Ready-to-wear garments • Sportswear • Jeans • Medical clothing |
| Food processing | With revenue of around USD 18 billion in 2022, Vietnam's food processing market is ranked third in SEA. The market is forecast to grow at an annual average rate of 8.2% from 2023 to 2027. | <ul style="list-style-type: none"> • Seafood • Meat • Fruit and vegetables • Milk and other dairy products |

Source: JLL, Vietnam GSO, various 3rd party sources

 Where are the key industrial clusters?



 What policies are driving manufacturing?

General - extensive array of investment

incentives: Established itself as an export-driven economy, Vietnam government is encouraging business in this sector, demonstrated by a wide range of investment incentives to attract foreign investment such as tax incentives, exemptions or reductions on import duties, land and rents incentives, and comprehensive operational support throughout the investment journey.

Free Trade Agreements (FTAs): Vietnam has signed and implemented 15 FTAs, including the CPTPP, EVFTA, and UKVFTA. These agreements facilitate trade, reduce barriers, and provide favourable terms for manufacturing projects.

Vietnam National Master Plan 2021-2030, vision to 2050: Aim to become an upper middle-income country with a modern industrial base. It focuses on science, technology, innovation, and digital transformation.

State Administration Reform Programme (2021-


2030): Directive No. 23/CT-TT aims to streamline administrative procedures and promote business development in the digital age. Over 1,000 procedures have been simplified, benefitting businesses and investors.

Public-Private Partnerships (PPP) 2020:

Vietnam's first PPP law, effective from January 1, 2021, encourages private investment in critical infrastructure projects. This will expectedly improve infrastructure development, including transportation networks, power grids, and industrial zones, which will enhance logistics, connectivity, and efficiency.

Net-zero Carbon Commitment by 2050: Vietnam pledged to phase out coal power generation by the 2040s and achieve net-zero carbon emissions by 2050. This commitment positions Vietnam as an attractive destination for manufacturers seeking sustainable production environments.

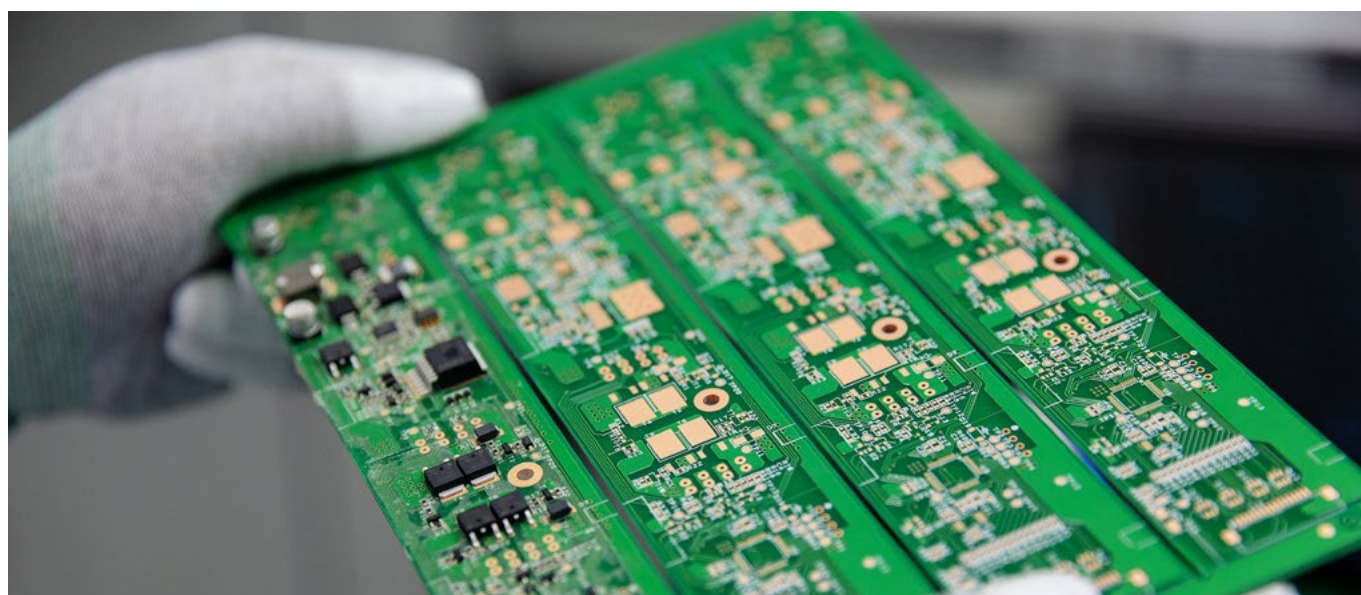


 Who's investing?

| Company | Sector | Investment size (USD Mn.) |
|-------------------------|----------------------------|---------------------------|
| Pegatron | Electrical and electronics | 500 |
| Lego | Toys | 20 |
| Amkor Technology | Electrical and electronics | 520 |
| Pandora | Wearing apparel | 100 |
| JA Solar | Energy | 477 |
| Wistron | Electrical and electronics | 300 |
| Foxconn | Electrical and electronics | 3,200 |
| LG | Electrical and electronics | 2,000 |
| Quanta Computer | Electrical and electronics | 120 |
| Luxshare ICT | Electrical and electronics | 480 |
| Hana Micron | Electrical and electronics | 600 |

Source: JLL

Note: This is not an exhaustive list – only selected investments shown



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