

ASEAN Investment Report 2022

Pandemic Recovery and Investment Facilitation





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The ASEAN Secretariat

**United Nations Conference on
Trade and Development**

The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1967. The Member States are Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam.

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ASEAN: A Community of Opportunities for All

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FOREWORD

ASEAN recorded a robust rebound in Foreign Direct Investment (FDI) inflows, surging by 42 percent to reach US\$ 174 billion in 2021. This increase to near pre-pandemic levels reverses the decline in 2020 caused by the COVID-19 outbreak and reflects the attractiveness of the region's economy for global investors. With a large market and strong regional integration, ASEAN remains a major FDI destination in the developing world – second only to China – and will play an important role in driving global economic recovery.

Intra-ASEAN FDI, which continue to be an important source of FDI as well as the establishment of production networks in the region, have been increasingly driven by emerging opportunities in sectors such as electric vehicles, electronics, digital economy and green technologies. Start-ups – in particular the unicorns – have been critical in driving these new trends and contributing to the Industry 4.0 transformation in ASEAN. At the same time, private equity and venture capital firms have been playing an increasingly active role to support the growth of start-ups, with total assets under management rising rapidly from US\$36 billion in 2017 to US\$66 billion in 2021.

This year's ASEAN Investment Report focuses on investment facilitation. Over the past few years, ASEAN Member States have undertaken significant efforts to attract and retain FDI. They are now stepping up this endeavour through the adoption of an ASEAN Investment Facilitation Framework (AIFF) in 2021, reflecting ASEAN's continued commitment to improve ease of doing business and investment in the region. This Report highlights many of ASEAN's investment facilitation initiatives at the national and regional levels and provides insights for foreign investors on how these initiatives could assist them in their investment decisions. The Report also highlights the initial assessment of the implementation of the AIFF.

As we continue to be confronted by global economic uncertainties, brought about by factors such as the evolving pandemic, supply chain disruptions, inflationary pressures and geo-political conflicts, it is more important than ever that ASEAN remains steadfast in its economic integration and create a conducive climate for business and investment. I hope that policymakers, businesses and stakeholders in the region will find this Report useful in informing their decisions to realise an ASEAN Community that is stable, prosperous, and more resilient.



Dato Lim Jock Hoi
Secretary-General of ASEAN

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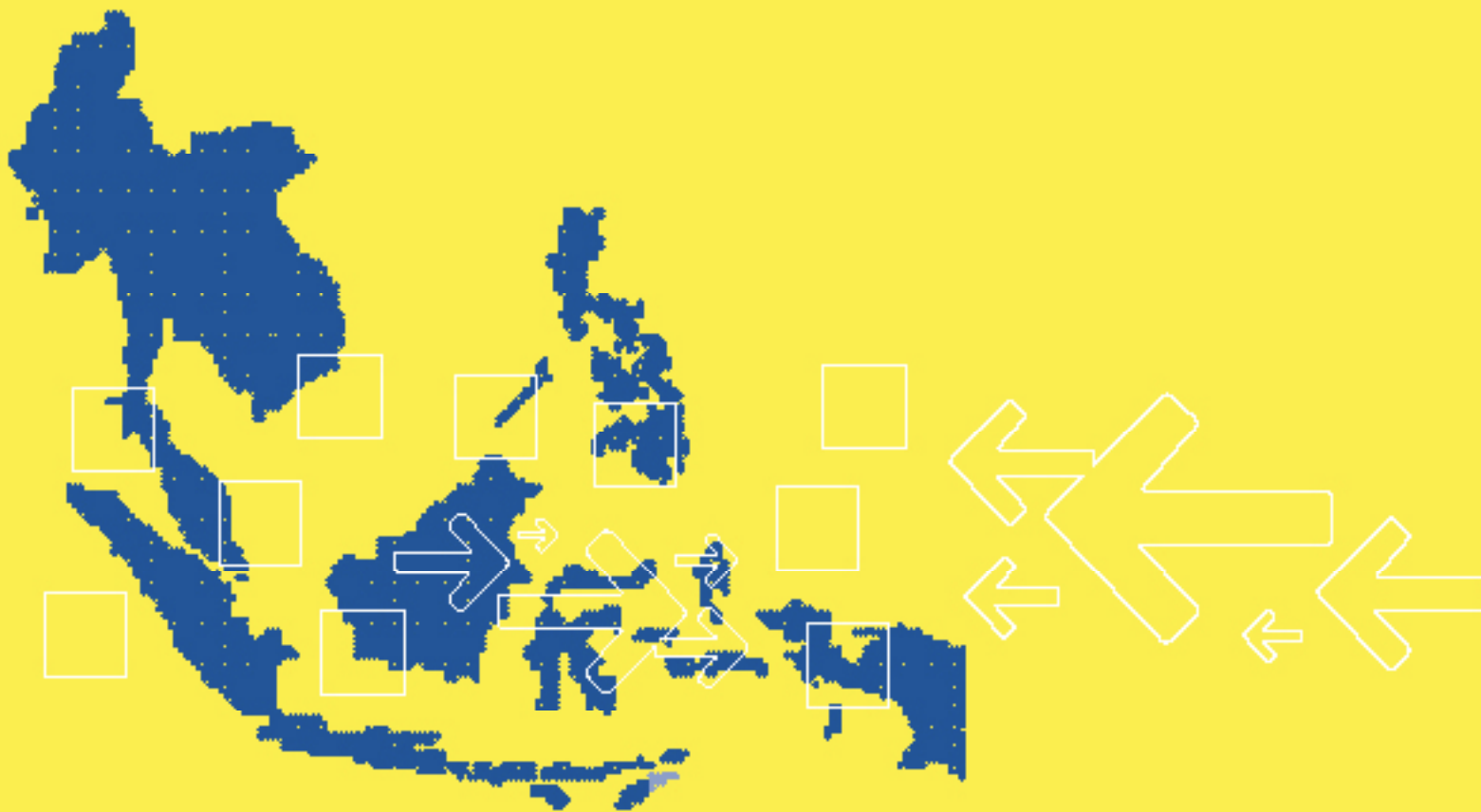
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ABBREVIATIONS

AI	artificial intelligence
ACIA	ASEAN Comprehensive Investment Agreement
ACTS	ASEAN Customs Transit System
AEC	ASEAN Economic Community
AFAS	ASEAN Framework Agreement on Services
AIA	ASEAN Investment Area
AIFF	ASEAN Investment Facilitation Framework
AIR	ASEAN Investment Report
ATIGA	ASEAN Trade in Goods Agreement
ATISA	ASEAN Trade in Services Agreement
BEV	battery electric vehicle
BIMP-EAGA	Brunei Darussalam-Indonesia-Malaysia-Philippines – East ASEAN Growth Area
BIT	bilateral investment treaty
BPO	business process outsourcing
CAGR	compound annual growth rate
CLMV	Cambodia, Lao People's Democratic Republic, Myanmar, Viet Nam
EU	European Union
EV	electric vehicle
FDI	foreign direct investment
FTA	free trade agreement
GDP	gross domestic product
GVC	global value chain
HDD	hard disk drive
HEV	hybrid electric vehicle
IA	industrial automation
IC	integrated circuit
ICE	internal combustion engine
ICT	information and telecommunication technology
IDM	integrated device manufacturing
IF	investment facilitation
IIA	international investment agreement
IIoT	industrial internet of things
IoT	internet of things
IPA	investment promotion agency

IT	information technology
LDCs	least-developed countries
LNG	liquefied natural gas
M&As	mergers and acquisitions
MNE	multinational enterprises
MSMEs	micro, small and medium-sized enterprises
MW	megawatts
OEM	original equipment manufacturer
PCB	printed circuit board
PHEV	plug-in hybrid vehicle
PPP	public-private partnership
R&D	research and development
RCEP	Regional Comprehensive Economic Partnership
SEZ	special economic zone
SMEs	small and medium-sized enterprises
TIPs	treaty with investment provisions
UNCTAD	United Nations Conference on Trade and Development
WIR	World Investment Report
WTO	World Trade Organization

OVERVIEW



OVERVIEW

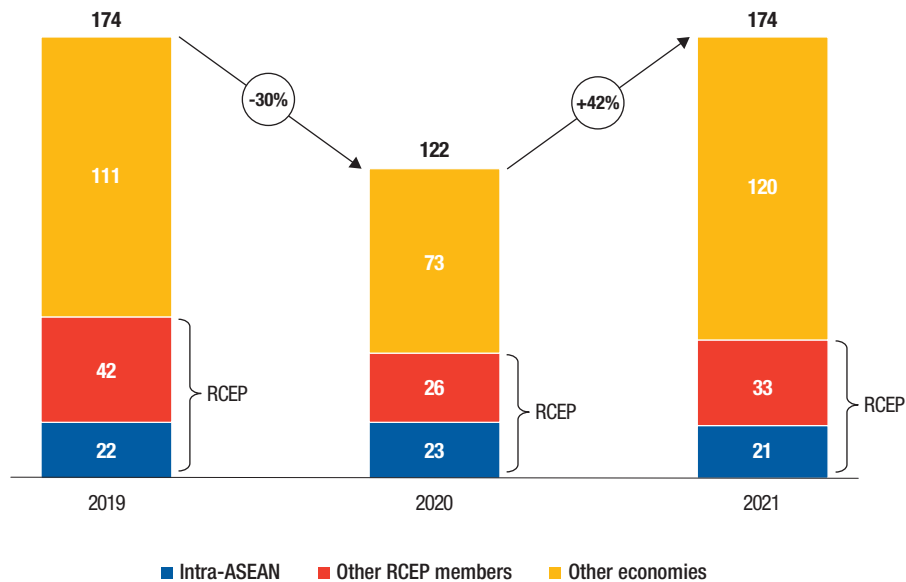
FDI AND CORPORATE INVESTMENT TRENDS

Inflows of foreign direct investment (FDI) in ASEAN increased by 42 per cent in 2021 to \$174 billion, the pre-pandemic record level (figure 1). The rebound underscores the resilience of the region, which has been battered by successive waves of the pandemic. The recovery in ASEAN compares favourably with the 30 per cent average growth in developing economies (*WIR 2022*).

Six Member States recorded a rise in inflows and in two, inflows remained flat. This contrasted with the situation in 2020 when only two Member States recorded a rise.

ASEAN remained a top recipient of FDI in developing regions (second after China in 2021) and continued to be an engine of growth. The region's share of global FDI inflows rose from a pre-pandemic annual average of 7 per cent in 2011–2017, to 11 per cent in 2018–2019, to 12 per cent in 2020–2021. Strong inflows pushed up FDI stock in the region to \$3.1 trillion, an increase of 72 per cent from 2015 (\$1.8 trillion).

Figure 1. ASEAN: Flows of foreign direct investment, 2019–2021 (Billions of dollars)



Source: ASEAN Secretariat and UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

Note: RCEP = All ASEAN Member States plus Australia, China, Japan, the Republic of Korea and New Zealand.

Key drivers of recovery

Several factors led to the robust upturn. They include (i) rising investment across different modalities, (ii) a strong rebound in manufacturing, (iii) corporate investment strategies focusing on capacity expansion to bolster supply chains and for the post-pandemic recovery, (iv) significant investment from key source countries and (v) investment in infrastructure-related activities, including in the digital economy.

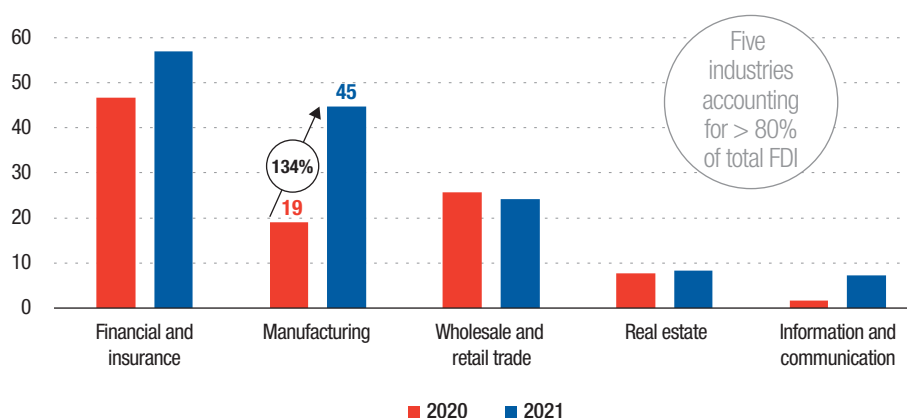
Announced greenfield investment project numbers rose by 12 per cent, with most investment in manufacturing and infrastructure-related activities. Three industries (electronics and electrical equipment, energy and gas supply and information and communication) accounted for 68 per cent of announced greenfield investment values in 2021.

Cross-border M&As declined in number but rose significantly in value, from -\$4.7 billion in 2020 to almost \$50 billion because of a few megadeals, including the \$34 billion special purpose acquisition company established by Grab (Singapore) and Altimeter Growth (United States).

Announced international project finance values increased from \$66 billion to \$114 billion, with the largest increase in renewable energy, followed by industrial estates. These two industries accounted for 75 per cent of international project finance activities in 2021. The number of international project finance deals rose by 18 per cent to 134.

A broad-based rise in FDI in manufacturing played a key role in 2021. Strong investment in manufacturing, finance and some services industries associated with the rapidly growing digital economy and Industry 4.0 activities were the main industry drivers. Investment in manufacturing recorded the strongest growth (134 per cent), to \$45 billion, in industries such as electric vehicles (EVs), electronics, biomedical and pharmaceuticals (figure 2). Finance and banking remained the largest FDI recipient industry with 22 per cent growth, to \$57 billion, underpinned by ASEAN and foreign banks picking up investment and multinational enterprises

Figure 2. ASEAN: FDI by industry, 2020–2021 (Billions of dollars)



(MNEs) in banking resuming their regional expansion plans. The active fintech industry in the region was another contributory factor. The strong digital economy helped attract rising investment in data centres and in information and communication activities (*AIR 2020–2021*).

Robust investment in semiconductors, electronics and EVs were significant drivers of the rise in manufacturing FDI. Announced greenfield investment in electronics and electrical equipment quadrupled to \$33 billion in 2021, increasing the share of these two industries in the total value to 52 per cent, from 12.4 per cent in 2020.

Investment in all FDI components (equity, intracompany loans and reinvested earnings) rose. New equity investment was prominent, suggesting new investment interest or further injection of capital into expanding existing operations.

Source-country trend

FDI from the top 10 sources accounted for 74 per cent of investment in ASEAN with the top 5 contributing more than 55 per cent to total inflows in 2021. This compared with 90 per cent for the top 10 and 64 per cent for the top 5 in 2020, suggesting more diverse sources of investment. **Investment from the United States ranked top**, rising by 41 per cent to \$40 billion, mainly because of significant increases in investment in banking and finance, and in the electronics, biomedical and pharmaceutical industries. FDI from China increased by 96 per cent to almost \$14 billion, mostly in manufacturing, EV-related activities, the digital economy, infrastructure and real estate. Investment from Japan rose marginally to \$12 billion, largely in manufacturing (e.g., electronics and automotive industries (including EVs)).

Intra-ASEAN investment

Intra-ASEAN investment fell by \$2 billion, or 9 per cent, with flows remaining at a high level (\$21 billion). Intra-ASEAN investment remained a significant source, second after the United States. Strong intraregional investment in manufacturing, which rose by \$3.7 billion to \$7.7 billion, was not sufficient to cushion the fall in total intra-ASEAN investment. The share of intra-ASEAN investment in total FDI in the region declined from almost 19 per cent in 2020 to 12 per cent, against significant increases in extra-regional investment, primarily from the United States and China.

Major developments shaping the FDI landscape

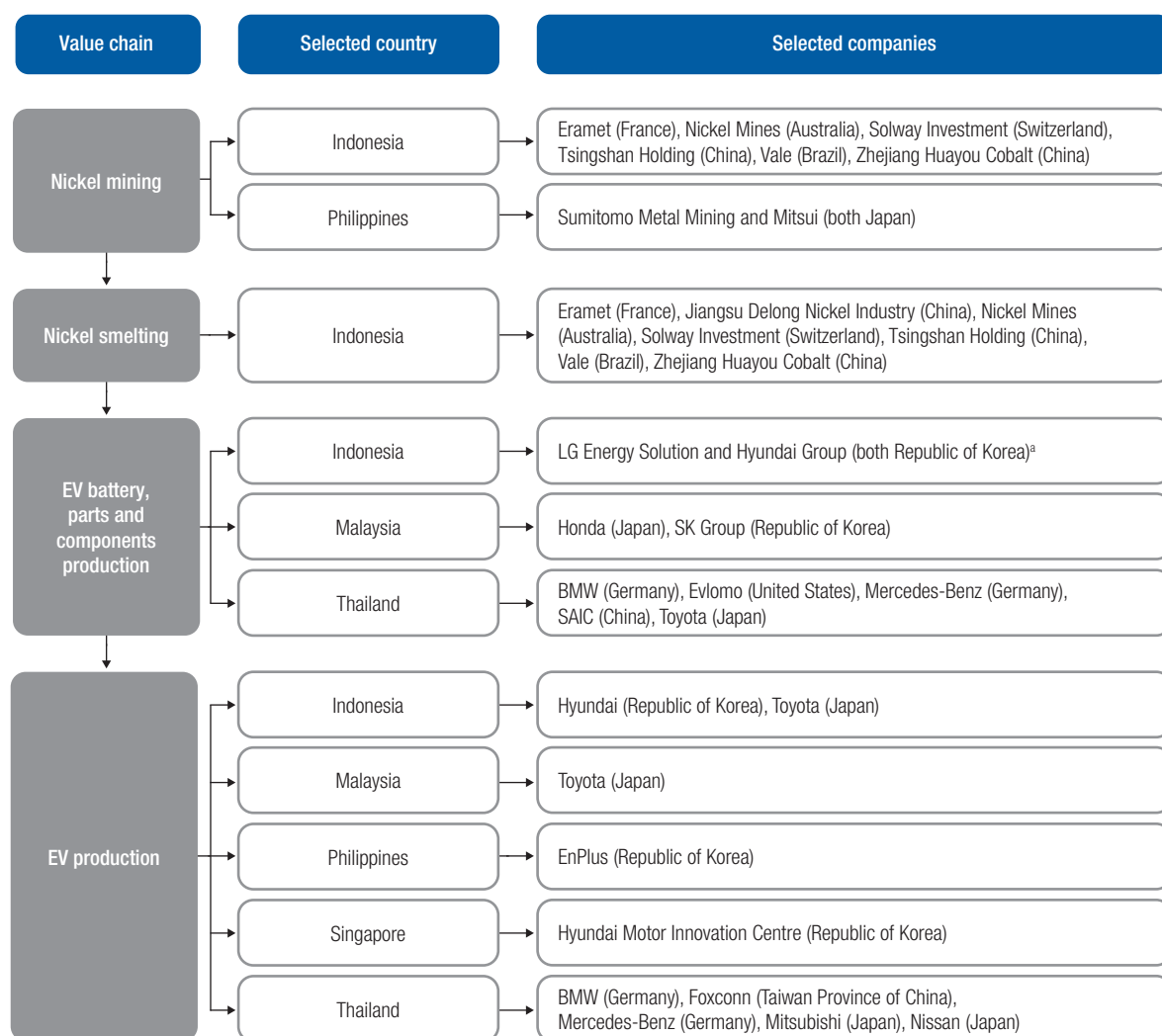
Several significant industrial developments continued to shape the investment landscape. Among them are the efforts of countries to develop EV hubs, which resulted in a significant increase in investment in the EV value chain in recent years. Several Member States are encouraging EV adoption and targeting a zero-carbon policy. Global supply chain disruptions and the drive by MNEs to beef up production capacity and diversification has led firms to expand operations in electronics and semiconductors. Strong digital growth has been helping the region attract increasing investment in the digital economy such as e-commerce, information and communication, and data centres.

Key industries such as EVs, electronics and the digital economy have the potential to drive continued FDI growth in the next few years. Significant developments in these industries include new categories of investors, new segments of value chains, further expansion of capacity and more activity in regional production networks.

FDI in the EV value chain

FDI in the EV value chain includes activities from nickel mining and smelting to battery production to manufacturing, as well as related R&D activities and investment in new infrastructure (figure 3).

Figure 3. EV value chain in ASEAN



Source: ASEAN Investment Report 2022 research.

^a LG consortium consists of LG Chem, LG Energy Solution, LG International, Posco (all Republic of Korea) and Huayou Holdings (China).

New entrants are emerging in the EV industry, challenging traditional automotive manufacturers and in some cases operating in partnership with them to manufacture EVs or invest in EV charging stations.

These newcomers include electronics manufacturers, technology companies, energy MNEs and industrial companies. They add to the expanding sources of FDI. Investment along the EV value chain is connecting countries, production processes and companies in the region, further strengthening regional production networks and the automotive ecosystem.

The top six countries with nickel reserves account for 79 per cent of global reserves, and two ASEAN Member States (Indonesia and the Philippines) are among them, with 27 per cent of reserves. This resource endowment has led to an increase in extractive FDI activities in Indonesia and growing attention paid by investors to the Philippines.

The global EV battery market is dominated by 10 MNEs, which together accounted for 94 per cent of the global market in 2021. **Nine of the top 10, all headquartered in Asia, have a presence in ASEAN,** with significant integrated operations producing EV batteries.

All the top 10 EV manufacturers are present in ASEAN (e.g., Tesla (United States), BMW (Germany, Hyundai (Republic of Korea) and Toyota (Japan)). Many operate in the region with multiple business functions, from manufacturing of parts and components to assembly of EVs, sales and distribution, R&D activities and establishment of centres of excellence.

A substantial challenge to the EV industry is the limited charging network, which also offers investment opportunities. Some ASEAN Member States are encouraging investment in EV charging networks and providing incentives to local companies and MNEs to invest in EV infrastructure.

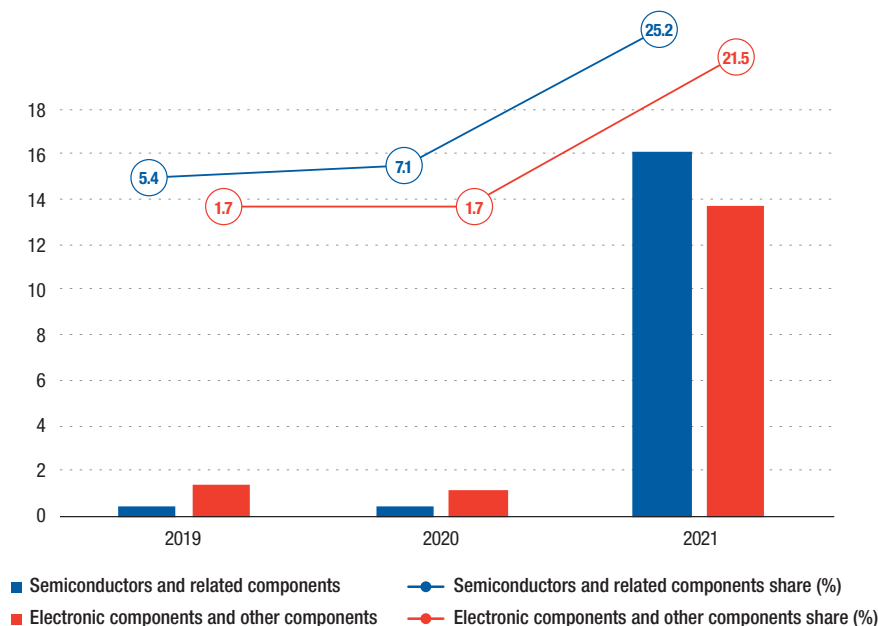
FDI in the semiconductor industry

Robust FDI in electronics, in particular semiconductors, helped the region record strong investment growth in 2021. Greenfield investment in semiconductors and other electronic components rose significantly in 2021 (figure 4). The share of semiconductors in total greenfield investment rose from 7 per cent in 2020 to 25 per cent and the share of electronics from less than 2 per cent to 22 per cent in the same period.

The global shortage of semiconductors and supply chain disruptions aggravated by the pandemic led electronics MNEs to shore up production capacity in the region. Many MNEs that already had a significant presence in ASEAN further expanded electronic and semiconductor operations in the region, particularly in prime locations such as Malaysia, the Philippines, Singapore, Thailand and Viet Nam. Some MNEs made significant capital expenditures in 2021 to expand capacity.

ASEAN is host to the top 20 global semiconductor MNEs, most of which are headquartered in the United States. Many have decades of investment relationships in the region, with manufacturing and testing facilities that date to the early 1970s. These MNEs have established many business functions (e.g., manufacturing, testing, regional HQs, R&D centres, sales and distribution) in ASEAN.

Figure 4. ASEAN: announced greenfield investment in semiconductors and in electronic components, 2019–2021 (Billions of dollars and per cent)



Source: UNCTAD, based on information from the *Financial Times Ltd*, fdi Markets (www.fdimarkets.com).

FDI in the digital economy and Industry 4.0

Investment in the digital economy and in activities related to Industry 4.0 continued to receive strong attention from investors. Some ASEAN Member States received more investment in digital infrastructure, such as data centres in 2021. This is on top of the many ongoing projects of large-scale investment in data-centre construction discussed in *AIR 2020–2021*. MNEs and local companies in industries such as automotive and electronics also continued to upgrade production facilities and factories with Industry 4.0 technologies, including during the pandemic period.

Prospects

It is expected that ASEAN will continue to receive a high level of FDI flows following the significant rebound. However, potential new waves of the pandemic, inflationary pressures and a weakening global economy will put downward pressure on both global and regional FDI. Other developments on the global stage in 2022 (e.g., Ukraine war, food-fuel-finance crises, recession fears) could dampen the growth momentum.

Despite the worsening outlook for global FDI, several factors will support continued growth in ASEAN, including vibrant industrial development, regional integration momentum, growing numbers of middle-income consumers and a consistent policy push. The interaction of internal (e.g., regional integration, market attraction) and external factors (e.g., adjustment or

strengthening supply chain capacity and regional corporate expansion strategies) favourable to the region will help sustain a high level of inflows. FDI in manufacturing is expected to remain strong particularly in the EV value chain, electronics and semiconductors and in activities related to the digital economy.

START-UPS AND UNICORNS IN INTRA-ASEAN INVESTMENT

The relative abundance of start-ups and unicorns in ASEAN are an important factor behind the dynamism of FDI in ASEAN, including intra-regional investment. It is the nature of start-ups to scale up quickly with a business idea, innovate and disrupt the market. Their proprietary advantage, ability to raise funds and drive to grow have led many to regionalize through a number of modalities, such as direct investment in neighbouring countries, cross-border M&As, acquisition of strategic stakes in other start-ups, establishment of corporate venture capital funds and partnerships with other start-ups and MNEs to expand horizontally and vertically in the region.

The rise of start-ups and unicorns is causing rapid growth of global and regional private equity and venture capital funds in the region. These activities have important implications for FDI and intra-ASEAN investment.

Start-ups in ASEAN

ASEAN is increasingly a hotspot for start-ups. The region is witnessing rapid growth in the number of start-ups across an expanding range of business activities, from e-commerce and fintech to travel and hospitality.

The number of start-ups in ASEAN that have raised more than \$1 million in funding almost tripled between 2015 and 2021, from 652 to 1,920. It rose much faster than in India (+110 per cent), Europe (+85 per cent) and the United States (+65 per cent). Three Member States (Singapore, Indonesia and Malaysia, in that order) account for 83 per cent of start-ups that have raised more than \$1 million in funding in the region. However, other ASEAN Member States are also witnessing fast growth (e.g., Viet Nam, Philippines and Thailand in that order).

Of the 100 most-funded start-ups in ASEAN in 2022, 42 have a physical presence in at least one other Member State. Looking only at the 100 most funded start-ups with a regional presence, 32 have subsidiaries in one other Member State, while 68 operate in two or more locations in the region. Of the 100 most-funded start-ups with regional investment activities, 31 are in fintech, 24 in e-commerce, 17 in enterprise or other business-to-business services, and the remaining in other businesses.

Various “push” and “pull” factors drive start-ups and unicorns to invest regionally. Market factors are the principal reason. An overwhelming majority (96) of the 100 most-funded start-ups with regional investment expanded to other ASEAN Member States primarily because of market-seeking considerations. Other reasons include opportunities to access

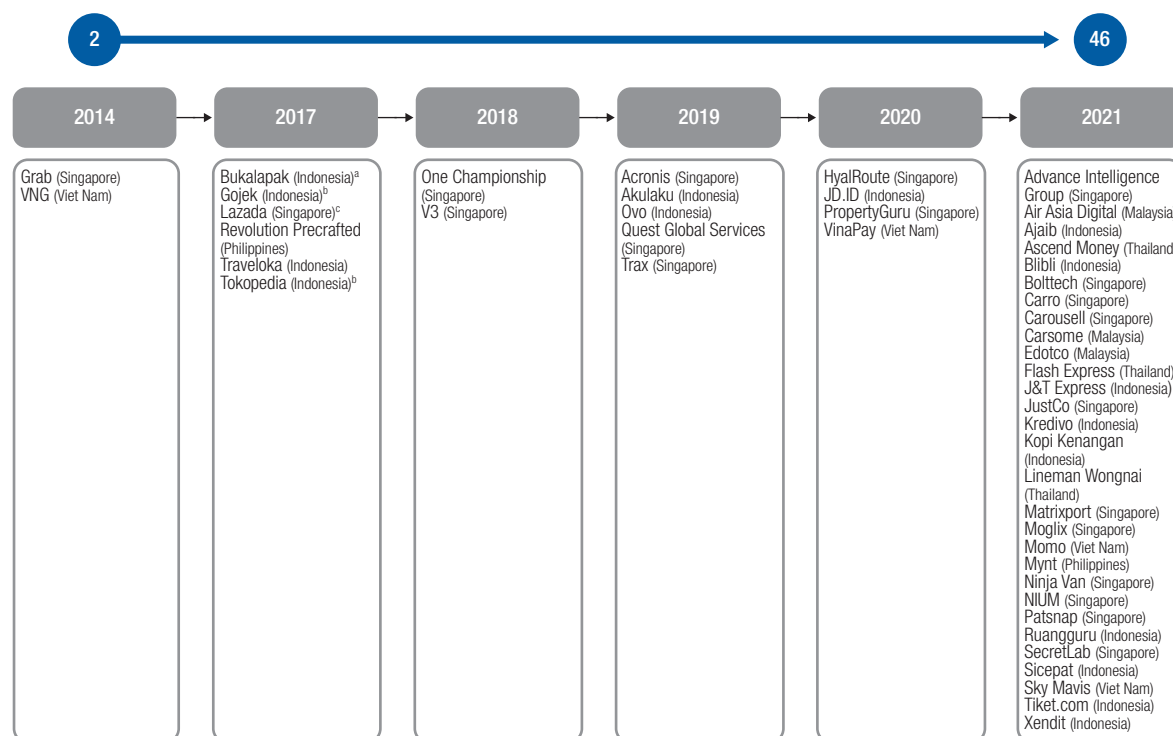
funding, technology development, access to strategic assets, and overseas partnership opportunities. The influence of a competitive start-up ecosystem in the host country, the support of accelerators and success stories of regionalized unicorns have also played a role.

Unicorns in ASEAN

The region is a prolific producer of unicorns, ranking behind only the United States, China and India. The number of unicorns in ASEAN rose rapidly in recent years, from just 2 in 2014 to 10 in 2018, and then to 46 in 2021 (figure 5). With the thriving digital economy, the region could register more unicorns in the next few years, depending on financial market conditions.

Most unicorns in ASEAN (38 out of the 46) are active in cross-border investment in multiple countries in the region and farther afield. Some 28 unicorns have established operations abroad through FDI, 16 have been involved with cross-border M&As, and 33 have established joint ventures, strategic partnerships or collaborations with foreign MNEs or start-ups. Unicorns in the region acquire strategic assets (technology) to complement existing businesses or to diversify into new business areas.

Figure 5. Unicorns in ASEAN, 2021



Source: ASEAN Investment Report 2022 research (see annex table 2.3).

Note: A unicorn is a privately owned start-up with a valuation of \$1 billion or more.

^a Bukalapak went public in August 2021.

^b Gojek and Tokopedia merged to become GoTo in May 2021.

^c It is now part of the Alibaba Group (China).

Some unicorns started to invest in other ASEAN Member States before they achieved unicorn status (e.g., iPrice Group, Edotco (both Malaysia) and Advance Intelligence Group (Singapore)). **Many unicorns that already had a significant regional presence have continued to expand in ASEAN** (e.g., Ajaib (Indonesia), Ascend Money (Thailand), and Bolttech, Carousell and Hyalroute (all Singapore)). **Some unicorns invest regionally after they have achieved unicorn status** (e.g., Akulaku and Kopi Kenangan (both Indonesia)). Many Indonesian unicorns have also become active regional investors in recent years (e.g., Akulaku, *J&T Express*, Kredivo, Traveloka, Xendit).

Some technology unicorns are involved in a series of FDI activities not only in the same sector but in complementary or diversified products and services (e.g., from ride-hailing to fintech, electric vehicles (EVs) and digital health). *Gojek* (Indonesia) has evolved from a ride-hailing app start-up into a multiplatform technology group, involved in an expanding list of businesses such as fintech and EV infrastructure. *Grab* (Singapore) has evolved from a ride-hailing business to a technology company offering services such as logistics, food and supermarket delivery, health care and fintech. Other unicorns are also expanding their operations vertically and regionally.

In their regionalization, start-ups and unicorns (mostly in the technology space) play an important role in connecting countries and markets and they can be a contributing factor in facilitating regional integration. Start-ups are making a significant impact in the development of e-commerce, fintech, transportation and logistics, travel and hospitality and other areas of the digital economy. Some also support other entrepreneurs and micro, small and medium-size enterprises (MSMEs) in adopting technology to enhance efficiency and market reach (*AIR 2020–2021*).

Private equity and venture capital investment

Private equity and venture capital assets under management in the region – capital that is already invested and available for investment – rose rapidly (by 83 per cent) between 2017 and 2021, from \$36 billion to \$66 billion. In the same period, FDI stock in ASEAN increased by 36 per cent.

The rapid growth of the start-up environment is attracting increasing amounts of international and regional venture capital FDI in ASEAN. While private equity assets under management grew by 42 per cent between 2017 and 2021, venture capital assets under management grew by 158 per cent. In perspective, venture capital investment in ASEAN rose by a factor of 2.6 between 2015 and 2020, compared with 1.4 in China and India.

Challenges and policy options

Start-ups face challenges in internationalizing. These challenges include lack of funding, lack of overseas market knowledge, lack of adaptability of business ideas to meet host-country demand, and fear of the unknown (e.g., regulatory requirements and additional risks associated with internationalization). These challenges can be alleviated through policy support and capacity-building programmes.

Cooperation between home- and host-country agencies in promoting start-up development could help, including cooperation between inward and outward investment promotion agencies (IPAs) in the region. Member States could strengthen investment facilitation measures to support start-ups. Investment facilitation is more important for small companies than for large ones, as the former have little experience in operating overseas and fewer resources to overcome administrative hurdles for investment.

Understanding the symbiotic relationship between start-ups and private equity and venture capital investment is crucial to designing policy options that target promoting FDI in the region by these firms. These stakeholders are closely interconnected and important emerging sources of FDI and intra-ASEAN investment. Monitoring and supporting the growth of the start-up ecosystem is necessary as they contribute to the expanding pool of MSMEs, technology and innovation development, digitalization and intra-ASEAN investment.

INVESTMENT FACILITATION IN ASEAN

Investment facilitation is a key tool for ASEAN Member States to attract investment.

They have put in place various types of investment facilitation measures for several decades and have been cooperating on investment facilitation since the adoption of the ASEAN Investment Area Agreement in 1998. Much of the UNCTAD Global Action Menu for Investment Facilitation and the proposed measures currently being discussed at the World Trade Organization (WTO, 2021) have been put in place or are being worked on by ASEAN Member States. Regional cooperation on investment facilitation was further strengthened with the adoption of the ASEAN Investment Facilitation Framework (AIFF) in 2021.

Investment facilitation environment in ASEAN

In recent years, Member States have adopted significant investment reforms and regional frameworks for the purpose of promoting FDI (AIR 2020–2021). Recent UNCTAD Investment Policy Monitors have observed that the number of measures restricting or regulating investment at the global level has gone up. ASEAN, by contrast, is moving in the other direction, continuing to implement almost exclusively measures favourable to investment. These actions, together with the influence of regional integration, have contributed to an improving investment environment over the past decade (AIR 2020–2021), which has played a role supporting ASEAN in attracting FDI inflows exceeding \$100 billion since 2010 (with recent years registering inflows more than \$170 billion).

This report assesses the efforts of ASEAN Member States in implementing investment facilitation actions following the categorization along 10 types of measures used in the AIFF. They are transparency and provision of information, streamlining and speeding up of administrative procedures and requirements, use of digital and internet technologies, single digital platform, assistance and advisory services to investors, independence of competent authorities, temporary entry and stay for business persons, facilitation of investment-supporting factors, consultative mechanisms for investment policies and cooperation.

Many investment facilitation measures are common to all the Member States, but there are differences in the quality or sophistication of measures in place and the level of service provided (table 1). In facilitating investment, all Member States are actively using digital technologies and online systems, a shift accelerated by the pandemic. Some Member States have established single digital platforms in which all services are integrated, including investment application, information and consultation as well as use of electronic documents, registration and payment of fees and charges. Other Member States are developing or examining the establishment of such platforms to improve efficiency. Investment facilitation measures are either national or regional.

The impact on investment decisions of the various types of investment facilitation measures varies. Assigning focal points in IPAs to assist investors with enquiries can be helpful, but providing relevant information (translated into multiple languages) and simplifying investment requirements is likely to generate more direct and significant impact for investors. One way to significantly improve the efficiency of investing in a country is to provide a single platform or window – ideally digital – that combines essential services, supporting an integrated investment application process that entails one-time submission of one set of documents, which relevant authorities can review for the issuance of permits and licences.

Investment facilitation measures adopted by ASEAN Member States have evolved to become more effective and efficient. In several Member States, the use of online or digital systems has become more sophisticated with upgraded features that support payment facilities, acceptance of electronic documents and access to databases.

Investment relocation and pandemic influence

Some Member States have attempted to accelerate investment facilitation to attract FDI diversification projects. In the context of specific situations such as support for businesses relocating production from other economies to ASEAN, some Member States have pushed facilitation measures such as establishment of a dedicated taskforce, simplification of the business licensing process and assistance with factory facilities in special economic zones (SEZs).

During the pandemic the number of new investment facilitation measures rose from 6 in 2019 to 28 in 2020 (*AIR 2020–2021*, p. 65). Most Member States further streamlined and simplified investment procedures, introduced greater use of online or e-application systems, strengthened one-stop centres, accelerated business licence approval processes and offered other support to investors.

More work needed, with a broader scope

Despite progress in implementing or putting in place investment facilitation measures, there is still more work to do, particularly in strengthening the quality of such services. This includes, first, increasing the effective use or application of technology and developing efficient information portals and digital platforms. Second, it entails broadening the scope of investment facilitation tools to include a wider set of administrative procedures relevant for the establishment of a business.

Table 1. Investment facilitation measures in place or being addressed by ASEAN member States, interim assessment

Lao People's Democratic Republic												
	Brunei Darussalam	Cambodia	Indonesia	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam			
1	Transparency of measures and information	1	1	2	1	2	2	1	1	2	2	1
2	Streamlining and speeding up administrative procedures and requirements	1	2	2	1	2	2	1	1	2	2	1
3	Use of digital and internet technologies	2	1	2	1	2	2	2	2	2	2	2
4	Single digital platform	0	0	2	0	1	2	2	2	2	2	2
5	Assistance and advisory services to investors	1	2	2	1	1	2	2	1	2	1	1
6	Independence of competent authorities	2	2	2	2	2	2	2	2	2	2	2
7	Temporary entry and stay of business persons for investment purposes	1	1	1	1	1	1	1	1	1	1	1
8	Facilitation of investment supporting factors	0	1	1	0	2	2	2	1	2	2	1
9	Consultative mechanisms for investment policies	1	2	2	1	2	2	2	1	2	2	1
10	Cooperation	2	1	2	1	2	2	2	2	2	2	1

Source: ASEAN Investment Report 2022, AIF assessment.

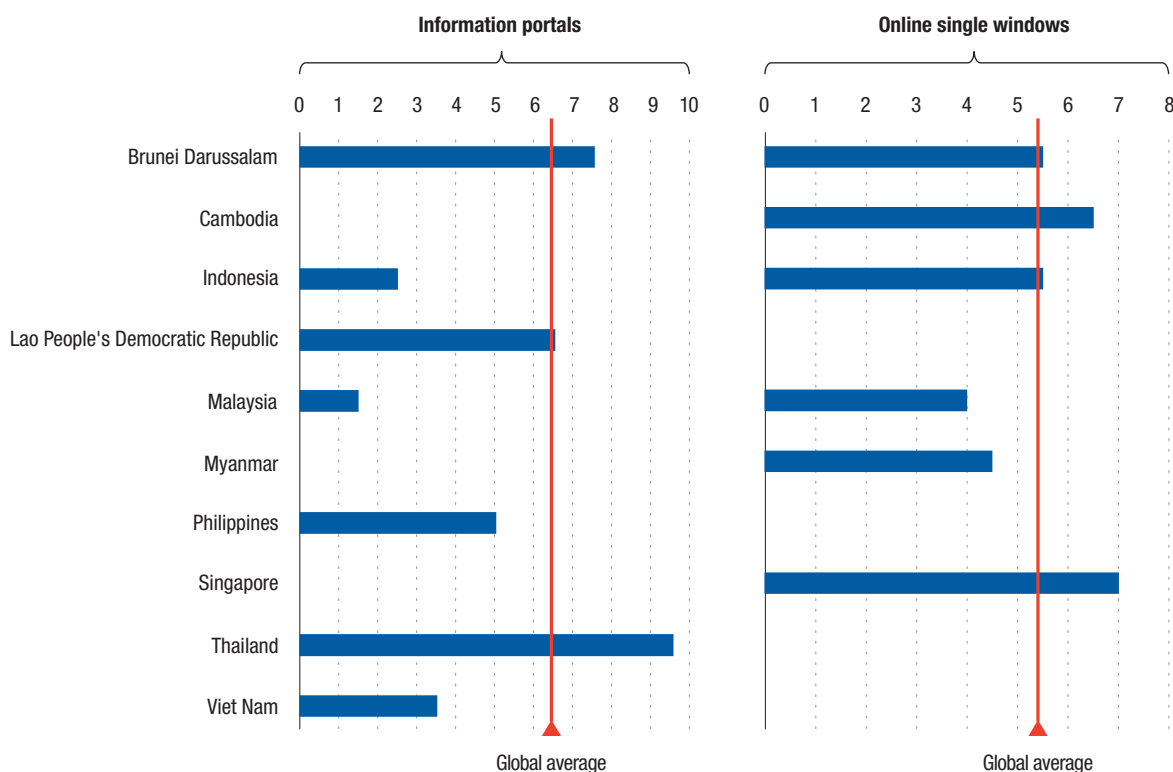
Note: 0 = not in place, 1 = basic, 2 = advanced.

Investors are not helped by smooth investment approval processes if subsequent general business establishment procedures remain inefficient. The cost of setting up a digital platform for investment facilitation can also be spread more widely if more procedures (including those relevant for domestic businesses) are covered.

UNCTAD's GER.co benchmarks information portals and online single windows for such general business administrative procedures. **Only a few Member States exceeded the global average in the global enterprise registration rating of information portals and online single windows** (figure 6).

ASEAN Member States need continuous progress to stay ahead of the game on business and investment facilitation. Looking at developments around the world, an increasing number of developing economies are establishing digital information portals and online single windows to facilitate registration of businesses. The number of countries with investment portals grew from 87 economies in 2016 to 121 in 2021. The number of online single windows in developing economies grew from 17 to 55 in the same period (UNCTAD, 2022).

Figure 6. ASEAN: Global enterprise registration rating



Source: UNCTAD/GER.co.

Note: Data extracted on 21 June 2022.

Survey findings about investment facilitation in ASEAN: perspectives of investors

Key findings from the investment facilitation survey conducted for the preparation of this report highlight a number of observations that have important implications for designing investment facilitation actions and tools.

Overall, 94 per cent of firms surveyed confirmed that investment facilitation is important or very important in supporting and attracting investment. In general, **88 per cent thought that the investment facilitation measures adopted or in place by Member States are important or useful and 52 per cent rated the level of investment facilitation services provided as satisfactory or exceeding expectations.** However, there are differences between Member States in the level of such services provided and the measures in place, with the least developed Member States requiring more action.

The most important investment facilitation measures are provision of efficient logistics and infrastructure connectivity, streamlining of investment procedures and requirements, expatriate entry and visa support, and transparency and provision of information. The least important measures included opportunities to preview and provide feedback on proposed policy, tailored advice and guidance, and having a corporate social responsibility coordinator in the IPA.

On average, **48 per cent of firms indicated that there is room for improvement in the provision of several investment facilitation measures and in the quality of investment facilitation services.** These areas include coherence across ministries, complaint procedures, a reduced number of procedures and the use of digital technologies (e.g., online submission services).

Interviews with MNEs revealed the significance of information provision and streamlining of measures. Firms also underlined the importance of one-stop shop service centres, which help improve efficiency and the ease of investing. Frequent updates on regulatory information and regular contacts with IPAs (aftercare service) were commonly cited as useful actions. The use of online systems and digitalization of services improves efficiency, saves time and costs, and is strongly supported by the firms interviewed.

Observations and policy options

The synopsis of measures presented in this report suggests numerous observations that require attention from policymakers.

The benefit arising from implementing investment facilitation are universal, not specific. It is difficult to use investment facilitation for targeted FDI objectives. The benefits associated with implementation of an investment facilitation measure extend to all investors regardless of their nationality, where they plan to operate in the host country, and the size of their investment. Local investors also benefit from implementation of investment facilitation measures. In contrast, the benefits of investment promotion measures (e.g., incentives) are selective and targeted to investment in an area, industry or SEZ.

Regional cooperation on investment facilitation has the same effect: the benefits extend to all investors (intra- and extra-regional). Regional cooperation on investment facilitation can be a catalyst to help advance national implementation of such measures.

Investment facilitation is relatively more important to SMEs, which often have limited resources for managing the challenges of internationalization. Compared with MNEs, they have less capacity and expertise to research promotion benefits offered by host countries, and to follow up on investment applications. The impact of investment facilitation applies to all firms but more so for SMEs.

International tax reforms will have significant implications for efforts to attract FDI through the provision of tax incentives (*WIR 2022*). The use of investment facilitation will become even more important as the effectiveness of fiscal promotion measures is reduced. ASEAN Member States need to be aware especially of the implications for SEZs.

ASEAN Member States should adopt a holistic approach to building a competitive investment facilitation environment. Investment facilitation should incorporate business facilitation and other measures not limited to foreign investment procedures alone. Synergies should be sought between investment facilitation efforts and the activities and tools of authorities other than IPAs. Investment facilitation should cover business registration and approvals, licenses and other administrative requirements and processes, and tax-related and social security procedures, for example. Investors will consider the efficiency and effectiveness of a country's entire administrative process from obtaining investment permits, to incentives to the steps in registering and operating a business in the country.

Other government agencies such as economic zone authorities, business registry agencies and State and provincial government administrators have an important role in facilitating investment. Some industry associations and chambers of commerce also assist investors by providing databases and business networks. Investment facilitation efforts should involve the participation of many stakeholders.

In supporting the provision of relevant information, the region could consider strengthening the ASEANInvest website with more content and providing more relevant information to facilitate investment and make investing in ASEAN easier. An enterprise registration portal similar to UNCTAD Ger.co, which provides information at the regional level on online information portals and online single windows, could be established.

ASEAN INVESTMENT FACILITATION FRAMEWORK AND POLICY OPTIONS

ASEAN Member States have in place many investment facilitation measures, which are covered in the AIFF. **This report provides an initial assessment of the AIFF implementation, concluding that the Member States have been actively engaged in facilitating investment but there is still more to do.**

An initial assessment of AIFF implementation

At the level of the main investment facilitation provisions of the AIFF, all Member States have in place 8 of the 10 measures, with varying degrees of sophistication.

Two of the AIFF measures (i.e., single digital platforms and facilitation of investment-supporting factors) require action by some Member States.

At the subcategory level of 23 measures or action lines in the AIFF, there are gaps to fill. Depending on the measure, eight subcategory measures require attention by between one and a few Member States. In most cases they involve the least developed Member States.

Policy priorities

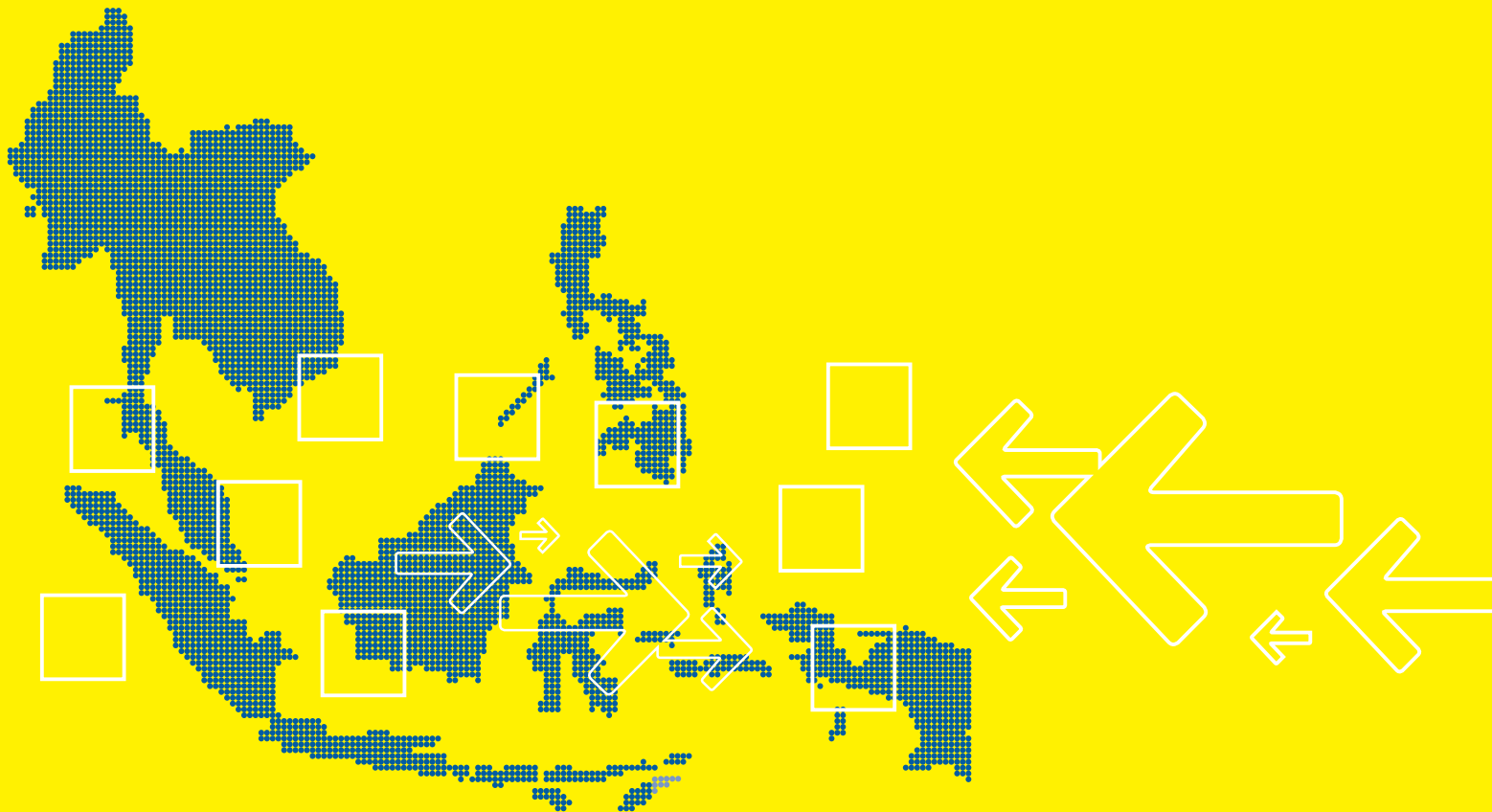
Despite the progress made, there is room for improvement, especially (i) to bridge the gaps between the Member States that have in place the investment facilitation measures listed in AIFF and those that have not or are beginning to implement them, (ii) to increase the depth and sophistication in the investment facilitation measures covered in the AIFF, (iii) to develop an investment facilitation environment based on a broader context, synergizing facilitation activities and tools with those of other authorities (e.g., business registries and tax authorities), and (iv) to go beyond the 10 main categories of AIFF provisions (to *AIFF plus*).

In strengthening the investment facilitation environment at the national level, Member States could focus on the highest impact set of measures such as (i) information provision for investors (which is also covered in AIFF provisions 1, 7 and 8); (ii) transparency of rules, regulations and process (AIFF provisions 1, 2); and (iii) streamlining of administration procedures (AIFF provisions 2, 3 and 4). These high impact set of measures were underlined by the survey findings and interviews conducted for this report.

At the regional level, IF capacity-building and sharing of experiences among Member States can be useful to advance the implementation of AIFF. Recognizing that the framework is less than a year old, subsequent assessment exercises should be considered to benchmark against acceptable indicators, especially for the scope and quality of service provided.

PART ONE

FDI AND MNE DEVELOPMENT IN ASEAN



CHAPTER 1

FDI and corporate investment trends

1.1. INTRODUCTION

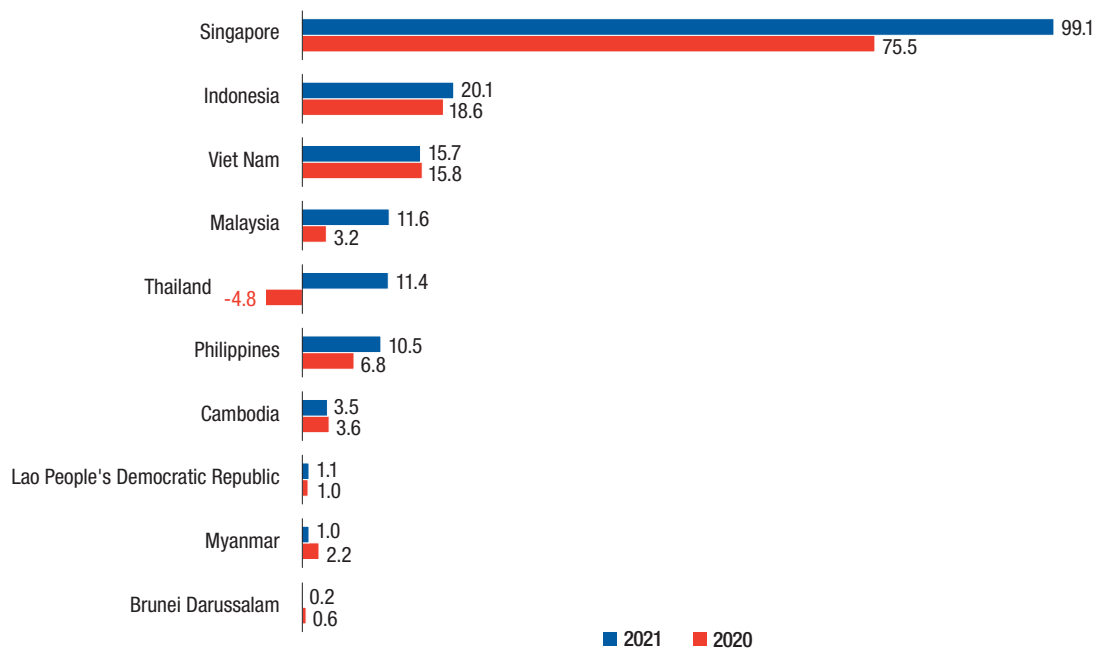
In a remarkable year for ASEAN, 2021 saw a strong rebound in FDI inflows, which surged by 42 per cent to \$174 billion, to the pre-pandemic record – despite successive waves of the pandemic. This trend reversed that seen in 2020, when FDI to the region fell by 30 per cent.

Regional integration and the large market potential continue to drive high levels of investment. Strong industrial development in some key areas in ASEAN Member States also attracts FDI. Emerging regional opportunities such as in the electric vehicle (EV), electronics and in the digital economy led to strong investment activity in these areas. Global challenges (e.g., supply chain disruption) also underlie high FDI inflows as firms expanded or strengthened supply chain capacity in the region. Intraregional investment, a major source of FDI, remained active with growing cross-border activities from start-ups (including unicorns) and from private equity and venture capital companies (chapter 2).

This chapter provides an analysis of FDI and intra-ASEAN investment in 2021 that includes developments in cross-border mergers and acquisitions (M&As), international project finance and announced greenfield investment. It highlights investment activities of foreign and ASEAN MNEs, including their strategies, their expansion and their regional production networks. It examines the recovery so far and why some industries are resilient. Particular attention is given to FDI in the value chains of EVs, semiconductors, the digital economy and activities related to Industry 4.0, as these are major areas for FDI growth that shaped the 2021 trend and will continue to help the region attract strong inflows in the future.

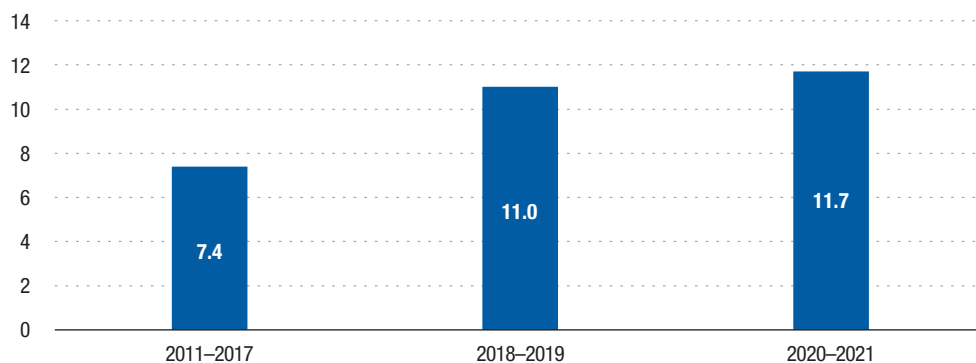
1.2. FDI TRENDS AND DEVELOPMENTS IN ASEAN

In 2021, FDI in South-East Asia rose by 42 per cent to \$174 billion, the pre-pandemic record. This rebound underscores the resilience of the region despite having been battered by successive waves of the pandemic. It reflects a strong recovery since 2020, both from the 30 per cent drop in FDI (\$122 billion) in the region and as compared with the 30 per cent average growth in developing economies in the same period (*WIR 2022*). Six Member States recorded a rise in inflows and in two inflows were flat (figure 1.1). This contrasts with the situation in 2020, when only two Member States recorded a rise.

Figure 1.1. FDI inflows in ASEAN Member States, 2020 and 2021 (Billions of dollars)

Source: ASEAN Secretariat.

ASEAN remained a major recipient of FDI in the developing world (second after China) and continued to be an engine of growth. The region's share of global FDI inflows rose from a pre-pandemic annual average of 7.4 per cent in 2011–2017, to 11.0 per cent in 2018–2019, to 11.7 per cent in 2020–2021 (figure 1.2). Strong inflows pushed FDI stock in the region up to \$3.1 trillion, an increase of 72 per cent from 2015 (\$1.8 trillion).

Figure 1.2. ASEAN share of global FDI inflows, before and during the pandemic (Per cent)

Source: UNCTAD, FDI/MNE database (<https://unctad.org/fdistatistics>).

1.2.1. Drivers of recovery

Several major factors led to the robust upturn. They include (i) rising investment across different modalities, (ii) a strong rebound in manufacturing, (iii) corporate investment strategies focusing on capacity expansion to bolster supply chains and the post-pandemic recovery, (iv) significant investment from certain source countries, and (v) investment in infrastructure-related activities, including in the digital economy.

Greenfield investment, international project finance and M&As

Announced greenfield investment and international project finance activities rose in 2021. Cross-border M&As declined in number but rose significantly in value, from -\$4.7 billion in 2020 to \$49.5 billion, while the value of international project finance deals escalated from \$66.1 billion to \$114.4 billion.

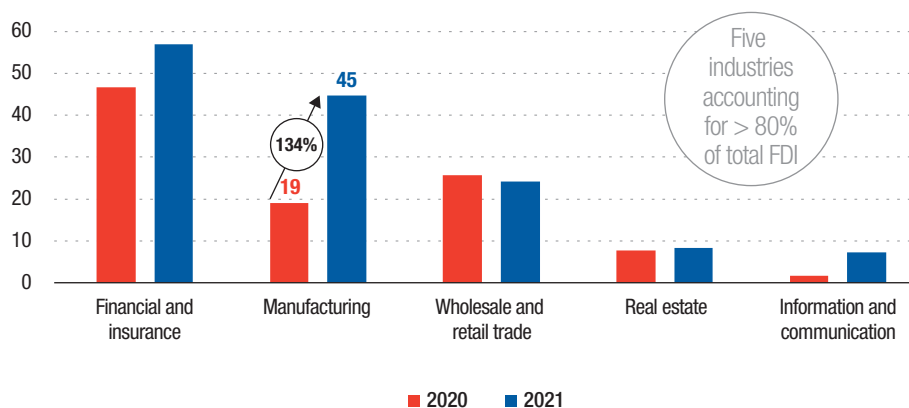
FDI components

Rising FDI was financed by growth in investment from all three FDI components (i.e., equity, intracompany loans and reinvested earnings). FDI from equity was the largest component, which rose by 37 per cent to \$114.3 billion, while intracompany loans doubled to \$14.0 billion and reinvested earnings increased by 32 per cent to \$46.0 billion.

FDI in industries

Key industry drivers of the growth in FDI were strong investment in manufacturing, finance and some services industries associated with the rapidly growing digital economy. Investment in manufacturing recorded the strongest growth – 134 per cent, to \$44.7 billion – in industries such as EVs, electronics, biomedical and pharmaceuticals (figure 1.3). The rise in FDI in manufacturing was widespread. Finance and banking remained the largest recipient, with a 22 per cent rise to \$56.9 billion.

Figure 1.3. ASEAN: FDI by industry, 2020–2021 (Billions of dollars)



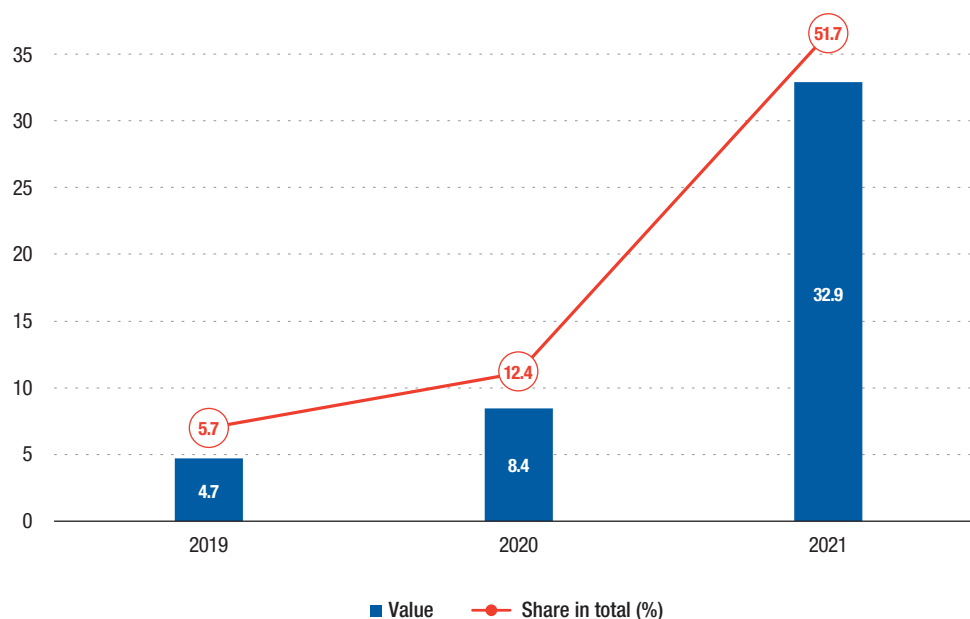
Source: ASEAN Secretariat.

Many MNEs invested in expanding facilities in the region to address supply chain bottlenecks and for post-pandemic recovery. FDI in the digital economy (e.g., e-commerce and fintech), activities related to Industry 4.0, information and communication, and data centres continued to see growth in investment. Some services industries (e.g., hospitality, entertainment) and labour-intensive activities witnessed further declines in investment because of lockdown measures, health protocols, excess capacity and the slump in demand.

Strong investment in electronics (semiconductors) and electrical equipment (including batteries for EVs) played a major role in pushing up FDI in manufacturing. A global shortage, “chip nationalism” and supply chain challenges led many electronics MNEs to expand facilities in many Member States. Announced greenfield investment in electronics and electrical equipment quadrupled to \$32.9 billion in 2021, increasing the share of these two product categories in the total value of announced greenfield investment to about 52 per cent, from 12.4 per cent in 2020 (figure 1.4).

A range of internal and external factors underpins rising investment in these key industries. In semiconductors, improving ecosystems and MNEs’ long experience operating in the region encouraged many expansion activities that aimed to strengthen capacity to cope with supply chain challenges and demand. Technology development and environmental concerns, together with internal factors such as the rich resource endowment, policy support and the emerging EV value chain, are driving more FDI to the region.

Figure 1.4. ASEAN: announced greenfield investment in electronics and electrical equipment, 2019–2021 (Billions of dollars and per cent)



Source: UNCTAD, based on information from the *Financial Times Ltd*, fdi Markets (www.fdimarkets.com).

Corporate strategy

The pandemic brought challenges and opportunities to existing and new investment in the region. Despite support and investment measures, many MNEs and local companies were affected by successive waves of the pandemic, lockdown measures and supply chain disruption. Some scaled down operations. However, the pandemic also provided opportunities for MNEs to expand or upgrade production capacities to cope with increasing demand in some industries. MNEs are investing in manufacturing of equipment, parts and components and in provision of technology solutions, centres of excellence and other services supporting adoption of Industry 4.0 technology. Local and foreign-owned plants are upgrading with Industry 4.0 technologies and smart factories, including installing such technologies as industrial automation, the Internet of Things, automated preventive maintenance, and remote control and management of plants to improve efficiency (*AIR 2020–2021*; section 1.4.3). Technology adoption and factory upgrading are increasing demand for companies that provide equipment, technology solutions and services, which in turn attract FDI.

The pandemic pushed some MNEs to strengthen regional production networks by optimizing and better coordinating production facilities in the region to address supply chain bottlenecks. It accelerated intra- and interfirm activities in the region (table 1.1).

Table 1.1. Adjustments to investment and production networks during the pandemic

MNEs	Headquarters	Investment in 2021	Regional production network or network of subsidiaries (selected cases)
Amkor Technology	United States	Invested to upgrade technology and facilities in the Philippines	• Amkor Philippines (packaging, test services of chips, sensors) • Amkor Malaysia (packaging, test services of chips, sensors) Intra- and inter-firm activities are involved, including sharing of machinery and equipment.
Continental Temic	Germany	Expanded and upgraded production technology and capacity in the Philippines	• Continental Malaysia (automotive electronic parts production) • Continental Philippines (automotive electronic parts production) • Singapore (R&D supporting operations in the region) • Continental Thailand (tyre production) Regional production cooperation between Continental Philippines and other sister subsidiaries in Asia in component flows.
Cypress Manufacturing	United States	Continued to invest in upgrading production facilities	• Connected to Infineon's global production networks • Receives raw materials from other Infineon manufacturing facilities and other sources (e.g. Malaysia and Singapore; also Japan and the Republic of Korea) • Supplies customers in the Philippines and abroad
Denso	Japan	Invested in technology upgrading and additional plants and machinery (for sensor production) in Denso Philippines	• Denso Philippines exports 70 per cent of its products to other Denso manufacturing facilities in Southeast Asia for further processing and assembly • Denso Philippines exports parts to Denso Indonesia for assembly, and supplies Toyota Motor and Astra Daihatsu Motor in Indonesia

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Table 1.1. Adjustments to investment and production networks during the pandemic (Concluded)

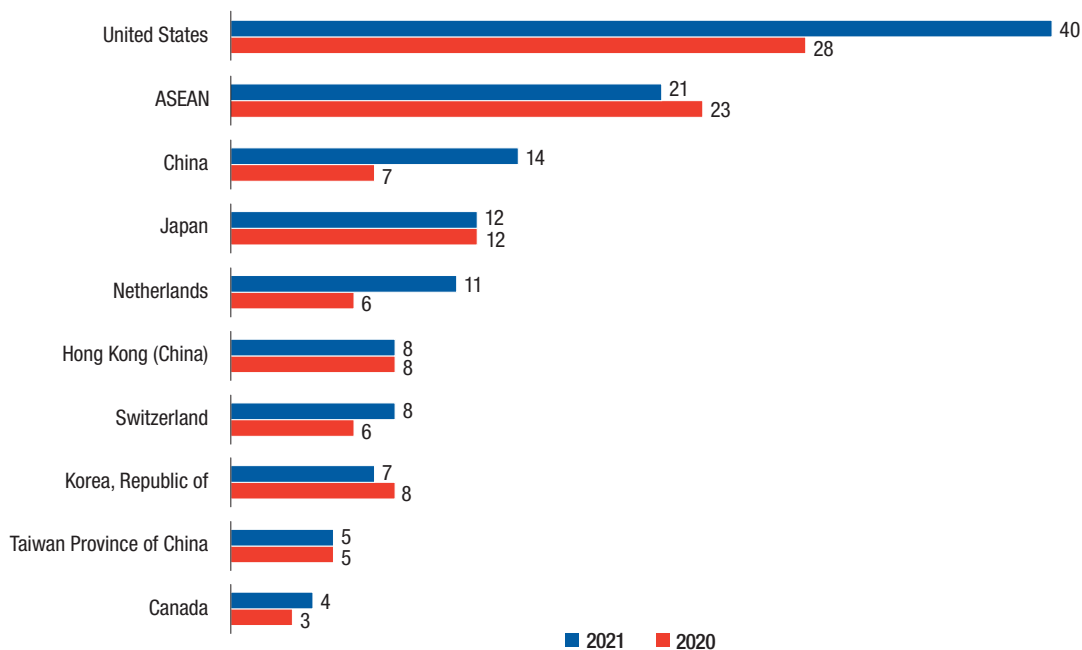
MNEs	Headquarters	Investment in 2021	Regional production network or network of subsidiaries (selected cases)
			- Denso Philippines exports fully assembled meter clusters to other Denso subsidiaries in ASEAN, which in turn supply other car manufacturers (e.g. Toyota and Honda) - Denso Philippines supplies Suzuki Philippines with capacitor discharge ignition (CDI) for motorbikes imported from Denso Indonesia
Schneider Electric Asia (logistics)	France	Technology upgrading with end-to-end visibility control tower to operate and monitor flow of products from various Schneider manufacturing facilities	Receives products from Schneider manufacturing in Indonesia, Thailand and Viet Nam and elsewhere and redistributes these products among ASEAN Schneider distribution centres and outside the region
Schneider Electric	France	Upgrading of plants in the Philippines with Industry 4.0 technologies	Company's manufacturing facilities in ASEAN support each other by moving production to facilities where raw materials inventory is available and where there is spare capacity. Schneider Philippines has been involved in intrafirm production arrangements to fulfil the group's commitment to meeting customer orders.
Honda	Japan	Invested in technology upgrading and expansion of production lines	Honda Parts Manufacturing (Philippines) increased supplies to Honda Thailand of some parts such as manual transmissions. In return, Honda Thailand exports assembled automotive back to the Philippines. The company also supplies Honda Indonesia with manual transmission parts for incorporation in automotive production for the Indonesian market.
Nidec	Japan	Invested in upgrading plants and technology	Nidec Philippines continues to supply Nidec Thailand with hard-disk drive motor bearing parts. Nidec Thailand in turn manufactures hard-disk drive motors and exports to customers around the world, including in ASEAN. Nidec Viet Nam was affected by the country's national lockdown policy. To continue supplying customers, Nidec headquarters had to transfer production of several cooling fan models from Nidec Viet Nam to Nidec Philippines. With the production re-arrangement, Nidec Viet Nam also had to export parts and components for the cooling fan models to Nidec Philippines.
Toyota Aisin	Japan	Invested in upgrading factories using advanced industrial technology, automation and robots to enhance efficiency	Toyota Aisin Philippines exports its pinion gear to Aisin AW Thailand as part of Toyota's supply chain network globally. During the pandemic period, intra- and interfirm cooperation was intensified to address production disruptions and fluctuations, particularly among Toyota manufacturing facilities in the region. Toyota (TDEM) in Thailand and Toyota (TMAP) in Singapore consolidated all orders for auto parts and assigned or distributed production volume requirements to different manufacturing facilities in the region to maximize operational efficiency

Source: Interviews conducted for the preparation of *ASEAN Investment Report 2022*.

Trend by source country

FDI from the top 10 sources accounted for 74 per cent of investment in ASEAN, with the top 5 contributing more than 55 per cent to total inflows in 2021. The sources of investment were more diverse than in 2020 (90 per cent for the top 10 and 64 per cent for the top 5). Seven of the top 10 witnessed a rise in investment (figure 1.5). FDI from the United States was the largest source, rising by 41 per cent to \$40 billion, mainly because of significant increases in investment in the banking and finance, electronics, biomedical and pharmaceutical industries. FDI from China increased by 96 per cent to \$13.6 billion, mostly in manufacturing, EV-related activities, the digital economy, infrastructure and real estate. Investment from Japan rose from \$11.6 billion to \$12 billion, largely in manufacturing (e.g., electronics and automotive industries, including EVs). Intra-ASEAN investment remained a significant source but dropped by 8.6 per cent – suggesting the impact of economic uncertainties and the relatively weakened financial position of ASEAN companies (section 1.3).

Figure 1.5. ASEAN: FDI inflows by top 10 investors, 2020–2021 (Billions of dollars)



Source: ASEAN Secretariat.

Following pandemic response measures introduced in 2020–2021 to attract and retain FDI (*AIR 2020–2021* chapter 2), ASEAN Member States continued to adopt measures favourable to FDI in 2022. They are implementing the ASEAN Investment Facilitation Framework (signed in 2021) and putting in place new investment facilitation measures to support investors (chapter 3). The RCEP Agreement signed in 2020 was ratified in 2022, which has important implications for the region, given that ASEAN is at the centre of this economic bloc. The RCEP Member States account for 30 per cent of global gross domestic product (GDP), exports and FDI flows, and are both major home countries and major host countries to many global companies (UNCTAD, 2020a).

1.2.2. FDI in ASEAN Member States

In 2021 FDI in six Member States rose, inflows in two were flat and investment in two declined (see figure 1.1). Active cross-border investment by start-ups and unicorns and by venture capital firms continued to contribute to the evolving regional FDI landscape. FDI in individual ASEAN Member States is analysed in the following subsections, followed by a separate analysis focused on the CLMV (Cambodia, the Lao People's Democratic Republic, Myanmar and Viet Nam) countries (section 1.2.3).

Brunei Darussalam

FDI fell by 65 per cent to \$205 million, mainly because of a large decrease in intracompany loans, from \$420 million in 2020 to -\$28 million. However, intra-ASEAN investment rose 10-fold to \$44 million. Major investment activities continued, such as the expansion by Hengyi Industries (China) of its refinery and petrochemical project, which is expected to be completed in 2023 at an estimated cost of \$13.6 billion. In 2021, PetroVietnam Drilling and Well Services Corporation completed a semi-submersible auxiliary drilling rig in Viet Nam for Brunei Shell Petroleum.

Indonesia

FDI in Indonesia rose by 8 per cent to \$20 billion – \$3.8 billion less than the pre-pandemic record level. Robust investment in manufacturing; transportation, storage and communication; mining; and the digital economy pushed up inflows. The EV value chain continued to receive strong investment interest, from mining and smelting to production of batteries, assembly of EVs and investment in EV infrastructure (section 1.4.1). The market potential and rapid growth of the digital economy, including data centres, were also key reasons. FDI in finance fell 56 per cent, from \$4.4 billion in 2020 to \$1.9 billion in 2021, led by a nearly 98 per cent fall in finance FDI from Thailand to just \$64 million.

Investment from ASEAN and other Asian economies (e.g., China, Japan and the Republic of Korea) accounted for more than 90 per cent of inflows. Intra-ASEAN investment in Indonesia dropped by almost \$1 billion but was still at a high level at \$7.1 billion. Such investment remained the largest source of FDI (35 per cent) because of significant inflows from Singapore – the single largest investor country. Investment from Singapore rose to \$5.0 billion from \$4.2 billion in 2020 but was not sufficient to compensate for the decline in inflows from most

ASEAN Member States. FDI from China (the second largest investor) rose more than four-fold, to \$4.9 billion. A 13 per cent rise in investment from Hong Kong (China), to \$3.2 billion, also played a role.

Significant investment was notable in a few specific industries. ASEAN was the largest investor in mining at \$2 billion, mainly from Thailand. ASEAN and China accounted for more than 60 per cent of investment in manufacturing. FDI in manufacturing from ASEAN rose from just \$596 million in 2020 to \$2.5 billion, led by a 350 per cent increase in manufacturing investment from Singapore to \$2.4 billion. In transportation, storage and communication, China was the largest investor, accounting for 70 per cent of FDI in this industry group.

In the automotive industry, MNEs such as Toyota (Japan) are strengthening operations by increasing productive capacity to address supply chain disruptions and to meet future increases in demand.¹ It is investing \$2 billion over the next five years in EV manufacturing, including in battery production. Other automotive and non-automotive MNEs are actively investing in the EV and related industries (section 1.4.1). Virtue Dragon Nickel Industry (China) started operation of a \$3 billion nickel smelter in Central Sulawesi in December 2021. Honda, Mitsubishi and Suzuki (all Japan) announced a combined \$1.2 billion investment plan to expand operations into EV production in Indonesia over the next few years. Toyota (Japan) plans to invest \$2 billion over the next five years for EV production in Indonesia. Many other Asian MNEs have been actively investing in EV battery plants. A Korean consortium comprising Hyundai Group, LG and Kia is building a \$1.1 billion battery plant in the country. Other investors include Posco (Republic of Korea) and Contemporary Amperex Technology (China). There has been strong investment interest in upstream and mining activities that link to battery production. This is partly because of a deliberate policy push (Indonesia aspires to be a global hub for EV batteries) and partly because of the interest of major automotive manufacturers in accessing raw material deposits (such as nickel for lithium-powered batteries) in Indonesia and forming strategic partnerships with the private sector in related mining and battery activities. An increasing number of Asian MNEs from China, Japan and the Republic of Korea have recently started nickel mining and smelting operations in Indonesia.

In 2021, there was strong and continued growth in investment in the digital economy, technology start-ups and data centres. Rapid growth of the local digital market and rising demand for digital infrastructure, data centres and cloud facilities have attracted many major cloud and data centre MNEs from China, Japan, Europe, Singapore and the United States, and many of them continued to open more facilities in the country. These MNEs include Alibaba and Tencent (both China); NTT (Japan); Space DC and ST Telemedia (both Singapore); and AWS, Equinix, IBM and Microsoft (all United States). Data Center First (Singapore) is building a facility in a special economic zone (SEZ) at Nongsa Digital Park in Batam; Alibaba Cloud (China) is building a third data centre; Tencent Cloud (China) expanded further in Indonesia with a second data centre facility; Princeton Digital (Singapore) is building its third centre in Jakarta; and AWS (United States) is also expanding in the country. Acronis (Switzerland) is building its first data centre, and Microsoft (United States) announced plans to increase investment in the country's digital economy, including data centres, because of strong local demand.

Foreign and local firms are paying more attention to the adoption of Industry 4.0 technologies, a move accelerated by the pandemic, which in turn has spurred further interest from investors, technology suppliers and MNEs upgrading factories in the country.

Malaysia

After a 59 per cent decline to \$3.2 billion in 2020 (the lowest FDI level since 2009), investment in 2021 surged to the highest-ever level, exceeding \$11.6 billion. A key factor was robust FDI in manufacturing. Investment in electronics, in particular semiconductors, was significant (section 1.4.2). MNEs such as Intel and Micron Technology (both United States) and Infineon (Germany) expanded semiconductor operations in Malaysia as part of their strategies to address global supply chain challenges and to increase production capacity.

Bosch (Germany) expanded a semiconductor manufacturing plant, and Denso (Japan) invested \$36.4 million in an advanced semiconductor production plant for the automotive industry. AT&S Technologie and Systemtechnik (Austria) is building a \$2.1 billion integrated circuit substrates plant, Jinko Solar Holding (China) a \$221 million solar cell plant and Risen Energy (China) a \$317 million solar cell plant. Investment in information and communication was also notable, with Chindata Group (China) planning to invest in a hyperscale data centre and Wiwynn (Taiwan Province of China) a rack server plant. These cases are reported by Refinitiv SA.

Volkswagen (Germany) began developing a regional parts distribution centre. Toyota (Japan) invested a further \$61.4 million to increase its production capacity, and Porsche (Germany) expanded its engineering and assembly capacity in an assembly plant partnership with Sime Darby (Malaysia).

Philippines

FDI in the Philippines increased by 54 percent to \$10.5 billion (a record level) in 2021. Most investments were financed by intracompany loans and reinvested earnings. Manufacturing, electricity generation, finance, and real estate all received strong levels of investment.

Many industrial investments were related to expanding capacity to cope with supply chain bottlenecks and to prepare for post-pandemic recovery, particularly in electronics. Investments in upgrading factories and adopting Industry 4.0 technologies to increase efficiency were also key factors. MNEs such as U-DEV, Metro Versatile Build Technology and Trinx Bicycle Sport Technology are planning to expand production capacities to meet demand. Major sources of FDI were from Singapore, Japan, the United States and Netherlands.

In strengthening the country's investment environment and promoting economic development, the Government adopted measures to attract and facilitate foreign investment (chapter 3). These include amendments to the "Foreign Investments Act of 1991" (Republic Act No. 11647), which allows investors to fully own investment projects, including in micro and small enterprises. It strengthens institutional support to attract investment by establishing an inter-agency committee to coordinate investment promotion efforts. The amendment to the Public Service Act (RA No. 11659) clarifies public utilities that are allowed up to 100 per cent foreign

ownership. It creates more opportunities for foreign investors to invest in various public service sectors that are no longer considered public utilities. The amendments to the Retail Trade Liberalization Act (RA No. 11595) lowers the paid-up capital requirement for retail enterprises, which will help attract foreign investment in the retail sector. The Government, through RA No. 11534, has also lowered corporate income tax rate and rationalized administration of fiscal incentives to increase efficiency in attracting local and foreign investments.

Singapore

FDI flows in 2021 rose to an all-time high of \$99 billion, an increase of 31 per cent over 2020. As noted earlier, Singapore remained the region's largest recipient and source of investment. Inflows to most major ASEAN Member States also rose.

The strong inflows were led by robust recovery of investment in manufacturing. Large-value manufacturing investment in the electronics and biomedical industries were key drivers. MNEs in these industries that already had a presence in the host country announced huge investment commitments in the billions of dollars. They are building manufacturing facilities to meet demand or expanding existing operations to beef up production capacity for post-pandemic recovery. Other important factors were strong investment in research and development (R&D), and in information and media, and increasing interest in the digital economy and technology start-ups from private equity and venture capital investors.

Some large investments included Infineon Technologies (Germany) expanding with the development of artificial intelligence (AI) applications, and TrendForce (Taiwan Province of China) adding production capacity. Micron Technology (United States) is also expanding operations, and Zoom (United States) opened an R&D centre.

In the biomedical industry, BioNTech (Germany), Sanofi (France) and Thermo Fisher Scientific (United States) are setting up vaccine manufacturing facilities in Singapore. BioNTech (Germany) is also establishing a regional headquarters while Pfizer (United States) expanded further in the host country.

Thailand

Inflows in Thailand rebounded strongly, from -\$4.8 billion in 2020 to \$11.4 billion. Strong investment in manufacturing was a key reason. Robust investment from five sources – China, the European Union (mainly from the Netherlands), Hong Kong (China), Japan and the United States – underpinned the rise, accounting for nearly 80 per cent of investment in 2021.

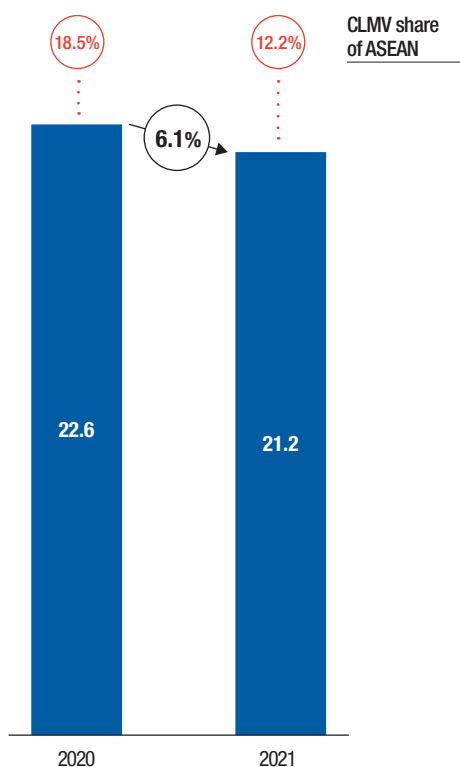
Manufacturing FDI, which accounted for 48 per cent of inflows, surged by 9.5 times to \$5.4 billion, primarily because of a rise in investment in the electrical and electronics industry and the automotive industry. FDI in finance also rose, from -\$6.8 billion to \$2.7 billion, as did FDI in wholesale and retail trade, from \$331 million to \$1 billion in 2021.

Investment from ASEAN fell to \$209 million (from \$1.9 billion) as companies from Singapore (the traditional largest ASEAN investor) divested -\$201 million in 2021, from \$1.8 billion in 2020.

1.2.3. FDI in the CLMV countries

FDI in the CLMV countries in 2021 fell by 6.1 per cent to \$21.2 billion – leading to a smaller share in ASEAN FDI inflows (from 18.5 per cent in 2020 to 12.2 per cent) (figure 1.6). Investment in Cambodia and Viet Nam was flat, but inflows to Myanmar fell by 55 per cent. Despite the pandemic, investors remained active in a wide range of industries in Cambodia, the Lao People’s Democratic Republic and Viet Nam. MNEs continued to participate in many international project finance activities in these countries, particularly in infrastructure-related areas such as power and renewable energy, and in industry.

Figure 1.6. FDI in CLMV countries, 2020–2021 (Billions of dollars and per cent)



Source: ASEAN Secretariat.

Cambodia

FDI in Cambodia was flat at \$3.5 billion but remained high compared with the 2015–2019 annual average of \$2.8 billion. Inflows into manufacturing, though, rose 28 per cent to \$710 million. FDI in the garment industry – traditionally the largest manufacturing recipient – held steady at \$272 million. Investment in construction rose from \$260 million in 2020 to

\$334 million – reflecting expanding industrial and economic activities. Despite a decline in investment in services, FDI in finance was flat at \$1.3 billion. These three industries (manufacturing, construction and finance) received more than half of all investment in the country in 2021. FDI from the two largest sources – i.e., China (\$1.2 billion) and intra-ASEAN (\$630 million) – which accounted for more than 50 per cent of flows, was also flat.

Lao People's Democratic Republic

FDI in the Lao People's Democratic Republic rose by 10.8 per cent to \$1.1 billion, supported by strong investment in infrastructure and energy projects. The \$6 billion rail infrastructure project linking the country with China opened in December 2021. The project was developed by a consortium of Chinese companies and is owned and operated by the Lao-China Railway Company (in which the former has a 30 per cent share and the latter a 70 per cent share).

Numerous hydropower projects commenced or continued construction. The contract for the \$2.4 billion 728 MW Phou Ngoy hydropower plant was signed in 2021. The project, to be completed by 2029, involves a consortium of Korean companies (Korea Western Power, Doosan Group, Korea Overseas Infrastructure & Urban Development Corporation) and the Thai company Charoen Energy and Water Asia.

Myanmar

FDI in Myanmar fell because of the lingering impact of the pandemic and social tensions. Investment declined by 54 per cent to \$1 billion. A few oil MNEs exited or scaled down operations. They included BG Exploration and Production (Singapore) and Petronas Carigali Myanmar (a subsidiary of Petronas (Malaysia)). Some mining companies such as Myanmar Wanbao Mining (China) and Myanmar YangTse Copper (China) and telecommunication companies such as Ooredoo (Qatar) and KDDI Summit Global (Japan) were involved in making significant repayments of intracompany loans.

Viet Nam

FDI in Viet Nam was flat at \$15.7 billion. Investment from two major economies (Singapore and the Republic of Korea) was unchanged, but inflows from Japan increased (3.5 times) to \$2 billion, from Hong Kong (China) by 5 per cent to \$1.2 billion and from China by 8 per cent to \$1.5 billion. These five economies accounted for 80 per cent of inflows, with Singapore alone accounting for nearly half of that share.

The level of investment was sustained by strong FDI in manufacturing and in electricity production and distribution – the two largest recipients, accounting for 77 per cent of inflows. Investment in real estate continued to grow – up 41 per cent to \$1.4 billion – reflecting the continued economic growth and industrial development in the country in the pandemic years.

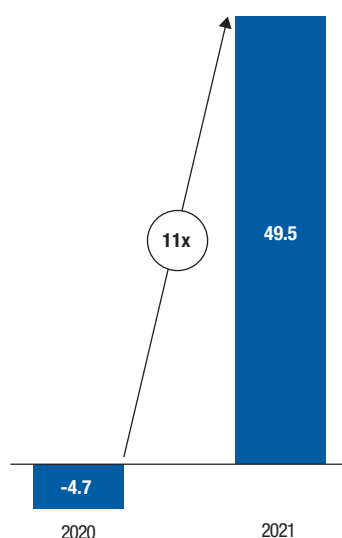
Some big-ticket projects in 2021 help sustained the high level of registered investment. They included a \$3.1 billion liquefied natural gas (LNG) power plant in Long An province

with participation from companies from Singapore; LG Display (Republic of Korea), which is expanding production facilities in Hai Phong that involved an increase in capital by \$2.1 billion; Marubeni (Japan), which together with Vietnam Trading Engineering is developing the \$1.3 billion O Mon 2 gas-fired power plant; and Samsung (Republic of Korea), which invested further in the country with an electronics production facility estimated to be worth \$952 million.

1.2.4. Cross-border M&As

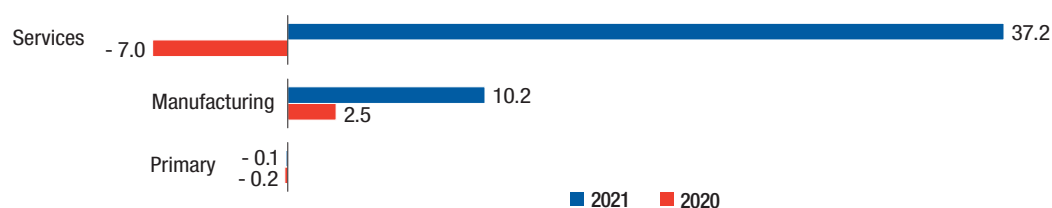
Cross-border M&As in 2021 surged to an all-time high to \$49.5 billion, as compared with -\$4.7 billion in 2020 (figure 1.7). The rise was primarily due to significant M&A activities in services (i.e., \$34.8 billion in information and communication) and manufacturing of chemicals (\$10 billion) (figure 1.8).

Figure 1.7. ASEAN: cross-border M&A sales, 2020–2021 (Billions of dollars)



Source: UNCTAD, cross-border M&A database (<https://unctad.org/fdistatistics>).

Figure 1.8. ASEAN: cross-border M&A sales by economic sector, 2020–2021 (Billions of dollars)



Source: UNCTAD, cross-border M&A database (<https://unctad.org/fdistatistics>).

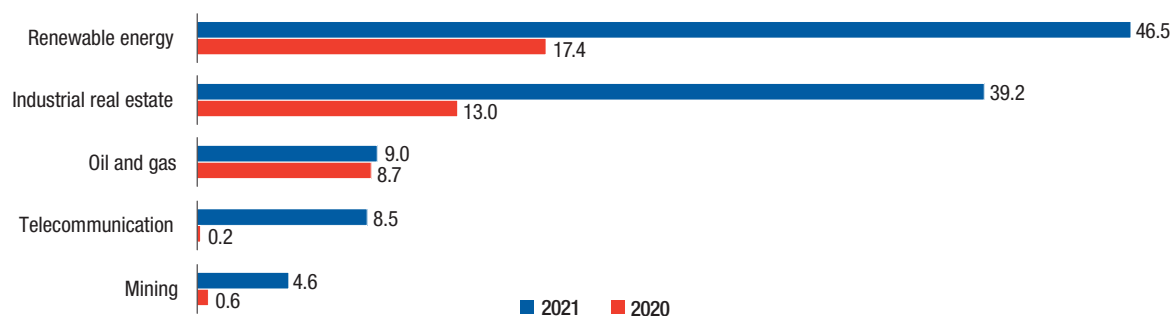
These two industry groups accounted for 94 per cent of total M&A sale values in 2021. The rise in the number of megadeals exceeding \$300 million also played a role, with 31 such megadeals in 2021 as compared with only 18 in 2020. Two significant megadeals accounted for 89 per cent of cross-border M&A activities in 2021, generating the “lumpiness” effect: the \$34 billion merger of Grab (Singapore) and Altimeter Growth Corporation (United States) to form a special purpose acquisition company and the acquisition of Nipsea (Singapore) by Nippon Paint (Japan) for \$9.9 billion.

A few other megadeals also drove up cross-border M&As. Among others, Nippon Paint (Japan) acquired Wuthelam Holdings’ Indonesia business for \$2.2 billion; Tokyo Electric Power (Japan) bought a 27 per cent share in Aboitiz Power (Philippines) for \$1.6 billion; an investor group (United States) took a stake in GoTo for \$1.3 billion; and Colony Capital (United States) acquired Indosat telecommunication towers in Indonesia for \$750 million. ASEAN MNEs also made acquisitions in other Member States. They included the acquisition by GIC (a sovereign wealth fund of Singapore) of a 17.5 per cent interest in AC Energy Philippines for \$412 million, an investment by Elang Mahkota Teknologi (Indonesia) investment in Grab Technology Indonesia (owned by Grab (Singapore)) for \$375 million and the acquisition by Keppel Corporation (Singapore) of Philippine Tank Storage International (Philippines) for \$334 million.

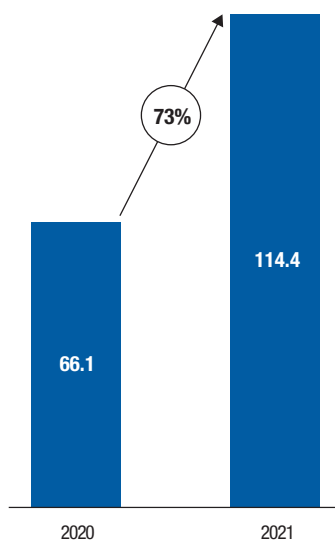
1.2.5. International project finance

Announced international project finance deals in ASEAN rose in value by 73 per cent, from \$66.1 billion in 2020 to \$114.4 billion, with the largest increase in investment in renewable energy, followed by industrial estates (figures 1.9 and 1.10). These two industries accounted for 75 per cent of international project finance activities in 2021. Other industries with significant rises in such activities included oil and gas, telecommunication and mining. Together these five industries, most with significant increases, received about 95 per cent of international project finance by value in 2021. The number of announced international project finance deals rose by 18 per cent to 134.

Figure 1.9. ASEAN: top five industries in international project finance, 2020–2021 (Billions of dollars)



Source: UNCTAD, based on data from Refinitiv SA.

Figure 1.10. ASEAN: announced international project finance, 2020–2021 (Billions of dollars)

Source: UNCTAD, based on data from Refinitiv SA.

In 2021, 17 megaprojects exceeded \$1 billion each in value, as compared with 13 in 2020 (table 1.2). With a total value of \$89.4 billion, these megaprojects accounted for more than 90 per cent of the value of international project finance in 2021. That value was 170 per cent more than the value of such projects in 2020. Most of these megaprojects were in energy and industry (primarily in semiconductors and EV-related activities).

Table 1.2. ASEAN: International project finance deals exceeding \$1 billion, 2020–2021

Year	Project	Project nation	Total project cost (\$ billion)	Project industry	Ultimate sponsor	Ultimate sponsor headquarters
2021	20.76 MW Kulim Large-Scale Solar Photovoltaic	Malaysia	20.7	Power and renewables	Thai Beverage Savelite Engineering Moderntent	Thailand Malaysia Malaysia
	3,900 MW Hai Phong Offshore Wind Power Plant	Viet Nam	11.9	Power and renewables	Orsted A/S T&T Group	Denmark Viet Nam
	Gia Loc & Binh Giang & Thanh Mien Pharmaceutical Park	Viet Nam	10.0	Industry	SMS Pharmaceuticals Dai An Group Sri Avantika Contractors Leaps & Bounds	India Viet Nam India Viet Nam
	Bayan Lepas Intel Semiconductor Packaging Facility	Malaysia	7.1	Industry	Intel	United States
	Indonesia Deepwater Development	Indonesia	7.0	Oil and gas	Chevron	United States
	Dito Telecommunity Corp Telecom Towers	Philippines	5.4	Telecommunication	China Telecommunications	China

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2021	PNE Group Offshore Wind Farm	Viet Nam	4.8	Power and renewables	PNE	Germany
	Woodlands Wafer Fabrication Plant	Singapore	4.0	Industry	Mubadala Investment	United Arab Emirates
	Manyar Copper Smelter	Indonesia	2.8	Mining	Freeport-McMoRan	United States
	Freeport and Tsingshan Copper Smelter	Indonesia	2.8	Industry	Freeport-McMoRan Tsingshan Holding Group	United States China
	Tampines Wafer Fabrication	Singapore	2.4	Industry	Siltronic	Germany
	Weda Bay Industrial Park	Indonesia	2.1	Industry	Eve Energy	China
	Nickel Cobalt Wet Smelting				Zhejiang Huayou Cobalt Ever Rising Tsingshan Holding Group Perlux	China Singapore China United Kingdom
	Kulim Hi-Tech Park Integrated Circuit Substrates Production Plant	Malaysia	2.1	Industry	AT&S Austria Technologie	Austria
	Ubadari Field and Vorwata Carbon Capture Utilization and Storage	Indonesia	2.0	Oil and gas	BP Mitsubishi ENEOS Holdings Sumitomo KG Berau China National Offshore Oil	United Kingdom Japan Japan Japan Indonesia China
2020	2.2 GW Duriangkang Reservoir Floating Solar Farm	Indonesia	2.0	Power and renewables	Sunseap Group	Singapore
	0 Mon 2 Gas-Fired Power Plant	Viet Nam	1.3	Power	Marubeni Vietnam Trading Engineering	Japan Viet Nam
	Karawang Electric Vehicle Battery Cell Factory	Indonesia	1.1	Industry	Hyundai Motor LG Chem	Republic of Korea Republic of Korea
	3.5 GW La Gan Offshore Wind	Viet Nam	10.0	Power and renewables	Copenhagen Infrastructure Asiapetro Novasia Energy	Denmark Viet Nam Viet Nam
	ExxonMobil Corp Gas-to-Power	Viet Nam	5.1	Power	ExxonMobil	United States
	Haiphong Liquefied Natural Gas Power and Terminal	Viet Nam	5.1	Oil and gas	ExxonMobil Tokyo Electric Power	United States Japan
	Indonesia CATL Lithium Battery Plant	Indonesia	5.0	Industry	Contemporary Amperex Tech	China
	1.46 GW Mekong Mainstream Hydropower Plant	Lao People's Democratic Republic	4.8	Power and renewables	CH Karnchang	Thailand
	Malampaya Deep-Water Gas-to-Power Offshore	Philippines	4.5	Petrochemicals	Shell Berlian Laju Tanker Udenna	United Kingdom Indonesia Philippines
	Rayong-Chanthaburi-Trat Eastern Link Phase II PPP	Thailand	3.3	Transportation	China Railway Construction Group	China
	ExxonMobil Upstream Assets Sale	Malaysia	3.0	Oil and gas	ExxonMobil	United States
	Gresik Copper Smelter	Indonesia	3.0	Industry	Freeport-McMoRan	United States
	1,320 MW Quang Tri Coal-Fired Power Plant	Viet Nam	2.4	Power	Electricity Generating Authority of Thailand	Thailand
	1.5 GW Quang Ninh LNG to Power	Viet Nam	2.0	Power	Marubeni PetroVietnam Tokyo Gas Colavi	Japan Viet Nam Japan Viet Nam
	Dakcheung Clean Coal Power Plant	Lao People's Democratic Republic	1.7	Power	Evolution Power Invest KMX	Singapore Lao People's Democratic Republic
	Vietnam Singapore Industrial Park III Lego First Carbon-Neutral Factory	Viet Nam	1.0	Industry and power	Sembcorp Industries Kirkbi	Singapore Denmark

Source: UNCTAD, based on data from Refinitiv SA.

1.2.6. Greenfield investment

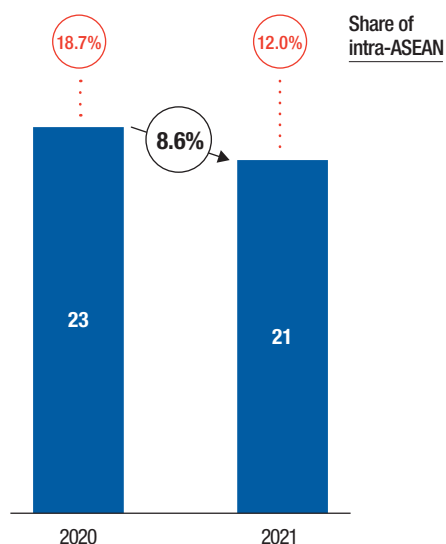
Announced greenfield investment in terms of number of projects rose by 12 per cent to 840; however, in value terms it was flat, at \$63.6 billion. Greenfield investment in a few Member States rose significantly: Indonesia by 80 times to \$8.2 billion; Malaysia by nearly 250 per cent to \$25 billion; and Singapore and Thailand by 100 per cent to \$13 billion and \$4 billion, respectively.

Most announced greenfield investment was in manufacturing and infrastructure-related activities. Three industries (electronics and electrical, energy and gas supply, and information and communication) accounted for 68 per cent of greenfield investment, with the electronics and electrical industry alone receiving 52 per cent of the total value.

1.3. INTRA-ASEAN INVESTMENT AND ENTERPRISE REGIONALIZATION

Intra-ASEAN investment fell by \$2 billion or 8.6 per cent, with flows still at a high level (\$21 billion) (figure 1.11). Six ASEAN Member States received less intra-ASEAN investment (i.e., Cambodia, Indonesia, Malaysia, Myanmar, Thailand and Viet Nam). However, strong intraregional investment in manufacturing – which rose by \$3.7 billion to \$7.7 billion – was not sufficient to cushion the fall. The share of intra-ASEAN investment in total FDI in the region declined from 18.7 per cent in 2020 to 12.0 per cent, against significant increases in investment from non-ASEAN sources (primarily the United States, China and the Netherlands).

Figure 1.11. Intra-ASEAN investment, 2020–2021 (Billions of dollars and per cent)



Singapore remained the largest intraregional investor at \$13.3 billion, slightly higher than in 2020 (annex table 1.1). Investment from Indonesia, Malaysia and Singapore rose but not sufficient to cushion a \$3.3 billion decline in investment from Thailand. Companies based in Indonesia were active with intraregional investment activities. After dismal flows in 2020, intraregional investment from Indonesia rose more than 1,210 times to \$1.2 billion.

1.3.1. Intra-ASEAN MNE activities

ASEAN companies continued to expand regionally, with investment in new locations and in expansion of operations in existing host countries. Intraregional investment occurred in a wide range of industries.

ASEAN companies were active in energy and mining activities, including in contractual arrangements or concessions in 2021. A conventional gas field in Malaysia owned by Pertamina (Indonesia), PTT (Thailand) and Petroliam Nasional (Malaysia) underwent further expansion. Sembcorp Industries (Singapore), PLN Batam and Suryagen (both Indonesia) started joint development of a large-scale integrated solar and energy storage project in Indonesia.

Manufacturing was the largest recipient of intra-ASEAN investment, accounting for 37 per cent of intraregional investment in 2021. Intraregional investment in manufacturing rose, from \$4.0 billion in 2020 to \$7.7 billion. Indorama Ventures (Thailand), a producer of recycled PET (polyethylene terephthalate) for beverage bottles, started construction of a facility in Indonesia. Siam Cement (Thailand) expanded operations in Indonesia, Singapore and Viet Nam and increased its investment in retail and logistics businesses in Cambodia, Indonesia, Myanmar, the Philippines and Viet Nam. It is building a \$5.1 billion petrochemical complex in Viet Nam, which will be completed in 2023. In 2021–2022, PTT Global Chemical (Thailand) expanded operations and partnerships in manufacturing and retail activities in Cambodia, Indonesia, the Lao People's Democratic Republic, Myanmar and Viet Nam.

The services industry received about 50 per cent of intraregional investment, down from 78 per cent in 2020. Key industries included banking and finance, infrastructure, wholesale and retail, digital economy and real estate. Banking and finance remained the largest services industry for intraregional investment because of ASEAN banks regional expansion and continued investment interest in fintech development. OCBC Bank (Singapore) diversified and built a more comprehensive business platform in other ASEAN countries to help Chinese customers expand in the region. United Overseas Bank (Singapore) announced plans to invest \$500 million over the next five years to boost its digital banking operations in ASEAN (including Singapore). Siam Commercial Bank (Thailand) expanded its activities in Myanmar and Viet Nam to offer more digital products and services in these host countries. Kasikorn Bank (Thailand) opened a branch in Viet Nam and diversified its service in the Lao People's Democratic Republic.

Many ASEAN fintech companies also continued expanding regionally in 2021. Sea (Singapore), a diversified technology company with a fintech arm, acquired Bank BKE (Indonesia) to expand in Indonesia. ASEAN Fintech Group (Singapore) acquired JazzyPay (Philippines),

as part of a strategy to scale the fintech app into other ASEAN markets. Fintech platform Kredivo (Indonesia) expanded its online lending business to Viet Nam. Qoala (Indonesia), an insurtech company that leverages big data, machine learning, the Internet of Things and blockchain technologies, expanded into Thailand in the same year.

Intra-ASEAN investment in digital activities and e-commerce is growing as start-ups scale up by venturing into new markets and neighbouring countries. Many technology start-ups are actively investing in the region, for various reasons (see chapter 2). In 2021, J&T Express (Indonesia), a freight service e-commerce company, entered Viet Nam and further expanded operations in Cambodia, Malaysia, the Philippines, Thailand and Singapore. Bolton International (Singapore) established a business process outsourcing office in the Philippines to provide international clients with back-office and business process solutions. ST Telemedia (Singapore) established a data centre in Indonesia in a joint venture with Triputra (Indonesia). InCorp Global (Singapore), a corporate service provider, expanded its presence in Malaysia by acquiring WeCorporate Global Consultancy (Malaysia). GoJek (Indonesia) expanded operations in the Philippines, Thailand and Viet Nam.

1.4. MAJOR DEVELOPMENTS SHAPING THE FDI LANDSCAPE

Several major industrial developments continued to shape the investment landscape in the region. Among them are the efforts of countries to develop EV hubs, which resulted in a significant increase in investment in the EV value chain in recent years. In the electronics and semiconductors industries, global supply chain disruptions and the drive by MNEs to strengthen production capacity and diversification has led many MNEs to expand operations. Many also continued to invest to upgrade production facilities and factories with Industry 4.0 technologies.

This section analyses key industries (i.e., EVs, electronics and the digital economy) driving robust investment in the region in 2021 and their potential to continue receiving a high level of FDI in the next few years. Significant developments in these industries included new categories of investors, new segments of value chains, further expansion of capacity and increasing activities in regional production networks. These developments have significant implications for further shaping the investment landscape and FDI flows in the region.

1.4.1. FDI in the EV industry

Despite the pandemic, investors in the automotive industry in ASEAN were active – especially in the EV value chain. Activities run from nickel mining and smelting to battery production to manufacturing of EVs, as well as related R&D activities and investment in new infrastructure. In addition to traditional automotive MNEs, non-automotive companies are emerging in the EV industry, adding to expanding sources of FDI. They include technology MNEs as well as extractive and energy corporations. FDI along the EV value chain is connecting countries, production processes and companies in the region, further strengthening regional production networks and the automotive ecosystem.

Many EV projects in recent years are large in terms of value and are to be implemented over a few years. The increase in types of investors and in high-value projects are key drivers pushing up EV-related investment. Strong investment in the EV value chain is expected to continue, given that most ASEAN Member States are supporting the development of a competitive ecosystem, encouraging EV adoption and targeting a zero-carbon policy. The favourable automotive production environment, established production networks, and the potential and integration of the regional market are further reasons for the growth.

The rise in EV investment was led by activities in building productive capacity for manufacturing of EVs, including parts and components. Because of rising global and regional demand for EV batteries, FDI in extractive industries (e.g., nickel) in some ASEAN Member States has also risen rapidly. Policy support for EVs in ASEAN has also encouraged investment interest, including in EV infrastructure such as charging stations. Major EV investment in 2019–2022 included construction of EV battery plants, and expansion and upgrading of manufacturing facilities for EV production by auto manufacturers, new entrants and other MNEs in the value chain (table 1.3).

Table 1.3. ASEAN: FDI in the EV industry, 2019–2022 (Selected cases)

MNE	Nationality	Project cost (\$ million)	ASEAN country	Year construction started	Purpose of investment
BMW ^a	Germany	16	Thailand	2019 (inauguration)	Battery assembly plant
Contemporary Amperex Technology Limited	China	5 200	Indonesia	2021	Build EV battery production plant
ENPlus	Republic of Korea	101	Philippines	2021	Build EV manufacturing plant (for production of electric cars and electric jeepneys)
Evlomo	United States	1 060	Thailand	2021	Construct lithium battery plant
FOMM	Japan	31	Thailand	2019 (production)	Expand electric car assembling plant
Ford	United States	900	Thailand	2022	Increase automation and expand output models including EVs
Foxconn	Taiwan Province of China	8 000	Indonesia	2022	Develop a wide range of EV segments, from cars, two-wheelers and buses to battery production and supporting industries (e.g. energy storage systems, battery exchange or swap stations, battery recycling and R&D)
		1 000–2 000 ^b	Thailand	2022	Produce EVs
Kymco	Taiwan Province of China	30	Singapore	2020	Invest in GrabWheels (Grab's new mobility arm)
GWM	China	71	Thailand	2022	Upgrade Rayong plant to produce EVs
Honda Motor	Japan	136	Thailand	2021	Build EV battery factory in Prachin Buri
Hyundai Motor	Republic of Korea	1 500	Indonesia	2021	Build EV production facility

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Table 1.3. ASEAN: FDI in the EV industry, 2019–2022 (Selected cases) (Concluded)

MNE	Nationality	Project cost (\$ million)	ASEAN country	Year construction started	Purpose of investment
Hyundai Motor and LG Chem	Both Republic of Korea	1 100	Indonesia	2021	Build EV battery factory at Karawang
Mercedes-Benz	Germany	20	Thailand	2019	Expand manufacturing of PHEV
Mitsubishi Motors	Japan	644	Thailand	2019	Improve manufacturing plants and production lines for production of PHEVs, HEVs and BEVs
		175		2020	Increase production of EVs in 2023
Nissan	Japan	352	Thailand	2020	Expand capacity for production of HEVs at Samut Prakan facility
		15		2019	Construct EV battery plant
SAIC	China	75	Thailand	2022	Produce batteries (through a joint venture of SAIC Motor-CP)
		782		2022	Expand production capacity for PHEV and EV recharging network
Energy Efficiency Services	India	5	Thailand	2020	Invest in SWAG EV, an electric bike company
SK Group	Republic of Korea	553	Malaysia	2021	Manufacture electro-deposited copper foil for EV batteries
Toyota Motor	Japan	2 000	Indonesia	2022 (production)	Develop and produce EVs
		65	Malaysia	2021	Expand manufacturing facility for HEVs
		622	Thailand	2019	Produce HEVs
		119 ^c		2019 (production)	Extend a plant in Samut Prakan and build a hybrid battery assembly plant

Source: ASEAN Investment Report 2022 research, based on company websites, media and industry reports.

Note: BEV = battery electric vehicle, HEV = hybrid electric vehicle, PHEV = plug-in hybrid vehicle.

^a Partnership with Dräxlmaier Group (Germany).

^b Partnership with PTT (Thailand).

^c Partnership with Thonburi Automotive Assembly Plant (Thailand).

Most EV investments since 2019 have been by Japanese and Korean MNEs building new plants and expanding or upgrading production capacity. Some of these companies have multiple investment projects in different ASEAN countries. In 2020, Hyundai (Republic of Korea) opened a \$1.5 billion EV production plant in Indonesia and a \$294 million innovation centre in Singapore. In 2021 Toyota (Japan) was involved in three major projects: (i) a \$2 billion EV production facility in Indonesia, (ii) a \$64 million investment in Malaysia to expand its manufacturing operations and facility for manufacturing of HEVs, and (iii) a \$386 million investment to manufacture EVs at its Chachoengsao plant in Thailand.

Most investment by major automotive manufacturers in EV production takes place in locations where they already have a significant presence in terms of production facilities – building on existing synergies, clusters and experience. They upgrade or expand manufacturing lines to produce EVs, which require higher-tech and more flexible technology platforms. Mitsubishi and Nissan (both Japan) and Mercedes-Benz (Germany) in Thailand and Toyota in Malaysia all invested in existing facilities by upgrading and expanding production capacity.

New entrants

Newcomers are entering the EV value chain, challenging traditional automotive manufacturers and in some cases operating in partnership with them to manufacture EVs or investing in EV charging stations. These newcomers include electronics manufacturers, technology companies, energy MNEs, industrial companies and venture capital firms (table 1.4). PTT (Thailand), an oil and gas MNE, and Foxconn (Taiwan Province of China), an electronics contract manufacturer, are building an open platform for producing EVs and key components to serve the EV industry in Thailand. Foxconn also entered into a joint venture arrangement with Gogoro (Taiwan Province of China), Indika Energy (Indonesia) and Indonesia Battery Corporation (a State-owned entity) to develop a wide range of EV products in Indonesia, e.g., from electric cars, two-wheel vehicles and buses to battery production, battery exchange or swap stations, battery recycling, and R&D.² Mercedes-Benz (Germany) in partnership with Thonburi Automotive Assembly and Thonburi Energy Storage Systems (both Thailand) in 2019 had already set up a battery assembly production facility and an expanded production facility for PHEVs in that host country (KPMG, 2021). Enplus (Republic of Korea), a firefighting vehicle manufacturer, is establishing an EV manufacturing facility in the Philippines.

These new entrants are extending the value chain, adding an increasing number of categories, expanding sources of investment and strengthening ecosystems. Their emergence suggests that to build competitive EV ecosystems, policymakers need to target investment promotion efforts at these categories of the value chains.

Table 1.4. Newcomers in EV activities in ASEAN

Category	Company	Nationality	EV activities	Location	Remarks
Electronics manufacturer	Foxconn	Taiwan Province of China	EV and EV battery production	Indonesia	Joint venture with Gogoro (Taiwan Province of China) and local partners in Indonesia
				Thailand	Joint venture with PTT (Thailand) in Thailand
Real estate	City Developments	Singapore	EV charging stations	Singapore	Partnership with Porsche (Germany) and SP Group (Singapore)
	HomePro	Thailand		Thailand	Partnership with BMW (Germany) and EGAT (Thailand)
	Lippo Mall	Indonesia		Indonesia	Partnership with Hyundai (Republic of Korea)
Technology	Grab	Singapore	EV charging stations	Indonesia	Partnership with Perusahaan Listrik Negara (Indonesia)
			Electric car fleet	Indonesia	Cars from Hyundai (Republic of Korea)
			Electrification of fleets (electric cars, motorcycles, bicycles and scooters)	Indonesia	Partnership with Hyundai (Republic of Korea), Kymco (Taiwan Province of China), and two domestic EV motorbike manufacturers
			Two-wheel e-scooter solutions	Singapore	Partnership with Hyundai (Republic of Korea), Kymco (Taiwan Province of China), and two domestic EV motorbike manufacturers

/...

Table 1.4. Newcomers in EV activities in ASEAN (Concluded)

Category	Company	Nationality	EV activities	Location	Remarks
Technology	Gojek	Indonesia	EV charging stations and electric motorbikes	Indonesia	Partnership with Gogoro (Taiwan Province of China) and Pertamina (Indonesia)
			Electrification of fleets (cars and motorbikes) by 2030	Indonesia	Partnership with NIU Technologies (China), Honda Motor, Toyota Motor and Mitsubishi Motors (all Japan)
Investment management and venture capital company	First Pacific	Hong Kong (China)	EV charging stations	Philippines	Through its subsidiary, Metro Pacific Tollways (Philippines)
	Clime Capital	Singapore	Electric motorbikes and battery swapping infrastructure in Indonesia	Indonesia	Investment in Oyika, a Singapore electric mobility start-up that builds battery-swap and charging infrastructure for consumers in Southeast Asia
	Jungle Ventures	Singapore	Invest in technology start-up	Viet Nam	Investment in Dat Bike, a Vietnamese electric motorbike start-up
	Geko Life	Singapore	EV motorcycle production	Singapore	Acquisition of Swag EV (Singapore) and EV bike (two-wheel drive) manufacturer
Energy	Shell	United Kingdom	EV charging stations	Malaysia	Investment in EV charging network
	Chevron	United States	EV charging stations	Singapore	Partnership with SP Group (a Singapore Government-affiliated electricity and gas distribution company)
				Thailand	Partnership with Energy Absolute (Thailand)
Industrial companies	ABB	Switzerland	EV charging stations	Indonesia	Partnership with Shell in which ABB supplies chargers for Shell charging stations
	Bosch	Germany	EV charging stations	Indonesia	Partnership with Pertamina

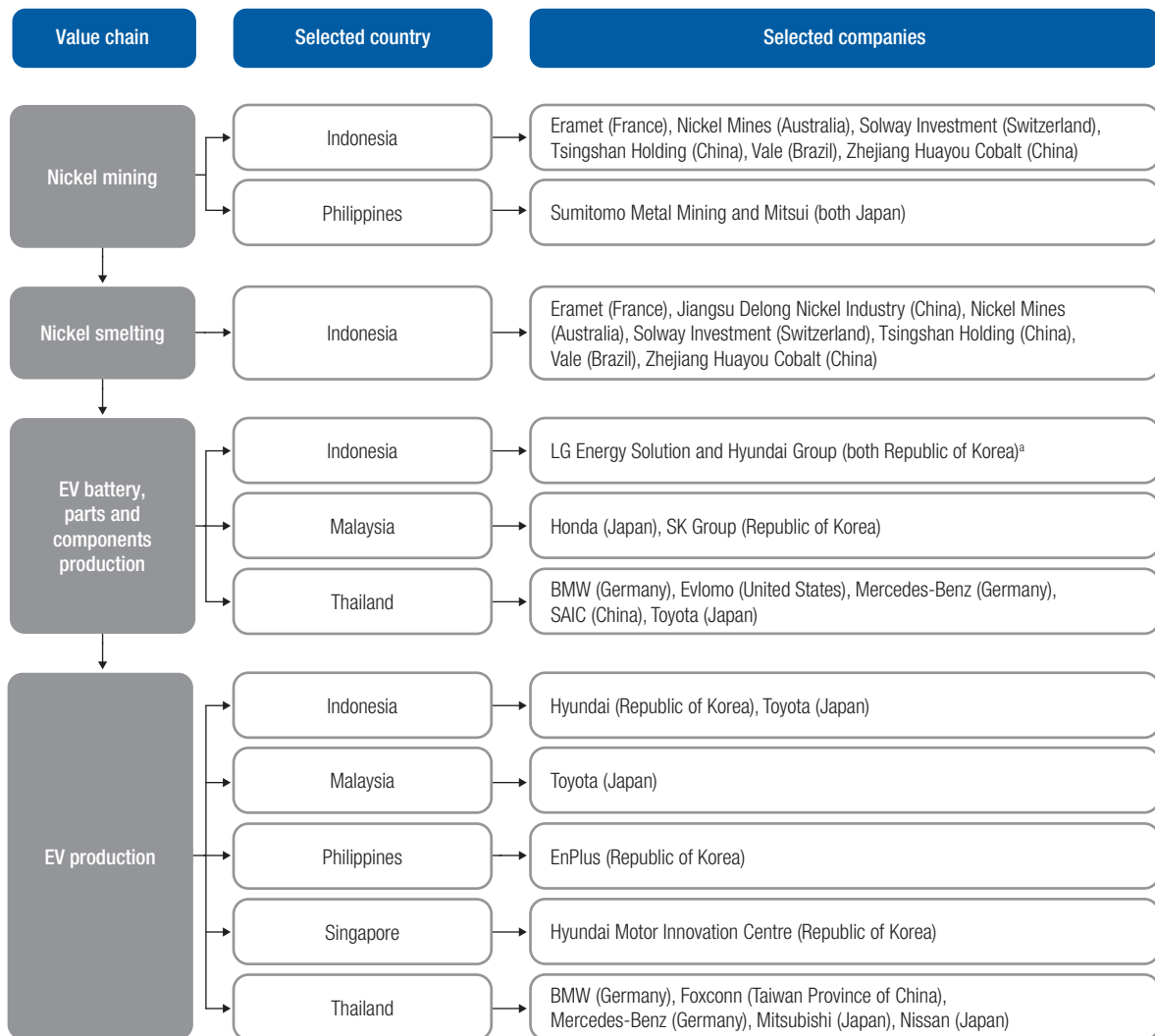
Source: ASEAN Investment Report 2022 research.

Note: The list highlights selected major categories of new players in the EV industry, compiled from company websites, media and industry reports.

a. EV value chain

Although production of EVs is simpler, with fewer parts than traditional internal combustion engine (ICE) vehicles,³ the value chain is relatively longer in that it is connected to upstream mining and smelting, to production of EV batteries, parts and components and to EV infrastructure development (figure 1.12).

The production of EVs involves additional chains of suppliers and associated service providers (i.e., production and distribution of EV batteries and supply and distribution of power). The distribution of EV batteries itself has its own ecosystem of charging stations and of recycling and disposal of batteries. Many non-automotive MNEs participate in these segments of the value chain.

Figure 1.12. EV value chain in ASEAN

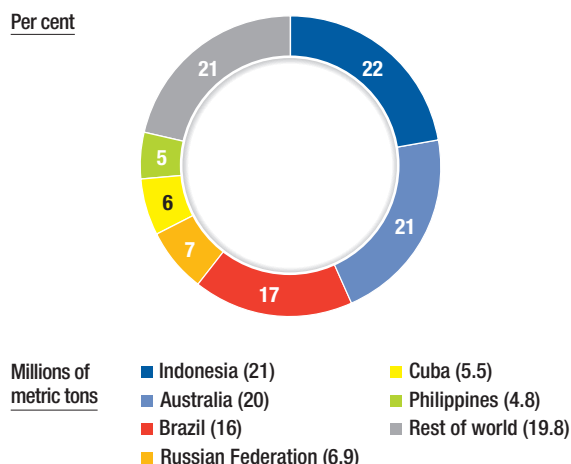
Source: ASEAN Investment Report 2022 research.

^a LG consortium consists of LG Chem, LG Energy Solution, LG International, Posco (all Republic of Korea) and Huayou Holdings (China).

Nickel mining and smelting

Lithium-ion batteries are common in electronics equipment and EVs. They are the most valuable component in an EV, representing about 40 per cent of total production cost,⁴ and nickel is widely used in lithium-ion batteries. The top six countries with nickel reserves account for 79 per cent of global reserves (figure 1.13), and two ASEAN Member States (Indonesia and the Philippines) are among them, with 27 per cent of reserves. This resource endowment has led to an increase in extractive FDI activities in Indonesia and growing attention of investors to the Philippines.

Figure 1.13. Global nickel reserves: top six countries, 2021 (Per cent and millions of metric tons)



Source: NS Energy, "Profiling the top six countries with the largest nickel reserves in the world", 11 February 2021.

Many FDI projects in mining and smelting in ASEAN in recent years entailed huge investment costs. For instance, in 2021 Indonesia Vale (Brazil) and Sumitomo Metal Mining (Japan) were building a \$2.5 billion nickel plant, Jiangsu Delong Nickel Industry (China) a \$2.7 billion nickel smelting factory, and Zhejiang Huayou Cobalt (China) a \$2.1 billion smelting plant together with a consortium of Chinese companies and a \$1.2 billion nickel and cobalt plant with China Molybdenum and Tsingshan Group (both China). In addition, Shandong Xinhai (China) was developing a \$1.2 billion nickel iron and smelting plant, while Nickel Mines (Australia) acquired a 70 per cent stake in the Indonesia-based nickel smelting operation of Oracle for \$525 million. In Viet Nam, Blackstone Minerals (Australia) invested in an \$854 million nickel copper project.

FDI in nickel mining is not new to ASEAN. Access to natural resources has led to extractive FDI in Indonesia, the Philippines and other ASEAN Member States over the past decades. In 2012 China Nickel Resources Holdings invested in a 61 per cent share of the \$1.8 billion South Kalimantan (Indonesia) steel project and in 2011 acquired an 80 per cent stake in Yiwan Mining (Indonesia) for \$266 million. Also in 2011, Solway Investment Group (Switzerland) invested \$3 billion for a smelting plant and three nickel ore mine concessions in Asera, Bahomoahi and Sorawolio (Indonesia).⁵

Recent projects include Eramet (France), Tsingshan Group (China) and Antam (Indonesia) jointly investing in a \$500 million nickel smelting plant in Indonesia in 2018. Since 2014, Tsingshan Group (China) has established a strong mining operation in Indonesia through three joint ventures, with Bintang Delapan Group (Indonesia) in a \$1.9 billion smelting and power plant; with other Chinese companies (e.g., Guangdong Guangxin Holdings Group and Guangdong J-eray Technology Group) in a \$1 billion nickel project; and with Ruipu Technology Group (China) in a \$460 million nickel and chrome alloy plant.

In the Philippines, Sumitomo Metal Mining (Japan) has been involved in major mining and smelting projects. These activities include (i) a joint venture with Rio Tuba Nickel Mining (Philippines) in 2005 in a \$180 million hydrometallurgical processing plant; (ii) a joint venture with Mitsui (Japan) and Nickel Asia (Philippines) in 2010 in a nickel processing plant at Taganito; and (iii) a joint venture with Nickel Asia (Philippines)⁶ in 2020 in a \$1.4 billion nickel plant. Other Japanese MNEs such as Mitsui and Sojitz are also involved with nickel mining and smelting activities in the Philippines. Chinese companies have also been active in the nickel industry. Carasscal Nickel

(40 per cent Chinese-owned) has a nickel mining operation in the Philippines. Wei-Wei Group (China) operates a \$100 million nickel processing plant in Zambales Province, where Jiangxi Rare Earth and Rare Metals Tungsten Group has a \$150 million nickel exploration and cobalt processing project.⁷ Sinosteel started operation of its a nickel-chromite project in the Philippines a decade ago, in 2012. The lifting in 2021 of the Philippines moratorium on nickel mining is likely to lead to a rise in FDI in this extractive industry, given the global increase in demand (box 1.1).

The last decade has witnessed growing participation by Asian companies (e.g., from China, Japan and the Republic of Korea) in nickel and other mining activities in ASEAN. Such activities include processing of raw materials such as nickel close to mines to supply customers in the host country for EV battery production and for export. Large EV projects involve consortiums of foreign and local companies. Consortiums include Hyundai and Kia (both Republic of Korea) with other Korean and local companies in extractive projects in Indonesia. Many Chinese MNEs operate in consortiums or joint ventures with multiple strategic partners in large-scale mining and smelting projects. An example is Zhejiang Huayou Cobalt's joint venture with Eve Energy

Box 1.1. Moratorium on nickel mining in the Philippines

In 2012 the President of the Philippines signed Executive Order No. 79,^a which included a moratorium on new mining agreements until Congress came up with a scheme for sharing revenue between the Government and mining firms. Other provisions included the following:

- Expansion of the areas closed to mining to 78, referred to as “no-go” zones
- Alignment of ordinances to be consistent with national laws
- Prohibition of the use of mercury in small-scale mining

In addition to the protected areas cited in the Philippine Mining Act of 1995 and the National Integrated Protected Area System, the order banned mining in the following areas:

- Tourism development areas identified by the National Tourism Development Plan
- Prime agricultural lands such as plantations and other properties devoted to valuable crops
- Fisheries development zones and marine sanctuaries as declared by the Secretary of Agriculture
- Island ecosystems, to be determined by the Department of Environment and Natural Resources with mapping technology

In April 2021, Executive Order No. 130 lifted the nine-year moratorium. The order was expected to ease the entry of at least 291 applications. Unlike other sectors in the country, mining grew during the pandemic, driven mainly by demand from China for nickel.^b About a dozen new metal mines are expected to start commercial operation in 2022, most of them in nickel projects.^c

Source: Official gazette, Executive Order No. 79, media and industry reports.

^a Government of the Philippines, Official Gazette, “Executive Order No. 79, s. 2012”, 6 July 2012 (<https://www.officialgazette.gov.ph/2012/07/06/executive-order-no-79-s-2012/>).

^b Reuters, “Philippines lifts nine-year ban on new mines to boost revenues”, 15 April 2021.

^c SMM News, “Philippines to open 12 new metal mines in 2022, mostly nickel mines”, 18 March 2022.

(a major battery manufacturer in China), Lindo Investment (China), Yongrui Holdings (part of Tsingshan Group (China)) and Perlux (United Kingdom) in building a nickel smelting plant in Indonesia. Also in Indonesia, Zhejiang Lygend Invest (China) partnered with a local company in a \$986 million nickel sulfate project in 2021.

EV battery production

The global EV battery market is dominated by 10 MNEs, all headquartered in Asia, which together accounted for 94 per cent of the market in 2021. Nine of the top 10 have a presence in ASEAN, with large-scale integrated EV battery production plants, R&D centres and laboratories for EV innovation (table 1.5). The regional presence of these manufacturers underlines the importance of the region as a major source of raw material for EV battery production and an established automotive production hub, where major automotive manufacturers are producing HPEVs and EVs.

Table 1.5. Top 10 global EV battery manufacturers and their presence in ASEAN, 2021

Manufacturer	Headquarters	Global market share (%)	Presence in ASEAN (Selected cases)	Activity
Contemporary Amperex Technology	China	32.5	Indonesia	Establishing a \$5.2 billion EV battery production plant, which broke ground in 2021
LG Energy Solution ^a	Republic of Korea	21.5	Indonesia	Established a \$9.8 billion integrated EV battery plant in 2021 in a joint venture with Hyundai (Republic of Korea) and Indonesian State-owned Battery Corporation
Panasonic	Japan	14.7	Indonesia, Thailand	Established battery manufacturing facilities; major supplier of EV batteries to Toyota, which has a significant presence in ASEAN
BYD	China	6.9	Singapore	Established an office and market presence in ASEAN
Samsung SDI	Republic of Korea	5.4	Malaysia	Established a \$175 million facility in 2021 to expand lithium battery production capacity (Samsung SDI Seremban plant)
SK Innovation	Republic of Korea	5.1	Indonesia Malaysia	Established an office in early 2022 Establishing a \$553 million battery copper-foil manufacturing facility in Sabah, which will be part of the SK Group's EV value chain
China Aviation Lithium Battery	China	2.7	..	..
Envision AESC	Japan	2.0	Singapore	Established the Envision Group (China) global technology innovation centre, focused on sustainable energy and other solutions
Guoxuan	China	2.0	Singapore	Established the Guoxuan-Nanyang Technological University Smart Energy Joint Laboratory
Toyota Motor	Japan	1.3	Thailand	Invested in a \$622 million battery plant through Toyota Motor Thailand in 2018; opened a battery life-cycle management plant in 2019

Source: ASEAN Investment Report 2022 research, based on VC Elements, "Ranked: the top 10 EV battery manufacturers", 25 November 2021, as well as company information, annual reports, media and industry reports.

^a LG's partners in the joint venture as a consortium consisting of LG Chem, LG Energy Solution, LG International, Posco (all Republic of Korea) and Huayou Holdings (China).

Some EV battery manufacturers have formed their own upstream linkages to ensure supplies of nickel for battery production. In 2018, CATL (China) teamed up with stainless-steel maker Tsingshan Holding, battery firm GEM (both China), trading firm Henwa (Japan) and Morowali Industrial Park (Indonesia) in a \$700 million project to make battery-grade nickel chemicals in Central Sulawesi.⁸ In 2020, CATL invested in a \$5.1 billion EV battery manufacturing plant in Indonesia. Construction started in late 2021 and commercial operation is expected in 2024. CATL supplies batteries to many automotive MNEs such as Honda and Toyota (both Japan), Hyundai (Republic of Korea), BMW and Volkswagen (both Germany), Tesla (United States) and Volvo (Sweden).

In Indonesia, Hyundai Motor and LG Energy Solution (both Republic of Korea) began construction of a \$1.1 billion EV battery cell plant in 2021. The LG side of the joint venture involved a consortium consisting of LG Chem, LG Energy Solution, LG International, Posco (all Republic of Korea) and Huayou Holdings (China).⁹ Huayou, in turn, has a joint venture (57 per cent) with China Molybdenum (30 per cent) and Tsingshan Group (both China) (10 per cent) for a \$1.2 nickel plant and a \$12 billion ferro-nickel production project with State-owned Aneka Tambang (Indonesia). Battery cells produced in Karawang will be used in Hyundai Motor and Kia EV models built on the group's dedicated BEV platform. Also in Indonesia, in March 2022, Hyundai launched an automotive plant to produce locally assembled EVs. The plant will be linked with a Hyundai-LG battery plant, which is scheduled to open in 2024.¹⁰

The presence of these nine leading EV battery producers has contributed to the development of the EV battery ecosystem in ASEAN. In the past three years (2019–2021), a significant level of FDI activity took place in EV battery production – some in the form of greenfield investment in plants, some through expansion of production capacity. These activities concentrated mainly in Indonesia, Malaysia and Thailand (ASEAN countries that host major automotive production hubs) (table 1.6).

Three types of MNEs are involved in battery production in ASEAN:

- (i) Highly specialized MNEs focused on battery technology and production (e.g., CATL, Chengxin Lithium Group (both China) and LG Energy Solution, Samsung SDI, SK Nexilis (all three Republic of Korea))
- (ii) Major global automotive MNEs that have integrated internal production networks (i.e., Honda, Nissan, Toyota (all three Japan); BMW Mercedes-Benz (both Germany); SAIC (China))
- (iii) New entrants that possess certain expertise or technology (e.g., TÜV SÜD (Germany), a standards and testing company; Foxconn (Taiwan Province of China), a major electronics contract manufacturer)

Table 1.6. FDI activities in EV battery manufacturing in ASEAN (selected cases)

Company	Headquarters	Location in ASEAN	Investment activity	Type of set-up	Year of investment	Project cost (\$ million)
BMW	Germany	Thailand	High-voltage battery production plant	Partnership with the Dräxlmaier Group (Germany)	2019	16
Contemporary Amperex Technology	China	Indonesia	EV battery plant	Partnership with Aneka Tambang (Indonesia)	2021	5 200
Chengxin Lithium Group	China	Indonesia	Lithium project for EV battery production	Joint venture with Stellar Investment (Singapore), an affiliate of Tsingshan Holding Group (China)	2021	350
Evlomo	United States	Thailand	EV battery plant	Joint venture with Rojana Industrial Park (Thailand)	2021	1 060
Foxconn Technology and Gogoro	Taiwan Republic of China (both)	Indonesia	EV and EV battery plant	Joint venture with Indonesia Battery, a partnership of four State-owned companies, and energy firm Indika Energy ^a	2022	8 000
Honda	Japan	Malaysia	High-voltage EV battery assembly plant	Business unit of Honda Malaysia	2020	..
Hyundai-LG Energy partnership	Republic of Korea	Indonesia	EV battery plant	Joint venture between Hyundai and LG Energy Solution (both Republic of Korea)	2021	1 100
Jiangsu Highstar Battery Manufacturing	China	Philippines	EV battery assembly plant	Partnership with Tojo Motors (Philippines)	2020	..
LG Chem	Republic of Korea	Viet Nam	EV battery packs plant	Partnership with Vinfast (Viet Nam)	2019	1 500
Mercedes-Benz	Germany	Thailand	EV battery plant	Partnership with Thonburi Automotive Assembly Plant and Thonburi Energy Storage Systems in Thailand; assembly facility for batteries for its PHEVs in Thailand	2019	120
Nissan	Japan	Thailand	EV battery plant	Through Nissan Motor Thailand	2019	15
SAIC	China	Thailand	EV battery plant	Through a joint venture of SAIC Motor-CP, based in Thailand	2021	782
Samsung SDI	Republic of Korea	Malaysia	EV battery plant	Manufacturing of EV battery	2021	175
SK Nexilis	Republic of Korea	Malaysia	EV battery plant	Manufacturing of EV battery	2021	568
TÜV SÜD	Germany	Thailand	Battery laboratory	Joint venture with a local company	2019	15.2

Source: Company websites, media and industry reports.

^a Forbes, "Apple supplier Foxconn, electric scooter maker Gogoro to co-invest in Indonesia batter cell project", 14 February 2022.

EV production

All the top 10 EV manufacturers are in ASEAN (table 1.7). They operate in the region with multiple business functions, from manufacturing of parts and components to assembly of EVs, sales and distribution, R&D activities and establishment of centres of excellence.

In Thailand, major automotive MNEs have started commercial production of EVs. They include Honda, Nissan and Toyota (all Japan) for HEVs; Mercedes-Benz and BMW (both Germany) for PHEVs; and new entrants FOMM and Takano (both Japan) for BEVs. European, Japanese and Korean automakers are also producing EVs in Malaysia (e.g., Toyota (Japan), Kia (Republic of Korea) and Volvo (Sweden)). Automotive manufacturers from Japan and the Republic of Korea have been actively investing in Indonesia in recent years in EV production.

Driving the rise of production of EVs in the region are the market potential, automotive MNEs' corporate strategy and EV plans, carbon-neutral policies, technology development and policy

Table 1.7. ASEAN: EV production and operations by automotive MNEs

MNE	Nationality	Facilities in ASEAN	Other EV related activities and business functions in ASEAN (selected cases)
Tesla	United States		Office and service centre (Indonesia, Malaysia, Singapore)
Renault-Nissan-Mitsubishi Alliance	France (Renault)		Sales and distribution (Brunei Darussalam, Indonesia, Malaysia, Singapore, Viet Nam)
	Japan (Nissan and Mitsubishi)		
	Nissan (Japan)	Thailand	EV battery plant, R&D (Thailand) Sales, distribution (Cambodia, Malaysia, Philippines, Singapore, Viet Nam)
Volkswagen	Germany		Sales and distribution (Indonesia, Singapore)
BYD	China		Sales and distribution (Singapore)
Kia and Hyundai	Republic of Korea	Indonesia (Hyundai)	Hyundai EV battery (Indonesia)
		Malaysia (Kia HEV and HPEV assembly facilities)	Hyundai Motor Group Innovation Centre (Singapore)
BMW	Germany	Thailand (HPEV production)	EV battery plant (Thailand)
Toyota	Japan	Indonesia, Malaysia, Thailand	Spare parts manufacturing facilities (Indonesia) Regional headquarters (Singapore) HEV battery plant and battery life-cycle plant; R&D (Thailand)
Daimler AG	Germany	Thailand (EV production and EV battery)	Assembly plant, two distribution offices (Indonesia) Production plant, sales office, Asia-Pacific logistics centre (Malaysia) Shared service centre for Mercedes-Benz sales organizations in Asia-Pacific region (Philippines) Regional IT hub, logistics centre, business development (Singapore) Office (Viet Nam)

Source: Businessupturn.com, "Top 10 electric vehicles manufacturers in the world", 21 September 2021, as well as company websites, annual reports and media.

Note: EV = electric vehicle, IT = information technology.

pushes by host countries for production and adoption of EVs. While adoption is still in its infancy in ASEAN, demand is growing.¹¹ EV sales are expected to rise because of government policies supporting adoption, growing concerns about pollution and the perceived need to switch to cleaner and environmentally friendly modes of transportation. The ASEAN EV market was estimated at \$10 billion in 2021 and is expected to reach \$18 billion by 2027, with a compound annual growth rate of more than 10 per cent during the five-year period.¹²

EV R&D activities

Some EV manufacturers and global battery manufacturers have established EV-related innovation and R&D centres in the region, such as in Singapore and Thailand, in partnership with science and technology institutions. For instance, in Singapore, Hyundai started building a \$400 million innovation centre in 2020 to serve as an R&D centre and a small-scale EV production facility. The centre primarily focuses on developing new technology such as AI, ICT, big data, autonomous vehicles and urban air mobility systems.¹³ In Thailand TÜV SÜD (Germany) established a battery test centre in cooperation with the Thai Ministry of Industry and the Thailand Automotive Institute. Korea Conformity Laboratories (Republic of Korea) established an EV battery testing centre in cooperation with the Thailand Automotive Institute in 2020. Also in Thailand, FOMM (Japan) and Mercedes-Benz (Germany) have established an R&D facility and a battery testing laboratory, in partnership with local organizations.

New infrastructure

Apart from improvements to battery capacity and charging technology, an extensive charging network is important in the adoption of EVs. The limited charging infrastructure in ASEAN poses a major challenge that needs to be addressed in order to build an efficient ecosystem and to support adoption in the region.

Some ASEAN Member States are encouraging investment in EV charging networks and providing incentives to local companies and MNEs to invest in EV infrastructure. Foreign MNEs involved in the development of the charging station network in ASEAN are mostly automotive manufacturers such as BMW (Germany), Hyundai (Republic of Korea), Mercedes-Benz (Germany), Nissan (Japan) and SAIC (China).

The investment need for EV infrastructure is huge, and the infrastructure gap has attracted new entrants that are not traditional automotive companies. Some engineering, power, and oil and gas MNEs are involved in developing private EV charging stations. They include ABB (Switzerland), Chevron (United States), Engie (France), Evlomo (United States), Shell (United Kingdom) and TotalEnergies (France). In 2019, Shell launched its EV chargers at petrol stations in Singapore.¹⁴ In 2021, in collaboration with BMW (Germany), it introduced rapid EV charging facilities in Thailand and in Indonesia. And in January 2022, in partnership with Porsche Asia Pacific, it announced the start of operation of a high-powered charging station in Johor, Malaysia. In 2019, Chevron partnered with Energy Absolute (Thailand) to install 30 charging stations at Caltex Petrol Station¹⁵ and in May 2022 it launched its first EV charging facility in Cambodia.¹⁶

There are also other new entrants in the charging station network. They include technology companies such as Grab (Singapore) and Gojek (Indonesia), investment holding companies (e.g., First Pacific (Hong Kong, China)), venture capital firms (e.g., Clime Capital and Jungle Ventures (both Singapore)), real estate corporations (e.g., Lippo Malls-Indonesia) and ASEAN conglomerates (e.g., CP-Thailand).

b. Drivers and motivations

The rise in EV investment in ASEAN is being driven by a number of major factors, which include (i) access to raw materials, (ii) market potential from the growing adoption of EVs by consumers, (iii) the policy push by governments supporting adoption and production of EVs, (iv) automotive manufacturers expanding facilities in host countries, (v) MNEs establishing closer linkages and connectivity in the EV value chain (upstream and downstream) and (vi) emerging investment opportunities in the EV battery production and infrastructure network.

Increasing demand and market prospects

Although consumer adoption of EVs is at a nascent stage, demand is growing as are efforts by some Member States to support adoption through purchase incentives. A total of 38,119 HEVs and EVs were sold in Indonesia, Malaysia and Thailand in 2020.¹⁷ The ASEAN EV market is expected to grow by 10 per cent (compound annual growth rate) during 2020–2025.¹⁸ The growth and potential for EV adoption will be a key determinant for FDI.

Mobility and electrification solutions

ASEAN Member States are committed to zero-carbon emissions and are establishing a sustainable zero-carbon transport system, which will include electrification of public transportation systems and provision of mobility solutions (ASEAN Secretariat, 2019). Some Member States are introducing electrification of mass mobility systems and are partnering with MNEs to deliver such mobility solutions (box 1.2). Private investors are playing an important role, in partnership with the public sector, in the electrification of mass transportation in the region.

Efficiency-seeking factors

The region has remained an attractive location for automotive production, including for efficiency-seeking EV FDI. Many global automotive MNEs have widespread facilities in the region. They have accumulated extensive experience and have built a strong regional production network and supply chains that support efficient operation.

A key aspect of the region's attractiveness is the influence of production facilities in host countries that can be upgraded or expanded to produce EVs for local, regional or export markets. Expanding existing facilities could generate benefits from synergy, agglomeration and economies of scale. In 2020, the Thai Board of Investment approved a \$175 million investment project by Mitsubishi Motors (Japan) for new robotics and automation upgrades in the production line at Laem Chabang Industrial Estate for annual production of 39,000 vehicles, consisting of 9,500 BEVs and 29,500 HEVs, starting in 2023.¹⁹ In 2021, Great Wall Motor

(China) started a \$688 million investment for factory upgrades to produce EVs in Thailand.²⁰ Also in 2021, UMW Toyota Malaysia committed to investing another \$65 million on top of its earlier \$483 million investment to expand manufacturing operations in Malaysia. The earlier investment was used to construct and commission UMW Toyota's Bukit Raja plant, which introduced hybrid electric technology.²¹

Box 1.2. ASEAN: Electrification of mass transport systems (Selected cases)

Many ASEAN Member States are electrifying mass transport systems to reduce carbon emissions. In partnership with the private sector, including foreign MNEs, they provide incentives for fleet companies to adopt EV solutions.

Indonesia

The Government aims to increase production of EVs to 20 per cent of all vehicles by 2025 and to electrify the public bus system. By 2030, the Transjakarta bus system is expected to have about 10,000 electric buses. It has been conducting trials with models of electric buses since 2019. These models were supplied by BYD (China) and Higer (United Kingdom).

In ride-sharing solutions, Gojek announced that it would have EVs and electric motorcycles on its platform by 2030. The project will involve Gesit (Indonesia) and Gogoro (Taiwan Province of China). Grab (Singapore), as part of its electrification plan in Indonesia, launched 30 electric motorcycles and seven public EV battery-swap stations in Bali in 2020. This was in collaboration with the State-owned electricity company's local branch, PLN UID Bali, the Bali Transportation Office, and Astra Honda Motor (Hong Kong (China)-Japan) and Panasonic (Japan). Grab Indonesia launched its electric car fleet in Jakarta in 2020. The electric cars were produced by Hyundai (Republic of Korea). Astra Honda Manufacturing (a subsidiary of Honda (Japan)), supplied Grab with electric bikes. Grab Indonesia is collaborating with Hyundai (Republic of Korea), Kymco (Taiwan Province of China) and two domestic EV motorbike manufacturers to provide its fleet with more than 5,000 electric cars, motorcycles, bicycles and scooters.

Malaysia

Adoption of EVs for fleet use is gaining ground in Malaysia. In January 2022, the Government announced that a fully electric bus service will start in Kuala Lumpur, Putrajaya and other major cities before expanding nationwide. This aligns with the national goal to transform to a carbon-neutral country by 2050. SKS Bus Group (Malaysia), in collaboration with CCRC Group (China), is supplying electric buses to Kuala Lumpur City Hall.

Philippines

The EV adoption rate for private vehicles remains low. Most adoption incentives target commercial and fleet uses, such as e-jeepneys and electric-powered tricycles (e-trikes). The Department of Transportation issued Department Order No. 2017-011 (Re: Omnibus Guidelines on the Planning and Identification of Public Road Transportation Services and Franchise Issuance), or the Public Utility Vehicle Modernization Programme, in June 2017. The switch to e-trikes and e-jeepneys is gaining ground. In June 2018, four cities in Metro Manila saw the roll-out of 3,000 e-trikes. A popular e-trike brand is manufactured by BEMAC Philippines (a subsidiary of BEMAC, a pioneer in the EV industry in Japan). Star 8 Green Technology (Australia) entered the Philippine automotive market in 2020, offering the use of electric- and solar-powered jeepneys to operators.

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Box 1.2. ASEAN: Electrification of mass transport systems (Selected cases) (Concluded)**Singapore**

The Government's Smart Mobility 2030 vision calls for innovative and intelligent transport systems. Across all fleet use cases, including ride-hailing and logistics, the Government is providing incentives to encourage adoption. It has announced that all new public buses will be either electric or hybrid and running on 100 per cent cleaner energy by 2040. The Government is working with various players in the EV industry. ABB (Switzerland) is to supply charging infrastructure for 40 electric buses in 2020.

In March 2022, the Singapore Government set a new target to reduce land transport emissions by 80 per cent by 2050. To achieve it, the Land Transport Authority will intensify efforts to electrify public bus fleets and encourage the adoption of private EVs and taxi fleets over those powered by fossil fuels. One goal is that at least half of taxis in the country will be electric by 2030. SMRT, the mass rapid transit provider, aims to change all its taxis to 100 per cent EVs within the next five years. In 2021, SMRT rolled out its first 300 electric taxis, made by MG, originally a United Kingdom company and now owned by Geely (China). Ride-hailing company Grab partnered with Hyundai Motor Group) and Kia (both Republic of Korea) in 2021 on new EV business models such as battery-as-a-service leasing, to facilitate the switch for Grab drivers.

Thailand

The Thai Government is promoting the use of EVs to help reduce air pollution in metropolitan areas and to cut down on carbon emissions. It aims for 30 per cent of total car manufacturing to be EVs by 2030 and 30 per cent of the transport system to be electrified by 2035. The plan includes 53,000 electric motorcycle taxis by 2022 and 5,000 electric buses by 2025. In 2018, BYD (China) deployed electric cars for VIP taxi and car-sharing service in Bangkok. The initiative stems from an agreement with the Land Transport Department for 1,000 EVs to be delivered to Bangkok.^l Also in 2018, Torqeedo (Germany) delivered its first electric propulsion system for ferries in Thailand. In 2022, 11 electric buses started operating on two Bangkok routes as part of pilot projects to build a comprehensive network of buses that use 100 per cent electricity. The buses were supplied and produced by Electric Vehicle Thailand.

Viet Nam

Although fleet adoption of EVs is low, VinBus (a subsidiary of VinFast (Viet Nam)) is planning to introduce 200 electric buses. As of March 2022, the first batch was already in Ho Chi Minh City for the pilot phase of the first e-bus service linked to the city's public transport system. In 2019, VinFast and Kreisel Electric (Austria) worked together to develop a battery pack that VinFast electric cars and buses are using. VinBus went into a strategic partnership in 2020 with Advantech (Taiwan Province of China) to develop a smart electric bus system.^q In the same year, it also partnered with Wanbang Digital Energy (China) to provide high-efficiency and smart electric-charging technology solutions. VinFast launched two electric motorbike models in 2021 and worked with several global automotive MNEs in the development of its motorbike models. For example, for its Theon model, the chassis and the front and rear suspension systems were supplied by Showa (Japan), the brakes by Nissin Automotive Parts (Japan) and a two-channel antilock braking system by Continental (Germany).

Source: Country websites, industry and consultancy reports, and media.

Green and zero-emission commitment

Global, regional and national policies on carbon neutrality are affecting technology innovation and zero-emission vehicles, in favour of EVs. ASEAN Member States have plans to move towards carbon neutrality that include production and adoption of EVs. This policy push is an important factor driving FDI in the EV value chain in the region. In addition, many major automotive manufacturers that also operate in ASEAN have corporate pledges to move towards an entire portfolio of EV production within a target timeline. For instance, the EV strategy of Toyota (Japan) is driven partly by the home country's drive to achieve net-zero greenhouse gas emissions by 2050, through manufacturing cars that run on renewable energy only.²² Mercedes-Benz (Germany) aims to transition to an electric-only line-up by 2030.²³

Policy and institutional support

ASEAN Member States are adopting climate mitigation and adaptation measures, including carbon-neutral policies and reduction of carbon emission from vehicles (ASEAN Secretariat, 2021a). Promotion of EVs is an important consideration. In encouraging the automotive industry to adopt clean vehicles and technology for production of automobiles, many Member States offer incentives and actively promote FDI in the production of EVs, including batteries, and at the same time encourage consumers to adopt EVs (table 1.8). Some Member States are developing EV hubs and specialized auto parks. Indonesia and Thailand are developing their respective EV hubs to attract an agglomeration of EV-related companies to help build an efficient ecosystem, thereby further strengthening the automotive industry.

Table 1.8. ASEAN: EV-related measures (Selected countries)

Measure	Indonesia	Malaysia	Philippines	Singapore	Thailand	Viet Nam
Carbon neutrality target	☑	☑	☑	☑	☑	☑
EV target	☑ 2035: 30 per cent of production volume	☑ 2030: 15 per cent of industry volume	☑ Electric motorbike “e-trike” programme	☑ 2040: all types of vehicles	☑ 2030: 30 per cent of all car sales	☑ Development stage
Investment incentives for MNEs	☑	☑	☑	☑	☑	☑ Incentives are general but include EV production
Incentives for EV adoption by consumers	☑	☑	☑	☑	☑	..
Industrial zones solely for EVs	..	☑	..	..	EEC (Next-generation automotive, including EVs)	..

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Table 1.8. ASEAN: EV-related measures (Selected countries) (Concluded)

Measure	Indonesia	Malaysia	Philippines	Singapore	Thailand	Viet Nam
National programme and institutional support	Presidential Regulation No. 55 of 2019 on Acceleration of Battery-Based Electric Vehicles Program for Road Transportation Various ministries	National Automotive Plan, launched in February 2020, involved various ministries	House Bill 10213 Electric Vehicle Industry Development Act Various Government departments	Various agencies and institutions supporting the development of different EV value chain	EV Industry Development Road Map National Electric Vehicles Policy Committee	..

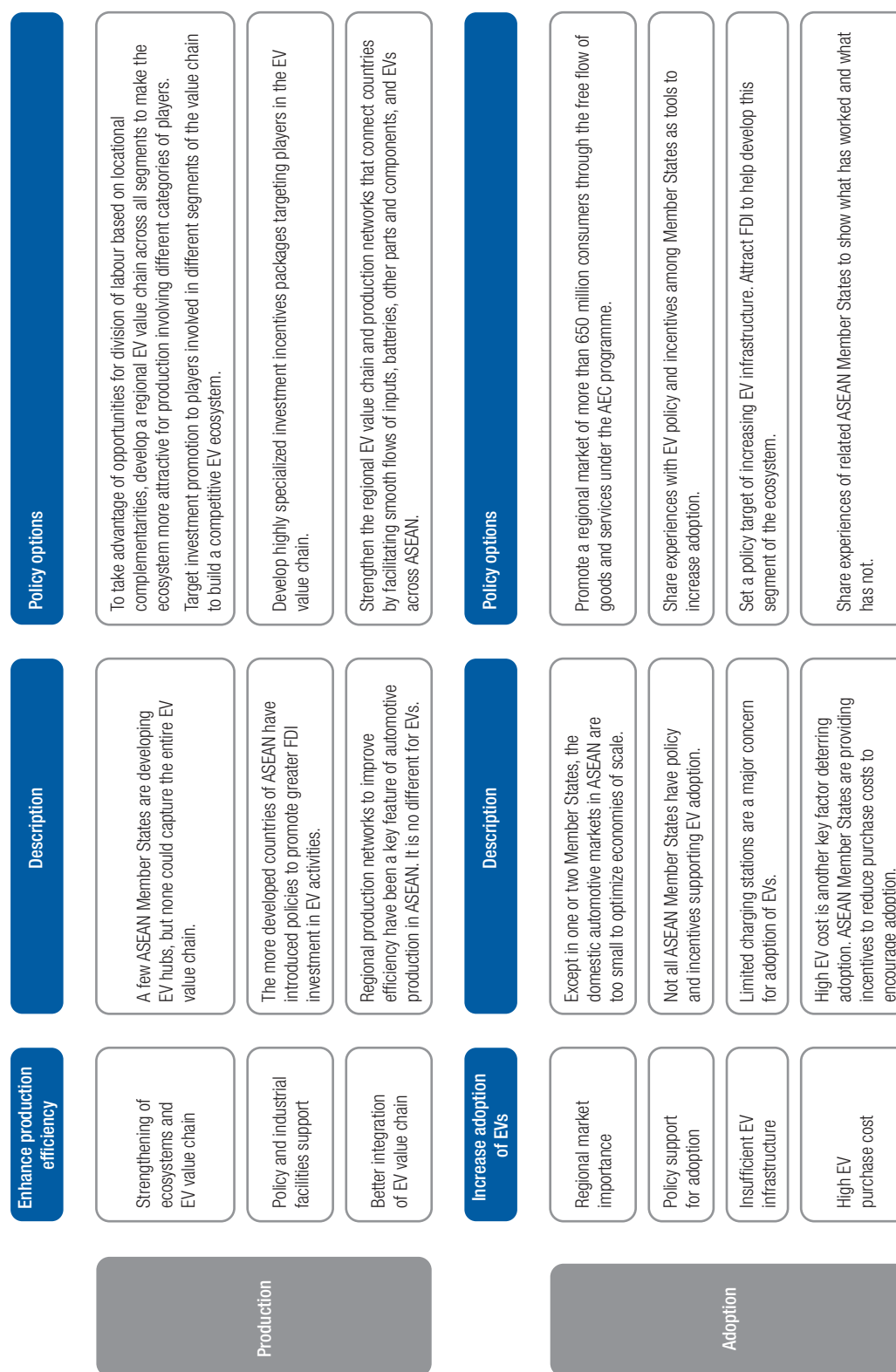
Source: ASEAN Secretariat and media reports.

The EV industry in ASEAN – both production and adoption – is at an early growth stage, underpinned by push and pull factors, including the influence of carbon-neutral policies. Recent years have witnessed a rapid rise in FDI in the EV value chain, from mining to battery production, EV assembly, R&D and EV infrastructure development. Some segments of the value chain are attracting new entrants that operate alongside traditional automotive manufacturers, strengthening the ecosystem and expanding sources of FDI.

Many EV projects witnessed in recent years are large in value (in the billions of dollars) as firms expand facilities or establish plants to build integrated networks to benefit from synergy, agglomeration, established production networks and operational experience. Some of these large-scale projects started construction in 2021–2022 and will begin commercial operations in a few years, which will sustain strong inflows of FDI in the EV value chain over the next few years. Given the significance of automotive manufacturing and the early stage in the development of the EV industry, prospects for faster growth in FDI in the EV value chain are promising. The EV industry will remain a key recipient of future FDI flows, though they may be uneven. The implications of FDI in the EV value chain extend beyond developing the ecosystem. FDI will continue to generate significant effects in connecting countries, companies and production processes, including in strengthening regional integration.

Yet, two key challenges to the pace of EV development could affect the FDI environment for EVs: (i) building production efficiency and the ecosystem, and (ii) increasing adoption of and demand for EVs (figure 1.14).

A major challenge in ASEAN is the development of EV infrastructure (table 1.9). Although Member States have established significant infrastructure targets, they are considerably lower than those of other countries with major EV activity (e.g., in Europe, and in China). More needs to be done to develop the infrastructure network to support an efficient EV industry and market. This infrastructure gap implies opportunities for FDI in EV infrastructure in the region.

Figure 1.14. ASEAN EV challenges

Source: ASEAN Investment Report 2022 research.

Table 1.9. EV public charging stations in ASEAN, 2021

Country	Existing	Targets
Indonesia	240 (first half 2021)	2,400 charging stations and 10,000 battery-swap stations by 2025 and 31,000 charging stations by 2030
Malaysia	421 (March 2021)	25,000 public charging points and 100,000 private charging points by 2030
Philippines	136 (July 2021)	5,000 charging stations by 2025
Singapore	1,800 (February 2021)	60,000 charging points by 2030
Thailand	1,000 (Nov 2021)	7,000 charging stations in the next few years

Source: Nikkei Asia, "Slow charge: ASEAN aims to bring lofty EV goals within range", 21 September 2021; as well as industry reports and media.

To move forward, policy options to be considered include attracting foreign technologies and companies to help develop an efficient regional EV ecosystem. Efforts could be considered to increase participation by MNEs, FDI activity and business linkages between MNEs and local companies in different segments of the EV value chain. Full realization of the ASEAN Economic Community and accelerated regional integration will be crucial to improve the competitiveness of the region for FDI in EVs. Factors that would improve the attractiveness of the region for such FDI include free flows of parts and components, intraregional sourcing of them, and an efficient investment environment that facilitates regional production networks.

1.4.2. FDI in the semiconductor industry

FDI in semiconductors was particularly active in ASEAN in 2021. The shortage of global supply of semiconductors and supply chain disruptions aggravated by the pandemic led electronics MNEs to shore up production capacity in the region to meet current demand and post-pandemic recovery demand. Many MNEs that already have a significant presence in ASEAN further expanded operations in the region, particularly in major hubs such as Malaysia, the Philippines, Singapore, Thailand and Viet Nam. They also upgraded plants with Industry 4.0 technologies and equipment to improve efficiency.

Some MNEs made huge capital expenditures in 2021 to expand capacity. For instance, Intel (United States) continued building a \$7.1 billion semiconductor packaging plant in Penang (Malaysia) and Siltronic (Germany) a \$2.4 billion wafer fabrication facility in Singapore. Austria Technologie & Systemtechnik continued constructing phase 1 of a \$2.1 billion integrated circuit substrates plant, and in 2022 Infineon Technologies (Germany) announced an expansion with a \$2.6 billion fabrication facility in Malaysia. In 2021, Samsung (Republic of Korea), which already has a significant presence in Viet Nam, continued developing a \$952 million facility for ball grid assembly chips in that host country, and Rohm (Japan) is building a \$215 million electronic component plant in Malaysia.

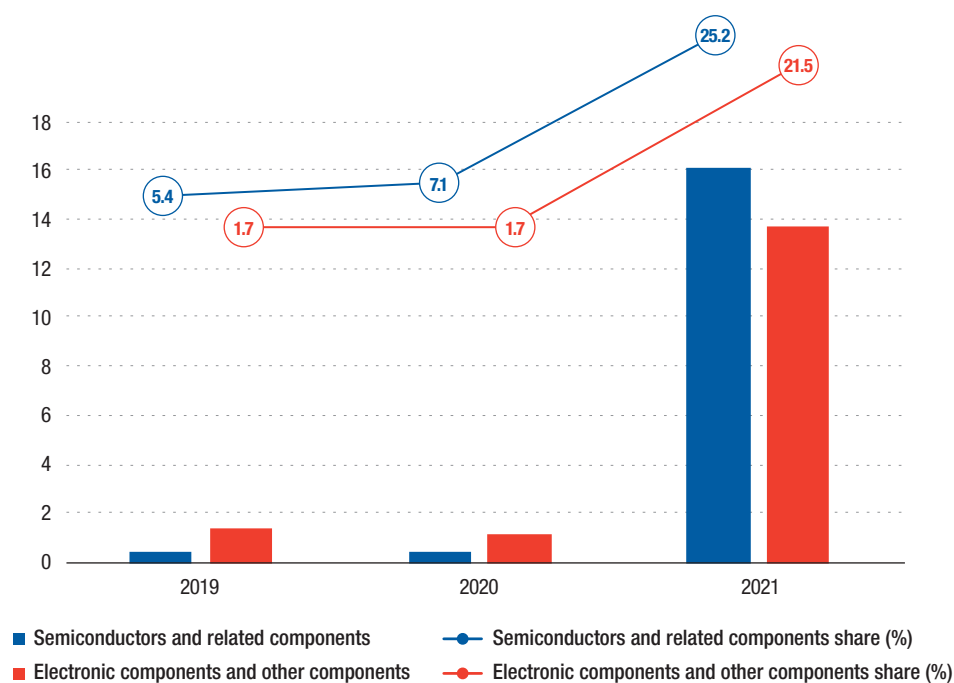
The electronics industry in ASEAN continued to receive high levels of FDI in recent years, underscoring the significance of the region as a major global production hub. Robust FDI in electronics, in particular semiconductors, helped the region record strong investment growth

in 2021. Greenfield investment in semiconductors and other electronic components rose significantly in 2021 (figure 1.15). Semiconductors share in total greenfield investment rose from 7.1 per cent in 2020 to 25.2 per cent and electronics from 1.7 per cent to 21.5 per cent in the same period.

Rising global demand and investment by MNEs to expand production capacity and to address supply chain challenges were key reasons. Investments in semiconductors are concentrated, particularly in Member States with a long history of semiconductor production (e.g., Malaysia, the Philippines, Singapore and Thailand) and more developed ecosystems. Indonesia and Viet Nam, though, have received increasing electronics investment in the last decade.

The prospects for further growth in global semiconductor demand and an improving investment environment in ASEAN are major forces driving semiconductor investment in the region. These forces will continue to encourage more such investment in the next few years. Greater application of semiconductors in industrial uses, 5G technology, data processing, the automotive industry, Industry 4.0, smart electronic products and other consumer electronics is expected to further push up demand. This would lead to a further rise in investment and capital expenditure. Global supply chain disruption has also led MNEs to diversify and strengthen production facilities in key strategic locations, including in some ASEAN Member States, to prepare for post-pandemic recovery.

Figure 1.15. ASEAN: announced greenfield investment in semiconductors and in electronic components, 2019–2021 (Billions of dollars and per cent)



Source: UNCTAD, based on information from the *Financial Times Ltd*, fdi Markets (www.fdimarkets.com).

Many MNEs, led by those from the United States and Europe, have been upgrading or expanding semiconductor production facilities or investing in new business functions in ASEAN in recent years. MNEs from China, Japan, the Republic of Korea and Taiwan Province of China are also increasing their investment in semiconductors in the region. Another major reason for the surge in FDI in semiconductors in 2021 was the many megadeals, involving investment projects with values exceeding \$0.5 billion.

Examples of investment in semiconductors include that of GlobalFoundries (United States), ultimately owned by the United Arab Emirates, which is building a \$4 billion wafer fabrication plant in Singapore. Samsung (Republic of Korea) approved an investment of about \$900 million to develop a subsidiary in Viet Nam to manufacture flip-chip ball grid arrays. Intel (United States), which already has a significant presence in Malaysia, is investing \$7.2 billion to expand its semiconductor production capacity with advanced packaging technology. It is also upgrading its facilities in Viet Nam to manufacture 5G products and core processors, investing \$475 million in that host country in 2021. Spartronics (United States), a contract manufacturer of complex electronic and electromechanical devices, continued constructing a facility in Viet Nam, with a factory space that is four times the size of its existing plant in that host country. Siltronic (Germany) started construction of a \$2.4 billion second manufacturing facility (300 mm fabrication plant) at Tampines Wafer Fab Park in Singapore, and Nexperia (Netherlands) continued building a \$400 million facility in Seremban, Malaysia. Amkor Technology (United States), a contract manufacturer, announced in 2021 a \$1.6 billion investment plan to develop a semiconductor manufacturing, testing and assembling plant in Viet Nam, with construction to start in 2022.²⁴ It is constructing the first phase of a clean room facility, estimated at 20,000 square metres, with high-volume manufacturing scheduled to start in 2023. The investment is part of Amkor's assembly and test network, factory capacity expansion and geographical diversification strategy.

Other electronic MNEs are also increasing investment in the region (table 1.10). National Instruments (United States) is expanding its facility in Penang, Malaysia with an estimated \$40 million investment. The expansion will form the company's key global hub and its third largest facility. The Penang facility is one of the company's largest R&D centres outside of its headquarters in the United States. In 2021, Simmtech Holdings (Republic of Korea) started an investment in an 18-acre site at Batu Kawan Industrial Park, Malaysia, to host its first large-scale factory in South-East Asia. In 2019, Pegatron (Taiwan Province of China), together with a local partner, opened a factory to make wireless chips and semiconductors for routers in Batamindo Industrial Park, Indonesia. The initial investment of \$40 million is expected to scale to \$300 million by the time that the factory is fully built.²⁵

In 2022, Infineon Technologies (Germany) began expanding its back-end operations in Batam, Indonesia to double operational capacity. The expansion, estimated to be worth \$2.8 billion, is expected to start production in 2024 and to focus on assembly and testing of automotive products. The company is transforming its Singapore operations into a base for AI applications with an initial investment of \$20 million. The AI hub is to be established over the next three years. Concurrently, it is building a \$2.6 billion front-end fabrication plant in Malaysia

Table 1.10. ASEAN: FDI in semiconductors, 2020–2022 (Selected cases)

MNE	Headquarters	Year	Investment location in ASEAN	Purpose of investment
ASML International	Netherlands	2022	Singapore	Open manufacturing facility and operations hub, and start construction of a second manufacturing site (to start operation by 2023)
Ferrotec	Japan	2022	Malaysia	Construct a manufacturing facility for electromechanical assembly and advanced material fabrication for semiconductor equipment
Graphcore	United Kingdom	2021	Singapore	Open a regional hub to support customers across Southeast Asia
Hayward Quartz Technology	United States	2021	Viet Nam	Construct a semiconductor factory
Murata Manufacturing	Japan	2021	Thailand	Construct a production plant for multilayer ceramic capacitors, for completion in March 2023
NVIDIA	United States	2020	Thailand	Work with a consortium of universities in Thailand to drive research and accelerate scientific breakthroughs in artificial intelligence and high-performance computing
Qualcomm	United States	2020	Viet Nam	Launch an R&D facility that can also provide high-end testing services
Rohm Group	Japan	2022	Malaysia	Expand its electronic components facility
TTM Technologies	United States	2022	Malaysia	Construct a manufacturing plant
Universal Scientific Industrial (Shanghai)	China	2021	Viet Nam	Construct a manufacturing facility to produce electronic circuit boards for wearable devices

Source: ASEAN Investment Report 2022 research.

(the third manufacturing line in its Kulim plant).²⁶ Also in 2022, semiconductor foundry United Microelectronics (Taiwan Province of China) announced a \$5 billion investment plan to build an advanced manufacturing facility next to its plant in Singapore. Bosch (Germany) announced that it is investing \$457 million to expand its semiconductor manufacturing facilities in Penang (Malaysia). Delta Electronics (Taiwan Province of China) announced the construction of Plant 8 in Bangpoo Industrial Estate, Samutprakarn and an R&D centre in Thailand, with a total investment cost of about \$81.8 million.²⁷

Expansions and new projects in recent years have mostly been concentrated in Malaysia, Singapore, Thailand and Viet Nam (box 1.3). Aside from expanding production capacity, investment in more recent times by semiconductor MNEs has involved upgrading facilities and focusing on new and advanced fabrication plants, development of centres of excellence, R&D centres and advanced assembly and test facilities.

Box 1.3. Semiconductor MNEs expanding in ASEAN

Over the years, semiconductor MNEs have continued to expand in the region with additional plants and upgraded facilities, operating in more ASEAN Member States and in multiple business functions.

Micron Technology (United States) established its presence in the region with a facility in Singapore in 1998. Today, it has three manufacturing facilities in Malaysia. The Batu Kawan facility is also its centre of excellence for solid state drive assembly and testing. In Singapore, the company has invested more than \$15 billion since 1998; it has three fabrication facilities and a test and assembly facility in that host country. Micron's presence in Singapore also includes a technology centre supporting innovation. In 2019, Micron Technology Singapore completed the expansion of its NAND centre of excellence (a NAND flash memory fabrication facility) to support advanced 3D NAND technology node transitions while maintaining wafer capacity.^a The facility is a base for Micron's global operations. It comprises the global manufacturing hub and a wafer fabrication unit, as well as a space for testing and assembly of materials. Micron has also continued to expand in Singapore. In 2016, it added approximately 255,000 square feet to its site facility, almost doubling the space.^b

Murata Manufacturing (Japan) established Murata Electronics Singapore in 1972, one of the first factories set up by the company outside Japan to meet the demand for electronic components in South-East Asia. Today, it operates three facilities in Yishun Industrial Park, manufacturing multilayer ceramic chip capacitors and covering sales in South-East Asia and South Asia. To support Murata Singapore's sales operations, several sales affiliates were established in Malaysia, the Philippines, Thailand and Viet Nam. The company has manufacturing facilities and other business functions in Malaysia, the Philippines and Thailand. It is expanding in Thailand with a new plant, which is expected to be operational by 2023.

China-owned Nexperia (Netherlands) established a subsidiary in 1992 in Negeri Sembilan, Malaysia. Since then, it has continuously expanded operations in that host country to become an extensive assembly and test entity. The company is constructing an additional facility to double production capacity by 2026. In 2021 it launched a global R&D centre in Penang.

Major electronics and semiconductor MNEs are expanding operations in and to Viet Nam. Canon and Panasonic (both Japan), Samsung and LG (both Republic of Korea) and Intel (United States) have each built a significant presence in that host country. About half of Samsung's global smartphone production is from Viet Nam. As of the first quarter of 2022, Samsung had a total investment of \$19.2 billion in the country.^c Other major electronics MNEs also have a presence in the country. They include Broadcom (United States), Hitachi (Japan), ON Semiconductor (United States), Renesas Electronics (Japan), SK Hynix (Republic of Korea), STMicroelectronics (Switzerland), Texas Instruments (United States) and Toshiba (Japan). They operate multiple business functions, including manufacturing.

Between 2020 and April 2022, Viet Nam saw the inflow of more than \$3.9 billion in investment in new and expanded semiconductor facilities and R&D centres. Intel (United States) is expanding its testing and assembly operation in Ho Chi Minh City Hi-Tech Park, investing more than \$1.5 billion.^d United Scientific Industrial (China) had a ground-breaking ceremony in 2020 for a \$600 million facility to produce electronic circuit boards for wearable devices.

Source: Company websites, *ASEAN Investment Report 2020–2021* and media.

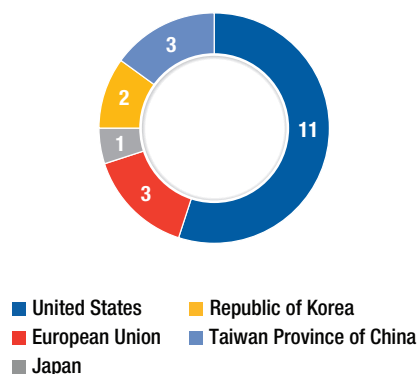
^a *AIR 2020–2021*, page 124.

^b *Cleanroom Technology*, "Micron completes Singapore NAND centre of excellence expansion", 15 August 2019.

^c *Nikkei Asia*, "Samsung injects \$920m into Vietnam factory", 17 February 2022.

^d *Enterprise IT News*, "Can Southeast Asia find footing as a semiconductor powerhouse in global chip ecosystem?", 20 September 2021.

Figure 1.16. Top 20 global semiconductor MNEs in ASEAN, by nationality (Number)



Source: ASEAN Investment Report 2022 research.

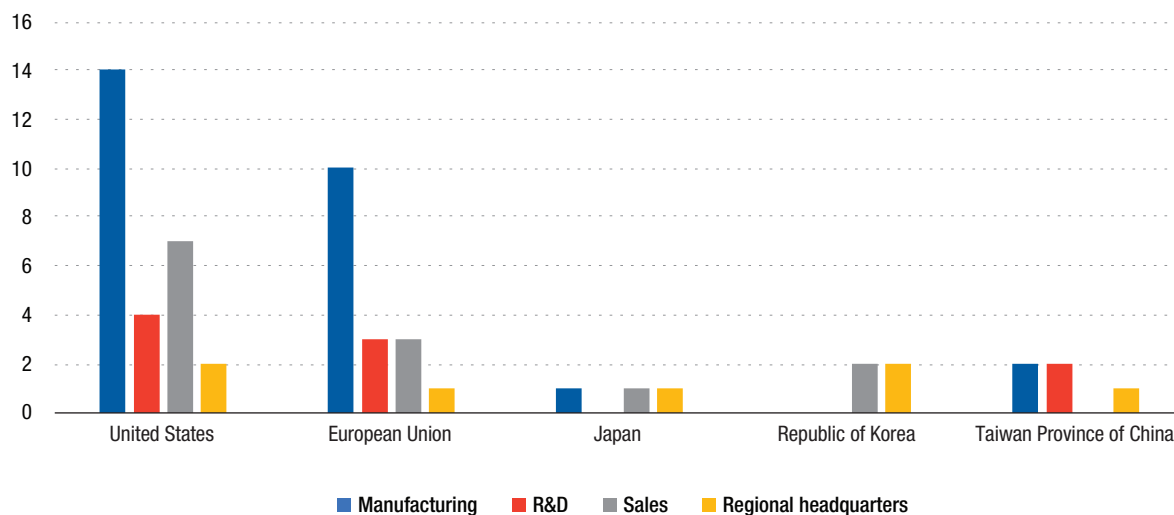
a. Top 20 global semiconductor MNEs

ASEAN is host to the top 20 global semiconductor MNEs. Most have many decades of investment relationships in the region, with manufacturing and testing facilities that date to the early 1970s. Over time, these MNEs have established many different business functions (e.g., manufacturing, testing, regional headquarters, R&D centres, sales and distribution). These 20 MNEs account for 88 per cent of total global semiconductor revenues, valued at \$556 billion in 2021.²⁸ A majority of the top 20 in ASEAN are from the United States (figure 1.16).

Profiles of the top 20 in ASEAN

Semiconductor MNEs from the United States have the greatest combined number of manufacturing facilities in ASEAN, followed by MNEs from Europe and MNEs headquartered in Asia (figure 1.17). United States MNEs have also established the greatest number of R&D and sales operations in the region, followed by European MNEs. Many continued to expand and upgrade facilities, deepening their footprints in the region.

Figure 1.17. Presence of top 20 global semiconductor MNEs in ASEAN, by business function and number of facilities



Source: ASEAN Investment Report 2022 research.

The top 20 MNEs from Japan, the Republic of Korea and Taiwan Province of China have fewer facilities in ASEAN. Major MNEs such as Taiwan Semiconductors Manufacturing (Taiwan Province of China), Samsung and SK Hynix (both Republic of Korea) have not yet established chip plants in the region, although plans for doing so have been announced and Samsung is in the finalization stage of plans to build a plant in Viet Nam. All of the top 20 MNEs from these three economies have a presence in Singapore, making it the largest host country. United States and European MNEs are mostly in Malaysia, the Philippines and Singapore.

A key feature of these top 20 MNEs, as noted, is that many of them have been in the region for decades (table 1.11). Their long history in the region entails (i) favourable experience operating in ASEAN, (ii) continuous expansion and upgrading of facilities with multiple business functions, and (iii) the development of strong regional production networks.

Table 1.11. Top 20 global semiconductor MNEs, decades of presence in ASEAN

MNE	Headquarters	Location in ASEAN of semiconductor-related facilities (Selected cases)	Date established in ASEAN
Samsung	Republic of Korea	Singapore and Viet Nam	1991 ^a
Intel	United States	Malaysia	1972
		Viet Nam	2010
Taiwan Semiconductor Manufacturing	Taiwan Province of China	Singapore (joint venture with NXP)	1998
SK Hynix	Republic of Korea	Singapore (sales and marketing)	1991
		Malaysia (sales operations for NAND business)	2021
Qualcomm	United States	Viet Nam	2003
Micron Technology	United States	Singapore	1998
		Malaysia	2010
NVIDIA	United States	Singapore	2000
ASML Holding	United States	Singapore	1994
		Malaysia	2000
Texas Instruments	United States	Malaysia	1972
		Philippines	1979
Mediatek	Taiwan Province of China	Singapore	2004
STMicroelectronics	Switzerland	Singapore	1969
		Malaysia	1974
		Philippines	1999

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Table 1.11. Top 20 global semiconductor MNEs, decades of presence in ASEAN (Concluded)

MNE	Headquarters	Location in ASEAN of semiconductor-related facilities (Selected cases)	Date established in ASEAN
Advanced Micro Devices	United States	Malaysia	1972
		Singapore	1987
Infineon Technologies	Germany	Melaka, Malaysia	1973
		Singapore	1991
		Batam, Indonesia	1996
		Kulim, Malaysia	2006
		Philippines and Thailand (under Cypress, which was acquired by Infineon)	2019
NXP Semiconductor	Netherlands	Malaysia	1972
		Thailand	1974
		Singapore (joint venture with Taiwan Semiconductor Manufacturing)	2007
Renesas Electronics	Japan	Malaysia	1974
		Singapore	1994
		Viet Nam	2004
United Microelectronics	Taiwan Province of China	Singapore	2001 (first fabrication plant)
Analog Devices	United States	Philippines	1982
Microchip Technology	United States	Singapore	1996
		Thailand	2014
On Semiconductor	United States	Philippines	1978
		Malaysia (a spin-off of Motorola Semiconductor Division)	1999
Qorvo	United States	Malaysia (manufacturing and test operations)	2004
		Philippines (assembly, test and packaging)	
		Singapore (R&D and sales centre)	
		Viet Nam (R&D and sales centre)	

Source: GlobalData, Counterpoint Technology Market Research, company websites and media.

Note: Rank based on 2021 global revenues.

* Samsung's earliest footprint in ASEAN with electronics (not semiconductor) facilities was in Indonesia in 1991. Viet Nam has become Samsung's largest electronics production hub in South-East Asia, and the company has announced plans to open a semiconductor facility in that country.

b. Other semiconductor MNEs and the ecosystem

Although not in the global top 20, other semiconductor MNEs play an important role in enriching the ecosystem (annex table 1.2). They operate in different segments of the semiconductor value chain and help make the industry more efficient. They also play a key role in the development of regional production networks, supporting intra- and interfirm transactions. The evolution of the semiconductor industry from pure integrated device manufacturing (IDM) to the development of fabless operations also reflect the type of semiconductor facilities established in the region. ASEAN hosts back-end to front-end manufacturing facilities for IDM²⁹ semiconductor MNEs (e.g., Intel, Infineon Technologies, On Semiconductors, ST Microelectronics) to R&D and design centres of specialized semiconductor MNEs involving fabless operations (e.g., Broadcom, Qualcomm, Amkor Technology, NXP). The presence of these MNEs and their interaction (among and between IDM and fabless) enriches ASEAN's semiconductor ecosystem.

There are key differences and similarities among semiconductor MNEs in ASEAN, including those not in the top 20 (figure 1.18). American and European MNEs have specialized operations in manufacturing and assembly of semiconductors, whereas Japanese and Korean semiconductor MNEs are part of a bigger electronic group of companies (e.g., Samsung Group). Semiconductor MNEs from Taiwan Province of China are also specialized, as they operate as fabless or contract manufacturing entities. The American and European MNEs were the earliest in the region, establishing manufacturing facilities in the 1970s and 1980s, mostly in Malaysia and Singapore and later expanding to include regional headquarters and R&D centres in these locations. Semiconductor MNEs from the Republic of Korea and Taiwan Province of China came in the 1990s. MNEs from Europe, Japan and the United States have established strong regional production networks involving intra- and interfirm activities.

c. The semiconductor value chain

Semiconductor manufacturing operations are complex. The interconnection of companies along the value chain is a major aspect of the semiconductor industry in ASEAN. No company can cover the entire semiconductor value chain, so collaboration of suppliers and production networks are important to the development of an interconnected industry. Semiconductor companies can outsource manufacturing to third parties. They can also outsource testing and packaging operations to other companies in geographical proximity. This production process encourages other related MNEs to establish operations in the region to be near markets and clients.

South-East Asia is an assembly, test and packaging hub for IDM and fabless operations. Given their locational strengths and the state of development of the semiconductor ecosystem, the division of labour and regional production networks in the industry in the region are both growing. The semiconductor ecosystem and the interaction of stakeholders improves efficiency through intra- and interfirm transactions involving contract manufacturers, electronics manufacturing services and third-party suppliers supporting the semiconductor value chain. Companies along the value chain support each other (e.g., front-end manufacturing facilities send products to back-end entities for final assembly, packaging and testing, including sharing

Figure 1.18. Characteristics of semiconductor MNEs in ASEAN

Headquarters	Earliest investment	Type of MNE	Type of presence	Mode of expansion	Location	MNEs
United States	1970s	Specialized	Network of production facilities, R&D, centre of excellence, sales	Mostly greenfield, some spin-offs and acquisitions	Mostly concentrated in Malaysia or Singapore; a few in the Philippines or Viet Nam	Advanced Micro Devices, ASML Holdings, Intel, Texas Instruments, Micron Technology, NVIDIA, On Semiconductor, Qualcomm, Qorvo, Flextronics, ^a Broadcom, ^a Amkor, ^a Seagate Technology ^a
European Union	1970s	Specialized	Network of production facilities, R&D, sales	Mostly greenfield, acquisitions	Mostly concentrated in Malaysia or Singapore; a few in the Philippines or Thailand	Infineon Technologies, STMicroelectronics, NXP Semiconductors, Graphcore, ^a Siltronic, ^a Soitec ^a
Japan	1970s	Part of an electronics group	Network of production facilities, sales	Mostly greenfield, acquisitions	Malaysia, Singapore, the Philippines, Thailand	Renesas Electronics, Murata Manufacturing, ^a Minebea Mitsumi, ^a Noble Electronics ^a
Republic of Korea	1990s–2000s	Part of an electronics group	Regional headquarters, sales	Mostly greenfield; concentrated in one or two countries	Either Malaysia or Singapore or Viet Nam	Samsung, ^b Simmtech, ^a SK Hynix
Taiwan Province of China	1990s–2000s	Specialized	Production facilities, sales	Mostly greenfield, joint venture, concentrated mostly in one country	Mostly in Singapore	Taiwan Semiconductor Manufacturing Company, MediaTek, United Microelectronics, ASE Group, ^a Powertech Technology, ^a GlobalWaters ^a

Source: ASEAN Investment Report 2022 research.

^a Including MNEs not in the global top 20 MNEs.^b In 2022, Samsung laid out plans for construction of a semiconductor plant in Viet Nam.

unutilized equipment in the region; regional logistics centres coordinate final products to be sent to other distribution hubs). Their interaction helps connect countries and companies, strengthening regional production networks in the region.

Although most ASEAN Member States specialize in assembly and testing, the region also hosts other types of operations (i.e., front-end, foundry, design, R&D facilities) along the value chain. In the early 1970s, prior to the development of fabless operation, integrated device manufacturers such as Infineon Technologies, Intel, Micron Technologies, Renesas Electronics, Samsung, Texas Instruments and Toshiba Semiconductors had already established assembly and test facilities in the region (table 1.12). Over time, they expanded and upgraded facilities, and established other business functions (e.g., design, R&D), further strengthening the region's semiconductor value chain.

Table 1.12. Integrated device manufacturer MNEs in ASEAN (Selected cases)

IDM semiconductor MNE	Headquarters	Facility in ASEAN
Intel	United States	Malaysia (assembly and test) Viet Nam (assembly and test)
Micron Technology	United States	Malaysia (three manufacturing facilities) Singapore (three manufacturing facilities and global operations headquarters). NAND Centre of Excellence for non-volatile memory, with the company's largest manufacturing footprint with three 200 mm and 300 mm memory wafer fabrication facilities, as well as a test and assembly facility; comprises an R&D technology centre for NAND innovation, and a shared service centre providing centralized support for Singapore and Asia-Pacific operations ^a
Texas Instruments	United States	Malaysia (two facilities for assembling and test) Philippines (two facilities for assembling and test)
Infineon Technologies	Germany	Indonesia (back-end manufacturing facility) Malaysia (two manufacturing facilities, advanced logic production facility, others) Philippines (back-end manufacturing facility, back-end under subsidiary Cypress Technologies, R&D, others) Singapore (Asia-Pacific headquarters, production, R&D, supply chain, sales and marketing) Thailand (back-end facility under subsidiary Cypress Technologies) Viet Nam (sales, others)
Renesas Electronics	Japan	Malaysia (four manufacturing facilities) Singapore (manage sales and marketing activities across South-East Asia and Oceania) Viet Nam (manufacturing facility)
Toshiba	Japan	Thailand (manufacturing facility – back-end processes, namely assembly and testing, of small signal devices and opto devices)
Samsung	Republic of Korea	Viet Nam – announced detailed plans to set up a semiconductor production facility, with construction to start in 2022

Source: Based on company websites, investment promotion agencies of ASEAN Member States, industry reports and media.

^a EDB Singapore, "Company highlights: Micron Technology" (www.edb.gov.sg).

Major MNEs in outsourcing semiconductor assembly and test, such as ASE Technology (Taiwan Province of China), Amkor Technology (United States), Jiangsu Changjiang Electronics (China), and Powertech Technology (Taiwan Province of China), have operations in multiple ASEAN Member States (e.g., Malaysia, the Philippines, Singapore, Thailand, Viet Nam). In addition, homegrown companies in such outsourcing from ASEAN Member States are strengthening the regional semiconductor value chain by providing services to many major MNEs.

Semiconductor equipment and materials producers have also established production facilities in the region. Mazak (Japan) has an advanced manufacturing facility in Singapore and technology or technical centres in Indonesia, Malaysia, Thailand and Viet Nam. ASM (Netherlands) has a manufacturing facility in Singapore. Agilent Technologies (United States) has subsidiaries in Malaysia, the Philippines, Thailand and Viet Nam and a manufacturing facility in Singapore.

d. Investment motivations

Factors driving the surge in semiconductor FDI in the region include (i) the improving semiconductor and electronics ecosystem (box 1.4), (ii) government efforts to promote and facilitate investment, (iii) investment incentive packages, (iv) the long experience of Member States with semiconductor production, (v) infrastructure and evolving industrial facilities and (vi) proximity and accessibility to major clients and to a growing electronics industry.

In the pandemic years, some MNEs upgraded their plants by installing advanced manufacturing and Industry 4.0 technologies to improve efficiency. In some cases, MNEs invested in other business functions such as in R&D and established centres of excellence in the region. The pandemic has also accentuated the use of regional production networks by MNEs to address supply chain challenges by optimizing plant facilities (e.g., those with excess capacity) or through better coordination in the utilization of machinery and equipment. This is corroborated by interviews with subsidiaries of electronics MNEs (e.g., Amkor Technology, Continental, Cypress, Nidec, Schneider Electric) for the preparation of this report. Key reasons for semiconductor MNE investment and expansion in ASEAN were also highlighted by senior company representatives (table 1.13).

Box 1.4. ASEAN: a growing regional semiconductor ecosystem

The first wave of electronics investment in Malaysia in the 1970s saw the establishment of semiconductor factories by MNEs. Their presence attracted other electronics and semiconductor MNEs and suppliers to also locate in Malaysia and in other countries in the region (e.g., the Philippines) (*AIR 2017*, p. 231).

As of the end of 2021, Malaysia housed global semiconductor players such as ASE Electronics (Taiwan Province of China), Broadcom (United States), Infineon Technologies (Germany), Intel (United States), Microchip (United States), Micron (United States), Renesas Electronics (Japan), TFME Semiconductors (China) and Western Digital (United States). It also hosted players in printed circuit board manufacturing, including Ibiden and ELNA PCB (both Japan).

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Box 1.4. ASEAN: a growing regional semiconductor ecosystem (Concluded)

Singapore has one of the most diverse semiconductor industries in the region. It is home to Micron's global operations headquarters, three memory wafer fabs, and an assembly and test facility and to Infineon's Asia-Pacific headquarters, managing key functions including R&D, supply chain, sales and marketing. GlobalFoundries (United Arab Emirates) and United Microelectronics (Taiwan Province of China) both have fabrication facilities in Singapore, producing chips up to 40 nm. The large outsourced semiconductor assembly and test companies, including ASE Electronics (Taiwan Province of China) and Jiangsu Changjiang Electronics Technology (China), have a presence in Singapore. Mediatek (Taiwan Province of China) has an R&D and innovation centre there.

Global semiconductor MNEs that have set up manufacturing, assembly, testing and packaging operations in the Philippines include Amkor Technology, Analog Devices, Fairchild Semiconductor, HGST, ON Semiconductor, Texas Instruments (all United States), Cypress (Germany), NXP (Netherlands), STMicroelectronics (Switzerland) and Toshiba Information Equipment (Japan).

The presence of these MNEs has helped establish an attractive semiconductor ecosystem involving the top 20 global MNEs, many contract manufacturers, test and semiconductor packaging companies, and other suppliers in ASEAN. These players are part of the regional production network, involving intrafirm and interfirm connections as well as connections with clients in various other industries (i.e., automotive, electronics, power, aerospace) within and outside the region.

Source: ASEAN Investment Report 2017, company websites, government websites, industry reports and media.

Table 1.13. Reasons why semiconductor MNEs invest in ASEAN (Selected cases)

MNE	Headquarters	Location	Stated reasons
Amkor	United States	Viet Nam	Support from both the industrial estate and the provincial Government in Bac Ninh and a strong labour force
Broadcom	United States	Malaysia	Policy and institutional support from the Government, in particular the MIDA, as well as incentive package and presence of an active ecosystem for partnerships
Graphcore	United Kingdom	Singapore	Policy and institutional support from the Government, an international business hub and vibrant ecosystem, with research labs, universities and other stakeholders to collaborate on R&D in advanced technology (including AI innovation)
Intel	United States	Malaysia	Fifty years of partnership with the Government and strong confidence in Malaysia and its production network environment and ecosystem
Infineon Technology	Germany	Singapore	Presence of a strong ecosystem that supports partnering with semiconductor, electronics and innovation communities, start-ups, institutes of higher learning, research institutes and Government-owned investment firms to develop AI applications
Micron Technology	United States	Singapore	Existence of a talent pool that enables the company to attract a diverse and skilled workforce, and partnership with the Government to grow, create opportunities and promote a favourable environment for the semiconductor industry
National Instruments	United States	Malaysia	Skilled workforce and stable business environment
Samsung	Republic of Korea	Viet Nam	Support from the Government, offer of policy support and investment incentives. Cost-competitive and easily trainable labour force

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Table 1.13. Reasons why semiconductor MNEs invest in ASEAN (Selected cases) (Concluded)

MNE	Headquarters	Location	Stated reasons
Siltronic	Germany	Singapore	Strategically close to customers and access to well-trained workforce
Simmtech	Republic of Korea	Malaysia	Proximity to customers, presence of a thriving ecosystem such as semiconductor equipment manufacturers and other stakeholders
Soitec	France	Singapore	Support from the Government through the Economic Development Board, existence of cooperation programmes with local universities, presence of a good ecosystem to leverage edge computing and AI for Internet of Things, availability of skilled manpower and engineers, strategic location that will allow Soitec and subsidiaries to be closer to its Asian customers and provide them with quick support
Toshiba Semiconductors	Japan	Thailand	A key centre for electronic products and parts manufacturing, support of the Government. Modern infrastructure with efficient production capabilities, existence of skilled workforce. (Remarks of President, Toshiba Semiconductor Thailand)
Universal Scientific Industrial (Shanghai)	China	Viet Nam	Support of Government and investment incentive programmes, availability of labour resources, strategic location to enhance cost competitiveness, consolidate and strengthen market position

Source: Company websites, annual reports, industry reports, press release and media.

Note: AI = artificial intelligence, MIDA = Malaysian Industrial Development Authority. Information from the company websites and annual reports of these MNEs suggest that location choices for assembly and testing are mainly in Malaysia and to an extent in the Philippines and Thailand. Singapore remains a destination for front-end operations such as wafer fabrication, R&D and regional HQ.

e. Policies and investment promotion

Many countries in South-East Asia have been actively promoting FDI in electronics and semiconductors. Attracting investment and developing the electronics industry have been given major emphasis in national industrial development plans in many Member States.

In attracting FDI in semiconductor activities, Member States have continued to develop the ecosystem and offer investment incentives such as corporate income tax holidays and duty-free importation of machinery and materials. Investment promotion agencies in the region continue to establish close partnerships with electronics and semiconductor MNEs, even after they have established a significant presence in the host country (i.e., aftercare services) (chapter 3).

Several Member States (e.g., Malaysia, Singapore, Thailand) have also established dedicated electronic and semiconductor clusters and industrial parks. For instance, Penang, Malaysia is home to many electronic and semiconductor MNEs, supported by its clusters environment. Singapore has the North Coast, Tampines and Woodlands wafer fab parks, dedicated to attracting semiconductor clusters. Other Member States (e.g., Indonesia, the Philippines, Thailand) have industrial estates that have attracted a concentration of electronics and semiconductor MNEs. In Indonesia, Batam island – next to Singapore – hosts numerous semiconductor MNEs. In the Philippines some ecozones under the Philippine Economic Zone Authority (i.e., Mactan, Laguna Technopark, Cavite) have attracted electronics and semiconductor clusters.

The outlook for FDI in electronics in the region, in particular in semiconductors, is encouraging. Global demand for semiconductors will continue to increase, and the region will remain a principal beneficiary of investment by MNEs aiming to strengthen production capacities. The evolving semiconductor ecosystem, developed over many decades, as well as the growing cluster of connected firms (e.g., suppliers, electronics manufacturing services), the long history of and experience with semiconductor production, the locational efficiency and the established regional production networks will play important roles in helping the region attract FDI. The competitiveness of ASEAN as a major global electronics and semiconductor production hub will continue to attract attention from investors. Expanding MNE investment activities in the semiconductor value chain will strengthen regional production networks, which further connect firms and countries.

Electronics MNEs will continue to invest, expand and upgrade facilities in ASEAN, including development of new business functions (e.g., R&D, centres of excellence, innovation centres). Many MNEs have also invested huge amounts of capital in establishing a network of facilities in the region. Expanding from adjacent plants and upgrading with advanced manufacturing technologies could generate synergy and economies of scale and facilitate better coordination of group operations in close geographical proximity. This would also imply demand for and further adoption of Industry 4.0 technologies to upgrade factories (*AIR 2020–2021*).

Another reason for the optimistic outlook is that MNEs have committed to many high-value projects in the region in recent years. Many of these projects, with values in the billions of dollars, are to be built over the next few years with continuing investment commitments and capital expenditures.

The electronics and semiconductors industry has remained a central focus in national development plans. Governments in the region have consistently provided policy support for FDI in these industries over many decades. That policy support is likely to be strengthened with further measures to promote and facilitate FDI in the industry in the region.

1.4.3. FDI in the digital economy and Industry 4.0

Investment in the digital economy and in activities related to Industry 4.0 continued to receive strong attention from investors in 2021. FDI in Industry 4.0-related activities in the region is increasing and is expected to continue to grow in the next decade. For instance, FDI in information and communication more than quadrupled, to \$7 billion, in 2021. Announced greenfield investment values in information and communication accounted for more than 12 per cent of all greenfield investment value in ASEAN in the last decade.

The investment and the roles played by MNEs in different Industry 4.0 value chains (e.g., industrial automation, additive manufacturing, industrial Internet of Things, smart factories development) were analysed in detail in *AIR 2020–2021*. The upward investment trend in digital infrastructure and other Industry 4.0 technology segments is expected to continue because of strong demand growth.

Having already hosted many data centres, some Member States continued to receive rising investment in such digital infrastructure (table 1.14). Major data centre MNEs opened more facilities in the region. Equinix (United States) completed its fifth data centre, estimated at \$86 million, in April 2022 in Singapore. Digital Realty (United States), having opened a third data centre in Singapore in 2021, began establishing a presence in Indonesia. NTT GDC (Japan) opened a second data centre in Indonesia and, in a joint venture with QD.Tek (Viet Nam), is building a data centre in Hanoi. KDDI Telehouse (Japan) is constructing a data centre in Bangkok. GDS (China) is developing a new data centre campus and two new data centre buildings in Batam. It is also building data centres in Johor Bahru, Malaysia in partnership with YTL Power International (Malaysia). Regional data centre companies, headquartered in Singapore, are also actively investing in neighbouring countries. For instance, Bridge Data Centers is building a fourth (hyperscale) data centre in Malaysia; Data Center First is establishing a \$40 million data centre in Batam, Indonesia; Digital Edge with a 10MW data centre in Manila, to be completed in 2022; and Princeton Digital Group is developing a \$150 million 22 MW data centre in Jakarta, Indonesia to be operational in late 2022.

Table 1.14. ASEAN: Investment projects in digital infrastructure, 2020–2022 (Selected cases)

Year	Project	Host country	Value (\$ million)	Investor	Headquarters
2022	Fourth hyperscale data centre	Malaysia	595	Chindata Group Holding	China
2022	Jakarta pure data centre	Indonesia	171	Pure Data Centres Group	United Kingdom
				Ara Investment	Cayman Islands
2020	Tanjong Kling data centre	Singapore	144	Equinix	United States
2020	Six-storey data centre	Singapore	110	SP Group	Singapore
				Sembcorp Industries	Singapore
				CapitaLand	Singapore
2021	Digital edge data centre	Philippines	100	Digital Edge (Singapore) Holding	Singapore
				Threadborne	Philippines
2022	Overseas rack server integration plant	Malaysia	47	Wiwynn	Taiwan Province of China
2020	5G ecosystem innovation centre	Thailand	15	Huawei Technologies	China
2021	Cloud data centre	Philippines	263	Alibaba Cloud Computing	China
2021	Data centre expansion	Viet Nam	248	Nippon Telegraph & Telephone	Japan
2021	Smartfren data centre	Indonesia	283	PT Smartfren Telecom	Indonesia
				Group 42 Holding	United Arab Emirates
2021	Data centre portfolio	Thailand	253	Singapore Telecommunications	Singapore
				Advanced Info Service	Thailand
				Gulf Energy Development	Thailand

Source: UNCTAD, based on data from Refinitiv SA.

MNEs are playing an important role in Industry 4.0 development in ASEAN as investors, suppliers, users and developers of hardware and software solutions, including in providing skills development and training. As users, more MNEs are adopting Industry 4.0 technologies to upgrade plants and build smart factories to improve efficiency (see sections 1.4.1 and 1.4.2).

As investors, increasingly more MNEs are establishing a significant presence in ASEAN to build digital infrastructure, manufacture industrial automation equipment and supply technology solutions to clients in a vibrant manufacturing environment (*AIR 2020–2021*). They are investing in different Industry 4.0 value chains in the region, including in (i) digital infrastructure, (ii) industrial automation, (iii) additive manufacturing, (iv) advanced digital technology (industrial Internet of Things) and smart factory solutions, (v) centres of excellence, and (vi) R&D activities.

The investment prospects for Industry 4.0 development in ASEAN are promising. This stems from the strong commitment of all countries in the region to deliver 5G networks, rising demand for Industry 4.0 technologies from manufacturing and digital services industries, growing adoption of Industry 4.0 technologies by local and foreign firms, favourable government policies and measures supporting Industry 4.0 transformation, and the rapidly growing digital economy. Another reason is the growing pool of manufacturers that plan to adopt such technologies and the improving digital ecosystem.

1.5. PROSPECTS AND CONCLUSION

It is expected that ASEAN will continue to receive a high level of FDI flows following the significant rebound. However, potential new waves of the pandemic, inflationary pressures and a weakening global economy will put downward pressure on both global and regional FDI. Other developments on the global stage in 2022 (e.g., the war in Ukraine, food-fuel-finance crises, recession fears) could dampen the growth momentum.

Despite the worsening outlook for global FDI, several factors will support continued growth in ASEAN, including vibrant industrial development, regional integration momentum, growing numbers of middle-income consumers and a consistent policy push. The interaction of internal (e.g., regional integration, market attraction) and external factors (e.g., adjustment or strengthening of supply chain capacity and regional corporate expansion strategies) favourable to the region will help sustain a high level of inflows.

MNEs remain active with projects in international project finance and infrastructure-related industries such as electricity generation and renewable energy. This trend also reflects the strong commitment of Member States to infrastructure development and upgrading, including investment in industrial infrastructure (e.g., SEZs and industrial parks). Rising greenfield investment, an indicator of future investment, in 2021 also lend support to a continued positive outlook. Furthermore, announced greenfield investment value rose by 23 per cent to \$18 billion in the first five months of 2022 as compared with the same period in 2021, and the number of announced international project finance deals rose by 139 per cent to 91.

In addition, the implementation of existing big-ticket projects and those in the pipeline will help sustain investment. Many megaprojects announced in 2020–2021 are expected to be completed or in an advanced stage of development in 2022. Industries that received significant investment in 2021 (e.g., EVs, electronics, data centres, digital economy, biomedical) will continue to receive new, expanded and upgraded investment projects as MNEs strengthen production capacities or deepen regional footprints. Geopolitical tensions and supply chain challenges will continue to encourage more diversification or relocation towards the region (*AIR 2020–2021*).

NOTES

- ¹ Unless otherwise stated, throughout this report cases of companies mentioned are drawn from research using major national and international media reports (e.g., national newspapers and international newswires such as Reuters, Bloomberg, The Financial Times and Nikkei Asia), company press releases, industry and business reports, and selected databases of business information, foreign direct investment and financial market data (e.g., Orbis, fdi Markets, Refinitiv, UNCTAD cross-border M&A database).
- ² *Jakarta Post*, “Foxconn, other firms look to enter Indonesia’s EV market”, 26 January 2022.
- ³ *SCM Globe*, “A brief overview of EV supply chains”, 6 October 2021.
- ⁴ *SCM Globe*, “A brief overview of EV supply chains”, 6 October 2021.
- ⁵ *Reuters*, “Russia’s Solway confirms \$3 bln nickel smelter investment in Indonesia”, 17 February 2011.
- ⁶ Nickel Asia Corporation has a 22.5 per cent stake (source: SteelOrbis, “\$1.4 billion to be invested in new nickel plant in Philippines”, 6 April 2011).
- ⁷ *Asia Sentinel*, “China’s Filipino gold rush”, 13 November 2012.
- ⁸ *Jakarta Globe*, “EV battery giant CATL to invest \$5.1b for a factory in Indonesia”, 17 November 2020.
- ⁹ *Investment Monitor*, “LG to establish \$1.2 bn battery plant in Indonesia”, 29 October 2021; *Jakarta Post*, “Manufacturing car battery”, 22 September 2021; and *Jakarta Globe*, “Indonesia starts construction of Southeast Asia’s first electric vehicle battery factory”, 15 September 2021.
- ¹⁰ *Asia Financial*, “Hyundai launches plant to make Indonesia’s first electric vehicle”, 17 May 2022.
- ¹¹ Reglobal, “Increasing uptake: Southeast Asia on the verge of an EV surge”, 17 January 2022 and Schroder and Iwasaki (2021).
- ¹² Mordor Intelligence, “ASEAN electric vehicle market – growth, trends, COVID-19 impact, and forecast (2022–2027)” (<https://www.mordorintelligence.com/industry-reports/asean-electric-vehicle-market>).
- ¹³ *Automotive Logistics*, “Hyundai to build R&D centre and factory in Singapore”, 14 October 2020.
- ¹⁴ *Reuters*, “Shell debuts electric vehicle chargers in Singapore, first in Southeast Asia”, 5 May 2019.
- ¹⁵ *Bangkok Post*, “EA sees 1,000 charging points”, 9 July 2019.
- ¹⁶ *The Nation*, “1st EV charging unit set for public in Cambodia”, 22 April 2022.
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- ¹⁸ Mordor Intelligence, “ASEAN electric vehicle market – growth, trends, COVID-19 impact, and forecast (2022–2027)” (<https://www.mordorintelligence.com/industry-reports/asean-electric-vehicle-market>).
- ¹⁹ PR Newswire, “Car makers ramp up electric vehicle production capacity in Thailand, Investment Board says”, 30 June 2020.
- ²⁰ WapCar News, “GWM’s Thailand factory to open on 9 June; to produce Haval H6 for ASEAN exports too”, 2 June 2021.
- ²¹ MIDA, News, “UMWT advances local manufacturing of hybrid electric vehicles”, 6 July 2021.
- ²² *Bangkok Post*, “EVs on a roll”, 4 January 2021.
- ²³ *Nikkei Asia*, “Mercedes-Benz to build EVs in Thailand, in first for a major carmaker”, 4 February 2020.
- ²⁴ *EE Times*, “Amkor plans new Vietnam factory to expand advanced packaging technology capacity”, 9 November 2021.
- ²⁵ *Jakarta Post*, “Taiwan’s Pegatron opens US\$40 million factory in Batam”, 9 July 2019.
- ²⁶ *Techwire Asia*, “Malaysia gets a semiconductor boost with a US\$2.6b plant by Infineon”, 24 February 2022.
- ²⁷ MarketScreener, “Delta Electronics: Announces on behalf of its subsidiary, Delta Electronics (Thailand) Public Company Limited, the construction of Plant 8 and RD center”, 7 March 2022; and DeltaThailand.com, “Construction of new factory and R&D center in Bangpoo”, 7 March 2022.

²⁸ *Semiconductor Industry Association News*, “Global semiconductor sales, units shipped reach all-time highs in 2021 as industry ramps up production amid shortage”, 12 February 2022.

²⁹ In IDM operation, MNEs own their own design and manufacturing facilities (fabrication, assembly, test and packaging). They design and own branded chips (source: *Semiconductor Engineering*, “Integrated device manufacturer”, n.d., https://semiengineering.com/knowledge_centers/manufacturing/integrated-device-manufacturer-idm/).

CHAPTER 2

Start-ups and unicorns in intra-ASEAN investment

2.1. INTRODUCTION

ASEAN is a hotspot for start-ups and an important destination for globally and regionally based private equity and venture capital investment. The region is home to a significant number of unicorns,¹ ranking fourth behind the United States, China and India.

Start-ups are contributing to rising foreign direct investment (FDI) and intra-ASEAN investment. Many start-ups in ASEAN undertake FDI to scale up and diversify markets. Their proprietary advantage and ability to raise funds have led them to internationalize through greenfield investment or cross-border mergers and acquisitions (M&As) or through investing in strategic stakes in other start-ups.

Start-ups are an important subset of micro, small and medium-size enterprises (MSMEs), which make up the largest pool of formal enterprises in ASEAN by number (box 2.1). More than 97 per cent of enterprises in the region are MSMEs. They account for 67 per cent of employment in the region, an average of about 28 per cent of gross value added, about 20 per cent of export revenues and about 45 per cent of GDP (ASEAN Secretariat, 2021b; table 2.1). The rapid growth of start-ups is also pushing up the size of the MSME population in the region.

ASEAN MSMEs and start-ups are important conduits for regional linkages and economic transformation. For instance, start-ups play a key role in Industry 4.0 transformation in the region, as shown in *AIR 2020–2021*. They are an important part of the Industry 4.0 ecosystem and can help accelerate adoption of Industry 4.0 technology such as by partnering with multinational enterprises (MNEs) in technology and by supporting other SMEs and start-ups in digital transformation. Their investments and regionalization activities help support regional value chains, including connecting with other SMEs or MNEs as suppliers, contract manufacturers or investors. When they participate in cross-border activities they connect firms, countries and the region in value chains. These developments have important implications for strengthening the digital economy, expanding the pool of SMEs, and contributing to the growth of FDI activities and regional connectivity.

Start-ups, unicorns, and private equity and venture capital companies are closely interconnected. They are important sources of FDI and intra-ASEAN investment. This chapter examines the investment links between these entities and their FDI activities in ASEAN.

Table 2.1. Significance of MSMEs in ASEAN, 2021 (Thousands and per cent)

Country	Number of MSMEs (Thousands)	MSMEs as a share of formal enterprises (%)	Impact of MSMEs		
			Share of employment (%)	Share of GDP (%)	Share of exports (%)
Brunei Darussalam	2.6 ^a	97.3	35.4	35.5	2.8
Cambodia	512.9	99.8	52.5	58.0	12.1
Indonesia	65 465.5	99.9	97.0	60.3	14.4
Lao People's Democratic Republic	133.7	99.8	82.4	15.7	14.2
Malaysia	1 226.0	97.4	48.0 ^b	38.2 ^b	13.5 ^b
Myanmar	72.7 ^c	99.1	76.0	69.3	23.7
Philippines	996.7	99.5	63.2	45.5	14.5
Singapore	279.0 ^d	99.0	72.0	45.0	38.3
Thailand	3 134.4	99.5	85.5	35.3	28.7
Viet Nam	651.1	98.1	44.5	45.0	18.7

Source: ASEAN Secretariat (2021b), ASEAN Member States and Asian Development Bank SMEs Monitor.

^a Number of micro enterprises.

^b 2020.

^c Number of SMEs (72,667) registered with the Ministry of Industry. Excludes SMEs registered with other Ministries.

^d Number of SMEs.

Box 2.1. Definition of start-ups

Start-ups have been defined on the basis of a combination of criteria, which range from time frame, turnover, life cycle of the company (from idea to exit stage), scalability of business ideas or models, being high-growth businesses and having the potential to disrupt markets.

There is a close connection between start-ups and SMEs. Many start-ups are SMEs; however, not all are. For instance, many of the most-funded start-ups have grown rapidly to become large companies or unicorns with significant revenues or potential to generate huge future streams of income, and they receive substantial funding from private equity and venture capital funds.

For this report, start-ups are defined with a more targeted scope, corresponding to a venture-capital-backed entity with ambitions for rapid growth. The definition includes the life-cycle aspect of an entity from inception to exit and business ideas or models that attract funding from private equity and venture capital funds. They also include companies that have scaled up or have the potential to scale, including in technology-enabled start-ups. This targeted scope is used instead of timeline^a or revenue to capture internationalization aspects, as start-ups in certain market segments (e.g., e-commerce and fintech) that have dynamic industry specifics scale at a faster rate than others. The approach also focuses on the largest-funded start-ups with diverse nature of regional growth or potential to scale regionally. Many of the largest-growth start-ups fall in this category; however, some of the technology start-ups may have stayed longer in the incubation stage than others.

Source: ASEAN Investment Report 2022.

^a Most start-ups referred in this report are less than 10 years old.

2.2. PRIVATE EQUITY AND VENTURE CAPITAL INVESTMENT IN ASEAN

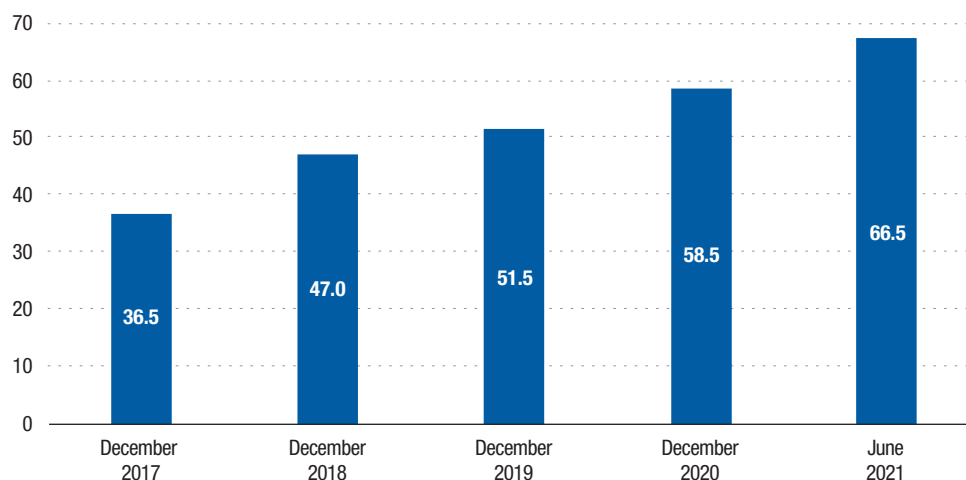
Private equity and venture capital firms are major sources of investment supporting start-ups' development and regionalization in ASEAN. They channel foreign and regional funds for investment in ASEAN-based companies. These funds play a key role in strengthening the start-up ecosystem and in driving the rapid rise in the number of start-ups and unicorns.

Private equity and venture capital assets under management² in the region – capital that is already invested and available for investment – rose rapidly in recent years, by 83 per cent, from \$36 billion in 2017 to \$66 billion in 2021 (figure 2.1). In the same period, FDI stock in ASEAN increased by 36 per cent. The region is increasingly an important target destination for global private equity and venture capital companies.³

Venture capital funds have not been alone in helping ASEAN-based businesses to scale up (box 2.2). Growth capital (which supports the expansion of relatively mature companies) and buyout funds also play a vital role in financing the growth of ASEAN companies and start-ups, such as in digital technology, fintech, business support services and health-care activities.

Of the kinds of assets under management, these three – growth funds, buyout funds and venture capital – have risen most rapidly in volume. Each is a major source of capital for ASEAN start-ups as well as relatively mature companies, including for financing intraregional investment activities. Over the 2017–2021 period, growth funds accounted for the largest share (\$79 billion) of private equity and venture capital funds by type, followed by buyout funds (\$70 billion), venture capital (\$65 billion) and other types of private equity funds (\$8 billion) (figure 2.2).

Figure 2.1. ASEAN: Private equity and venture capital assets under management, 2017–2021
(Billions of dollars)



Source: ASEAN Investment Report 2022 research, based on data from Preqin Pro.

Box 2.2. Different types of funds supporting start-ups

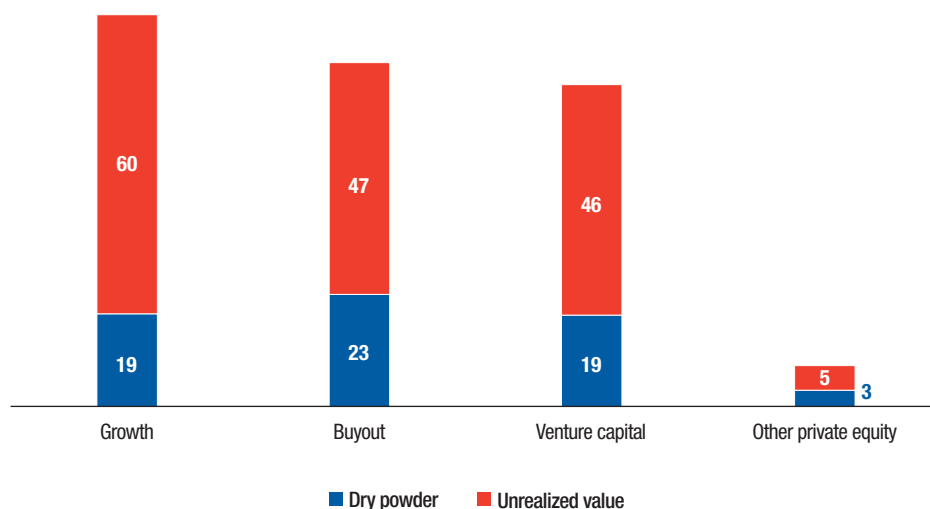
Private equity encompasses a wide variety of investors, but broadly, they fall into three categories: venture capital, growth equity and buyouts. All invest or provide capital to firms, with their focus varying with the stage of development or maturity of firms they invest in. Their motivation also varies, from accelerating expansion, to developing products, to restructuring operations, management or the degree of ownership of investees. Both venture capital and growth (private) equity firms provide funds in exchange for equity in a company or start-up, with the main purpose of fostering the growth and development of these companies. This report focuses mainly on venture capital and growth (private) equity funds.

At the investment level, venture capital funds are narrow in scope. Venture capital investments usually provide capital to start-up or early-stage businesses or to other firms with the potential to grow quickly or with a track record of high growth. They are characterized by iterative rounds of funding, with additional capital provided as growth or return on investment is achieved. Private or growth equity investments are typically in later-stage companies – larger and more mature businesses with proven financial record. Venture capital investments typically are higher risk than private equity. Venture capital firms usually acquire minority stakes, whereas private equity firms acquire controlling stakes in businesses they invest in.

Buyout funds target more mature businesses, usually taking a controlling interest. Other private equity includes balanced funds, co-investment funds, co-investment multi-manager funds, direct secondaries and turnaround funds.

Source: ASEAN Investment Report 2022 research and Preqin (<https://www.preqin.com/academy/lesson-4-asset-class-101s/private-equity-venture-capital/privateequity>).

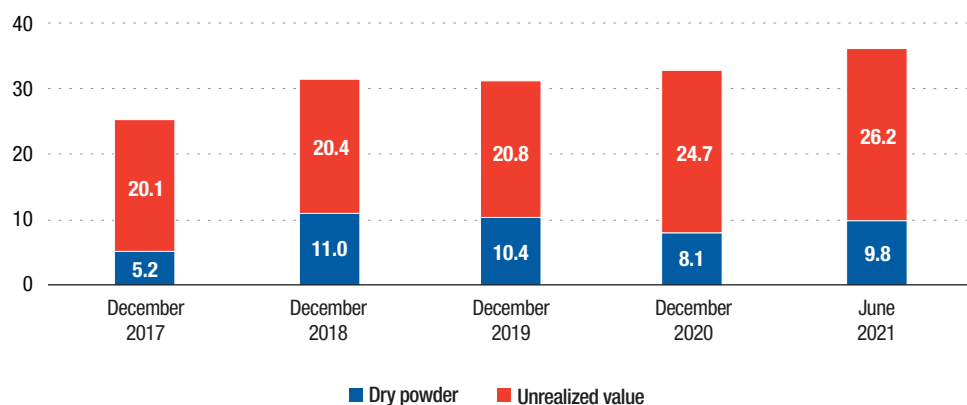
Figure 2.2. ASEAN-based private equity and venture capital assets under management, by fund type, 2017–June 2021 (Billions of dollars)



Source: ASEAN Investment Report 2022 research, based on data from Preqin Pro.

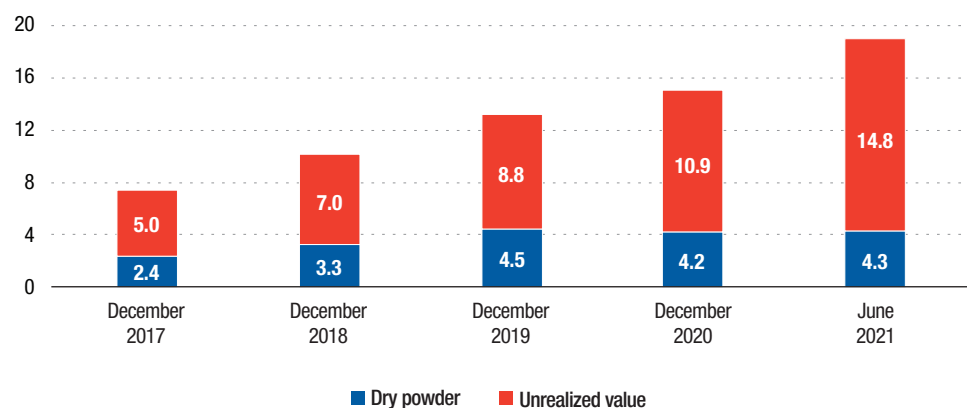
There has been a marked rise in the volume of assets under management held by private equity and venture capital fund managers. Between 2017 and 2021, private equity assets under management grew by 42 per cent (figure 2.3), while venture capital assets under management grew by 158 per cent (figure 2.4). In perspective, venture capital investment in the region has grown much faster than in China and India. For instance, venture capital investment in ASEAN rose 2.6 times between 2015 and 2020 as compared with only 1.4 times in China and India in the same period.⁴ Private equity and venture capital funding has helped the region produce 46 unicorns (section 2.6), most of which operate in the technology sector and in the digital economy.

Figure 2.3. ASEAN-based private equity assets under management, December 2017–June 2021
(Billions of dollars)



Source: ASEAN Investment Report 2022 research, based on data from Preqin Pro.

Figure 2.4. ASEAN-based venture capital assets under management, December 2017–June 2021
(Billions of dollars)



Source: ASEAN Investment Report 2022 research, based on data from Preqin Pro.

2.2.1. Venture capital investment

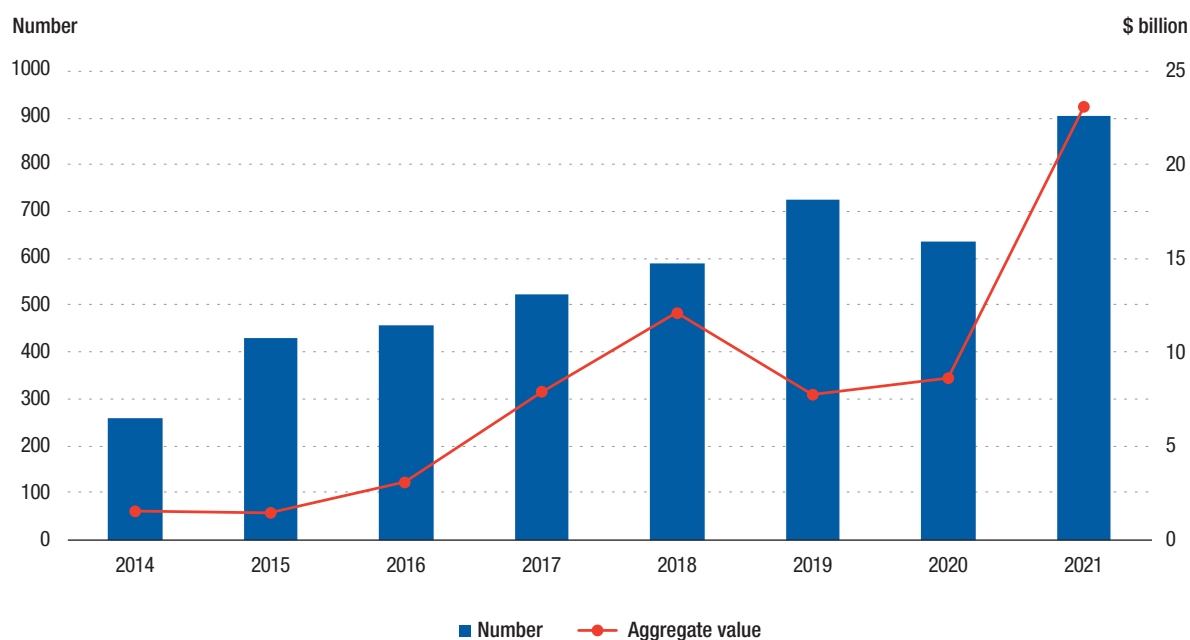
a. Number and value of deals

Reflecting an active and growing venture capital industry, the number and the aggregate value of venture capital deals in ASEAN are both increasing (figure 2.5). The number of deals rose by 72 per cent between 2014 and 2021, from 257 to 903. In 2021, the value of deals reached \$23 billion, 15 times the value reported in 2014. Venture capital deals have been concentrated in Singapore and Indonesia. Other key destinations include Malaysia, the Philippines, Thailand and Viet Nam.

b. Types of investors

The region is attracting a growing number of global investors: in 2021 more than 470 institutional investors targeted ASEAN-focused venture capital funds as compared with 230 in 2019 (*AIR 2019*). Although foreign private equity and venture capital investors are significant, ASEAN-based private equity and venture capital firms are a growing source of funding for start-ups and for cross-border activities. Intraregional investment accounted for 22 per cent of global investment into ASEAN-focused venture capital funds in 2021. Singapore was the largest source country (60 per cent), followed by Malaysia, Thailand, Indonesia and the Philippines (table 2.2). The three industries most favoured by investors are technology, health care and consumer services.

Figure 2.5. Venture capital deals in ASEAN, 2014–2021 (Number and billions of dollars)



Source: ASEAN Investment Report 2022 research, based on data from Preqin Pro.

Table 2.2. ASEAN investors investing in ASEAN-focused venture capital funds, by source country, 2020 and 2021
(Number of investors and per cent)

Country	Entities with venture capital funds (Number)		Share of total, 2021 (%)
	2020	2021	
Singapore	54	72	60
Malaysia	14	17	14
Thailand	12	14	12
Indonesia	9	8	7
Philippines	6	7	6
Brunei Darussalam	2	2	2
Viet Nam	1	1	1
ASEAN	98	121	100

Source: ASEAN Investment Report 2022 research, based on data from Preqin Pro.

Different types of investors are involved with venture capital investment and funding of unicorns (table 2.3). Corporate and corporate venture capital investors can be grouped into three categories:

- (i) Conglomerates such as Djarum Group (Indonesia), Ayala Group (Philippines) and Charoen Pokphand (Thailand) that invest in unicorns they established or spun off from their group. For instance, Djarum Group funds Blibli and Tiket.com, and Ayala Group is funding Mynt. Most of the conglomerates have also established venture capital funds that target start-ups in and outside the region.
- (ii) Corporate venture capital – corporations that have established dedicated venture capital funds to invest in unicorns and start-ups in ASEAN. Examples include MDI Ventures (Indonesia), owned by Telkom Indonesia, investing in Sicepat (Indonesia) and NIUM (Singapore); UOB Ventures (of the UOB Group), investing in Ruangguru (Indonesia); Softbank Vision Fund (United Kingdom) of Softbank Group (Japan), investing in unicorns in technology and in e-commerce and marketplaces based in Singapore, such as Advanced Intelligence Group, Carro, PatSnap and Trax.
- (iii) Digital and technology companies such as Facebook (United States), Google (United States), Naver (Republic of Korea), Rakuten (Japan) and Tencent (China). A majority of the technology companies investing in ASEAN unicorns are from China, and they invest an equity stake to build business synergy. Tencent (China) has invested in four unicorns in Indonesia, Singapore and Viet Nam. Alibaba (China) has invested in at least six unicorns in the region: fintech Akulaku (Indonesia), Ascend Money (Thailand), delivery and logistics service Flash Express (Thailand), Lazada (Singapore) (which is also Alibaba's e-commerce subsidiary), fintech Mynt (Philippines), and delivery and logistics service Ninja Van (Singapore).

Table 2.3. Types of investors funding unicorns in ASEAN and examples

Investor type	Examples	
	Investor	Unicorn
Corporate and corporate venture capital	Ant Group (China)	Akulaku (Indonesia)
	Tencent (China)	JT Express (Indonesia)
	Tokyo Century Corporation (Japan)	Ovo (Indonesia)
	UOB Venture (Singapore)	Ruangguru (Indonesia)
	Air Asia (Malaysia)	Air Asia Digital (Malaysia)
	Ayala Corporation (Philippines)	Mynt (Philippines)
	Softbank Vision Fund (United Kingdom)	Advance Intelligence Group (Singapore)
	Daito Trust Corporation (Japan)	JustCo (Singapore)
	Charoen Pokphand (Thailand)	Ascend Money (Thailand)
	Alibaba Group (China)	Flash Express (Thailand)
	Tencent (China)	VNG (Viet Nam)
Traditional venture capital	Summit Partners (United States)	Lazada Group (Singapore)
	500 Startups (United States)	Sky Mavis (Viet Nam)
	Primavera Capital (China)	GoTo (Indonesia)
	Bow Wave Capital (United States)	Ascend Money (Thailand)
Government investment corporation or fund	Temasek Holdings (Singapore)	GoTo (Indonesia)
	Khazanah Nasional (Malaysia)	Edotco (Malaysia)
	EDBI (Singapore)	Bolttech (Singapore)
	Temasek Holdings (Singapore)	PatSnap (Singapore)
Financial institutions	Daiwa Securities Group (Japan)	Sicepat (Indonesia)
	Goldman Sachs (United States)	Acronis (Singapore)
Unicorns	Gojek (Indonesia) ^a	JD.ID (Indonesia, parent: JD (China))
	Grab (Singapore)	Ovo (Indonesia)
	Tokopedia (Indonesia) ^a	Ovo (Indonesia)

Source: ASEAN Investment Report 2022 research (see annex table 2.3).

^a Gojek and Tokopedia have merged to form GoTo.

c. Nationality

Most of the 191 investors supporting the 46 unicorns in ASEAN in 2021 (section 2.6) were from the United States (69), followed by Singapore (26), China (24), Japan (13), Europe (11) and Indonesia (10) (table 2.4). European investors were mainly from Germany and the United Kingdom, while those from ASEAN were from Singapore, Indonesia, Malaysia, Thailand and Viet Nam, in that order. Key aspects of these investors are summarized in table 2.5.

Table 2.4. Investors in unicorns in ASEAN, by nationality, 2021

Nationality of unicorn	ASEAN					Asia Pacific									Others	
	Indonesia	Malaysia	Philippines	Singapore	Thailand	United States	United Kingdom	European Union	Hong Kong (China)							
									China	Japan	India	Australia	Republic of Korea			
Indonesia	7			8		16		2	9	5	2	2	1	4	1	57
Malaysia		6		1				1		1						9
Philippines			2			6			1							9
Singapore	3			15		38	5	8	8	3	2	1	1	1	3	88
Thailand					4	2			4	2						13
Viet Nam				1		7	1		2	2				1	1	15
Total	10	6	2	26	4	69	6	11	24	13	4	3	2	6	5	191

Source: ASEAN Investment Report 2022 research (see annex table 2.3).

Note: Universe of investors here covers the top five funders of each unicorn.

Investors from the United States, ASEAN and China accounted for 62 per cent of the major investment sources for the 46 unicorns in ASEAN. About half of the United States investors focused on unicorns in Singapore. United States investors were the largest investors in unicorns in Indonesia, Viet Nam and the Philippines, in that order. The majority of ASEAN-based investors (48) focused on funding unicorns from their home countries. Eleven investors headquartered in Singapore invest in other ASEAN countries, primarily in Indonesia. Investors from China focused mainly on Indonesia and Singapore.

Table 2.5. Key characteristics of investors in unicorns in ASEAN

Nationality of investor	Type of investor	Characteristics	
		Focus of funding	
		Nationality of unicorns	Industry of unicorns
United States	59 of the 69 investors are traditional venture capital companies. - Technology MNEs (e.g., Facebook, Google) have entered the corporate venture capital space.	Most based in Singapore and Indonesia	Mainly e-commerce platform and marketplace, logistics solutions, fintech and technology (e.g., AI, cybersecurity, blockchain)
China	29 per cent are corporations and corporate venture capital (including technology companies). - Alibaba Group has major investment or stakes in six unicorns (in Indonesia, the Philippines, Singapore and Thailand). - Tencent has funded four unicorns headquartered in Indonesia, Singapore and Viet Nam.	Spread throughout Indonesia, the Philippines, Singapore, Thailand and Viet Nam	E-commerce, marketplace, travel aggregator, logistics, telecommunication, fintech and technology (AI)
Europe: European Union and United Kingdom	- Two types of investors: Corporations or corporate venture capital firms and traditional venture capital firms - Of these funders, Softbank Vision Fund (United Kingdom), part of Softbank Group (Japan), funds the greatest number of unicorns.	Most based in Singapore	Travel aggregator, e-commerce or marketplace platform, technology, fintech
Japan	Corporate and corporate venture capital firms, including digital and technology companies (e.g., Softbank Group, Tokyo Century Corporation, Rakuten) and traditional venture capital firms (e.g., East Ventures)	Majority in Indonesia, a few in Singapore and Thailand	..
India	Mainly traditional venture capital companies	Indonesia and Singapore	..
Hong Kong, China	Mainly traditional venture capital companies	Indonesia, Singapore and Viet Nam	..
ASEAN countries			
Indonesia	Traditional corporate and corporate venture capital firms	Majority from Indonesia	E-commerce or marketplace, logistics, travel, fintech

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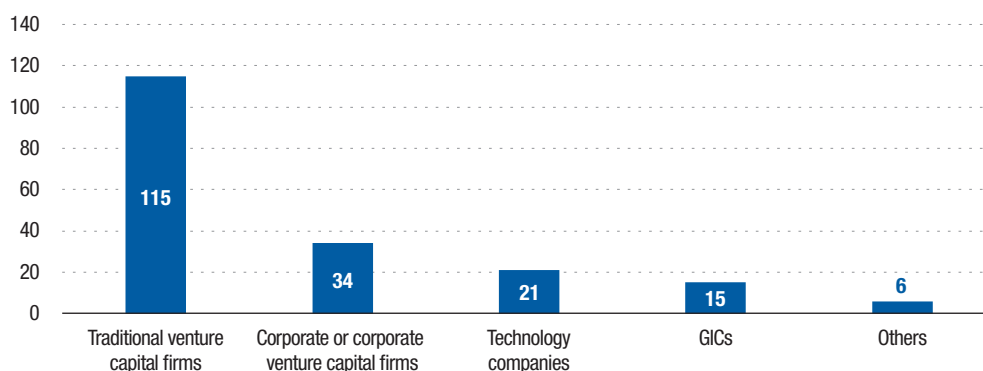
Table 2.5. Key characteristics of investors in unicorns in ASEAN (Concluded)

Nationality of investor	Type of investor	Characteristics	
		Focus of funding	
		Nationality of unicorns	Industry of unicorns
Malaysia	Either government-linked institutions or corporate groups	Two of three are their own spin-offs (i.e. Air Asia from Air Asia Digital; Edotco from Axiata Group, in which the Government has a stake)	Telecommunication, travel and innovation, marketplace
Philippines	Corporate groups (e.g., Ayala Group and subsidiary Globe Telecom)	Spin-off from the Ayala Group	Fintech
Singapore	Traditional venture capital firms, sovereign wealth funds, corporate groups and corporate venture capital firms, unicorns (in that order)	Mainly in Singapore and Indonesia	E-commerce or marketplace platform
Thailand	Corporate and corporate venture capital (Charoen Pokphand Group, SCB 10x of Siam Holdings, InVent by InTouch)	Solely in Thailand	Fintech, logistics, marketplace

Source: ASEAN Investment Report 2022 research.

2.2.2. Traditional versus corporate venture capital

Although traditional venture capital firms (115 companies) still constitute the majority of investors for the 46 unicorns, interest from corporate venture capital firms (55 companies) has been rising rapidly in recent years, led by funds established by technology MNEs and ASEAN conglomerates or large MNEs (figure 2.6). In addition, ASEAN unicorns are emerging sources of funding for other unicorns and for start-ups in the region. In 2018, Gojek (Indonesia) established its own venture fund, Go Ventures. It has invested in more than 24 start-ups in ASEAN and further afield (e.g., Kita Lulus, Mall91 and eFishery (all Indonesia) and FoodMarket Hub (Malaysia)).

Figure 2.6. Types of funders of unicorns in ASEAN, 2021 (Number)

Source: ASEAN Investment Report 2022 research (see annex table 2.3).

Note: Universe of investors here covers the top five funders of each unicorn. GICs = Government-linked companies or sovereign wealth funds.

2.2.3. Top 50 ASEAN venture capital firms

Of the 50 most prominent venture capital firms and funds headquartered in ASEAN with the largest number of deals, 34 are based in Singapore, 9 in Indonesia, 3 in Malaysia, 2 in the Philippines and 1 each in Thailand and Viet Nam (annex table 2.1).⁵ Together they had made 3,707 investments as of May 2022, of which 48 per cent were in ASEAN start-ups. More than half have a majority of their investments concentrated in ASEAN, suggesting the attraction of ASEAN start-ups for investment. Many of the ASEAN venture capital firms have invested outside their home countries. Those based in ASEAN countries other than Singapore are overwhelmingly regional investors (15 of the 16 in the list have more investments in ASEAN than elsewhere). Of the 34 based in Singapore, only 12 have a majority of their investment portfolio in ASEAN companies, which underscores the international reach of Singaporean venture capital firms.

2.3. RELATIONSHIP BETWEEN START-UPS, UNICORNS AND FDI

Some start-ups scale their operations very quickly because of the nature of their business, their niche, their agility and their ability to raise funds to finance growth. In some cases, they expand into new business or product lines and overseas markets. They grow rapidly in a context of digitalization opportunities, technology applications that enhance consumer convenience, competitive ecosystems, and large and expanding home markets. Some have successfully regionalized their operations.

Various factors, both “push” and “pull”, motivate start-ups to regionalize (table 2.6). The former covers factors associated with being “born regional” or “born global”, the need to sustain growth through new markets and the founder’s vision of internationalization. The latter relate to a set of drivers associated with market reasons and opportunities to scale up in host countries (box 2.3). These include the rapid growth of the digital economy, market potential, emerging investment opportunities and access to technology. Geocultural proximity and affinity are also key factors.

Box 2.3. Market factors driving regionalization of start-ups in ASEAN

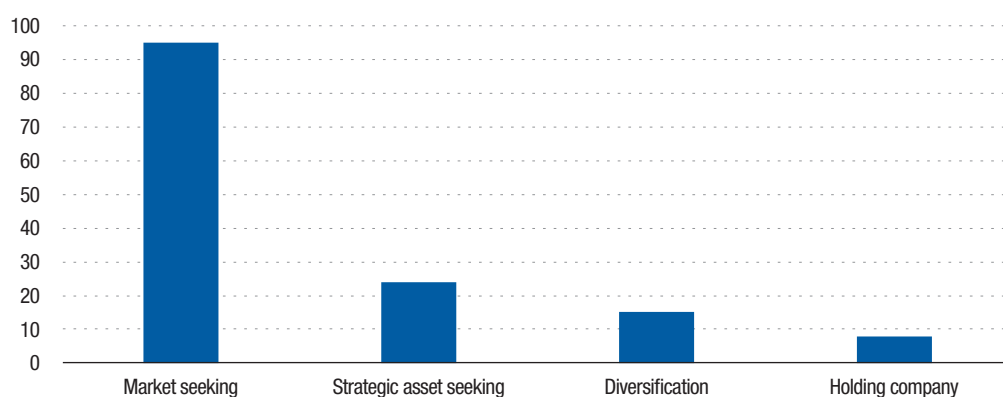
The 100 most-funded start-ups in ASEAN with regional investment have expanded to other ASEAN Member States for a combination of reasons, with the overwhelming majority (96) driven by market-seeking considerations (box figure 2.3.1). These start-ups include Ninja Van (Singapore), a technology-enabled logistics company; Carro (Singapore), an online used-car marketplace; and Ada (Malaysia), an integrated digital, analytics, marketing, and e-commerce solution provider.

In addition to market-seeking reasons, some (24) also invest in at least one other ASEAN Member State for strategic-asset-seeking reasons, which include setting up a subsidiary purely to hire local engineers and computer scientists or to tap into the host country’s research and development (R&D)

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Box 2.3. Market factors driving regionalization of start-ups in ASEAN

ecosystem for improving technology offerings. For example, Sky Mavis (Viet Nam) registered its principal business – the development of software and programming activities – in Singapore, with an \$8.7 million investment in that host country. Some of these start-ups also invest abroad, maintaining a holding company function in Singapore without much business activity in that country (e.g., Wave Money (Myanmar)).

Box figure 2.3.1. Drivers of the top 100 most funded start-ups with regional investment, 2022 (Number)

Source: ASEAN Investment Report 2022 research, based on data from Crunchbase.

Source: Crunchbase.

Note: Data is compiled through a triangulation of secondary data, including Singapore Company Search, company websites, news articles and press releases, which offers information of the primary function of business of these start-ups.

Table 2.6. Why do start-ups regionalize or internationalize?

Key driver	Description	Examples of start-ups
Limited home market	Some start-ups are born regional or global because their home markets are small, so they go abroad to scale.	Many start-ups in Singapore invest in neighbouring countries to expand their markets. Examples include Beam, Shopback and Volopay.
Digital economy growth	The rapid growth of the digital economy in ASEAN is attracting more start-ups to undertake cross-border investment.	Start-ups such as Cialfo, Insider and Shopback (all Singapore) and Ula (Indonesia) are expanding in the region and abroad in businesses related to technology. Other start-ups are investing in Indonesia because of the rapid growth of its digital economy.
Stage of business development	Rapidly growing start-ups and unicorns are more likely to undertake cross-border investment than smaller start-ups. Technology start-ups are also more likely to scale through investing in multiple markets.	Gojek (Indonesia) and Grab (Singapore) each have an extensive presence in the region in multiple business lines (e.g., ride-hailing, logistics, fintech, food delivery) as compared with smaller unicorns or start-ups (e.g., Kopi Kenangan and Xendit (both Indonesia)). Flash Express and Ascend Money (both Thailand) also scale up through regional expansion.

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Table 2.6. Why do start-ups regionalize or internationalize? (Concluded)

Key driver	Description	Examples of start-ups
Access to funding	The maturity of the venture capital industry and easier access to funding for overseas expansion are significant factors.	Many start-ups and unicorns have successfully raised funds to expand regionally. Examples include Ninja Van and Moglix (both Singapore). Carousell (Singapore) secured \$100 million in mid-2021 to accelerate expansion in the region. Sicepat (Indonesia) raised \$170 million in March 2021 with plans to strengthen its domestic market and explore expansion in ASEAN. Many Indian start-ups have established a presence in Singapore to access that country's business infrastructure and venture capital market. ^a
Competitive host-country ecosystem	An efficient start-up ecosystem or the infrastructure of a host country can attract start-ups to set up a presence.	Start-ups have chosen to set up their headquarters in Singapore because of the ease of establishing operations, the more efficient ecosystem and the infrastructure in that country. ^b Examples are Konigle, Interviewer.AI and Privyr.
Regional integration	Regional integration opens up opportunities for cross-border investment and scaling-up.	Carsome (Malaysia) invested in Universal Collection (Indonesia), an offline car and motorcycle auction service company, in July 2021 to open up networks in Indonesia.
Home-country measures	Some home countries provide support and encourage their SMEs and start-ups to regionalize or internationalize.	Malaysia and Singapore, for example, provide a wide range of support (e.g., institutional, funding, coaching and mentoring) for their SMEs, including start-ups, to internationalize.

Source: ASEAN Investment Report 2022 research.

^a Corporate services.com, "Why Indian startups incorporate in Singapore: complete guide", www.corporateservices.com.

^b EDB Singapore, "Startups share how they incorporated their business in Singapore", 24 April 2020.

A competitive start-up ecosystem in a host country is an important driver for growth. In Singapore, such an ecosystem, as well as policy support and the existence of a strong venture capital and private equity industry, is attracting start-ups from other ASEAN countries and elsewhere to establish operations or headquarters (e.g., Grab started out in Malaysia and is now headquartered in Singapore). Kezar Innovations (Philippines) has incorporated start-ups Kezar Atlas Technologies and StudyPlay in Singapore. Moglix established its headquarters in Singapore while maintaining its operations centre in India. Acronis launched its international headquarters in Singapore because of that country's strategic location.

Regional integration is an ever more important driver for start-ups to regionalize in ASEAN. Regional integration offers opportunities for start-ups to scale, especially those born in small market environments. For instance, the rapid digital market growth and potential market size of Indonesia, accentuated by momentum for regional integration (i.e., the ASEAN Economic Community), have been encouraging many foreign and ASEAN start-ups to establish a presence in that host country. HyalRoute (Singapore) provides shared communication fibre networks in Cambodia and Myanmar. In 2019, it entered into a partnership with the Government of the Philippines to strengthen network connectivity in that country. J&T Express (Indonesia) entered Malaysia and Viet Nam in 2017, the Philippines and Thailand in 2018, and Cambodia and Singapore in 2019 to expand regionally. It opened a third warehouse in Singapore in June 2022.

The availability of and access to funding play a key role in regional expansion (box 2.4), accentuated by the expansion of global and regional private equity and venture capital companies in the region in recent years. Cases of initial public offerings (IPOs) such as Sea and Grab (both Singapore), Frontier Digital Ventures (Malaysia) and KinerjaPay (Indonesia) have also inspired other start-ups and funding entities.

Box 2.4. Regional expansion of start-ups (Selected cases)

An increasing number of start-ups have been successful in raising funding to expand regionally. Some have continued to invest in more ASEAN Member States to scale; others have indicated plans to further expand their regional footprints.

aCommerce (Thailand) is an e-commerce enablement software company established in 2013. It provides end-to-end solutions that include digital marketing, online store development and management, data analytics, fulfilment and delivery services. The company offers offline and online solutions and has five fulfilment centres in the region. To support its expansion, it has raised funding from venture capital firms and investors such as Emerald Media (India), DKSH (Switzerland) and Kohlberg Kravis Roberts (United States). It has operations in Indonesia, Malaysia, the Philippines and Singapore. Some of its customers include L'Oréal (France), Line (Japan), Abbott (United States), Unilever (United Kingdom) and Nescafé (Switzerland), where it offers localized e-commerce solutions.

Ada (Malaysia) is a data and artificial intelligence (AI) solutions provider founded in 2013. It designs and executes integrated digital, analytics, marketing and e-commerce solutions. Some of its major investors include SoftBank and Sumitomo Corporation (both Japan). Ada has offices in Cambodia, Indonesia, the Philippines, Singapore, Thailand and Viet Nam. Its customers include Unilever (United Kingdom), Timberland (United States) and DBS (Singapore).

Akulaku (Indonesia), established in 2016, is a banking and digital finance platform entity with a presence in Malaysia and the Philippines. It has successfully raised funds from investors such as Ant Group (China), Arbor Ventures (Singapore) and Eight Roads Ventures (United Kingdom). It reaches out to underserved customers in emerging markets to provide consumer financing, digital investment, digital banking and insurance brokerage services.

Ayannah (Philippines), established in 2010, provides digital commerce and payment services to the unbanked in emerging markets. It has diversified with its AI-enabled platform, offering a suite of financial and lifestyle products from insurance to telemedicine, payments and remittances. It has raised venture capital from Beenos Partners (Japan), Google Launchpad Accelerator (United States) and Spiral Ventures (Singapore). As part of its global expansion, Ayannah acquired and merged with Ecaps (India), a fintech company with the same mission, which led to expansion of its presence in Viet Nam. It later established a physical presence in Indonesia and in Singapore. The company has users across all of ASEAN. In 2021, it announced plans to raise another round of funding to further expand growth, both regionally and internationally.

Insider (Singapore), established in 2012, enables marketers to connect customer data across channels, predict behaviour with AI and individualize cross-channel experiences. It serves customers such as Singapore Airlines, Virgin (United Kingdom), Toyota (Japan), IKEA (Sweden), Samsung

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Box 2.4. Regional expansion of start-ups (Selected cases) (Concluded)

(Republic of Korea) and CNN (United States). Insider has raised venture capital from Riverwood Capital (United States), ESPRO Investment (Netherlands), and Sequoia Capital (United States). The company has a presence in Indonesia, Malaysia, the Philippines, Thailand and Viet Nam.

Spemmo (Singapore), established in 2019, has a presence in Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam. It provides all-in-one software that consolidates corporate cards, multi-currency dashboards, automated bill pay, employee expense claims and payroll disbursements. The company has raised investment from Commerce Ventures, Insight Partners, and Salesforce Ventures (all United States).

Source: Company websites, Crunchbase, TechCrunch, Tech in Asia, press releases and media.

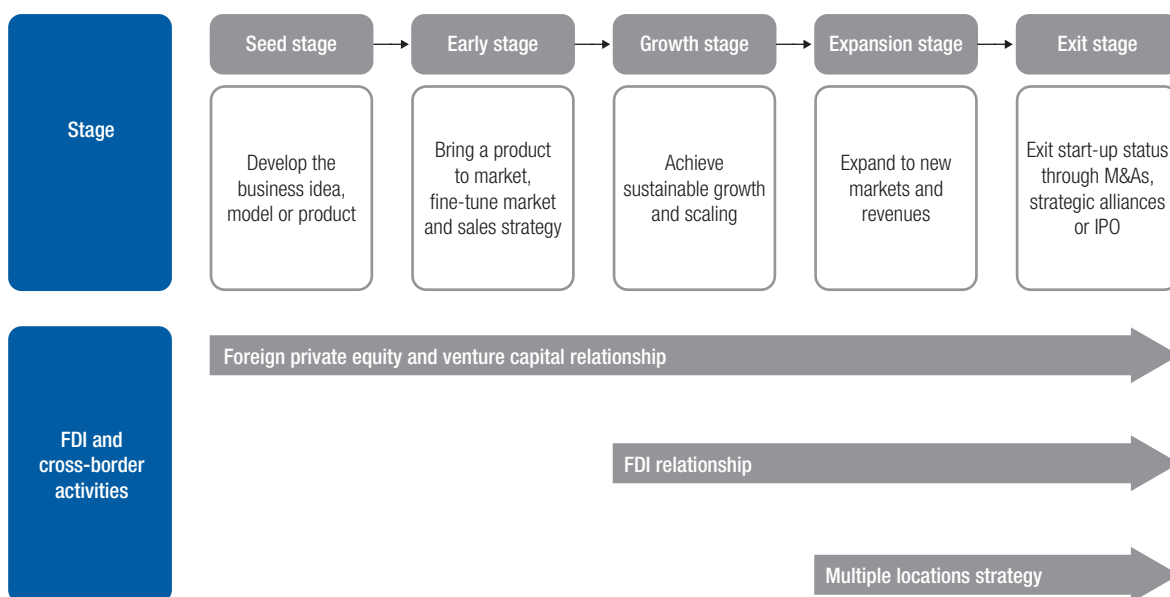
Whether or not start-ups regionalize depends on factors such as the size of the home market, the business model of the start-up, the policy support of the host country and the ability of the start-up to raise funding. Start-ups in countries with small markets are more likely to internationalize or go regional to grow and scale up than those in countries with large markets (Cavusgil & Knight, 2009; Dzikowski, 2018). Even during the pandemic, one in two firms (mostly SMEs) in Singapore expanded overseas, primarily in neighbouring countries.⁶ In the 2021 Singapore Business Federation SME Internationalization Index study, two thirds of the businesses have gone abroad or plan to indicated that Singapore's market is too small. Expanding abroad is the only way to grow and fulfil the companies' vision of internationalization.⁷

Start-ups in ASEAN regionalize through a number of modalities. They include mostly cross-border investment, M&As, and strategic partnerships or alliances (see section 2.6). In some cases they also partner with other start-ups, unicorns or MNEs to strengthen or diversify their business at home, establishing linkages with these stakeholders.

The relationship between start-ups and FDI activities in ASEAN reflects different stages of the growth process, from seed to exit (figure 2.7). Start-ups regionalize mostly during the growth and expansion stages. At expansion stage, they regionalize rapidly in multiple locations to capture horizontal and vertical markets. Some form strategic alliances with MNEs or other unicorns to expand value chains or diversify digital or technology services from e-commerce to fintech and medtech (*AIR 2020–2021*, box 2.5).

The symbiotic relationship between start-ups and venture capital helps the region attract venture capital and other types of funders (e.g., private equity and foreign family offices or funds) of FDI. The exits of some start-ups (e.g., Grab in 2021, Sea in 2017, Razer in 2017) through public offerings are attracting venture capital companies to set up offices in the region. They include several from the United States (e.g., Valar Ventures, Hedosophia and Goodwater Capital).

But not all start-ups or unicorns follow the path to regional expansion. Some remain local market players, preferring to expand and achieve further growth locally. The large local market of Indonesia is in itself a strong deterrent to regional expansion by a start-up in the growth stage.

Figure 2.7. Stages of start-up development and FDI relationship (Simplified illustration)

Source: ASEAN Investment Report 2022 research.

Box 2.5. Expansion to multiple ASEAN Member States by start-ups

Some start-ups scale rapidly through geographical and product diversification, into multiple regional locations. In some cases, they also form strategic partnerships with other MNEs, the traditional ASEAN conglomerates and local start-ups.

Grab (Singapore) has expanded its ride-hailing business to many ASEAN countries. It has also expanded into other digital businesses such as logistics, online payments and health care. In addition to investing regionally, it has established partnerships and alliances with partners in multiple markets. Some of the partnerships include the following:

- *Ovo* (Indonesia). Grab acquired a majority stake in this unicorn, an e-payment service, in 2021.
- *Kasikornbank* (Thailand). Grab established this partnership in 2018 to introduce GrabPay by KBank – a co-branded mobile wallet – and other financial solutions in Thailand.
- *Maybank* (Malaysia). Grab established this partnership in 2018 to increase use of its new cashless payment solution in Malaysia.
- *Mastercard* (United States). Grab established a partnership with Mastercard in 2021 to advance digital and financial inclusion in South-East Asia.
- *Wirecard* (Germany). Grab established this partnership in 2020 to connect the two payment ecosystems. Wirecard processes card transactions made through the GrabPay e-wallet.

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Box 2.5. Expansion to multiple ASEAN Member States by start-ups (Concluded)

- *Ping-An Good Doctor* (China). In 2018 Grab entered into a joint venture with this online health-care service to deliver health-care solutions using AI technology and telemedicine.
- *Unilever* (United Kingdom). Grab established this partnership in 2020 to cover GrabProtect, through which Unilever's sanitation and hygiene products support in-vehicle cleaning and personal hygiene for Grab commuters in Indonesia, Malaysia and the Philippines. Grab and Unilever cooperate to dispatch products to retailers to meet real-time demand, creating opportunities for GrabExpress driver-partners.
- *Tops Online* (Thailand). Grab partnered with Tops Online, an online supermarket, in 2019 to expand its GrabExpress delivery service for Tops Online's products.
- *Marriott Group* (United States). Grab partnered with Marriott in 2020 to integrate premium hospitality services for food delivery, payment, transport, loyalty and rewards into Grab's platform in phases.

Ascend Money (Thailand), established in 2013, offers digital financial products and services such as lending, borrowing, wealth management and payments. It is part of the Ascend Group, which is a spin-off from True (Thailand). Ascend Money also operates in Cambodia, Indonesia, Myanmar, the Philippines and Viet Nam. It also has established strategic partnerships and alliances with other MNEs. They include the following:

- *Ant Financial* (China). The partnership assists Ascend Money in growing its online and offline payment and financial services ecosystem in Thailand by providing strategic and technical support.
- *Omise* (Japan and Thailand). The partnership supports integration of TrueMoney Wallet (TrueMoney is a subsidiary of Ascend Money) into e-commerce platforms.
- *Bank Negara Indonesia*. The collaboration extends Ascend Money's financial services to rural communities in Indonesia.
- *Bayad Center* (Philippines). The partnership gives customers of this bill payment centre company access to TrueMoney payment services.
- *Google* (United States). The partnership supports Ascend Money's transition from an on-premise data centre to a cloud service provider. It helps Ascend Money reduce infrastructure investment and improve the efficiency of its online processes. Ascend Money uses Google cloud technologies such as the BigQuery data analytics warehouse, as well as Cloud Storage to store raw and archive data and Cloud Dataflow to process streaming and batch data.

Source: Grab and Ascend Money websites, media and industry reports.

However, many successful start-ups that have not undertaken cross-border investments have expressed interest in expanding regionally to tap other ASEAN markets and to scale up. An example is Kredivo (Indonesia), which plans to further expand regionally to Thailand and the Philippines in 2022. In 2021, Kopi Kenangan (Indonesia) raised \$96 million in a Series C funding round and announced plans to use the funding to expand domestically and in ASEAN. Xendit (Indonesia) announced in 2022 that it plans to expand regionally.

Foreign start-ups or entrepreneurs have also established a presence in ASEAN. Some have invested initially in one ASEAN Member State and then used that Member State as a platform to invest and expand regionally. Having established JD.Id in Indonesia in 2015, JD.com (China) then formed a joint venture with a Thai conglomerate, Central Group, to enter Thailand in 2017, and in 2018 it made a strategic investment in Viet Nam in a business-to-consumer e-commerce platform, Tiki.vn. Many Indian, Korean and Japanese entrepreneurs have established start-ups in ASEAN (box 2.6). Indian start-ups such as Flipkart, InMobi and Medialink were incorporated in Singapore. Entrepreneurs from Japan have established start-ups in various ASEAN Member States, including Thailand, Singapore and Viet Nam. Examples include TalentEx (online recruitment), BuzzCommerce (e-commerce for cosmetics and health foods) and Newlegacy Hospitality (hotel operation), with headquarters in Singapore, and BuzzElement, with headquarters in Malaysia.

Box 2.6. FDI by Korean start-ups in ASEAN

In a survey on overseas investment of 198 Korean start-ups by the Korea Trade-Investment Promotion Agency (KOTRA) in December 2021, some 40.4 per cent of respondents indicated North America as their top preference for investment, followed by China (20.2 per cent), South-East Asia (15.3 per cent), and Europe (11.1 per cent). Key drivers for overseas investment by Korean start-ups include to provide customized products or services (45.5 per cent), to increase their “consumers and customer base” (39.0 per cent), “incentives and easiness of overseas investment” (4.5 per cent), and “to cooperate with overseas partners” (4.5 per cent).

Korean start-ups select ASEAN for overseas expansion because of the region’s locational advantages, which include lower entry barriers compared with countries in other regions, the loyalty of ASEAN consumers towards Korean brands, and the relatively well-developed infrastructure and high ratio of social network usage among Internet users (Yin, Moon, and Lee, 2019). Other factors such as the New Southern Policy of President Moon’s administration and the rapid growth of South-East Asia’s start-up ecosystem were also important.

Korean unicorns (e.g., Yanolja, Megazone Cloud, Crelabs) have a presence in ASEAN (box table 2.6.1). Many Korean start-ups have established joint ventures with large Korean firms or local firms or have acquired local firms to leverage their partners’ local and global networks to better serve local customers and exploit technological advantages. For example, the joint venture between Woowa Brothers (Republic of Korea) and Delivery Hero Asia (Singapore) aims to expand the food delivery business into 14 countries across Asia, including Cambodia, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam.

A few Korean start-ups also have used an ASEAN country initially as a gateway to serve or extend investments to other ASEAN markets. Socar Malaysia was established in 2017 as a joint venture between SK Holdings and Socar (both Republic of Korea). It evolved into a major car-sharing platform within two years after it launched in Malaysia. It established a wholly owned subsidiary, Trevo, in February 2020 and entered the Indonesian market later that year. The launch of Trevo and expansion into Indonesia were facilitated by funding from Korean private equity firm (EastBridge) and a Malaysian conglomerate Sime Darby.

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Box 2.6. FDI by Korean start-ups in ASEAN (Concluded)**Box table 2.6.1. FDI by Korean start-ups in ASEAN (Selected cases)**

Start-up	Year	Business	FDI in ASEAN
Megazone Cloud	1998	Software services	Established overseas subsidiaries in Indonesia, Singapore and Viet Nam
Yanolja	2005	Motel-booking service platform	Invested in and become the largest shareholder of ZEN Rooms the leading budget hotel chain; operates in Indonesia, Malaysia, the Philippines, Singapore and Thailand
Woowa Brothers	2011	Mobile food delivery platform	Established Woowa DH Asia, a joint venture with DH Asia (Singapore)
Socar	2011	Car-sharing service	Established a joint venture, Socar Mobility Malaysia, with SK Holdings (Republic of Korea)
Crelabs	2012	Biotech	Acquired a majority stake in Eunogo, an online beauty concierge start-up in Indonesia and Singapore
BucketPlace	2014	Home interiors app	Acquired online furniture commerce platform HipVan (Singapore)
Bespin Global	2015	Software services	Established Bespin Global SEA (Singapore)
Chai Corporation	2019	Fintech	Established a foreign subsidiary in Viet Nam

Source: Company websites, media and industry reports.

Some start-ups expanded into ASEAN at the early stage of their development. For instance, Chai established a subsidiary in Viet Nam in the third year after its inception. Other start-ups such as N.thing (an automated modular vertical farming solution), Marvrus (edutech), Visual Camp (eye-tracking technologies), Gene (biotech) and Moin (fintech) are investing or planning to invest in ASEAN.^a Most Korean start-ups provide intangible services using their asset-light business models, which helps them enter and expand investments in ASEAN without much resource commitment for launching services overseas.

Korean venture capital companies and funds are also investing in start-ups in ASEAN. They include KB Investment, in Naluri (Malaysia) and fintech start-ups; LB Investment, in Happyfresh (Indonesia) and other ASEAN Member States; Korea Investment Partners, in C88 Financial Technologies (Singapore), Halodoc (Indonesia) and start-ups in other ASEAN Member States; and TS Investment, which teamed up with VSV Capital (Viet Nam) to invest in start-ups based in Viet Nam.

Source: Company websites, industry reports and media.

^a e27, "15 South Korean startups set to pursue the Southeast Asia market", 7 December 2020.

2.4. POLICY AND INSTITUTIONAL SUPPORT

Some ASEAN Member States have implemented policy measures that support start-up development. They include measures and programmes to build the local start-up ecosystem, including attracting foreign start-ups, venture capital and entrepreneurial talent to the country. For instance, in *Malaysia* the Tech Entrepreneur Programme, under the Malaysia Digital Economy Corporation, promotes investment by entrepreneurs and investors in tech start-ups in Malaysia.

Singapore has various schemes and programmes to attract global entrepreneurial talent. A one-stop centre – Startup SG – provides loans, grants, funding and capability-enhancement support. The Financial Sector Technology and Innovation scheme is helping to create a vibrant ecosystem for innovation by attracting financial institutions to set up innovation labs in Singapore. The Government also provides various grants, such as the Capabilities Development Grant and the Global Company Partnership Grant, to attract start-ups and facilitate development of the country's start-up ecosystem.⁸

In *Thailand*, the Government is planning to develop the country into a global hub for start-ups by attracting local and foreign entrepreneurial ventures. Three key locations for such hubs have been established, in Bangkok, Chiang Mai and the Eastern Economic Corridor. Institutions such as the National Innovation Agency and the Digital Economy Promotion Agency are supporting the development of the start-up ecosystem and the growth of start-ups. The National Innovation Agency and the Board of Investment coordinate on a smart visa programme to attract foreign start-ups and investors to establish a presence in the country.

There is increasing interest from foreign venture capital companies in *Viet Nam*. The Government is providing support to develop the start-up ecosystem and attract foreign start-ups and venture capital. It has established various funds (e.g., the National Technology Innovation Fund) to provide financial assistance, training and mentoring support to entrepreneurs and start-ups (e.g., the National Agency for Technology, Entrepreneurship and Commercialization Development). The Law on Supporting Small and Medium-Sized Enterprises of Viet Nam highlights support for start-ups, in such areas as technology development, trade promotion, investment, preferential loans and incentives for venture capital funds.⁹

Other policy measures also support local start-ups in scaling up overseas. The policy measures and institutional support of home countries play a key role in encouraging ASEAN start-ups to regionalize (table 2.7). Yet, not all ASEAN Member States are encouraging start-ups in their markets to undertake cross-border investment; hence, the absence of clear policy and institutional support in these countries for start-ups to go abroad.

Unlike the more mature start-up environment in Member States such as Malaysia and Singapore, the infancy of the start-up industry in Member States such as Cambodia, the Lao People's Democratic Republic and Myanmar limits adoption of such an outward investment policy. In some Member States (e.g., Malaysia and Singapore), local start-ups benefit from funding, grants, coaching and market information provided by government institutions to help them grow and venture abroad.

Table 2.7. Support for internationalization of SMEs or small companies in ASEAN

Country	Type of support			
	Policy	Institutional	Funding	Coaching/mentoring
Brunei Darussalam	..	..	..	..
Cambodia	..	..	..	..
Indonesia	☑	☑	☑	☑
Lao People's Democratic Republic	..	..	..	..
Malaysia	☑	☑	☑	☑
Myanmar	☑	☑	..	☑
Philippines ^a	☑	☑	☑	☑
Singapore	☑	☑	☑	☑
Thailand	☑	☑	☑	☑
Viet Nam	..	..	..	..

Source: Investment agencies of ASEAN Member States and media.

^a Focused on SMEs.

Although the more advanced ASEAN economies have focused policies that support the expansion of SMEs abroad, the degree of support varies (box 2.7). Some countries have specific funds, grants and incentives for SMEs to go abroad; others do not provide funding or institutional support for internationalization.

Box 2.7. ASEAN: Support for SMEs and start-ups to expand overseas (Selected cases)

Some ASEAN Member States provide specific programmes that support SMEs or start-ups in internationalizing. Selected programmes of these Member States include the following:

Indonesia

Indonesia adopts several programmes to support SMEs development.

- The Ministry of Investment/Indonesia Investment Coordinating Board (BKPM) collaborates with other stakeholders, such as Gojek and the Ministry of State-Owned Enterprise, to support SMEs in internationalizing.^a
- *Indonesia Eximbank* provides export-oriented SMEs and their international ventures with financing to help their businesses grow. Two types of funding support are available: (i) domestic financing (covers e.g., working capital, export financing, investment export financing and supplier bills purchasing) and (ii) overseas financing (covers e.g., overseas investment financing, overseas project financing and buyer's credit).
- *Pertamina UMK (SME) Academy* helps Indonesian SMEs go global. In 2020, 61 foster partners successfully graduated from the UMK (SME) Go Global programme, with a focus on export market development.
- *Institute Teknologi Bandung* launched Aplikasi UMKM (SME apps) to support digitization and global expansion by Indonesian SMEs. Enterprises that join the platform can analyse products and markets with the data provided. SMEs get coaching and training from the Institute.^b

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Box 2.7. ASEAN: Support for SMEs and start-ups to expand overseas (Selected cases) (Concluded)**Malaysia**

SME Corporation Malaysia coordinates, monitors and evaluates the progress and effectiveness of SME development programmes implemented by 15 ministries and more than 50 agencies. It offers two programmes – SMEs Go Global and Global SME Masterclass – both aimed at assisting SMEs in expanding globally. Specific support activities include capacity-building, market access, financing, branding, technology, outreach and business advisory services.

Philippines

In March 2022, to promote FDI, the Government signed Republic Act No. 11647, which amended the Foreign Investment Act. Foreign investors can set up and acquire domestic enterprises, including micro and SMEs (MSMEs). Through the Department of Trade and Industry, the Government has an MSME Development Plan that covers financing, market access, productivity and efficiency. It has a dedicated website for MSMEs for business and export development. It provides support and guidance in other areas such as (a) trademark and patent matters; (b) quality standards; (c) market development, by providing information on suppliers, subcontractors, distributorships and other types of partnership; (d) product development; and (e) export trade information to facilitate SMEs in exporting or expanding abroad. The Department of Trade and Industry also partners with local banks (e.g., Bank of the Philippine Islands) to support SME internationalization.

Singapore

Singapore has various programmes for SME development and internationalization. Enterprise Singapore offers the Go Global programme for domestic enterprises, in particular SMEs aspiring to expand into new markets. The programme includes guidance and assistance in (a) assessing market readiness, (b) researching in-market opportunities, (c) building capabilities for internationalization, (d) exploring in-market opportunities, (e) matching with partners and projects, (f) obtaining human resources training, (g) co-funding market expansion and (h) leveraging financing. It also provides a market readiness assistance grant to support SMEs in Singapore in expanding their operations into international markets.^c Other grants that support SME internationalization include the Enterprise Development Grant, which helps domestic companies grow, transform, innovate or venture overseas.^d The Government also provides overseas business development consultancy services.

Thailand

Government support for SME internationalization includes programmes such as Global SME, which assists Thai SMEs in venturing abroad. It provides an International Market Expansion Grant and other incentives. The Export-Import Bank of Thailand continues to support Thai SMEs in expanding overseas, particularly in neighbouring countries. It set up offices in Cambodia, the Lao People's Democratic Republic and Myanmar to help Thai customers invest and operate in these markets. The Federation of Thai Industries and the Bank of Thailand also work together to help Thai SMEs expand overseas.

Source: Country websites and media.

^a BKPM, "BKPM collaborates with major companies to support SMEs to go global", 2021.

^b Institute Teknologi Bandung, News, "Supporting digitalization and global expansion of Indonesian SMEs: SBM ITB soft-launches Aplikasi UMKM", 24 September 2021.

^c Cekindo, "Singapore's MRA Grant – Market expansion into Indonesia", 31 March 2021.

^d Singapore Association of Trade and Commerce, "Government grants and support schemes for businesses" (<http://atc.sg/singapore-government-business-sme-grants-support-assistance.php>).

2.5. START-UP LANDSCAPE IN ASEAN

The start-up landscape in ASEAN Member States is mixed, with most in the infancy or growing stage (table 2.8). However, a majority of Member States are witnessing rapid growth in the number of start-ups across an expanding range of business activities. Also, more start-ups are internationalizing than in the past because of the increasing number of inspiring successes in regionalized ventures and because of the market reasons mentioned earlier.

The number of start-ups in ASEAN that have raised more than \$1 million in funding almost tripled between 2015 and 2022, from 652 to 1,920. In perspective, the number rose much faster than in India, which witnessed an increase of 110 per cent, Europe (85 per cent) and the United States (65 per cent) in the same period.

Three countries (Singapore, Indonesia and Malaysia, in that order) account for 83 per cent of the start-ups that have raised more than \$1 million in funding in the region. Other ASEAN Member States (e.g., Viet Nam, the Philippines and Thailand) are also witnessing rapid growth in the number of start-ups. Start-ups based in Singapore internationalize far more actively than those in other Member States. Differences in the start-up landscape (ecosystems, profiles of start-ups and support) among the Member States influence start-up development and internationalization (box 2.8).

Of the 100 most-funded start-ups in ASEAN as of May 2022, 42 have a physical presence in at least one other Member State. For the start-ups that do not yet have a regional presence, three key reasons underlie this choice. First, some internationalize but not through a presence in ASEAN. These are mostly the “born global” firms that operate in a more complex technology spectrum,

Table 2.8. ASEAN start-up landscape, 2022

Country	State of development	Start-ups (Number)		Unicorns (Number)
		2015	2022	
Brunei Darussalam	Infancy	0	0	..
Cambodia	Infancy	4	10	..
Indonesia	Fast growth	78	285	14
Lao People's Democratic Republic	Infancy	1	2	..
Malaysia	Growing	57	146	3
Myanmar	Infancy	13	7	..
Philippines	Growing	40	89	2
Singapore	Frontier	370	1 157	20
Thailand	Growing	33	86	3
Viet Nam	Growing	56	138	4
ASEAN	Mixed	652	1 920	46

Source: ASEAN Investment Report 2022 research, based on data from Crunchbase (extracted on 10 June 2022).

Note: Start-ups with over \$1 million funding raised.

often holding technical superiority in a given product category (Mostafiz et al., 2019). There are also start-ups that need to be present in sophisticated ecosystems and in close proximity to customers and other networks (Dzikowski, 2018). For example, Trax (Singapore), a data science solutions software company, does not have a physical presence in other ASEAN countries but has a significant presence outside ASEAN (e.g., Australia, China, France, Japan, and United States).

Box 2.8. ASEAN start-up ecosystem

A start-up ecosystem is developed through the connection of people, businesses, organizations and other stakeholders at the different development stages. These stakeholders help create, nurture, support and scale start-ups (Mason and Brown, 2014).

Many entities play important roles in developing the ASEAN start-up ecosystem, among them banks, venture capital firms, universities, co-working spaces, events, media, trade associations, consulting firms, government bodies and not-for-profit organizations, established technology companies and multinational firms. Specialized industry entities such as Tech in Asia (Singapore) organize conferences and events across ASEAN and provide useful resources for start-ups. They also play an important role in promoting start-ups and entrepreneurship. Co-working spaces, such as WeWork (United States), lead to entrepreneurs working near one another, which helps develop networking opportunities. Associations such as the Asosiasi Fintech Indonesia work closely with governments to advocate and improve policy, and organize conferences and networking events. Large companies such as Grab (Singapore), Microsoft (United States) and Google (United States) that are present in ASEAN offer opportunities for knowledge spillovers, and help develop employees through access to the latest technology and innovation. Many employees working in these established companies later established innovative start-ups themselves. Some of these companies, such as Google and Gojek (Indonesia), also invest in and offer start-up programmes to help foster entrepreneurship.

Other supporting organizations include incubators and accelerators. Incubators work with founders at the idea stage to help them network with other entrepreneurs, develop their idea, determine product-market fit and the business model, and get ready to release an early version of a product or service. Accelerators offer programmes to help start-ups that have potential for rapid growth. They provide financial support, expert advice, mentoring, training and networking opportunities. The programmes usually last three to six months, aiming to accelerate growth and take the start-up business to a stage where it is ready to raise investment and scale (Hausberg and Korreck, 2021). Some prominent non-regional accelerators active across ASEAN include 500 Start-ups (United States), TechStars (United States), and Startupbootcamp (United Kingdom). There are also local accelerators.

Financial institutions and venture capital firms play an essential role in funding, which is essential for start-ups to scale and stay competitive. Prominent local ASEAN venture capital firms include Alpha JWC Ventures (Indonesia), Gobi Partners (Malaysia), and Jungle Ventures (Singapore). However, international venture capital firms are significant players in the development of the start-up ecosystem in ASEAN. Some of these firms include Atinum Partners (Republic of Korea), Boyu Capital (China), Digital Horizon (United Kingdom), Global Founders Capital (Germany), Khosla Ventures, Kohlberg Kravis Roberts, Sequoia Capital (all United States), and SoftBank and Sony Innovation Fund (both Japan).

Source: ASEAN Investment Report 2022 research.

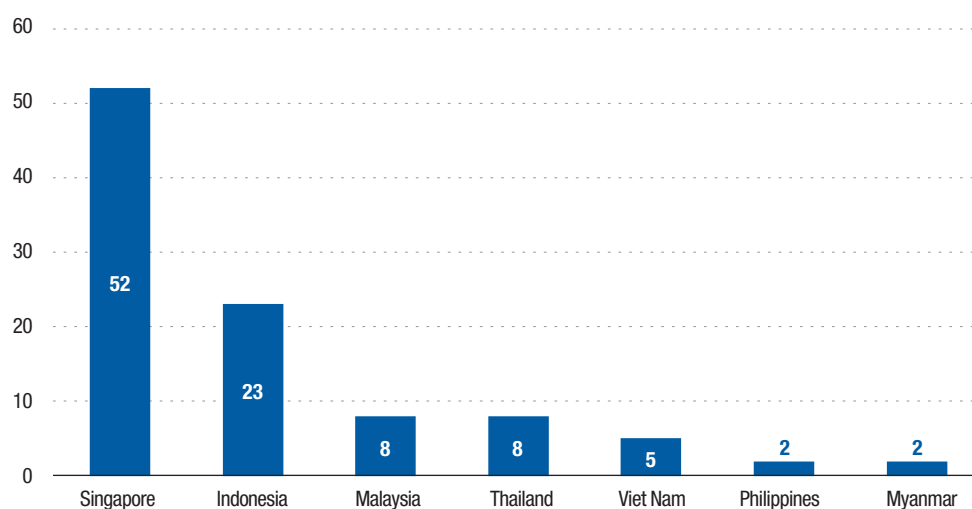
Second, some start-ups that do not have a physical presence in other Member States export services to regional customers from their home countries, enabled by connected technology platforms. Emeritus (Singapore) and Trax do not have a physical presence in ASEAN but serve clients in other ASEAN countries out of their home locations. Similarly, NIUM (Singapore), a payment system developer, and Mynt (Philippines), a diversified fintech start-up, offer services to customers in the region from their home locations. Third, many start-ups that operate in large markets are not driven by the need to go abroad to scale. They are often preoccupied with expanding domestically to scale, with business strategies to capture more local markets in different geographies and to expand domestic business with a more diversified range of products and services.

2.5.1. 100 most-funded start-ups with regional investment

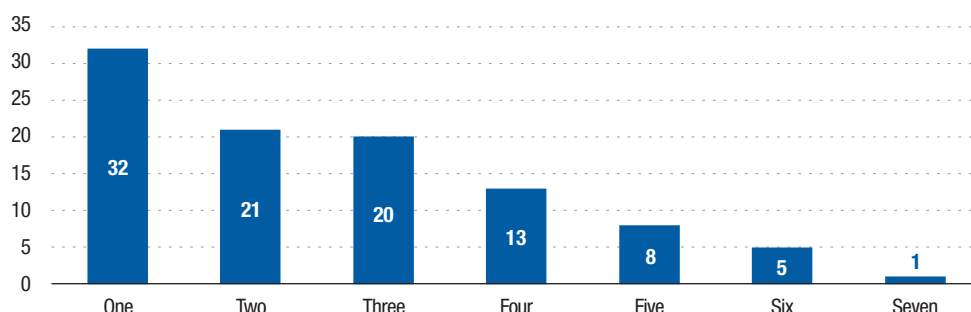
Two countries are home to three quarters of the 100 most-funded start-ups with regional investment in ASEAN (figure 2.8). More than half are headquartered in Singapore and nearly a quarter in Indonesia. Singapore remains the most popular headquarters location, but other ASEAN Member States are witnessing increasing numbers of regionalized start-ups and venture capital investment activities. These companies are enriching the ecosystems and strengthening intra-ASEAN investment.

Thirty-two of the 100 most-funded start-ups with regional investment have subsidiaries in one other ASEAN Member State, while the remaining 68 operate in two or more locations in the region – suggesting that those that do regionalize quickly expand to more countries (figure 2.9, box 2.9). Many of these top 100 also have other internationalization activities¹⁰ in the region (e.g., exports of services).

Figure 2.8. Top 100 most funded start-ups with regional investment, by headquarters location, 2022 (Number)



Source: ASEAN Investment Report 2022 research, based on data from Crunchbase.

Figure 2.9. Top 100 most funded start-ups with regional investment, number of locations, 2022 (Number)

Source: ASEAN Investment Report 2022 research, based on data from Crunchbase.

Box 2.9. Why do some start-ups scale quicker than others?

The extent of internationalization of start-ups varies from sector to sector. Some technology start-ups expand rapidly, enabled by the standardized nature of their products and services. For example, the taxi-hailing application *Grab* standardized its business model and technology with limited adaptation as it expanded overseas. However, standardization presents such companies with challenges. These companies often operate in industries that have low levels of product differentiation, and they can gain advantages over competitors on customer service, availability and price. Scaling operations abroad quickly is important for these companies, as the larger their network effects, the more they will benefit from economies of scale and cost advantages against competitors (Abdelkafi et al., 2019; Cusumano et al., 2019; Van Alstyne and Parker, 2017; Van Alstyne et al., 2016).

Owing to the price competitive nature of such industries, many firms that cannot compete on price pivot their business to another market, diversify or add features to differentiate themselves from competitors (see box 2.11), or go out of business. As a result, certain industries can sustain only one to three players, as they need to have high volumes of customers for the market to be viable (Cusumano et al., 2019). First-mover advantages are thus essential to sustain a competitive advantage in such market. *Grab* benefited from first-mover advantages by expanding abroad rapidly in taxi-hailing application markets and was able to create monopolistic market positions in several ASEAN countries. *Uber* (United States) sold off its operation in South-East Asia to *Grab*. Some start-ups operating in industries where levels of standardization are high and barriers to internationalization low are forced to expand rapidly in order not to be locked out of key markets.

In some cases, start-ups are largely embedded in the domestic setting they operate in. For instance, fashion differs from one cultural setting to another, and thus what sells well in Indonesia, say, may not necessarily sell well in Thailand. Educational technology companies are also embedded in the varying curriculums of the countries where they operate. As a result, companies operating in edutech tend to be less global, because of the differing country contexts, and need to significantly adapt their products and services in order to internationalize successfully. Thus, edutech companies face more barriers to international expansion and start-ups in this category also face less pressure to expand internationally early in their life cycles.

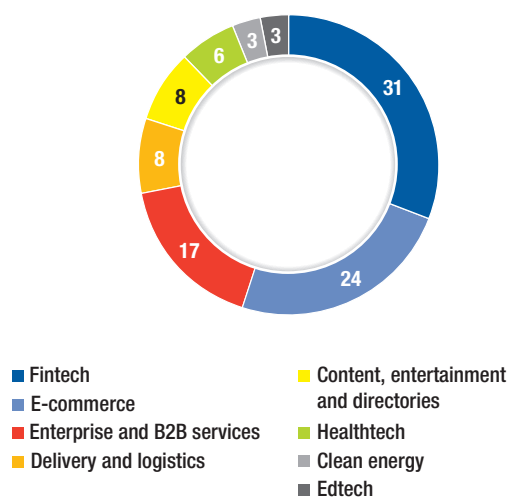
Source: ASEAN Investment Report 2022 research.

Despite the pandemic, start-ups have continued to invest and expand regionally. FlowerStore (Philippines), an online florist, expanded into Thailand (2022) and Viet Nam (2020). Glife Technologies, a food and agritech company, expanded into Indonesia and Malaysia in 2022. In 2021, Kredivo (Indonesia), a “buy now, pay later” fintech start-up and J&T Express (Indonesia), a freight service e-commerce company, entered Viet Nam. That same year, Deskimo (Singapore), a desk booking application, expanded into Indonesia; Happy Fresh (Indonesia), a grocery delivery start-up, further expanded in Malaysia; and Qoala (Indonesia) an insurtech company that leverages big data, machine learning, the Internet of things and blockchain technologies, expanded into Thailand. In 2020, Social Bella (Indonesia), a beauty and personal care e-commerce start-up, went into Viet Nam; and Igloo (Singapore), an insurtech AI platform that provides digital insurance products, expanded into the Philippines through a partnership with Union Bank of the Philippines and Akulaku (Indonesia).

a. Types of business

Most start-ups operate in technology-related businesses. Of the 100 most-funded start-ups with regional investment activities, 31 are in fintech, 24 in e-commerce and 17 in enterprise or other business-to-business services (figure 2.10). Edutech is represented by two start-ups: Cialfo (Singapore), which helps high school students with early career exploration and the college search and selection process; and LingoAce (Singapore), an online platform for children to learn Chinese. The limited number of regionalized edutech start-ups suggest that it is difficult for this category of firms to engage in international expansion, as most are largely embedded in the domestic setting of the home country (as the business model may not align

Figure 2.10. Top 100 most funded start-ups with regional investment, by industry, 2022 (Number)



Source: ASEAN Investment Report 2022 research, based on data from Crunchbase.

with the education system in other ASEAN countries; see box 2.9). There are also fewer healthtech start-ups that internationalize. Barriers such as the need to form networks with local hospitals and doctors, build a trusted business ecosystem (e.g., for telehealth), overcome language differences, adopt differing medical practices, and incorporate different cultural perspectives on consuming medical information in the region are some deterrent factors.

b. Evolution of the top 50 most-funded ASEAN start-ups since 2018

Start-ups in ASEAN have evolved rapidly in recent years. Since 2018 many have scaled quickly and achieved the status of unicorns, raised significantly more funding and regionalized to more ASEAN countries. The evolution of the 50 most-funded start-ups in ASEAN since 2018 is captured in

annex table 2.2. Despite the pandemic, 13 have expanded into more ASEAN countries and 26 have raised more investment. Fourteen were subsequently acquired by foreign firms. In addition, 14 have also diversified into new markets (not mutually exclusive activities) as part of their expansion strategies. Gojek (Indonesia), which did not expand internationally in 2018, had made significant investment and established a presence in the Philippines, Singapore, Thailand and Viet Nam by 2021. It later merged with Tokopedia (Indonesia) to form a formidable company (box 2.10). Advance.AI (Singapore), a cybersecurity start-up, diversified into other markets related to AI activities. The company expanded its international footprint with investment in the Philippines and Viet Nam in 2021, from having a presence only in Indonesia in 2018.

Box 2.10. GoTo Group: A merger of two Indonesian most valuable unicorns

In 2021, two of the largest Indonesian unicorns, Gojek and Tokopedia, merged to form GoTo Group. The merger led to the development of a strong digital ecosystem comprising on-demand, e-commerce and fintech services for customers in Indonesia and across South-East Asia. GoTo dominates several verticals. The merger is backed by major investors, such as Alibaba Group, JD.com and Tencent (all China), and BlackRock, Facebook and Google (all United States).

Gojek was founded in 2010, starting off as a courier delivery and two-wheeled ride-hailing services. In 2015, it diversified and focused largely on four services (GoRide, GoSend, GoShop and GoFood) before developing a super app, which offers more than 20 services. The company also internationalized into the Philippines, Singapore, Thailand and Viet Nam. As part of its diversified services, Gojek formed a strategic partnership with Tokopedia, through which Gojek sold Tokopedia products. Tokopedia, founded in 2009, grew to be the largest Indonesian e-commerce site and the most visited marketplace platform in the country.

Rational for merger and diversification

Industry forces have been the driving factors for both companies to merge, to compete against competitors, such as super app Grab (Singapore) and e-commerce platform Shopee (Singapore). Both companies operate in industries that have low product differentiation and ultimately compete on cost, and thus consolidation was needed because of the fierce competition. With both Gojek and Tokopedia operating in markets with low margins (e-commerce and on-demand services), economies of scale and large sales volumes are essential. The intense price competition in these industries means that many of the largest players make significant losses year on year, being sustained only by large financial backing from investors. GoTo Group, despite having raised \$1.2 billion in March 2022, has yet to make a profit.

The rationale for the GoTo merger is to scale the combined businesses and create barriers to entry for competitors (Singh, 2021). The long-term strategy for the merger is to create a monopolistic position in key markets, benefit from high sales growth, increase profit margins through cross-selling across different vertical segments to the same customers and generate income from both customers and merchants (Langley and Leyshon, 2017).

Source: Company press releases, industry reports and media.

c. ASEAN start-ups and M&As

The use of cross-border M&As for scaling up is increasingly visible among the more-funded start-ups. Of the 50 most-funded ASEAN start-ups with regional investment, 30 have made acquisitions as part of their domestic, international or diversification strategies, of which 10 have been involved in cross-border M&As since 2020 (table 2.9). The primary reason for the M&A strategy was market-seeking through acquiring a competitor, either to expand a foothold or to diversify markets. Examples of M&As undertaken for international expansion include the acquisitions by PropertyGuru Group (Singapore) of Brickz (Malaysia), Prakard.com (Thailand) and ThinkofLiving (Thailand). M&As motivated by diversification include the acquisitions by Grab (Singapore) of the Kudo and Ovo (both Indonesia) payment systems as Grab was expanding into fintech. In 2019, AnyMind Group (Singapore), a commerce-enabled platform company, acquired Moindy Digital (Thailand), a multichannel network that helps manage video content on various platforms. The acquisition allowed the company to offer more comprehensive products to clients.

Table 2.9. Cross-border M&As by start-ups in ASEAN, 2022

Company	Headquarters	Acquisitions since 2020	Companies acquired	Motivation
Grab ^a	Singapore	3	Kudo and Ovo, both payment system start-ups (Indonesia) Jaya Grocer a grocery group (Malaysia)	Diversification and regional expansion
Sea ^a	Singapore	1	Bank BKE (Indonesia)	Diversification and regional expansion
GoTo Group	Indonesia	2	Moka, fintech (Indonesia) WePay (Viet Nam)	Diversification Diversification and regional expansion
Carro	Singapore	1	Jualo, marketplace (Indonesia)	Regional expansion
In.Corp Global	Singapore	1	WeCorporate, fintech (Malaysia)	Diversification
Qoala	Indonesia	1	FairDee, insurtech (Thailand)	Diversification and regional expansion
ASEAN Fintech Group	Singapore	1	JazzyPay, fintech (Philippines)	Diversification and regional expansion
PropertyGuru Group	Singapore	4	Brickz (Malaysia) IProperty (Malaysia) Prakard.com (Thailand) ThinkofLiving (Thailand), all online property companies	Regional expansion
Glif Technologies	Singapore	2	PanenID, agritech (Indonesia) Yolek, plant-based food distributor (Malaysia)	Regional expansion
Atome	Singapore	1	PT Mega Finadana Finance, fintech (Indonesia)	Regional expansion

Source: ASEAN Investment Report 2022 research, based on data from Crunchbase, company websites and media.

Note: Since 2020, 14 start-ups have been involved in cross-border M&As, with 4 making acquisitions only outside of ASEAN.

^a Listed company (IPO conducted).

2.5.2. Pursuit of technology and partnership

There are other factors contributing to the evolution of the regional expansion of start-ups in ASEAN. Key ones include the pursuit of technology development and the use of partnerships to drive growth. For instance, *VNLife* (Viet Nam), a diversified digital start-up that integrates AI, big data, blockchain and the Internet of things, is building technology capabilities through its operations in a few ASEAN countries, including Singapore. It has raised funding to support the growth of existing businesses and the development of new platforms and technologies in different locations. *Advance Intelligence Group* (Singapore), an AI-driven technology business, leverages innovative technology and partnerships in building an ecosystem that serves consumers, enterprises and merchants. It has a presence in Indonesia, Malaysia, the Philippines, Thailand and Viet Nam. One of its three subsidiaries, *Atome* (a “buy now, pay later” fintech) is expanding rapidly in the region. As part of that company’s growth strategy, *Atome* acquired a financing start-up (Mega Finadana Finance (Indonesia)) to expand in Indonesia. In October 2021, Standard Chartered Bank invested \$500 million in a 10-year multi-product regional partnership to improve financial access and product choice for consumers across key markets in the region. The partnership initially covers buy-now-pay-later services to be rolled out in Indonesia, Malaysia, Singapore and Viet Nam, and later will expand to include digital lending products. The partnership will also allow *Atome* to further diversify its product offerings to consumers. Another major reason explaining the evolution is the rise of diversified and vertically integrated regionalized start-ups (box 2.11).

Box 2.11. The rise of diversified and vertically integrated start-ups: the cases of Traveloka and Pomelo Fashion

Corporate expansion of digital firms does not only take the form of international and regional expansions, but also vertical integration (several e-commerce companies are now developing and selling their own products) and diversification into other industries (for instance, Grab went from a taxi-hailing application to offering food delivery, fintech and health services, before creating its super app ecosystem). These companies are not only focusing on scaling operations horizontally, vertically and internationally, but are also investing significantly in innovation to build capabilities. Vertical integration and international expansion are common features of start-ups operating in the digital and technology industries, and the pace at which this is happening is worth monitoring closely to better appreciate the evolution of start-ups in the region.

Most technology and digital firms start-off specializing in a niche product or service area, usually in the early stages of an industry life cycle. As these firms expand internationally, they start to diversify into related industries. The drivers for doing so vary, but some include to diversify risk and to find ways to capitalize on current networks so as to grow. The driver could be industry related, in that the industry in which a firm is operating is reaching maturity. In this situation, the firm is forced to look for new markets. In some cases, firms opt for a diversified strategy to evoke synergy opportunities and to create a barrier to entry for potential competitors (to differentiate itself from competitors). Many companies operate in industries that are driven by cost competition, where competitors share the same business models (e.g., e-commerce and online deliveries). In order not to compete on cost,

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Box 2.11. The rise of diversified and vertically integrated start-ups: the cases of Traveloka and Pomelo Fashion (Concluded)

firms diversify into new markets (e.g., e-commerce start-ups moving into fintech products). Some start-ups have intensive network effects that they can leverage to enter new markets. Taxi-hailing application companies such as Grab and Gojek are successful because of the network effects of the large number of drivers and customers, and they have used the network to enter the delivery market.

Traveloka (Indonesia), founded in 2012, started off as an online airline ticketing company before expanding into hotel booking services, as a way to benefit from cross-selling opportunities. It continued its growth through international expansion across South-East Asia, and by 2018, already had a presence in Malaysia, the Philippines, Singapore, Thailand, and Viet Nam. It also started to expand its operations by diversifying, through selling other lifestyle products (e.g., car rentals, attraction tickets and restaurant vouchers). In 2019, it began offering fintech products and home protection insurance. It invested heavily in R&D and expanded into Singapore, seeking strategic assets. The decision to offer insurance on the platform is an example of the company capturing more of the value chain and of its vertical integration strategy.

Pomelo Fashion (Thailand) is a vertically integrated online retail company that also has brick and mortar stores in Thailand and Singapore. It also has a presence in Indonesia, Malaysia and the Philippines. It sources materials, designs, researches fashion trends, manufactures and delivers goods, controlling a large part of the value chain, which separates it from other e-commerce start-ups, which focus only on sales and delivery of goods. Founded in 2013, the company has raised \$117.6 million from investors that include Lombard Investments (United States), InterVest (Republic of Korea) and AngelHub (Hong Kong, China). As part of its expansion strategy, Pomelo acquired Looksi (Thailand) in 2020, to accelerate progress towards Pomelo's goal to become a multi-brand fashion platform. Looksi, which already had customers outside of Thailand, helped Pomelo expand further across ASEAN.

Source: ASEAN Investment Report 2022 research, based on Feldman (2020) and Menz et al., (2021).

2.5.3. Regionalization of other start-ups

Other start-ups outside the top 100 are also actively investing in the region for various reasons. Pintu (Indonesia), a crypto assets platform for buying, selling and investing in bitcoin and blockchain-based assets, expanded into Singapore to develop software. Migo (Indonesia), a technology start-up, expanded into the Philippines for market-seeking reasons. iCandy Interactive Limited (Malaysia), a gaming developer, has a presence in Indonesia and Singapore, and has acquired start-ups in both countries (e.g., gaming start-ups such as Joyseed Gametribe (Indonesia), and Nextgamer and Storms (both Singapore)). First Circle (Philippines), a fintech and enterprise software company, has a holding company in Singapore. Parentinc (Singapore), a technology company and digital publishing house, has a presence in Indonesia, Malaysia, the Philippines, Thailand and Viet Nam. It also acquired Webtretho (Viet Nam), an online community that provides information and knowledge for women.

Major drivers are corporate strategies to scale across borders, the ability to access to funding, regional integration and investment opportunities. The influence of the start-up environment and ecosystem in the host country and at home, including the support of accelerators and the encouragement of unicorns, have also played roles in the internationalization of start-ups.

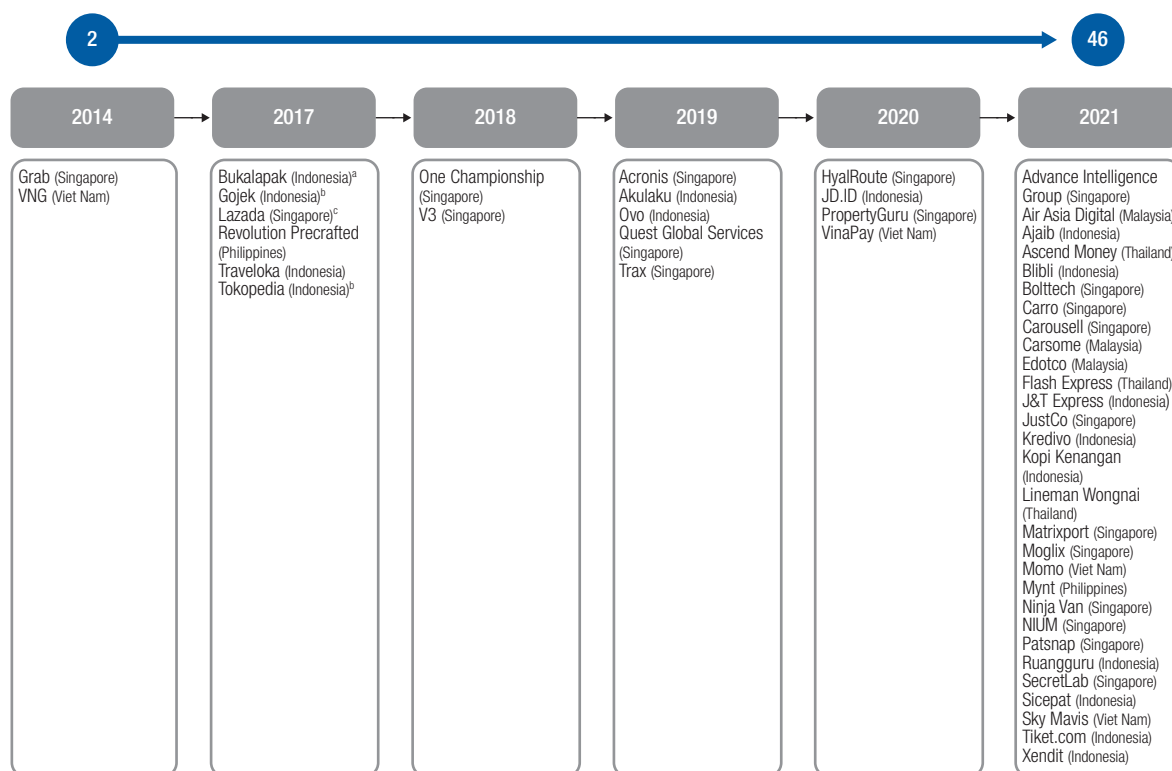
2.6. UNICORNS IN ASEAN

Many unicorns in ASEAN are active in intraregional investment, which takes various forms. They include (i) direct investment in neighbouring countries, (ii) funding of other start-ups' growth, (iii) acquiring other start-ups in ASEAN and (iv) forming strategic alliances and partnerships with other start-ups or MNEs to expand vertically in the region. Unicorns invest intraregionally for various reasons, which include expanding markets and services, adding business lines, enhancing technology or acquiring strategic assets, and diversifying.

2.6.1. Expanding list of unicorns

In 2021, there were 46 unicorns in ASEAN, as compared with 55 in India¹¹ (the home countries of the third largest number of unicorns). The number in ASEAN rose rapidly in recent years, from just 2 in 2014 to 10 in 2018, and then jumped significantly to 46 in 2021 (figure 2.11, figure 2.12). With a thriving digital economy, the ASEAN region is expected to register more unicorns in the next few years.

Figure 2.11. Unicorns in ASEAN, 2021



Source: ASEAN Investment Report 2022 research (see annex table 2.3).

Note: A unicorn is a privately owned start-up with a valuation of \$1 billion or more.

^a Bukalapak went public in August 2021.

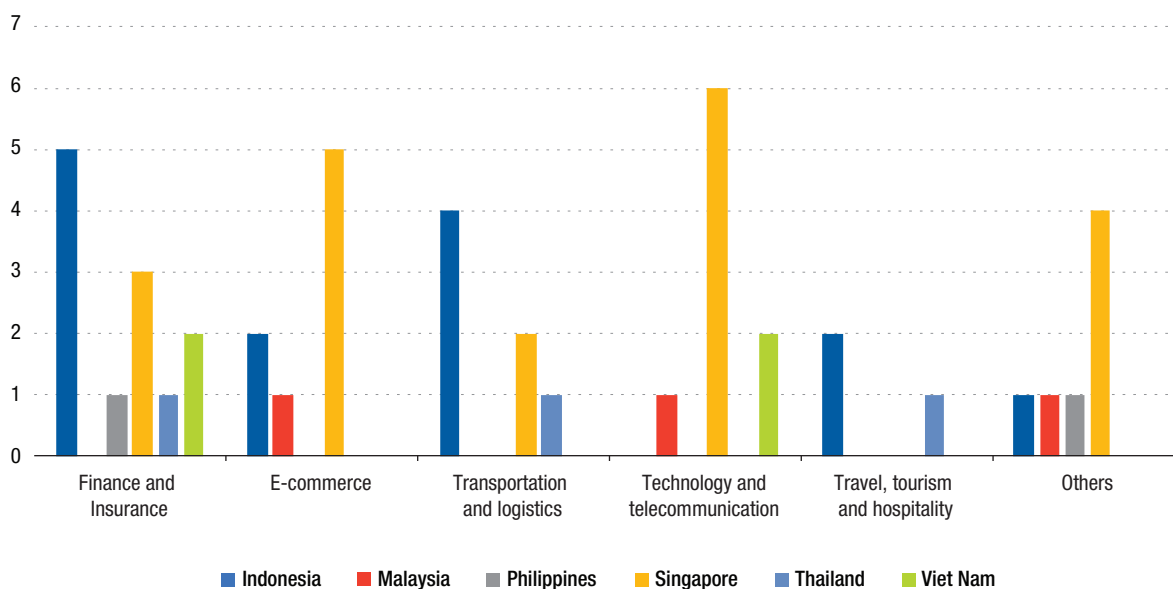
^b Gojek and Tokopedia merged to become GoTo in May 2021.

^c It is now part of the Alibaba Group (China).

Figure 2.12. ASEAN unicorns by headquarters location, 2021 (Number)

Source: ASEAN Investment Report 2022 research (see annex table 2.3).

Unicorns in ASEAN operate in six key groups of industries: finance and insurance, technology and telecommunication, e-commerce, transportation and logistics, travel, tourism and hospitality (figure 2.13). Singapore-based unicorns mostly operate in technology and telecommunication, e-commerce, finance and insurance, as well as in property, gaming and education. Indonesian-headquartered unicorns mostly operate in finance and insurance, transportation and logistics.

Figure 2.13. ASEAN unicorns, by industry, 2021 (Number)

Source: ASEAN Investment Report 2022 research (see annex table 2.3).

2.6.2. Cross-border investments

Most unicorns in ASEAN (38 out of the 46) are active with cross-border investment in multiple countries in the region and further afield (table 2.10, annex table 2.4). More are planning to expand regionally for the first time, with successful funding raised in recent years: 28 have established operations abroad through FDI, 16 have been involved with cross-border M&As, and 33 have established joint ventures, strategic partnership or collaborations with foreign MNEs or start-ups.

Some unicorns started to invest in other ASEAN countries before they achieved unicorn status. Lazada (Singapore) invested in iPrice Group (Malaysia) in May 2015 and merged with Lamido (Indonesia) in March 2015 before reaching its \$1 billion valuation. Edotco (Malaysia) expanded into the Philippines through a joint venture with Philippine-based ISOC Infrastructure in September 2019. Advance Intelligence Group (Singapore), through its subsidiary Atome Financial, expanded into Indonesia and Malaysia in 2020.

Some unicorns invest regionally after they have achieved unicorn status (e.g., Akulaku and Kopi Kenangan (both Indonesia)). Many Indonesian unicorns have also become active regional investors in recent years (e.g., J&T Express, Kredivo, Traveloka, Xendit).

Many unicorns that already had a significant regional presence have continued to expand in ASEAN. They include Ajaib and Akulaku (both Indonesia) and Ascend Money (Thailand), all of which have invested in neighbouring countries. Hyalroute (Singapore) has operations in Cambodia, the Lao People's Democratic Republic, Malaysia, Myanmar and the Philippines. Carousell (Singapore) has operations in Indonesia, Malaysia and the Philippines; Bolttech (Singapore) has operations in Indonesia, Malaysia, the Philippines, Thailand and Viet Nam; and JustCo (Singapore) has operations in Indonesia and Thailand.

Flash Express (Thailand) raised funds in June 2021 to introduce new services and expand to other ASEAN markets. Carro (Singapore), which already has a presence in Indonesia, Malaysia and Thailand, plans to use funds raised in June 2021 for acquiring companies,

Table 2.10. ASEAN unicorns with cross-border investment activities, 2018–2021 (Number)

Nationality	FDI ^a	Cross-border M&As	Partnerships and collaborations	Net cross-border activities
Indonesia	7	3	8	9
Malaysia	3	1	3	3
Philippines	..	..	1	1
Singapore	16	11	17	20
Thailand	2	1	2	3
Viet Nam	..	..	2	2
Total	28	16	33	38

Source: ASEAN Investment Report 2022 research (see annex table 2.4).

^a FDI includes international and regional investment.

expanding its financial services portfolio and developing AI capabilities, and expanding retail services into Indonesia, Malaysia and Thailand.¹² SiCepat (Indonesia), an end-to-end logistics start-up, raised \$170 million in March 2021 to scale up and expand in South-East Asia.¹³

Some unicorns are involved in a series of FDI activities not only in the same technology service (e.g., ride-hailing) but in complementary or diversified products and services (e.g., from ride-hailing to fintech, electric vehicles (EVs) and digital health care). Gojek (Indonesia) has evolved from a ride-hailing app start-up into a multiplatform technology group. In 2016, it launched its e-wallet, Go-Pay, and went regional with its fintech service by acquiring Coins.ph (Philippines) in 2019 and a majority stake in WePay (Viet Nam) in 2020. It is expanding into the development of EVs and associated infrastructure (see chapter 1). *Grab* (Singapore) has evolved from a ride-hailing business to a technology company offering services such as logistics, restaurant and groceries delivery, health care and fintech. Its regionalization involved cross-border investment, a series of acquisitions and strategic partnerships with other start-ups or MNEs. *Flash Express* (Thailand) launched its services in the Philippines in 2021 with nearly 140 logistics hubs and outlets. It established a joint venture with a Lao conglomerate (AIF Group) to expand logistics in that host country in 2021.

The limited home market and internationalization aspirations are two key factors driving Singapore-based unicorns to expand regionally and internationally. In addition, unicorns headquartered in Singapore (both local and foreign owned) are attracted by that country's efficient digital ecosystem, thriving digital economy, availability of skilled human resources and government support.

Half of the 14 Indonesian unicorns have gone regional. *Gojek* has operations in the Philippines, Singapore, Thailand and Viet Nam. It further increased investment in Singapore and Viet Nam in 2021. *J&T Express* has operations in Cambodia, Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam. It further expanded in the region in 2022 by opening a second sorting hub in Singapore and establishing a transit centre in Viet Nam. *Traveloka* has footprints in Malaysia, the Philippines, Singapore, Thailand and Viet Nam. *Kredivo* established a joint venture in Viet Nam with Phoenix Holdings (Viet Nam) in 2021, and *Akulaku* operates in Malaysia, the Philippines and Viet Nam. *Xendit* invested in a payment platform start-up, DragonPay (Philippines), in 2021.

A few unicorns have internationalized farther afield, bypassing the regional market. PatSnap (Singapore), a platform that provides intellectual property (IP) and R&D intelligence, has offices in Canada, China, Japan, the United Kingdom and the United States; and NIUM (Singapore), a global payments platform, operates in the United Kingdom and the United States.

a. Mergers and acquisitions

Some unicorns are also acquiring other start-ups to gain quick access to customers, networks and technologies (table 2.11). The majority of ASEAN unicorns that made M&A purchases between 2019 and 2021 are based in Singapore, followed by Indonesia (box 2.12).

Table 2.11. ASEAN unicorns expanding through M&As, as of 2021 (Selected cases)

Company	Headquarters	Year became unicorn	Acquisitions (Number)	Last valuation (\$ billion)
Grab	Singapore	2014	5	14.3
Bukalapak ^a	Indonesia	2017	2	3.5
Gojek ^b	Indonesia	2017	13	10.0
Lazada ^c	Singapore	2017	1	3.2
Traveloka	Indonesia	2017	3	3.0
Tokopedia	Indonesia	2018	1	7.0
Acronis	Singapore	2019	8	2.5
Akulaku	Indonesia	2019	1	1.1
Ovo	Indonesia	2019	2	2.9
Quest Global Services	Singapore	2019	12	2.5
Trax	Singapore	2019	6	1.3
PropertyGuru	Singapore	2020	6	1.0
Air Asia Digital	Malaysia	2021	1	1.0
Blibli	Indonesia	2021	3	1.0
Bolttech	Singapore	2021	2	1.0
Carro	Singapore	2021	1	1.0
Carousell	Singapore	2021	5	1.1
Carsome	Malaysia	2021	1	1.3
J&T Express	Indonesia	2021	1	7.8
Moglix	Singapore	2021	1	1.0
NIUM	Singapore	2021	2	1.0

Source: Credit Suisse (2021), "ASEAN Unicorns"; CB Insights (2022), "Complete List of Unicorns"; CB Insights (2020), "Southeast Asia Exit Landscape: A New Frontier"; company press releases and other media.

Note: Includes both cross-border and internal transactions.

^a Bukalapak went public in August 2021 and is no longer a unicorn.

^b Gojek merged with Tokopedia to become GoTo in May 2021.

^c Lazada is now part of the Alibaba Group (China).

Box 2.12. Cross-border M&As by unicorns in ASEAN (Selected cases)

Unicorns use M&As as a channel to acquire strategic assets or other start-ups, expand their geographical footprint, acquire technologies or venture into new business areas. Most of the deals involving ASEAN unicorns entail acquiring technology or facilitating access to a new market.

Expanding markets

In November 2019, Carousell (Singapore) merged with Telenor's (Norway) 701Search. Telenor has a minority stake of 32 per cent. The merger brings the 701Search online marketplaces (i.e., Mudah in Malaysia, OneKyat in Myanmar and Cho Tot in Viet Nam) to Carousell's regional operation – scaling up its online classified platform business in South-East Asia. In July 2021, *Bolttech* (Singapore) acquired I-surance (Germany) as part of its international expansion strategy. The acquisition extends Bolttech's global footprint to 26 markets across North America, Asia and Europe. In 2019, Carro (Singapore) raised about \$90 million in an extended Series B round to fund the acquisition of Jualo (Indonesia), a consumer-to-consumer marketplace. PropertyGuru (Singapore) acquired MyPropertyData, an online real estate information company in Malaysia. *Air Asia Digital* (Malaysia)

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Box 2.12. Cross-border M&As by unicorns in ASEAN (Concluded)

acquired the business of Gojek (Indonesia) in Thailand in 2021 as part of its strategy for taking its platform to another level. In 2018, to expand its presence in the region *Traveloka* (Indonesia) acquired from Recruit Holdings (Japan) three online travel agencies: Pegipegi (Indonesia), Mytour (Viet Nam) and Travel Book (Philippines).

Strengthening and upgrading technology capability

In 2019, Trax (Singapore) acquired Planorama (France), a supplier of image recognition services for retail execution and merchandising for packaged consumer goods. *Acronis* (Singapore) acquired Cyberlynx (Israel) in 2020 to strengthen its cyberprotection capabilities. In 2021, NIUM (Singapore) acquired Ixaris (United Kingdom), a payment optimization company, to enable NIUM users to optimize outbound payments. That same year, Quest Global Services (Singapore) acquired Synapse (United States) to enhance its capabilities in providing design and consultancy services and developing software for the semiconductor industry. Momo (Viet Nam) acquired Pique AI (Viet Nam), a company providing AI solutions to personalize the customer experience for digital businesses. Carousell (Singapore) acquired Watch Over Me (Malaysia), a personal safety app start-up.

Source: Company websites, media and industry reports.

b. Partnerships and collaborations

Of the 46 ASEAN unicorns, 33 have cross-border partnerships. The type of partnership or collaboration largely depends on where the unicorn is based (table 2.12).

Table 2.12. Unicorns in ASEAN: partnerships and collaborations

Nationality	Purpose of partnership	Examples
Indonesia	Technology partnership to enhance unicorn value	Gojek partnered with Gogoro (Taiwan Province of China) to build infrastructure for electric vehicles (electric bikes).
	Market and services expansion	J&T Express partnered with Shopee, an e-commerce platform, to deliver service for online retailers in the Philippines. Ovo partnered with Lazada (Singapore), which adopted the Ovo e-wallet in the Lazada platform for Indonesian customers. Akulaku partnered with Igloo (Singapore) and Union Bank of the Philippines to offer micro-insurance policies. Xendit partnered with Ecwid by Lightspeed (United States), a global SaaS e-commerce platform, to offer new ways to sell online and enable sellers to accept online payments with popular local payment options.
	New business line	Traveloka entered a joint venture with SCB 10X, the venture capital subsidiary of Siam Commercial Bank (Thailand), to expand Traveloka's fintech business in Thailand.
Malaysia	Market expansion	Carsome partners with iCar Asia. Edotco partners with Metfone Cambodia. Edotco gained access as Metfone's infrastructure partner.

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Table 2.12. Unicorns in ASEAN: partnerships and collaborations (Concluded)

Nationality	Purpose of partnership	Examples
Malaysia	Technology adoption	Edotco collaborates with Intelsat (Luxembourg) to advance connectivity capabilities across Edotco's footprint in South and South-East Asia.
Philippines	Market and service expansion	Mynt partners with Igloo (Singapore) for online shopping insurance.
Singapore	Market expansion	Acronis partners with ZNet Technologies (India), a leading cloud services distributor offering cloud infrastructure and managed services, expanding Acronis distribution network to Indonesia, Malaysia, the Philippines and Thailand. Carro collaborates with Tokopedia (Indonesia) for Tokopedia users to purchase Carro-certified used cars.
	Technology	Quest Global Services partnered with NXP Semiconductors (Netherlands) to deliver software support. Ninja Van partnered with Google Cloud (United States) to use the open-cloud infrastructure to streamline and expand its public-facing IT systems (to handle more than 10 times the website traffic).
	Service enhancement partnership	Advance Intelligence Group went into a 10-year partnership with Standard Chartered (through Advance Intelligence Group's subsidiary, Singapore-headquartered Atome Financial) to deliver financial services across key markets in Asia (including Atome's buy-now-pay-later service, which is being rolled out in Indonesia, Malaysia, Singapore and Viet Nam). Matrixport worked with payments processing firm Simplex (Israel) to provide its users with credit card payment support.
	Public-private	Carousell collaborated with MDEC (Malaysia) to roll out support for Penjana's economic recovery plan e-commerce initiative. The initiative helps Malaysian micro-sellers and SMEs turn to online selling.
Thailand	Market expansion	Ascend Money partnered with Omise (Japan and Thailand) to integrate its TrueMoney Wallet into the Omise e-commerce platform.
	Technology enhancement	Lineman Wongnai partners with Huawei (China) to use Huawei mobile services to power its apps.
Viet Nam	Customer base expansion	Momo partnered with Uber (United States) for customers to pay for trips using M'Mo's e-wallets.

Source: ASEAN Investment Report 2022 research.

Note: Uber's South-East Asia operations were acquired by Grab (Singapore) in 2018.

Unicorns that do not have a physical presence are also connecting regional markets and consumers through strategic alliances with local partners in host countries and offering access to their digital platforms or solutions based in their home countries. Blibli and Tiket.Com (both Indonesia) have booking platforms that can be accessed by customers in other ASEAN countries. Axie Infinity, an online game owned by Sky Mavis (Viet Nam), has 40 per cent of the gamer market in the Philippines.¹⁴ Although these unicorns do not yet have a physical presence through FDI in other ASEAN countries, they play an important role in connecting markets and consumers and in developing the regional digital economy. Many have expressed interest in regionalizing.

2.6.3. Home countries of unicorns

Whereas most unicorns are from ASEAN countries, a few are foreign owned but were started or are headquartered in ASEAN (table 2.13). They include Lazada (Singapore), owned by Alibaba (China); Lineman Wongnai, a merger of Lineman (Japan) and Wongnai (Thailand); and Moglix, headquartered in Singapore, with parent company Moglix Labs based in India.

a. ASEAN unicorns

Most ASEAN unicorns are direct investors and have themselves received significant foreign funding. They are important sources and drivers of FDI that have emerged through rapid scale-up by start-ups and spin-offs from universities and traditional corporations. Blibli (Indonesia) is owned and funded by the Djarum Group. In 2017, it bought Tiket.com, which subsequently was also internally funded by the Djarum Group. Air Asia Digital (Malaysia) is the digital arm of Air Asia. Edotco is a spin-off business of Axiata Group (Malaysia). Mynt (Philippines) was established by the Ayala Group (Philippines), Globe Telecom (Philippines) and Ant Financial (China). Ascend Money (Thailand), established in 2015, is a spin-off of Ascend Group owned by True (Thailand).

Table 2.13. Sources of unicorns in ASEAN

Source	Origin/nature	Description	Selected cases
ASEAN unicorns	Home-grown start-up	Expanded to become unicorns and attained regional reach	Indonesia: Ajaib, GoTo (merger of unicorns Gojek and Tokopedia), Ruangguru, Sicepat, Traveloka, Xendit Malaysia: Carsome Philippines: Revolution Precrafted Singapore: Advance Intelligence Group, Carousell, Carro, JustCo, PatSnap, PropertyGuru Thailand: Flash Express Viet Nam: Sky Mavis
	Spin-offs	Developed and nurtured by a parent company, university or institution and then split off as a separate entity, becoming unicorns; most have expanded or plan to expand regionally	Indonesia: Blibli, Tiket.com (both from Djarum Group) Malaysia: Air Asia Digital (Air Asia), Edotco (Axiata Group) Philippines: Mynt (Ayala Group) Singapore: Acronis (parent technology firm: Parallels (United States)) Thailand: Ascend Money (True Corporation)
Foreign unicorns	MNE-nurtured unicorns	Established and developed by MNEs	Indonesia: JD.ID (parent: JD (China)) Singapore: Moglix (parent: Moglix Labs India) Thailand: Lineman Wongnai (parents: Lineman (Japan) and Wongnai (Thailand))

Source: ASEAN Investment Report 2022 research (see annex table 2.3).

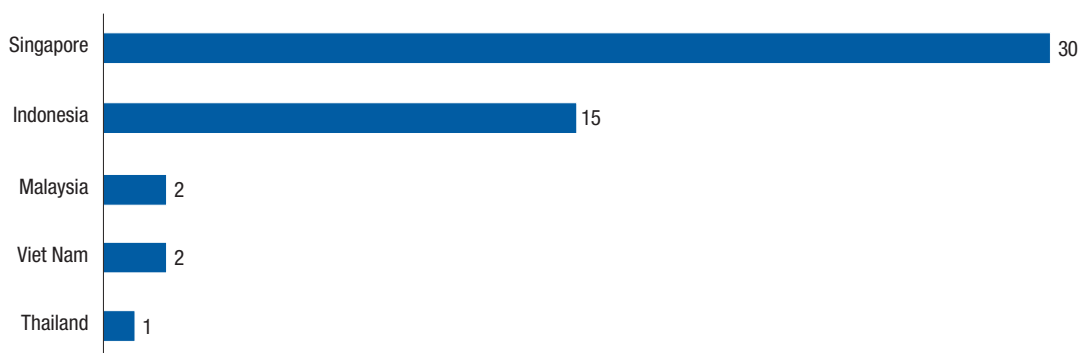
b. Foreign unicorns

Foreign unicorns in ASEAN are mostly connected with large technology MNEs or conglomerates, and they receive capital injection and business support from their parent companies. They scale up very quickly and into other ASEAN markets. JD.ID, a subsidiary of JD.Com (China), has been expanding in Indonesia because of e-commerce opportunities, as more than 90 per cent of commerce activities in 2020 are still conducted offline.¹⁵ Acronis, a spin-off from Parallels (United States), set up its international headquarters and development centre in Singapore because of government support, the conducive environment and the presence of skilled human resources.¹⁶

2.6.4. Rising start-ups and sources for next unicorns

Some emerging start-ups that are not yet unicorns are growing rapidly and have been able to raise funding to scale up operations. As they expand to neighbouring markets, they add to the number of cross-border investment activities. Singapore and Indonesia are the two major sources for the next 50 emerging start-ups (figure 2.14).

Figure 2.14. 50 emerging start-ups in ASEAN, by country, 2022 (Number)



Source: ASEAN Investment Report 2022 research, based on data from Technasia.

Note: Based on funding raised.

2.7. CHALLENGES AND POLICY OPTIONS

It is the nature of start-ups to scale up quickly with a business idea and to innovate and disrupt the market by making a big impact. Internationalization offers a route to scaling up. Yet many start-ups fail in the first few years of business. It is important to understand why, so that actions can be taken to address such challenges at the local level, to build a strong start-up ecosystem and to expand the pool of start-ups. Some key reasons for early failure include running out of cash or failing to raise new capital, not filling a market need, getting outcompeted, having a flawed business model, not overcoming regulatory challenges and having difficulty acquiring and retaining talent (CBInsights, 2021). Many start-ups that do succeed may still not internationalize, for a different set of reasons (table 2.14).

Table 2.14. Barriers to the internationalization of start-ups

Key challenges (selected cases)	Reasons
Lack of internationalization plan/drive	• Founders have no internationalization plan • Content with scaling up at home • No drive to internationalize
Large local market syndrome	• For start-ups born in large markets, lower urge to internationalize • No appreciation for the benefits of internationalization for growth • Lack of successful cases to inspire
Lack of access to funding	• Lack of funding, limiting internationalization • Not able to raise funds • Immature private equity or venture capital industry
Lack of market information	• No access to market information on neighbouring countries (demand, business development opportunities, regulatory requirements, local partners) • No knowledge of reliable local partners
Lack of promotion of regional development	• No knowledge about regional market or awareness that regional integration offers opportunities • No knowledge about the AEC and ASEAN's integration or opportunities arising therefrom • No knowledge of where to seek information or assistance on going regional
Lack of internationalization capacity	• Lack of internationalization knowledge, experience or skills or human resources • Lack of capacity and capability to internationalize • Lack of support, mentorship and capacity-building programme
Fear of the unknown	• Different regulatory requirements, rules and conditions for engagement • Additional risks for going overseas • Management and hiring issues

Source: ASEAN Investment Report 2022 research.

Policymakers and stakeholders could consider policy options and measures to address these internationalization challenges. Selected measures could include targeting or encouraging internationalization or regionalization, providing market and regulatory information, and building a competitive ecosystem to facilitate access to funding for start-ups (table 2.15). Specific capacity-building activities could cover mentorship, coaching and hiring skills, and skills development for internationalization. Establishing a network of universities, funds and accelerators to support innovation and the commercialization of ideas and internationalization could be considered. It is also necessary to support start-ups in their growth plans to adapt to foreign markets and in finding reliable partners in host countries.

Possible institutional arrangements could include joint cooperation between home- and host-country agencies in promoting start-up development, including cooperation between investment promotion agencies in the region responsible for attracting inward FDI and those supporting outward FDI. Investment facilitation is very important for small companies that have little experience in operating overseas. The investment facilitation measures discussed in chapters 3 and 4 of this report could be considered specifically for supporting small companies in going regional.

Table 2.15. Selected measures supporting start-up regionalization or internationalization

Programme	Measures
Regionalization or internationalization drive	• Establish programme to support internationalization of start-ups and SMEs; drive regional cooperation or policy push for regionalization of SMEs and start-ups under the AEC programme • Cooperate between ASEAN IPAs in promoting inward and outward FDI • Adopt investment facilitation measures to support small companies in going regional (chapters 3 and 4) • Provide mentorship, coaching and guidance on internationalization business development plan • Provide training, accelerator programmes and incentives • Impress upon start-ups the benefits of regionalization for growth, even when operating in a large home market • Promote inspiring cases of regionalized start-ups
Market and regulatory information	• Promote understanding of regional integration and opportunities through dedicated events for start-ups • Provide market information and information on market needs, stage of digital and technology development in ASEAN Member States to support adaptability • Support partnership development through matchmaking events and provision of related information (e.g., joint-venture partners) • Provide information on regulatory requirements of ASEAN Member States for FDI by start-ups
Access to funds	• Support development of the private equity and venture capital industry and ecosystem • Support participation of foreign and local players in private equity and venture capital development • Promote public-private partnership (e.g., with commercial and export-import banks) to help provide funding for regionalization of start-ups and SMEs

Source: ASEAN Investment Report 2022 research.

2.8. CONCLUSION

This chapter highlighted the continuing growth of start-ups and the rapid growth of investments by global and regional private equity and venture capital companies in ASEAN. These developments have important implications for FDI, intra-ASEAN investment and economic transformation involving start-ups.

The start-up landscape in ASEAN Member States is mixed, with most in the infancy or growing stage. The region is witnessing rapid growth in the number of start-ups across a range of business activities, from e-commerce to fintech and hospitality. More start-ups are internationalizing than previously because of market-seeking reasons, the need to scale, and the business and investment opportunities associated with regional integration.

The number of start-ups in ASEAN that have raised more than \$1 million in funding increased by nearly 200 per cent from 2015 to 2022, from 652 to 1,920. This growth is much faster than in India, which witnessed an increase of 110 per cent, in Europe (85 per cent) and in the United States (65 per cent) in the same period. Three countries (Singapore, Indonesia and Malaysia, in that order) account for 83 per cent of start-ups in the region that have raised more than \$1 million in funding raised in the region. The region is also seeing rapid growth in the number of unicorns, which rose from just 10 in 2018 to 46 in 2021. ASEAN is the fourth largest home location of unicorns after the United States, China and India.

Many start-ups and unicorns in the region are actively involved with cross-border investment as they scale. They have internationalized or regionalized to expand geographical coverage and acquire strategic assets (technology) to complement existing businesses or diversify into new business areas. They also have established strong business linkages or strategic alliances with other start-ups, unicorns and MNEs to support expansion or enhance efficiency. Some start-ups have established venture funds to invest and hold strategic stakes in other start-ups or unicorns.

In their regionalization, start-ups and unicorns (mostly in the technology space) play a key role in connecting countries and markets and in facilitating regional integration. They have transformed markets and improved efficiency in delivering products and services by innovating and adopting technology – thereby disrupting traditional business methods. These start-ups are making a significant impact in the development of e-commerce, fintech, transportation and logistics, travel and hospitality, and other areas of the digital economy.

The rapid growth in the number of start-ups and unicorns in ASEAN is attracting increasing investment by private equity and venture capital companies, which is strengthening the start-up ecosystem and providing access to funding. Many of these investors in turn have established a presence in ASEAN, albeit concentrated in a few Member States. Understanding the symbiotic relationship between start-ups and private equity and venture capital is crucial to designing policy options targeted at promoting FDI by these emerging entities in the region.

Some start-ups experience phenomenal growth and scale rapidly in a very short time to become big corporations with many subsidiaries and different lines of businesses in the region.

Monitoring and supporting the growth of the start-ups environment is necessary as they contribute to the expanding pool of SMEs, technology and innovation development, Industry 4.0 transformation, digitalization and intra-ASEAN investment.

Start-ups face challenges in internationalizing or regionalizing. These challenges include the lack of an internationalization plan or drive, the large-market syndrome, the lack of funding, the lack of overseas market knowledge, the inability to adapt business ideas to meet local demand, and fear of the unknown (e.g., regulatory requirements and additional risks associated with internationalization). These challenges need to be addressed through policy measures, support and capacity-building programmes, including sharing of experiences by successful regionalized start-ups to further inspire others.

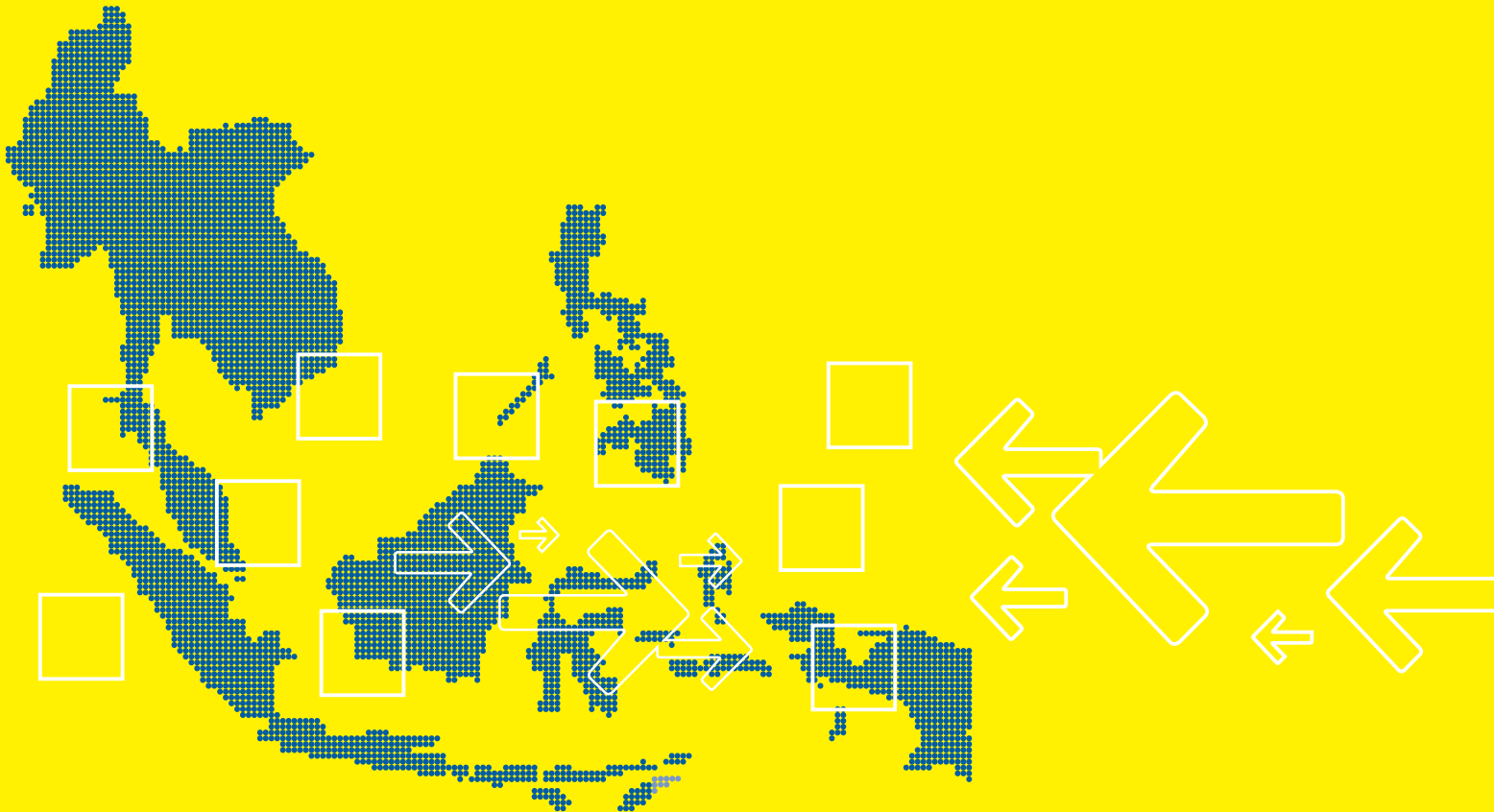
ASEAN Member States are actively supporting the development of national start-ups. With increasing policy and institutional support, the prospect of a vibrant start-up environment in ASEAN is promising. The robust growth of the digital economy and the digitalization of commerce are encouraging more start-ups. As the pool of start-ups expands, the number of start-ups going regional is likely to increase. Policy support and regional integration can accelerate the process.

NOTES

- ¹ Start-ups that have reached a valuation exceeding \$1 billion.
- ² Assets under management is the combination of dry powder (the amount of capital committed to a private capital fund minus the amount that has been called by the general partner for investment) and the unrealized value of assets.
- ³ *Nikkei Asia*, “VCs raised record funds for Southeast Asia, India as money leaves China”, 30 May 2022.
- ⁴ *Forbes*, “The venture capital boom In Southeast Asia: The best is yet to come”, 7 October 2021.
- ⁵ In terms of number of investments made.
- ⁶ See HSBC (Singapore), “SG firms expand trade and connectivity in face of slower recovery”, 1 December 2020. The 2021 QBE survey of 400 SMEs in Singapore found that 50 per cent had a business presence overseas and 40 per cent plan to invest abroad in the next two years (QBE, “Singapore SMEs Survey 2021” (www.qbe.com)).
- ⁷ Singapore Business Federation SME Internationalisation Index, December 2021 (https://www.sbf.org.sg/images/SBF_SME_Internationalisation_Index_December_2021_Report.pdf).
- ⁸ Singapore Company Incorporation, “13 startup schemes and grants in Singapore (undated), <https://www.singaporecompanyincorporation.sg/blog/13-startup-schemes-and-grants-in-singapore/>
- ⁹ *Vietnam Briefing*, “Why Vietnam’s emergence as a startup hub is promising for investors”, 14 December 2020.
- ¹⁰ Without having a physical presence in a host country.
- ¹¹ Statista.com, “Number of unicorns worldwide as of 2021, by country”, 11 March 2022.
- ¹² Techcrunch.com, “Automotive marketplace Carro hits unicorn status with \$360M Series C led by Softbank Vision Fund 2”, 15 June 2021.
- ¹³ Techcrunch.com, “Indonesian logistics startup SiCepat raises \$170 million Series B”, 5 March 2021.
- ¹⁴ Platformer News, “How Axie Infinity is turning on its head”, 13 October 2021.
- ¹⁵ ChinaDaily.com.cn, “JD ramps up efforts to expand presence in Indonesia”, 10 August 2021.
- ¹⁶ Techcrunch.com, “Acronis raises \$250M at a \$2.5B+ valuation to double down on cyber protection services”, 4 May 2021.

PART TWO

INVESTMENT FACILITATION



CHAPTER 3

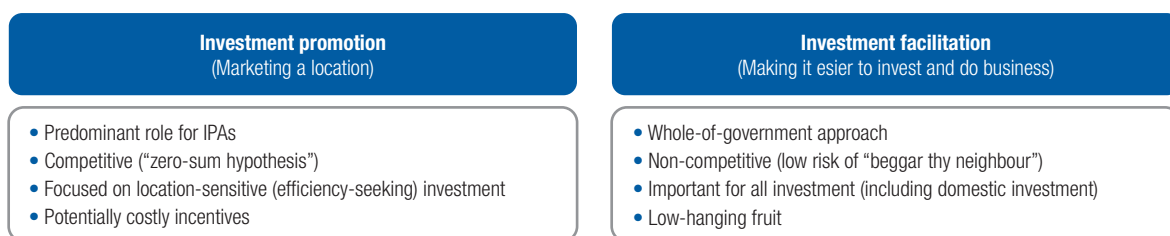
Investment facilitation in ASEAN

3.1. INTRODUCTION

The significance of foreign direct investment (FDI) is widely recognized by governments in the ASEAN region and is reflected in Member States' national development and industrial plans. Recent UNCTAD Investment Policy Monitors have shown that globally the number of measures restricting or regulating investment has gone up.¹ ASEAN, in contrast, is moving in the other direction, continuing to implement almost exclusively measures favourable to investment. Some measures implemented have aimed at increasing the ease of investing, reducing the cost of doing business and enhancing efficiency. Some included actions facilitating FDI relocation, further process streamlining, digital applications, expedition of approval processes and strengthening of aftercare services (*AIR 2020–2021*).

A country uses a combination of policies and measures to attract investment. They could cover (i) liberalization and regulation, (ii) investment facilitation, (iii) investment promotion and (iv) investment protection. There are key differences between investment facilitation and investment promotion (figure 3.1). *Investment facilitation* encompasses all policies and measures aiming to make it easier for investors to establish, operate and expand investments in a host country. It covers a wide range of measures and actions such as providing transparent and predictable rules, establishing efficient administrative procedures and effective stakeholder relations and offering various types of investor services (assistance with administrative processes and rules). In contrast, *investment promotion* is mainly about marketing a country as an attractive investment destination and targeting prospective investors. It includes offering various types of investment incentives, outreach programmes and awareness-building activities.

Figure 3.1. Key differences between investment promotion and facilitation



Source: UNCTAD.

Investment facilitation includes many different types of measures. This report uses the taxonomy for investment facilitation measures listed in the ASEAN Investment Facilitation Framework (AIFF) (box 3.1).

Box 3.1. Key provisions of investment facilitation in AIFF

The ASEAN Investment Facilitation Framework, adopted in 2021, covers 10 main areas of investment facilitation measures (box table 3.1.1).

Box table 3.1.1. Key measures of the ASEAN Investment Facilitation Framework

Category	Remarks
1. Transparency of measures and information	• Ensure transparency • Provide information on laws, regulations and administrative guidelines relating to investment • Provide investment related information
2. Streamlining and speeding up administrative procedures and requirements	• Ensure investment procedures do not act as barriers to investment • Ensure effective and efficient investment procedures (including documentation requirements) • Provide information concerning the status of the investment application • Ensure administration fees are reasonable, transparent and publish in an easily accessible manner • Review investment procedures and measures to make investment regime more effective
3. Use of digital and internet technologies	• Promote use of digital technologies • Establish online platform • Encourage the use of electronic copies of documents • Promote option of using electronic payment for fees and charges for investment applications
4. Single digital platform	• Establish single digital platform for the submission of all documents • Publish investment facilitation measures and provide related information in the platform • Support payment of all fees and charges associated with investment application using the platform
5. Assistance and advisory services to investors	• Prevent dispute and assist investors resolve complaints and grievances • Establish mechanism to address recurrent issues affecting investors
6. Independence of competent authorities	• Ensure competency and independence of authority
7. Temporary entry and stay of business persons	• Support and assist with matters on temporary entry and stay permit (e.g., publication of information, establish contact points, expeditious processing of applications)
8. Facilitation of investment supporting factors	• Assist investors in identifying supporting factors (e.g., labour force, funding sources, domestic suppliers, business matchmaking)
9. Consultative mechanism for investment policies	• Establish consultative mechanism and dialogues (with stakeholders and investors) • Conduct regular evaluation and update of investment measures
10. Cooperation	• Facilitate communication and cooperation with other member States (on e.g., exchange of information, best practices, technical assistance, capacity building, measures facilitating investment)

Source: ASEAN Investment Facilitation Framework.

The objective of this chapter is to highlight the salient features of national and regional investment facilitation actions. It describes different clusters of investment facilitation measures implemented or works in progress undertaken by ASEAN Member States. This chapter also provides foreign investors' insights on investment facilitation measures and on how these measures influence their investment decisions. Following from information provided in this chapter, the next chapter analyses the information, assesses regional investment facilitation efforts, and provides policy options and specific policy priorities for investment facilitation.

ASEAN Member States have also adopted measures that improve the general business environment, but these are beyond the scope of this report. They include development of physical infrastructure, which has significant implications for the investment environment. Some such measures were analysed in chapter 2 of *AIR 2020–2021*. Liberalization and promotion measures are important in attracting FDI, but they are also outside the scope of this report.

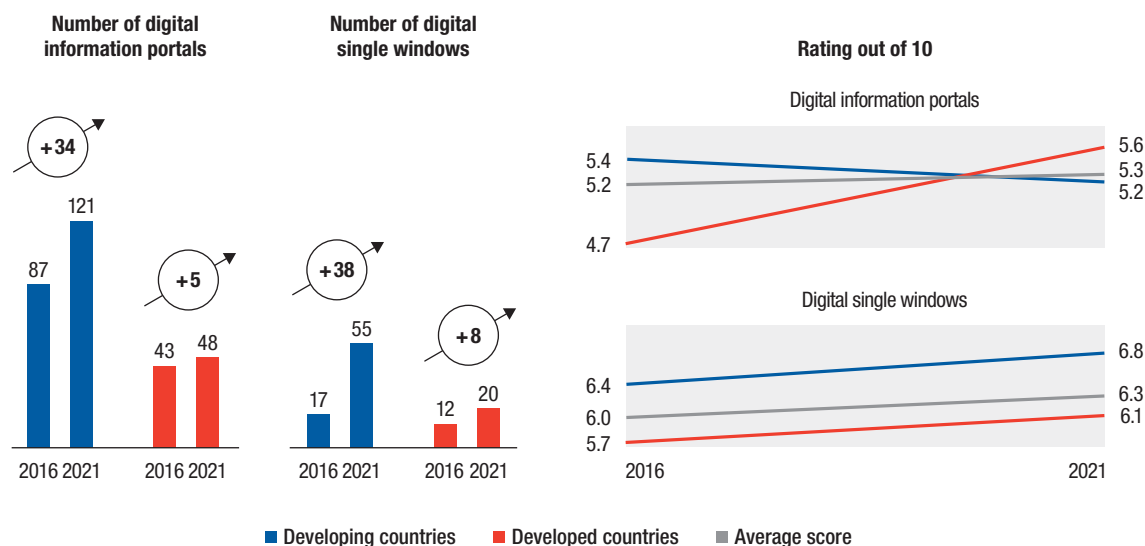
3.2. INVESTMENT FACILITATION

Investment facilitation measures can range from simple to sophisticated services, and their impact on investment decisions can vary. For instance, assigning focal points in investment promotion agencies (IPAs) to assist investors with enquiries can be helpful, but providing relevant information (translated into specific languages) and simplifying investment requirements can generate more direct and significant impact for investors. One way to significantly improve the efficiency of investing in a country is to provide a single digital platform that integrates key services, supporting an integrated investment application process that entails one-time submission of one set of documents, which relevant authorities can review for the issuance of permits and licences. This significantly simplifies steps for investors and improves efficiency.

Over the years, ASEAN Member States have adopted many significant investment reforms, deregulation initiatives, national investment facilitation measures and regional agreements that all have important implications for FDI, mostly favouring it. These national actions, together with the influence of regional integration, have contributed to an improving investment environment (*AIR 2020–2021*), which has played a role in attracting a new wave of high levels of FDI inflows – exceeding \$100 billion since 2010 (with recent years exceeding \$170 billion).

ASEAN Member States are not the only group of countries using investment facilitation measures to attract FDI. An increasing number of developing economies are adopting investment facilitation measures such as digital information portals and online single windows to facilitate registration of businesses (figure 3.2). The number of countries doing so has grown by 34 per cent for investment portals, from 87 economies in 2016 to 121 in 2021. The establishment of online single windows by developing economies grew by 38 per cent in the same period.

Investment facilitation has been discussed for some time at international forums such as the World Investment Forum and in the publication of UNCTAD's Global Action Menu for Investment Facilitation (box 3.2). The subject is now actively discussed at the World Trade

Figure 3.2. Global: Information portals and online single digital windows, 2016 and 2021 (Number of economies)

Source: UNCTAD/GER.co.

Box 3.2. UNCTAD's work on investment facilitation

UNCTAD has been working on investment facilitation for many years. It is participating in the WTO investment facilitation structured discussion and providing outside expertise to that process. A significant input to the initial WTO investment facilitation process was the consideration of the UNCTAD Global Action Menu for Investment Facilitation, which listed 10 action lines with a series of options for policymakers (UNCTAD, 2016). UNCTAD is also working with the WTO in identifying needs assistance for implementation of investment facilitation. In addition, UNCTAD is supporting WTO members in designing a technical assistance needs assessment for a future agreement on investment facilitation.

Among UNCTAD's other major investment facilitation activities are the establishment of the Global Enterprise Registration index to assess the provision of information portals and online single platforms (<https://ger.co>) by countries and policy analysis through the regular publication of the Investment Policy Monitor. UNCTAD has provided technical assistance and capacity-building activities relevant to investment facilitation to assist countries.

Source: UNCTAD.

Organization (WTO). Some ASEAN Member States are participating in the ongoing WTO Investment Facilitation for Development (Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines and Singapore). Implementation of the AIFF would help relevant Member States implement their obligations under the WTO process, when an agreement is adopted. Similarly, implementation of investment facilitation under the WTO process would help ASEAN Member States implement AIFF provisions.

3.2.1. Synopsis of investment facilitation measures

ASEAN Member States have been implementing investment facilitation measures for many decades. Many of the proposed measures being discussed at the WTO (WTO, 2021) have already been implemented by countries in the region, before the multilateral investment facilitation negotiation begins.

The ASEAN Investment Area Agreement signed by all Member States on 7 October 1998 made specific reference to investment facilitation (Schedule 1) as one of its key pillars of measures to attract FDI. Member States have continued to undertake individual actions and administrative reforms, including facilitation measures, to further improve their national investment environments. They have adopted or expanded implementation of many investment facilitation measures in the past two years (chapter 2 of *AIR 2020-2021*).

Investment facilitation measures adopted by ASEAN Member States have evolved to become more effective and efficient in supporting investment. For instance, in some Member States, the use of online or digital systems has become more sophisticated with upgraded features that support payment facilities, acceptance of e-documents and access to databases. Many have established single digital platforms. The use of digital technologies and online systems in processing and providing information is a growing feature.

There are two levels of investment facilitation measures in the region: national and regional cooperation. ASEAN Member States have also put in place, or are in the process of implementing, investment facilitation measures across the 10 main categories of the AIFF (chapter 4, table 3.1).

As ASEAN Member States are at varying stages of industrial development, the investment facilitation tools and policies they adopt differ in terms of mechanisms, institutional arrangements and sophistication. Some Member States have more sophisticated measures and mechanisms than others, such as significant aftercare services and public-private consultation mechanisms for feedback. Sharing experiences and narrowing this investment facilitation gap between Member States would help strengthen regional cooperation and the competitiveness of the region as well as the national investment environments. Investment facilitation implemented as a result of regional cooperation also extends the same benefits to all investors, including local companies and small and medium-size enterprises (SMEs) as the impact of investment facilitation implementation is universal – more inclusive rather than selective.

An overview of key aspects of investment facilitation measures that are in place or works in progress by ASEAN Member States is provided in the following subsections.

a. Transparency and information

ASEAN Member States publish and provide information in laws and regulations, industrial plans and investment procedures, as well as guidance on business registration, government assistance (e.g., incentives) and investment opportunities. Other information provided covers issuance of permits and licences, payment of fees and taxes, and set-up of a business. Some Member States (e.g. Thailand and Viet Nam) provide investment information in multiple languages.

Table 3.1. Investment facilitation measures in place or being addressed by ASEAN member States, interim assessment

	Brunei		Lao People's Democratic Republic					Thailand		Viet Nam	
	Darussalam	Cambodia	Indonesia	Malaysia	Myanmar	Philippines	Singapore	Thailand			
1	1	1	2	2	1	1	2	2	1		
2	1	2	2	2	1	1	2	2	1		
3	2	1	2	2	1	2	2	2	2		
4	0	0	2	2	0	1	2	2	2		
5	1	2	2	2	1	1	2	1	1		
6	2	2	2	2	2	2	2	2	2		
7	1	1	1	1	1	1	1	1	1		
8	0	1	1	2	0	1	2	2	1		
9	1	2	2	2	1	1	2	2	1		
10	2	1	2	2	1	2	2	2	1		

Source: ASEAN Investment Report 2022, AIF assessment.

Note: 0 = not in place, 1 = basic, 2 = advanced.

Information is provided through various channels, including official websites, printed materials, on-site consultation, online enquiries, representative offices abroad, regular overseas investment promotion missions, seminars, and investment clinics and other investment promotion events.

For instance, *Cambodia* is taking steps to publish a list of relevant laws and regulations, along with unofficial translations in English. The Official Gazette, which contains information and updates on laws in the country, is published online. *Myanmar* offers a similar initiative through the MyCO portal, which provides a database of companies operating in the country and publishes information with regard to investment projects. *Thailand* publishes the “Guide to the BOI (Board of Investment)” every year in Thai, English, Chinese and Japanese; it describes all the sectors, activities, regions and special regimes that are eligible for general and special promotion schemes and the corresponding criteria and procedures for obtaining licences. The BOI’s website is available in Thai and six other languages (Chinese, English, French, German, Japanese and Korean), though information is predominantly available in English and Thai. *Viet Nam* released a handbook entitled “Streamlining business registration in local government units (LGUs)”, which contains good practices on issuing business permits and licences in 16 LGUs in the country. *Singapore* has established the Singapore Investment Clinic to provide a single location for businesses investing in the country, with information related to applying for visas, claiming tax deductions, accessing innovation networks and other investment-related topics.

In general, the range of investment-related information provided by the various Member States is similar. They also provide similar consultation services, online facilities and investment clinics to assist investors with enquiries and provision of information.

b. Streamlining and simplification measures

Member States have undertaken various measures and actions to improve efficiency through streamlining and simplifying processes and requirements, reducing procedures and forms needed for investment applications and issuance of licences, and making it easier for investors to navigate the legal framework. The numbers of days needed for review of investment applications and issuance of licences have been considerably shortened. Member States have also taken actions to improve efficiency in the regulatory environment and have introduced approaches to reduce the costs associated with the investment process. Most Member States have reduced the number of administrative procedures associated with registering a business and obtaining the necessary licences or permits.

For instance, *Brunei Darussalam* streamlined the number of applications investors must fill out and introduced a single-step process to start a business in 2019. The number of days it takes to start a business in the country has fallen from 105 in 2014 to just 6 in 2019.² An Ease of Doing Business Steering Committee had already been established in 2011 under the Ministry of Energy, Manpower and Industry. *Cambodia* enacted in 2021 a new Law on Investment, which replaces the previous one enacted in 1993. The law established a new investment incentive regime, provides investor guarantees, and revised and improved administrative procedures for applying for registration of qualified investment projects (UNCTAD, 2021).

It established automatic approval and a one-stop service, which includes the provision of information and support with processing investment applications, customs duties, tax exemptions, visa and work permits, and company registrations.

Indonesia enacted the Omnibus Law on Job Creation in 2020. The law contains a lengthy regulatory reform process, including examination of existing laws, articles and regulations in a bid to streamline them. The Government has amended 79 existing laws that either overlap or need revision. The law aims to establish a friendlier investment environment, notably by significantly reducing the restrictions on foreign investment. It also seeks to harmonize and simplify the business licensing process by amending and superseding individual laws related to almost all economic sectors and by limiting the role of local governmental licensing authorities (UNCTAD, 2020b).

Myanmar and Thailand have made significant improvements in the procedures for starting and registering a business. *Myanmar* established the MyCO (Myanmar Companies Online) portal, which acts as a public registry of all companies, a process that can be done online. The number of days it takes to start a business in Myanmar has fallen from three in 2014 to just one in 2019. *Thailand* reduced requirements for business registration, which led to a significant reduction in the number of days needed to register a company, from 27.5 days in 2016 to only 4.5 days in 2019. Starting a business was made less costly by introducing fixed registration fees, while access to electricity was made easier by streamlining the number of procedures needed to obtain new connections and by making electricity tariff changes more transparent.

c. Use of technology and digitalization of service

A significant development is the growing use or upgraded use of digital technologies, online systems and digitalization of services to facilitate investment, accentuated by Member States' responses to the pandemic. The use of digital technology for accessing information and supporting investment applications is a norm in the region, although some Member States' online systems are more developed than others.

The use of online systems during the pandemic has helped IPAs in the region to continue to operate and support investors, including issuing entry visas and helping to keep factories open and running while respecting health protocols. Most IPAs support the use of e-registration and e-forms.

Cambodia has simplified the business registration process and moved it online. It reduced the number of steps, application forms and signatories required for business registration and permit applications. The new paperless system enables prospective local and foreign businesses to upload information on shareholders and boards of directors and to pay registration fees online. *Malaysia* has introduced a digital system to assist with and accelerate investment applications. The system provides real-time tracking of the status of approval, identifies issues that companies face in implementing projects and proposes appropriate solutions, monitors the progress of project implementation through an implementation tracking and monitoring system, and collaborates with federal and state governments, service providers, IPAs, technical agencies and other related technical departments.

d. Single digital platform

Many Member States (e.g., Indonesia, Malaysia, Singapore, Thailand) have adopted a single digital platform, which significantly enhances the efficiency and ease of investing. Such platforms support the provision of information, submission of investment applications and issuance of licences through one digital mechanism. Relevant government agencies utilize the same documents, submitted by investors through the single digital platform, thereby reducing cost, time and bureaucratic complications. The system also helps reduce the need for investors to deal with many relevant agencies at different times.

Indonesia launched the risk-based Online Single Submission (OSS) system in August 2021 to replace the previous OSS system that had been used since July 2018. The new OSS system applies the new concept of risk-based approach licensing. It offers a simple and more transparent as well as an integrated business licensing process involving all relevant ministries, institutions and regional governments. *Malaysia* offers the InvestMalaysia portal, a single gateway to assess applications which include e-manufacturing licences, e-incentives and import duty and sales tax exemptions. The facility supports users in applying for manufacturing licences, incentives and exemptions from customs duties and ensuring expeditious execution of investment projects. In addition, it provides information on investment incentives offered by the Federal Government of Malaysia.³

In *Singapore*, everything related to doing business can be accomplished online through the GoBusiness Portal. The National Information System on Investment (NIIS) of *Viet Nam* is an online single window that administers investment applications, renewal and aftercare needs. It provides investment-related information. It supports the use of electronically signed documents for investment applications.

e. Assistance and advisory services

All Member States have established complaints procedure and mechanisms to address recurrent issues affecting investors. Investors can raise complaints through channels such as on-site consultation, an ombudsman, public-private sector forums and IPAs, and websites. Levels of assistance range from basic to advanced.

Cambodia conducts an annual public-private sector forum, chaired by the Prime Minister. *Indonesia* provides several channels for investors to submit complaints and feedbacks, such physical meeting, phone, whatsapp and email. Indonesia holds private-public consultation meetings to disseminate updated laws, regulations and procedures as well as to obtain feedback and to receive complaints from stakeholders. It has also set up a special task force on investment acceleration consisting of high-level officials from various Ministries to address recurrent issues on investment and to provide recommendation to be followed up by relevant Ministries. In the *Lao People's Democratic Republic*, investors can submit complaints to the one-stop shop, which coordinates with relevant authorities.

In *Malaysia*, the Malaysian Investment Development Authority (MIDA) undertakes rigorous consultative review meetings with industry stakeholders when addressing recurrent issues that

affect investors. *Myanmar* has established a body to listen to investors' grievances but does not make rulings on disputed cases. In *Singapore*, the Singapore Accounting and Corporate Regulatory Authority provides open access for investors to lodge a complaint regarding any alleged statutory breach under its remit. These complaints may relate to businesses, business owners, or its officer and corporate service providers. The Authority actively solicits feedback and recommendations on recurrent issues that may warrant policy or legislative review. The Vietnam Business Forum in *Viet Nam* provides a channel for public-private sector consultation and attention to concerns of investors, including bureaucratic matters.

Member States also provide other advisory services, detailed in the following subsections.

One-stop shop service

"One-stop shop" service centres are common. All Member States have established such centres to facilitate investment; however, the services they provide differ significantly. The services generally cover a wide range of areas such as consultation; application for necessary permits or licences; access to information relating to investment and relevant regulations; and customs, import and export procedures. These centres consolidate all relevant services to support investors with the issuance of investment permits and business licences, and the provision of investment incentives and relevant information (box 3.3). They facilitate investment by eliminating the need for investors to visit multiple ministries and government agencies to complete the investment application process. Instead, investors access all these services under one roof, where the IPA helps investors coordinate with the relevant authorities. These centres also facilitate applications for entry and stay permits, including visas for expatriate families. In some, services include not only investment consultations but also assistance with issuance of relevant licences, support for securing industrial facilities as well as matchmaking, employment law and labour issues, and information on suppliers and other databases.

Box 3.3. Investment facilitation: the role of the Philippine Economic Zone Authority

The Philippine Economic Zone Authority (PEZA) is a major investment facilitation institution in the country. It has been at the forefront of the Philippines' investment promotion and investment facilitation efforts since its inception in 1995, particularly through the economic zone programme. The number of economic zones it develops and manages grew from just 16 in 1995 to 415 throughout the country in 2022. These zones host foreign and local companies for export manufacturing, information technology (IT) services, tourism, medical tourism and agro-industry activities.

Some 4,661 companies operated in these zones between 1995 and 2021, involving cumulative investment and reinvestment that amounted to \$77 billion. In the same period, \$26 billion of cumulative investment budget was spent on the development of zones. Investment in recent years has grown rapidly. The annual budget for development of zones between 2015 and 2021 generated 73 times the approved total investment (mostly in the form of FDI). In addition, investment (local and FDI) in these zones generated about 1.8 million jobs and \$933 billion in export revenues (or about \$36 in export revenues per \$1 invested) between 1995 and 2020. About two thirds of the country's total commodity exports are from facilities in PEZA economic zones.

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Box 3.3. Investment facilitation: the role of the Philippine Economic Zone Authority (Concluded)

In addition, PEZA offers fiscal and non-fiscal incentives to investors. These include income tax holidays, a special tax rate, a domestic sales allowance of up to 30 per cent, tax- and duty-free importation of raw materials and equipment, and others. During the pandemic, PEZA provided business assistance and reprieves to support investors operating in the zones. During lockdowns, when public transportation was suspended, PEZA temporarily allowed PEZA-registered enterprises to establish workspaces in non-PEZA-registered sites, called pop-up centres. It also provided deductions for pandemic-related expenses incurred by PEZA companies in ensuring the health and safety of workers.

PEZA has adopted various measures to improve the ease of doing business and investing in zones under its jurisdiction. It offers a one-stop shop, which facilitates the issuance of the necessary permits and licences a company needs in order to comply in establishing operations in the Philippines. This service significantly reduces the number of government transactions an investor would otherwise have to go through. It also assists with special non-immigrant visas for foreign investors and their immediate family members.

PEZA's investment facilitation efforts have evolved in the last two decades. It has developed various sizes of zones and new-generation zones, which are bigger, integrated and dedicated to the development of certain industries (e.g., call centres, electronics and automotive hubs). These zones range from simple industrial parks to integrated zones involving a portfolio of facilities such as bonded warehouses, ports and integrated logistics. Prior to the COVID-19 pandemic, PEZA had adopted a digital platform and technology to further facilitate the investment process. During the pandemic, the adoption of technology and digital platforms was accelerated to support online and simplified application processes. The electronic Application and Registration System (eARS) and e-Payment System were launched in 2021. Investors can electronically file their PEZA registration and applications for permits, licences and other requirements, and can make payments online.

In promoting and marketing activities, PEZA adopted the use of virtual events such as teleconferencing and livestreaming to reach out to target audiences. In 2021, it started a series of virtual investment forums called "Global Biz with PEZA" as well as other digital events to promote investment opportunities in PEZA economic zones.

Despite the country's success in attracting FDI, it does face challenges. In 2021, the Corporate Recovery and Tax Incentives for Enterprises Act was passed to reduce corporate income tax in the country and to rationalize the granting of fiscal incentives to local and foreign investors. The act limits the autonomy of IPAs to approve applications and determine incentives for big-ticket projects, as approval of such projects is now under the jurisdiction of the Fiscal Incentives Regulatory Board. Another major challenge is the high cost of factors of production in the economic zones, which emanate from high electricity charges, rising land prices and higher logistics costs.

Source: ASEAN Investment Report 2022 research, based on an interview with PEZA.

In *Indonesia*, the Ministry of Investment/BKPM (the Investment Coordinating Board) provides a range of services under one roof to support investors. It coordinates with other ministries and government agencies to ease the investment process for investors, which also cover consultation services provided by officials from different ministries. *Malaysia*, through various

IPAs (e.g. the MIDA, InvestKL), offers one-stop service to investors. *Myanmar* offers two one-stop shops, one for the whole country through the Directorate of Investment and Company Administration (DICA) and a specific one for the Thilawa Special Economic Zone (SEZ). DICA's service is more of a centralized information site, providing guidance and information for conducting business and investing in Myanmar. The Thilawa SEZ service has the authority to issue permits and licences on behalf of the various ministries represented there. In the *Philippines*, its BOI and PEZA provide one-stop services to investors. The BOI in *Thailand* established its one-stop shop in 2009 to offer investors convenience in dealing with multiple agencies located throughout Bangkok. The service brings together staff from 38 investment-related agencies at a permanent location in Bangkok's business district, together with the One-Stop Service Centre for Visa and Work Permits, the Smart Visa Unit and the Strategic Talent Centre. The one-stop shop also provides information and consultancy related to doing business in Thailand, covering topics such as investment promotion privileges, company registration, business licences, factory licence application, customs clearance, and import and export. The centre also facilitates site visits to industrial zones. However, it does not offer business permits and when applications for permits are submitted to the Ministry of Commerce, they must be filled out in Thai.

Aftercare service

Aftercare services are important to existing and established investors. Such services can help encourage expansion of operations, including retaining investment. Most ASEAN Member States offer some form of aftercare services. Some have used an investment targeting strategy to regularly talk to or visit prospective investors in the country, listening to what can be done to support existing investment. Aftercare services differ in scope and depth between more advanced Member States and others. The common aftercare services include mechanisms for complaints, regular consultation and dialogue with the private sector, and assistance with applications for entry and stay permits.

Independence of competent authorities

In ASEAN, IPAs or Ministries of Investment have the mandate and authority to make decisions on authorizing investment. In some Member States, IPAs are established under the Office of the Prime Minister or directly report to the President, and in others investment decisions are made collectively by appointed investment committees involving relevant ministries. IPAs are the national focal points for investment-related matters, enquiries, applications, incentives and other services. They also coordinate with other government agencies and ministries to facilitate an efficient investment process for investors.

Temporary entry and stay permits

All Member States allow foreign companies to bring in foreign employees, subject to certain conditions and requirements. IPAs of Member States assist foreign companies with applications for entry and stay permits for such employees. There are few differences between the Member States in hiring of foreign employees. For instance, *Indonesia* and *Malaysia* have

relatively more stringent requirements and would prefer firms to hire local employees first. Work visas are available for senior management, but a firm must first prove that employment of a foreign worker is necessary. *Thailand* and *Singapore* have targeted programmes that aim to attract skilled talent in targeted areas. In 2018 Thailand began offering the Smart Visa Programme for foreign experts, executives, entrepreneurs and investors who wish to work or invest in targeted industries (e.g., technology, high value added, start-ups). It offers significant benefits for the applicant, such as no necessity for a work permit and no requirement for a re-entry permit. Singapore has visa programmes aimed at attracting foreign talent in technology sectors. This includes the Tech.Pass, a visa that allows established tech entrepreneurs or technical experts to enter and work. *Cambodia* and *Myanmar* have less stringent or targeted policies. In Myanmar, enterprises can hire foreign experts as senior managers, technical and operational experts and managers and managers in the investment project.

Facilitation of investment-supporting factors

Most Member States provide support to investors in matchmaking and finding local suppliers (e.g., through databases). Not all have established databases; some have matchmaking programmes, assisting investors in looking for local partners or suppliers (e.g., Indonesia, Malaysia and Viet Nam). *Singapore* offers a personalized concierge service that connects investors with established enterprises that can respond to queries and help with networking. Singapore's investment clinic offers investors information on expanding into the region, managing talent, navigating industries, conducting research and development (R&D) and innovation, and identifying funding and partners.⁴ The BOI of *Thailand* supports investors with industrial linkages, involving services such as sourcing and business matching, providing information on subcontracting opportunities, and organizing seminars and networking forums. The Foreign Investment Agency of *Viet Nam* provides support for matchmaking and domestic linkages with multinational enterprises (MNEs). It has established a database of 500 firms in supporting industries in the country. Some Member States, such as Malaysia and Thailand, have a vendor programme, while others are examining approaches to establishing such databases to assist investors.

Member States also have national chambers of commerce or industry associations that provide support with databases and business networking information. As such, they play a role in facilitating investment, complementing public efforts in investment facilitation.

f. Consultative mechanism for investment policies

Public-private consultation

All Member States regularly organize public-private forums or dialogues to exchange views, receive feedback and listen to investors' concerns about investing and doing business in the country. The aim is to provide a platform for enhancing transparency and to identify areas where governments could further streamline measures, reduce costs and facilitate investment. Some Member States (e.g., Cambodia, Indonesia, Malaysia, Philippines, Singapore, Viet Nam) also use relevant forums to consult the private sector on intended changes to regulatory reforms

or to laws. *Cambodia* conducts an annual Government-Private Sector Forum, which provides a platform for business representatives to offer expertise on a range of policy and regulatory issues, and on ideas to further improve the country's investment environment. In *Myanmar*, the Investment Promotion Committee, a cross-ministerial coordination mechanism, regularly consults the private sector.

Inter-agency coordination

Inter-agency coordination is useful for achieving coherent implementation of policies across government ministries or departments. It also increases effective communication between relevant agencies and encourages exchange of views in attracting and facilitating FDI. Such coordination can help identify areas to reduce red tape or eliminate duplication of processes and requirements. IPAs in some Member States (e.g., Indonesia, Malaysia and Viet Nam) also coordinate with state and provincial agencies to facilitate investment. In *Thailand*, the promotion and facilitation activities of the BOI are complemented by other government institutions at national and subnational levels. They include the Industrial Estate Authorities, the Eastern Economic Corridor, the Office of Small and Medium Enterprises Promotion, and the SEZ Authority. Communication and coordination between these agencies and ministries is significant. The BOI also participates in the development of the national development strategy under the National Economic and Social Development Board. In *Malaysia*, the MIDA has established the Project Acceleration and Coordination Unit (PACU@MIDA) to provide end-to-end facilitation for all projects approved by the National Committee for Investment. In Viet Nam, there is close coordination between the national IPA with state or provincial level investment promotion agencies.

Cooperation

Through ASEAN institutional mechanisms (e.g., the ASEAN Coordinating Committee on Investment and the ASEAN Investment Area Ministerial Council), Member States regularly meet to discuss and exchange views and information. These meetings discussed regional cooperation and development relating to investment matters and implementation of related regional agreements.

Some regional investment forums (prior to the pandemic) were organized as part of the preparation of the annual *ASEAN Investment Report*, including as capacity-building events involving international and regional experts on thematic issues of interest to the region.

Some Member States have also established bilateral investment cooperation such as Indonesia and Singapore under the Indonesia-Singapore Working Group on Investment and Myanmar cooperation with Singapore. Lao People's Democratic Republic and Viet Nam have established a bilateral cooperation forum to discuss various economic matters, including investment.

Some Member States have also established cross-border cooperation on investment facilitation under the growth areas arrangement. This includes the Indonesia-Malaysia-Thailand Growth Triangle, the Indonesia-Malaysia-Singapore Growth Triangle and Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area.

g. Other investment facilitation support

Industrial facilities (SEZs) are discussed here because they are a form of geographically delimited investment facilitation, not because they provide industrial facilities. The development of an international minimum tax base will have an important implication for industrial facilities in attracting FDI as such facilities usually are linked with the provision of incentives (e.g., tax holidays or tax reduction) (*WIR 2022*). ASEAN Member States will need to understand the implication for SEZs in using tax incentives to attract investment.

Industrial facilities

Industrial facilities such as SEZs and industrial parks by themselves fall under investment promotion as they involve granting of investment incentives and other fiscal benefits. Member States view the provision of efficient industrial facilities as an important effort to facilitate investment (*AIR 2017*, *WIR 2019*). They have established many industrial estates and SEZs with distinctive locational advantages so that investors can implement investment projects quickly.

Many types of industrial facilities, large and small, in ASEAN support and facilitate investment. For instance, Cambodia plans to establish 54 SEZs; Indonesia has 126 industrial estates and 12 SEZs in operation; the Philippines has more than 415 types of parks and ecozones and 12 SEZs; Malaysia has more than 600 industrial estates, 23 Free Commercial Zones, 21 Free Industrial Zones and 5 mega-SEZs or economic corridors; and Thailand has 65 industrial parks and 10 SEZs (table 3.2). Some SEZs in the region are huge, consisting of residential cities, dedicated industrial zones, ports and facilities, targeting clusters of multiple industries. The Dawei SEZ under construction in Myanmar covers 196 km², and the SEZ of the Iskandar economic corridor in Malaysia encompasses 2,217 km² – about three times the size of Singapore.

Table 3.2. SEZs and economic corridors in ASEAN, 2021 (Number)

Country	SEZs or economic corridors		
	Announced or designated	In operation	Under construction
Brunei Darussalam	1	1	..
Cambodia	54	20	11
Indonesia	19	12	7
Lao People's Democratic Republic	14	12	2
Malaysia	5 ^a	5	..
Myanmar	3	1	2
Philippines	12	12 ^b	..
Singapore	10 ^c	10	..
Thailand	10	10	..
Viet Nam	19 ^d	19	..

Source: Adapted from *ASEAN Investment Report 2020–2021*.

Note: These SEZs are in addition to the many industrial parks that are in operation or being developed by investors and economic zone authorities. For more information on the more than 1,600 economic zones and industrial parks or facilities in the region, see *ASEAN Investment Report 2017*.

^a A new type of SEZ, comprising economic corridors involving contiguous States.

^b In addition, the country has 19 tourism SEZs.

^c Represented by free trade zones.

^d Comprises 15 economic zones, 3 EPZs and 1 high-tech park. Viet Nam has many industrial parks.

Some industrial facilities, including those owned by MNEs in the region, are very successful at attracting investment. For instance, most industrial estates in Penang (Malaysia) are tenanted; and many industrial parks in Viet Nam (e.g., Vietnam-Singapore Industrial Parks) have been further expanded with new phases of development. However, not all industrial parks or SEZs in the region are successful. Many struggle to attract tenants because of less attractive facilities or locations (*AIR 2017, WIR 2019*).

Industrial parks have also evolved. All Member States have continued to develop and upgrade industrial facilities to attract targeted types of investment, in line with national economic development plans. Some have established industrial infrastructure to attract industrial clusters such as electric vehicle hubs, advanced manufacturing, health-care activities, and IT and business process outsourcing, as well as high-tech investment projects. In partnership with private developers, some Member States are developing facilities that are ready for Industry 4.0 activities. Some are establishing SEZs with specialization because of their inherent locational advantages. Some of these SEZs have infrastructure earmarked for certain types of investments such as in tourism and in agribusiness.

Investment facilitation measures for facilitating diversification projects

In the context of specific situations such as support during the pandemic and support for businesses relocating production from neighbouring economies to ASEAN, some facilitation measures have been implemented or accelerated. In 2019–2020, some Member States announced measures to attract MNE projects for diversification of supply chains, arising from the trade tensions between the United States and China and from the pandemic-related supply chain disruptions. Some MNEs and Chinese companies had been relocating to ASEAN even before the outbreak of the pandemic, primarily because of rising costs in China (*AIR 2020–2021*). Governments supported relocation through incentives and investment facilitation measures such as offering specific support for relocation and establishing special task forces. *Indonesia* established a special task force in June 2020 to attract and help MNEs that plan to relocate their investments.⁵ The Government further streamlined investment processes and offered other support (e.g., simplifying the business licence process, assisting with factory facilities in SEZs) to improve the ease of setting up operations in the country. *Malaysia* established a Project Acceleration & Coordination Unit in the MIDA to speed up manufacturing licence approval for non-sensitive industries to within two working days. *Thailand* set up a one-stop service to improve the ease of doing business and facilitate investment and relocation to the country. *Viet Nam* established a special working group in June 2020 to attract large, innovative, high-tech projects. A key task of the working group is to formulate new policies to attract capital inflows from MNEs, including those that are diversifying investment locations and repositioning manufacturing facilities after the pandemic.⁶

Pandemic investment facilitation response

In supporting investors during the pandemic, ASEAN Member States accelerated adoption of additional investment facilitation measures. The number of measures put in place rose from 6 in 2019 to 28 in 2020 (*AIR 2020–2021*). They further streamlined and simplified investment

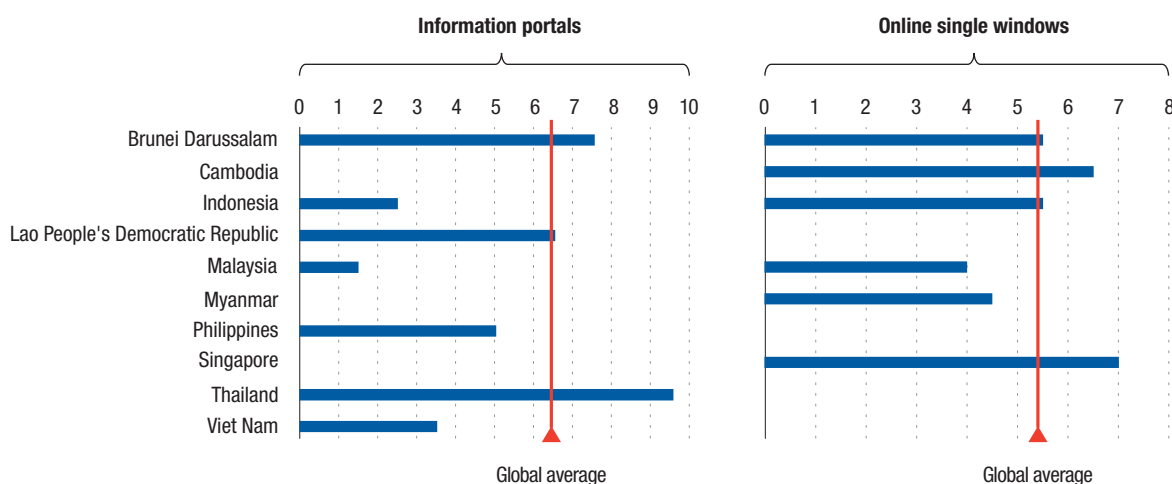
procedures, introduced greater use of online or e-application systems, strengthened one-stop shops, accelerated business licence approval processes and offered other support to investors (e.g., stimulus packages for investment, extension of administrative compliance deadlines such as for submission of tax returns). IPAs in the region kept offices open for investment applications and assisted investors with extended online services. While respecting health protocols, IPAs helped investors keep factories opened and helped them address labour issues.

Investment facilitation actors

Investment facilitation is not just the role of IPAs. Other government agencies such as economic zone authorities (e.g., the Industrial Estate Authority of Thailand and PEZA in the Philippines) and state and provincial governments have been playing a role in facilitating investment. Some industry associations and chambers of commerce also assist investors by providing databases and business networks. Investment facilitation efforts should involve all actors.

This synopsis underlines that ASEAN Member States are actively implementing or have already put in place many investment facilitation measures. Despite strong progress made in implementing such measures, Member States still have more work to do, particularly in strengthening the quality of investment facilitation services, including increasing the effective use or application of technology and developing efficient information portals and single digital platforms. Only a few Member States exceeded the global average in UNCTAD's Global Enterprise Registration (GER.co) rating in implementation of information portals and online single windows (figure 3.3).

Figure 3.3. ASEAN: Global enterprise registration rating



Source: UNCTAD/GER.co.

Note: Data extracted on 21 June 2022.

3.2.2. National investment facilitation efforts

Over the years, investment facilitation measures introduced by Member States have evolved and expanded. There has been an increasing push and use of digital technology, websites and online services, sped up by the pandemic. Some services have become more sophisticated, with extended services available through one-stop shops and single digital platforms.

This section highlights key investment facilitation measures and services offered by the respective Member States to assist investors.

a. Investment facilitation in Brunei Darussalam

Brunei Darussalam has a liberal investment regime and welcomes foreign investment, which is seen as playing a key role in the country's economic development. The Government overhauled its investment laws and established the Brunei Economic Development Board (BEDB) in 2001 to attract and support investment. The BEDB adopted a new approach to attracting FDI, focusing on large projects, including a global megaport hub and downstream manufacturing industries using natural gas. Over the years, the BEDB has adopted measures to facilitate investment and improve the investment environment.

Investment policy

The Government, recognizing the importance of foreign investment to diversifying the economy and limiting the country's long-term reliance on oil and gas, has taken steps to improve the business and regulatory environment. It has identified five priority clusters for foreign investment (i.e., downstream oil and gas, manufacturing and other services, food, tourism and information and communication technology).

Investment facilitation tools, measures and processes

Various tools and measures aimed at making it easier to invest and conduct business in the country have been adopted, including mechanisms to help investors navigate the legal and regulatory framework.

Transparency and provision of investment information

The Government has published various types of investment-related information through numerous channels, including online. It established the businessBN website (www.business.gov.bn), which provides information on requirements for starting, running and expanding business. The website provides information on all aspects of government services and reforms related to doing business (e.g., tips on choosing legal structures, recruiting, finding commercial premises, obtaining business licences and registering businesses). Related information can also be accessed from other platforms such as OneBiz and the GOV.BN portal.

Streamlining and speeding up administrative procedures and requirements

Brunei Darussalam introduced a single-step process that simplified procedures to start a business, amended its Stamp Act by removing requirements for share certificates to be

stamped upon incorporation and streamlined the approval process for getting electricity service. In 2016, the Government exempted seven business activities from needing a business licence: bakeries, food establishments and public entertainment establishments as well as motor vehicle dealers, gas stations and retail stores. Businesses in these categories can operate once they have received approval for their business name or company incorporation at the Registry of Companies and Business Names. Although these businesses no longer need to apply for a business licence, they still need to comply with rules and regulations regarding the type of business they plan to conduct.

The BEDB uses an FDI fast-track system to streamline the process of obtaining permits, licences and approvals, including construction permits, and recruiting foreign labour. This reduces costs and the number of steps that investors need to go through.

The country's Ease of Doing Business Secretariat has recently conducted workshops for the business community to further improve and streamline business-related processes and regulations.

Use of digital technologies and single digital platforms

Brunei Darussalam has established BusinessBN, a single digital platform to facilitate investment. It provides information on how to get a business up and running, and how to grow a business in the country. The platform offers a number of tools and services for investors, including submission of business reporting, information on how to start a business (through a guideline simulator) and links to other relevant online government services. The guideline simulator enables investors to input information about their business, including information on the type of business, building requirements, whether employees are foreign or local, and the legal type of business. They are then provided with all the potential guidelines and approvals required to start their business.

Assistance and advisory services to investors

BusinessBN offers a mechanism for feedback and complaints. It also offers links and information on where investors can raise complaints and grievances with relevant authorities. In addition, the BEDB will liaise and consult with relevant government agencies to address investors' concerns and provide guidance to investors.

Independence of competent authorities

The BEDB is the main agency coordinating and overseeing investment and economic development matters in the country. It has established a one-stop shop to support investors. Investors are assigned a dedicated focal point and liaison officer to assist with matters such as labour recruitment, investment approvals and reinvestment. The BEDB assists by providing information on the local investment climate, developmental requirements, laws and regulations, the cost of doing business and project-specific information.

Temporary entry and stay of business persons for investment purposes

Expatriate employment is controlled by a labour quota system administered by the Labour Department with the issuance of employment passes by the Immigration Department.

Information on the requirements for temporary entry and stay of business persons are published on the website of the Immigration Department, of the Ministry of Home Affairs. New companies can apply for special approval to expedite recruitment of expatriate workers in selected positions. The special approval is available only to new companies for up to six months and covers businesses such as restaurants and retail stores. The special approval cuts the processing time from 21 days to 7.

Facilitation of investment-supporting factors

The Government also supports investors with matters such as labour recruitment and information on local suppliers. In particular, the BEDB assists in providing information on the local investment climate and requirements, the cost of doing business and project-specific information.

Consultative mechanisms for investment policies

The BEDB conducts regular consultation with investors. It liaises and consults with other relevant agencies to address investors' concerns and to provide guidance to investors. Relevant government agencies may consider concerns raised by investors to the BEDB when they review their existing processes and procedures.

Cooperation

Brunei Darussalam cooperates on investment matters with neighbouring countries under the Brunei-Indonesia-Malaysia-Philippines East ASEAN Growth Area initiative.

Pandemic investment facilitation support measures

In March 2020, the Government introduced pandemic-response measures such as deferment of payment of utility services and social security deductions.

Industrial facilities

Brunei Darussalam has 25 industrial estates managed by the BEDB and the Brunei Industrial Development Authority. The industrial estates have been developed to support economic development, attract investment into specific industries and develop clusters (e.g., in oil and gas). Some were designed specifically to attract SMEs (e.g., Lambak Kanan Barat, Sg Bera, Salar and Pekan Belait industrial estates) and specialized industries.

The country established its first free trade zone, Terunjing Industrial Park, a 235-acre site between two main highways near Brunei Darussalam International Airport and Muara Port, in 2017. It focused on light industry and manufacturing, and goods imported and exported are not subject to customs duty. In 2018, the construction of the Pulau Muara Besar Bridge was completed, which enhanced transportation connectivity.

b. Investment facilitation in Cambodia

Cambodia has a liberal investment regime with few restrictions aside from the one on land ownership. The Government encourages and facilitates investment in all sectors.

Investment policy

In attracting investment to support industrial transformation under the Industrial Development Policy 2015–2025, the Government continued to examine the regulatory environment to strengthen competitiveness (e.g. improving the investment climate and trade facilitation, disseminating market information and reducing informal fees). Investment promotion and facilitation are at the heart of the Industrial Development Policy.

In 2005, the Government set up an SEZ programme to facilitate export development and create employment by providing industrial infrastructure and facilities. Although manufacturing activity outside the zones is heavily concentrated on the garment industry, the SEZs have attracted a much broader spectrum of foreign investors in light manufacturing.

Investment facilitation tools, measures and processes

Various investment facilitation tools and measures have been adopted to make it easier to conduct business. The Government has also developed mechanisms and facilities to assist investors in navigating the legal and regulatory framework.

Transparency and provision of investment information

The Government has published relevant laws and regulations relating to investment, along with unofficial translations in English. Official Gazettes are also published online. On 15 October 2021, the Government adopted a new Law on Investment, which replaced the Law on Investment of 1993 (revised in 2003). The new law creates an open and transparent legal framework for investment. It also provides investment guarantees and revises and improves administrative procedures for registration of investment projects.

Streamlining and speeding up administrative procedures and requirements

Cambodia has set out specific policies to improve the investment environment. These policies include digitalization and simplification of business registration. On 15 June 2020, the Government launched an online system for investment application that approves applications within eight working days.

The process of investment registration and establishment, including application for investment incentives, has been made easier, with an application process based on automatic approval. A one-stop service (providing information and processing application approval, customs duty and tax exemption, visa and work permits, and company registration) has been established.

Use of digital technologies and single digital platform

In 2015, the Government simplified the business registration process by introducing an online business registration system to reduce the number of steps, application forms and signatories needed in business registration and permit applications. The new, paperless system enables prospective local and foreign businesses to upload information on shareholders and boards of directors and pay registration fees online (through various e-payment channels),

as opposed to the old system, in which representatives had to physically go to the ministry to complete registration procedures. Information related to investment, including laws, policies and regulations, is available on the Cambodia Development Council's website (<https://cdc.gov.kh/>).

The Government launched an online system for investment applications on 15 June 2020, with the goal to approve applications within eight working days. While investors can apply online, it is still necessary for them to submit original copies of documents. Fees can be paid online through various e-payment channels.

Assistance and advisory services to investors

The Council for Development of Cambodia (CDC) has established a complaints desk to handle investor grievances. A special troubleshooting committee for SEZs oversees any problems that may occur with land rights, exports, imports and the labour market. The Prime Minister chairs both the CDC and the troubleshooting committee.

Independence of competent authorities

The CDC is the main authority. It has also set up a one-stop shop. The Government is identifying specific areas for further development of aftercare services to support investors.

Temporary entry and stay of business persons for investment purposes

Expatriates are allowed to work in Cambodia if they obtain a work permit. The Government, through the one-stop shop, assists foreign companies in applying for work visas for expatriates. The application process takes on average 15 to 20 days.⁷

Facilitation of investment-supporting factors

The CDC assists investors by organizing events to promote business matching opportunities. It has also established a portal of local suppliers.

Consultative mechanisms for investment policies

The Government (at the highest level) regularly holds dialogues with the investor community, through the annual Government-Private Sector Forum, to listen to their concerns and to exchange views on areas where the investment environment could be further improved. The forum also provides a platform for business representatives to offer expertise on policy and regulatory reforms. Successful examples include consultations on the investment, taxation and concession laws, the introduction of private sector monitors at the Ministry of Commerce, negotiations on cost reductions and suggestions on reform of governmental institutions. The Government often shares draft laws with private sector representatives for consultation and feedback.

Specific policies to improve the investment environment were discussed at the 18th Government-Private Sector Forum, held in May 2019. These policies included digitalization and simplification of business registration.

Pandemic investment facilitation support measures

Cambodia provided stimulus packages during the pandemic, primarily targeting the apparel manufacturing and tourism industries. For instance, to support the manufacturing industry, the Government kept borders and ports open to facilitate the importation of raw materials and parts used for manufacturing.

Industrial facilities

Cambodian SEZs are designed to offer one-stop service for imports and exports. Specially trained public officials are stationed on-site to provide administrative services. Applications to establish businesses within SEZs are dealt with on-site, together with company registration and investment licences, work permits and labour books for workers. Investment approvals, customs inspections and import-export procedures are also conducted on-site by representatives of Camcontrol and various ministries, such as the Ministries of Labour and Commerce. The zones also enjoy high levels of security, low insurance fees and few labour disputes.

There are 20 SEZs in operation out of 54 announced or designated. Most of these SEZs are located along the border with Thailand and Viet Nam, and at Sihanoukville and Phnom Penh.

While manufacturing activity outside the zones is heavily concentrated on the garment industry, SEZs have attracted a much broader spectrum of foreign investors in light manufacturing. Several of these SEZs are engaged in production and exports spanning from electronics and electrical products to plastics, food, furniture and car parts.

Institutional support

The institutional arrangements for managing and promoting FDI in Cambodia have evolved. The Law on Investment that was adopted in August 1994 created the CDC, with responsibility for developing and managing external resource inflows into Cambodia, including FDI. The CDC is an interministerial body under the direct responsibility of the Council of Ministers. Acting as the country's IPA, the CDC is the highest decision-making body in defining the framework for investment strategies and accepting or rejecting investment proposals. For foreign investors, the CDC is the first point of contact as well as the place to raise and resolve issues. It also serves as the one-stop service for granting authorizations for investment projects in accordance with the Law on Investment and oversees matters pertaining to investments as specified in the law. The CDC also coordinates the monitoring and evaluation of investment policies through a system of quarterly and annual reporting. The Cambodian Investment Board and the Cambodian Special Economic Zone Board are the CDC's operational arms for private sector development.

To facilitate investment in provinces, the Government has also established 24 Provincial-Municipal Investment Subcommittees, although little power is granted to the provincial authorities other than as licensing authorities for investment of less than \$2 million. All investment promotion and facilitation activity remains at the CDC. The CDC also acts as the secretariat of the Government-Private Sector Forum, facilitating dialogue within and among the joint government-private sector Working Groups, and broadly between the Government and the business community.

c. Investment facilitation in Indonesia

The Government of Indonesia has continued to take actions to provide a business-friendly environment and has taken steps to streamline administrative procedures to improve efficiency and attract FDI.

Investment policy

Improving the business environment has been a priority of the Government in the past few years. It has initiated various reforms relating to business licensing and strengthening investment facilitation services by improving transparency, streamlining procedures, simplifying processes and regulations, and creating mechanisms to ease investing in the country.

On 2 November 2020 the Government enacted the Omnibus Law to improve the ease of doing business by simplifying licensing processes, amending regulations of the Labour Law, relaxing immigration rules and harmonizing various sector-specific laws and regulations. The Omnibus Law introduces a new concept of risk-based business licensing where business activities are divided into three categories (i.e., low risk, medium risk, and high risk). Each category requires different type of licenses and procedures. All categories would require a business identity number, which is automatically generated by the risk-based online single-submission (OSS) system after submission of the application. Only medium high risk and high risk businesses would require verification first from relevant authorities before obtaining the business permit. Businesses in special economic zone or industrial zone can obtain business permit in advance but would need to fulfil the requirement before starting of commercial activity.

To implement the Omnibus Law, the Government has enacted 51 implementing regulations, which consists of 47 government regulations and 4 presidential regulations. Government Regulation No. 5 of 2021 on Risk-Based Business Licensing and Presidential Regulation No. 10 of 2021 on Investment Business Fields as amended with Presidential Regulation No. 49 of 2021 were adopted to further improve the country's business climate. Government Regulation No. 5 of 2021 regulates that business entities must fulfill basic requirements for business licensing and/or obtain the risk-based business licensing. Presidential Regulation No. 49 of 2021 provides a list of priority business sectors that can obtain investment incentives and stipulates less number of businesses that are open with certain conditions or requirements.

Investment facilitation tools, measures and processes

The Government has introduced measures to increase the ease for investing in the country. It has also developed mechanisms to assist investors navigate the legal and regulatory framework.

Transparency and provision of investment information

Indonesia provides information such as relevant laws and regulations related to investment, including investment procedures, incentives, investment opportunities. Information is published

through various government websites, printed materials, on-site consultation, representative offices abroad, workshops and seminars. The Ministry of Investment/BKPM website provides a wide range of information related to investing in Indonesia. However, not all information is provided in English. BKPM is now the Ministry of Investment.

Streamlining and speeding up administrative procedures and requirements

In 2018, Indonesia published 16 economic policy packages based on sectoral and thematic issues (such as harmonization of regulations, simplification of bureaucratic processes and assurance of law enforceability). As of January 2019, under these packages, the Government had streamlined 222 of 225 regulations.

Under the Omnibus Law, the Government has analysed laws and articles to streamline regulatory requirements. It has identified 79 laws and over 1,000 articles that either overlap or need to be revised. The Omnibus Law aims to significantly reduce existing restrictions on foreign investments. It harmonizes and simplifies the business licensing process by amending and superseding individual laws related to almost all economic sectors and by limiting local governments' licensing authority.

The implementation of Omnibus Law and the risk-based online single submission system have reduced the number of procedures and costs involved in investing in the country. The system connects all sectoral ministries and regional governments. The licensing requirements and procedures have been reduced and centralized. Enterprises only need to apply for approval through the online single-submission system for investment projects.

Use of digital technologies and single digital platform

Indonesia encourages the use of the online system and digitalization of services to further strengthen the investment environment. On 9 July 2018, it launched an online single-submission (OSS) system, a web-based business licensing system to reduce red tape and accelerate the process of doing business in the country. Since August 2021, a new risk-based OSS system was introduced.⁸ It is a fully integrated online system that facilitates a single submission of information and data requirements for application for permits and business licences. It also streamlines information requirements and assists investors in obtaining business licences through the system.

The online single-submission system issues three types of licences electronically: the business identity number, the certificate of standard (for medium risk) or business permit (for high risk), and the supporting permit (if necessary). The online single-submission system also issues the basic licenses, such as spatial conformity approval and environmental approval. It is a fully integrated online system for registering businesses and granting licences and permits across 18 different government ministries and agencies. It supersedes licences and permits issued by individual ministry. The online single-submission process also integrates the principle of “self-declaration” for investors applying for a licence.

The online single-submission system accepts electronic copies of documents. The issuance of most licences is free of charge. However, some licences, such as spatial conformity approval, would require payment of certain fees, which will be notified by the system. Those fees can be paid only through bank transfer and will be automatically updated in the system once payment has been made.

Assistance and advisory services to investors

The Ministry of Investment/BKPM website offers an online system for investors to raise complaints about public services. These are handled electronically, and through the system investors can raise grievances about corruption, collusion and other issues of concern.⁹ Investors can also raise complaints or inquiries through on-site consultation services, telephone, WhatsApp, e-mail and the online single-submission website.

Independence of competent authorities

The Ministry of Investment/BKPM is the main investment authority. It has established a one-stop shop to assist and support investors. This includes advisory service on investment applications, investment incentives, industrial facilities, business licences and dealing with other government ministries and agencies for establishing or operating in the country.

In a bid to retain investment and encourage investment expansion, the Government offers several aftercare services to investors. The Ministry of Investment/BKPM conducts visits to companies and follows up with existing investment to encourage expansion. The investment agency also provides several types of services such as consultation, matchmaking and an investor grievance mechanism.

Temporary entry and stay of business persons for investment purposes

Requirements for temporary entry and stay of investors are provided by relevant ministries and agencies through their websites. The Ministry of Investment/BKPM provides recommendation for temporary stay or permanent stay permit to business persons for investment purposes. There is a dedicated contact point in the Ministry of Investment/BKPM for such inquiries (rekomaltus@bkpm.go.id).

In 2021, the Indonesian Government enacted Presidential Regulation No. 34 regarding the employment of expatriate workers. The regulation introduces a new approval process for employing foreign workers. Foreign employees must be experts in their field. They can only fill certain positions as determined by Minister of Manpower. Foreign employees must undertake Indonesian language classes and must have an Indonesian co-worker to facilitate the transfer of technology and skills. Foreign employment in Indonesia is restricted, and the Government encourages firms to prioritize the employment of Indonesian citizens.

Facilitation of investment-supporting factors

One of the mandates of the Ministry of Investment/BKPM is to provide matchmaking services and encourage linkages between domestic and foreign firms. The Ministry of Cooperatives and

Small and Medium Enterprises and the Ministry of Investment/BKPM signed a memorandum of understanding which regulates and promotes partnership facilitation between MNEs with micro, small and medium-size enterprises (MSMEs). The memorandum encompasses matchmaking activities such as seminars and business forums. The Ministry of Investment/BKPM also assists with labour force and funding issues.

Consultative mechanisms for investment policies

The Ministry of Investment/BKPM works as an intermediary between the Government and private sector, and organizes business consultations on a regular basis. The private sector, business associations, academia, international organizations and non-governmental organizations are often consulted, particularly when new policies and regulations are in preparation. Some recommendations from consultations have been incorporated into new laws and regulations.

Cooperation

Indonesia is involved in a bilateral investment working group with Singapore (i.e., Indonesia-Singapore Working Group on Investment) to monitor and address issues on investment facilitation. It is also cooperating with other ASEAN Member States on investment matters at subregional levels (e.g., the Indonesia-Malaysia-Thailand Growth Triangle and Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area initiatives). The Ministry of Investment/BKPM has also signed a Memorandum of Understanding with the Philippines' Board of Investments to facilitate investment flows between the two Member States.

Pandemic investment facilitation support measures

Fiscal stimulus packages were launched during the pandemic to help businesses. The Government accelerated the launch of the pre-employment card.

It also facilitated greater use of online systems for processing business applications and licences. Applications for tax allowance investment incentives through an online single-submission system became effective in August 2020.

The Government assisted the pharmaceutical and medical devices industries by reducing business licensing requirements, accelerating licensing processes and providing special assistance services. These measures aim to make investment and production in the industry easier.

The Ministry of Investment/BKPM offered specific initiatives to facilitate and accelerate medical-related FDI projects. These actions included a "3+1 strategy", which comprised (i) accelerated realization of existing investments, (ii) completion of stalled investments, (iii) conduct of investment promotions and (iv) building of internal cooperation to prepare for post-pandemic conditions. The Ministry of Investment/BKPM also offered other services to facilitate investment during the pandemic. They included the following areas:

- (i) Accelerate the development and operation of business activities through the issuance of letters of support to companies while observing the COVID-19 protocol.

- (ii) Provide recommendations for top executives or investors to obtain an entry permit or visit visa for exploring investment opportunities or relocation to Indonesia.
- (iii) Provide recommendations for expert foreign workers to enter Indonesia in the framework of investment realization or implementation.
- (iv) Conduct visits to companies and follow up with existing investors to support and facilitate the potential for expansion.
- (v) Accelerate and facilitate the business licensing approval process. The number of business licences issued per day during the pandemic (both online and offline) was between 4,000 and 5,000.

Infrastructure and industrial facilities

In facilitating investment, Indonesia has developed and continues to develop various categories of industrial facilities. SEZs are often established in strategic locations, close to boundaries and in regions endowed with natural resources. The objectives of SEZs are to attract investment outside of Java and to encourage mining and other natural resource companies to transform locally. There are 12 SEZs and 126 industrial estates in operation.

Indonesia also offers industrial economic zones and tourism economic zones. The tourism zone is dedicated to tourism business activities to support the organization of entertainment and recreation, meetings, exhibitions and related activities. The industrial zone is for industrial activities processing raw materials, semi-finished goods and finished goods, and value added agricultural produce for both domestic consumption and export.

Institutional support

Investment promotion and facilitation is governed by the Ministry of Investment/BKPM, which was established in 1967 and later made into an independent agency. It works closely with other government bodies and regional authorities to assist investors in establishing and operating in the country. Since 2014, its three main tasks have been (i) simplifying licensing, (ii) assisting and facilitating investment projects, and (iii) improving investment attraction results.

Other important government ministries or agencies include the following:

- The Coordinating Ministry for Economic Affairs, which plays an important role in liberalization efforts by driving and coordinating the revision of the Negative Investment List. It has also been involved in the establishment of the online single-submission system and drove the preparation of the Omnibus Law. It is also in charge of the new regime for SEZs.
- The Ministry of Finance oversees the design of the investment tax incentives scheme while the Ministry of Investment/BKPM is in charge of preparing the operational regulations that apply to eligible sectors. They cooperate with each other and line ministries to ensure and monitor effective implementation of the fiscal incentives regime.

d. Investment facilitation in the Lao People's Democratic Republic

The Government has made substantial policy reforms in recent years to boost economic growth and improve overall living standards. Attracting FDI is an important aspect. It has engaged in several reforms to improve the business environment and focus more on attracting responsible and sustainable investment.

Investment policy

The Law on Investment Promotion, introduced in 2017, defines principles, regulations and measures regarding domestic and foreign investment promotion and administration to enable convenient, expeditious, transparent and proper investment.

Investment facilitation tools, measures and processes

Over the years, the Government has adopted and continued to improve on tools and measures to make it easier to conduct business in the country and support investment. It has also developed and is upgrading mechanisms for investors to navigate the legal and regulatory framework.

Transparency and provision of investment information

The Government publishes laws and regulations relating to investment. It has also developed a website where some relevant information can be accessed. There are challenges, as information in English is limited and some information is not easy to find.

Streamlining and speeding up administrative procedures and requirements

In 2018, the Government implemented a new regulation, Prime Minister's Order No. 02/PM, "Improvement of Regulations and Coordination Mechanism of Doing Business", which included simplification of procedures for obtaining licences and registered company seals. Prime Minister's Order No. 03/PM further improved the issuance process of investment and business licences by ensuring that they could be obtained through a single government agency (one-stop service).

Use of digital technologies and single digital platform

The use of digital technologies is encouraged. The Government provides investment and other related information such as laws and regulations, ease of doing business, corporate social responsibility, application forms, visa services, and news and events through a dedicated website (www.investlaos.gov.la).

Assistance and advisory services to investors

The 2017 Law on Investment Promotion includes provisions for the submission of complaints if investors find themselves at a disadvantage. The one-stop service receives complaints and disputes, and coordinates with relevant authorities to resolve these issues.

Independence of competent authorities

The Ministry of Planning and Investment is the main authority. A one-stop shop at the Ministry of Planning and Investment (MPI) and a Lao Services Portal at the Ministry of Industry and

Commerce (MoC) have been established. The one-stop shop was set up at central and provincial levels and includes representatives of various relevant government agencies. Aside from processing investment and visa applications, it also disseminates investment information.

There are three different service centers for different types of investment. The MPI has one for concession businesses, and the MoC has one for general businesses. Each SEZ also has one service center, which handles all investment applications, enterprise registrations and incentive applications. The MoC's service center can issue business licences, but investors must go through other ministries for other approvals and procedures, such as payment of tax.

Aftercare services are being developed. However, the Government is examining specific approaches to strengthen provision of aftercare services to assist existing investors and to encourage them to expand operations in the country.

Temporary entry and stay of business persons for investment purposes

A business visa is issued to a foreign citizen who wishes to work or invest in the country. Business visas are granted to foreign investors and their expatriate staffs. Foreign investors who received property rights through leasing and have stayed in the country more than three months are granted multiple-entry visa. Investors' spouses and children are granted multiple-entry visas for 10 years and those are extendable. Applications for visas can be done through the one-stop shop.

Facilitation of investment-supporting factors

The one-stop shop office guides investors with information relating to supporting factors such as labour issues and suppliers.

Consultative mechanisms for investment policies

A public-private sector dialogue platform is the Lao Business Forum, which was established in 2005. It facilitates discussion between private sector representatives and government officials on possible areas to improve in the business environment. Similar public-private dialogue mechanisms also exist at the provincial level.

Cooperation

The Lao People's Democratic Republic and Viet Nam have established the Vietnam–Laos Cooperation Committee to facilitate discussions on policy matters, including on investment cooperation.

Pandemic investment facilitation support measures

In response to the pandemic, the Government reduced various types of administrative fees. It also supported businesses with deferrals on payment of water and electricity services.

Industrial facilities

SEZ development is being given a central role in the Government's investment promotion strategy. SEZs are regarded as an important investment facilitation initiative for making

investment in the country more efficient. Twelve SEZs are in operation, though not all are fully developed. Some, especially border zones, have attracted many factories that have connections with factories in neighbouring countries. The Savan-Seno SEZ has attracted world-class MNEs and helps the country better integrate into the regional value chain.

Institutional support

The Investment Promotion Department, under the MPI, is the dedicated IPA. It was established in 2004 under the Law on the Promotion and Management of Foreign Investment and is now governed by the Law on Investment Promotion. Other ministries involved in investment facilitation include the MoIC, which grants licences for some investments, and the National Committee for Special Economic Zones, which is responsible for approving projects in SEZs.

e. Investment facilitation in Malaysia

Malaysia's investment environment has been improving over the years, with the Government constantly undertaking actions to improve the ease of investing and doing business in the country. Various investment facilitation measures have been adopted, including establishment of institutions to assist and support investors.

Investment policy

Malaysia has enacted policies and streamlined regulatory measures to improve the investment environment. Major laws, policies and regulatory mandates pertaining to investment facilitation have been adopted, with such goals as reducing regulatory barriers, enhancing entrepreneurial skills and attracting skilled talent from abroad.

Since 2019, the Government has prioritized streamlining and incentivizing investments redirected from China as a result of shifting global supply chains. It established the China Special Channel, led by MIDA, for facilitating such investments. Other FDI facilitation policy efforts include the following:

- Enhancing services at the district and local levels, integrating services across agencies and boosting public confidence in electronic services, mainly through the use of information and communication technology
- Streamlining processes and procedures as well as establishing commercial courts to reduce the cost of doing business
- Establishing one-stop centres to expedite approvals
- Streamlining immigration procedures to facilitate employment of highly skilled expatriates and reduce processing time for employment visas
- Reducing the time for the approval of licences
- Greater use of information and communication technology for government services through the “myGovernment” portal

Investment facilitation tools, measures and processes

Various tools and measures facilitating the ease of investing and lowering the cost of doing business in the country have been introduced.

Transparency and provision of investment information

The Government publishes and constantly makes available to investors information such as laws, policies, regulatory requirements, industrial plans, incentives and business matchmaking opportunities.

This information is provided through various channels, such as on-site consultation at MIDA and the MIDA website, other government websites, digital platforms, investment clinics, regular overseas investment missions, investment seminars and forums, and publication and dissemination of promotional materials. The Government has also created mechanisms for investors to navigate the legal and regulatory framework when making investments, including actively using digital technology, online services and portals.

Changes to procedures, standards, technical regulations and conformance requirements are announced in a timely manner through the media, government agencies' websites and other channels (e.g., seminars, investor briefings and private sector consultation events).

Streamlining and speeding up administrative procedures and requirements

The Government has taken action to simplify steps and requirements for investment applications, including 23 reforms undertaken over the last 15 years to improve the ease of doing business. These reforms reflect the country's commitment to reducing the regulatory burden and to encouraging investment. Some of the regulatory reforms undertaken include efforts to improve infrastructure facilities, such as to smooth handling processes at port terminals.

Use of digital technologies and single digital platform

The use of technology and digital systems to improve efficiency in supporting investors is actively promoted. MIDA and other agencies have established portals, online services and e-registration facilities to facilitate communication of information to investors and also provide mechanisms for investors to reach out to the Government, including for investment application and registration.

A notable initiative is the InvestMalaysia portal, which supports an end-to-end automated application process. It was introduced to achieve a shorter processing timeline and to improve efficiency. It is a single gateway portal to support applications for e-manufacturing licences, e-incentives, and exemption from import duty or sales tax. The single digital platform also provides up-to-date related information to investors and supports enquiries.

The single portal also accepts certified true copies of electronic documents for investment application purposes. MIDA has implemented an e-payment channel for digital certificates through the InvestMalaysia portal.

To further facilitate enquiries from investors, MIDA has established a dedicated call service centre operating under the Customer Service and Investment Information Section. In addition, it has created the Investment Incentives Portal (I-Incentives), which provides information on a comprehensive list of investment incentives provided by various government ministries and agencies.

During the pandemic, MIDA extended its services to support investors' enquiries and investment applications enabled by digital services and facilities. In collaboration with the Malaysia Digital Economy Corporation (MDEC), it also established the Digital Investment Office, a fully fledged digital platform, to coordinate and facilitate digital investment in Malaysia. The Government streamlined coordination among all IPAs in attracting digital investments. A Project Acceleration and Coordination Unit has been established in MIDA to track and monitor real-time project implementation, to ensure that approved projects are implemented in a timely manner.

Assistance and advisory services to investors

MIDA conducts regular consultative review meetings with industry stakeholders when addressing recurrent issues affecting investors. It also helps investors connected with relevant ministries to raise grievances.

MIDA has established the Customer Service and Investment Information Section, which manages MIDA's Resource Centre and Business Information Centre as well as the Customer Service Unit. It is the first point of contact to provide feedback on enquiries and information on investment approvals, facilitation and project implementation advisory services for local and foreign investors.

Independence of competent authorities

All investment decisions are made collectively by appointed investment committees, from relevant ministries. The MIDA acts as the country's one-stop shop. It assists investors in the form of consulting directly with relevant agencies; obtaining all necessary approvals for projects until they are operational; and facilitating site visits and investigations. MIDA hosts representatives from the Immigration Department, Tenaga Nasional (Malaysia's main power provider), Royal Malaysian Customs, Telekom Malaysia, the Department of Labour Peninsular Malaysia, the Department of the Environment and the Social Security Organization. This enables MIDA to connect firms with all relevant ministries and organizations pertinent to their investment.

The Government continued to support investors with post-establishment measures. Aftercare programme has been established to assist and facilitate existing investors with regard to post implementation issues such as utilities, goods and services tax, advice, update on information and assistance with permits and licences.

Malaysia offers several national advisory institutions, including the MDEC, the Bioeconomy Corporation and the Halal Industry Development Corporation to assist investors. All three of these government agencies provide enterprises with information and advisory services related to the digital economy, R&D, financial assistance, and market and value chain integration.

Temporary entry and stay of business persons for investment purposes

The Employment Pass is a work permit that enables an expatriate to take up employment with an organization in Malaysia. The pass is subject to the contract of employment (up to 60 months). The Expatriate Committee or relevant authorities must give approval for the foreign talent to fill a position before the Immigration Department can issue an expatriate Employment Pass.

MIDA evaluates and approves the application of expatriate posts in the manufacturing and related services sectors under its purview, following the procedures and guidelines published online. Expatriate entry and stay permits can be applied for through the InvestMalaysia portal.

Malaysia instituted in 2020 the One-Stop Centre for Business Travellers¹⁰ service to ease the movement of business travellers during the pandemic. The service helped investors by expediting approval of entries into Malaysia. A committee evaluated and approved applications for short- and long-term business traveller permits within three working days for each application. A Business Travellers Centre was also established at the Kuala Lumpur International Airport to assist incoming short-term business travellers. A Safe Travel portal became fully operational on 3 March 2021. It provides information and advisory services to facilitate business travellers' entry into Malaysia.

Facilitation of investment-supporting factors

MIDA has established an information portal for business matching and resources for investment facilitation (e-Services, <https://www.mida.gov.my/e-services>), which connects new and existing investors with various resources such as E-Stats Data, i-Incentives, i-Services and e-BizMatch with the aim to provide business development opportunities. It also assists with matters such as recruitment of labour and access to information or networks for business-related reasons.

MIDA and state-level IPAs, including the Penang Development Corporation (InvestPenang) promote business linkages as part of their mandates. They do this through matchmaking events and seminars, and also maintain databases of suppliers for large companies.

The Government has launched the SME Master Plan to (i) enhance the productivity of SMEs, (ii) increase the rate of business formation, (iii) increase the number of high-growth SMEs, and (iv) increase the rate of formalization. To improve SME-MNE linkages, the Master Plan aims to address the constraints in six focus areas (innovation and technology adoption, access to financing, human capital and entrepreneurship development, access to markets, legal and regulatory environment, and infrastructure) through 32 initiatives.

The Industrial Linkage Programme has been implemented to develop SMEs to work with MNEs. Through this programme, MNEs can deduct from their income tax expenses incurred in developing SMEs through activities such as training, product testing and development, auditing and other forms of technical assistance.

An Industry Talent Management and Expatriate Division at MIDA has also been established to facilitate investment by addressing the human capital needs of investors. In partnership with TalentCorp, another government agency, the division identifies sectors that require skilled labour.

Consultative mechanisms for investment policies

Dialogues and consultation with the business community (e.g., chambers of commerce and industry associations) are regularly held. Various ministries and agencies often consult the private sector on Malaysia's investment policies before changes to laws, regulations and policies are made.

An annual dialogue is also conducted by the Ministry of International Trade and Industry (MITI) with investors and the business community (through chambers of commerce and industry associations) to obtain feedback from the private sector on operating issues faced in Malaysia. The dialogue also provides a platform for the private sector to raise concerns that affect investment.

As part of its dialogue with investors, MIDA actively undertakes briefings on its investment policies through investment seminars held locally and abroad, regular public-private sector dialogues, and meetings with investors, chambers of commerce, industry associations, and incoming trade and investment delegations. This includes consultations with relevant government agencies regarding the impact of policy initiatives on investment.

Through MITI, MIDA conducts important processes to create a feedback loop through regular consultations with industry stakeholders and investors. The consultation mechanism involves regular reviews of policies, incentives and procedures to improve Malaysia's investment climate.

Cooperation

Malaysia is involved in investment cooperation with other ASEAN Member States through the various growth area initiatives. They include the Indonesia-Malaysia-Thailand Growth Triangle, the Indonesia-Malaysia-Singapore Growth Triangle and the Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area.

Pandemic investment facilitation support measures

A series of stimulus packages was adopted to ease the impact of the pandemic, with the first emergency stimulus package introduced on 27 February 2020. Packages include a set of measures to help reduce business costs. For example, the Government further simplified the investment process, accelerated approval of investment licences, extended compliance deadlines (e.g., tax returns and payments), offered discounts on utility bills for certain industries, and granted lease exemptions for six months for the tourism and manufacturing industries as well as tax deductions for personal protective equipment expenses incurred by businesses.

Industrial facilities

Malaysia has developed many industrial parks across the country to facilitate investment. Some (e.g., Penang and Selangor State) have attracted major global companies and

the development of industrial clusters such as those in electronics, semiconductors and automotive. In strengthening the country's industrial infrastructure, five major economic corridors (or SEZs) have been established. These are the East Coast Economic Region, the Iskandar Regional Development Authority for Iskandar Malaysia in Southern Johor, and the North Corridor Implementation Authority for the North Corridor Economic Region.

In 2016, Malaysia established a digital free trade zone, which is a special trade zone that promotes the growth of e-commerce by providing a state-of-the-art platform for companies.

Institutional support

MIDA is the lead agency for facilitation and promotion of FDI in the manufacturing and selected services sectors (excluding financial and utilities). It works with other government agencies at federal and state levels to support investors with various services. They include (i) securing infrastructural and industrial facilities such as land, factory sites, electricity and water supplies, and telecommunication; (ii) facilitating approvals related to building plans, certificates of fitness and business licences; (iii) handholding and assisting investors in obtaining all necessary approvals for projects until they are operational, and (iv) facilitating industrial site visits and investigations. It operates as a one-stop service, providing also a range of advisory services to investors, including start-ups. It operates an investment clinic and has organized many seminars and briefing events for investors. It provides advisory services, where investors can also discuss issues and challenges faced while in operation and seek clarification and advice on governmental guidelines and procedures.

Numerous key government agencies have been stationed at MIDA's headquarters to advise investors on policies, procedures and regulatory requirements. They include the Department of Labour, the Immigration Department, Royal Customs Malaysia, the Department of Environment, Tenaga Nasional, Telekom Malaysia and the Social Security Organization. In supporting investment into the five economic corridors in the country, MIDA partnered with other government institutions to establish a portal (myCorridor Portal) and monitor investment leads and approved projects as well as follow through on projects to ensure implementation.

Other national institutions also support investors. They include the MDEC, the Bioeconomy Corporation and the Halal Industry Development Corporation. Subnational IPAs that operate under the purview of the relevant state governments also attract, facilitate and support investments in the respective states.

Inter-agency coordination

The Project Acceleration and Coordination Unit (PACU)@MIDA has been tasked to improve the ease of doing business for investors in Malaysia. It provides end-to-end facilitation for projects approved by the National Committee for Investment. The unit facilitates speedy and efficient implementation of approved projects. It has adopted a digitalized system to assist and accelerate investment applications. It also provides real-time tracking of the status of approvals, as well as identifying issues faced by companies in implementing projects and

proposing appropriate solutions. It collaborates with federal and state governments, service providers, IPAs, technical agencies and other related technical departments to facilitate expeditious implementation of approved projects.

f. Investment facilitation in Myanmar

Since the early 2000s, Myanmar has undergone a major economic revolution, opening up the economy to foreign investment and experiencing a fast rate of private sector-led growth. It has also implemented an industrial policy that aims to diversify the economy. Various laws and regulations related to attracting investment have been enacted.

In facilitating investment, the Government has eliminated and streamlined laws and restrictions placed on foreign investment. It has also established institutional support and mechanisms to assist investors. Other actions have included provision of information, simplification of steps and requirements, industrial zones development and the use of digital technology to increase efficiency.

Investment policy

In general, investment policy relating to facilitation is under the purview of the Ministry of Investment and Foreign Economic Relations. DICA oversees the implementation of the country's investment policy.

Myanmar recently established the Myanmar Investment Promotion Plan (MIPP) for 2016–2036, which sets out the Government's drive to attract, facilitate and boost domestic and foreign investment. Improving the investment environment is central and the MIPP emphasizes the following factors:

- Fair and transparent investment regime
- Institutional development for investment promotion and facilitation
- Infrastructure development and supportive business-associated systems
- Competitive industrial linkages and human resources development

Foreign investment in Myanmar is still in its infancy. The Government is taking actions to further facilitate investment by addressing measures such as removal of regulatory bottlenecks, making it easier for investors to establish operations, providing information and making procedures more transparent with regard to doing business in the country. The Government has established the SMART programme to facilitate investment, which covers streamlining and simplifying procedures, maximizing online services and minimizing barriers to business, assuring aftercare services, reducing regulatory burden and enhancing transparency.

Investment facilitation tools, measures and processes

The Government has adopted tools and measures to facilitate and attract investment, as detailed in the following subsections.

Transparency and provision of investment information

Investment-related information such as laws and policy changes are published and provided through an investment website managed by DICA. Investors are also kept informed of changes in laws and regulation through notifications issued by DICA and other authorities.

In addition, DICA has established a portal, MyCO, which is an online database of companies operating in Myanmar. It also publishes information with regard to investment projects. MyCO acts as a company registration platform and provides information on how to interpret the Myanmar Companies Law, which contains information on how to set up and register a business.

Streamlining and speeding up administrative procedures and requirements

The Government has streamlined requirements to start or operate a business in the country. A business can now be established or registered through MyCO. The Myanmar Companies Law, enacted on 6 December 2017 and in effect on 1 August 2018, makes it easier to register a company and provides flexibility for companies to conduct business. As a result of the electronic registry system, companies can be registered in Myanmar within a few hours.

Past reviews of investment procedures have led to reduction of administrative fees, reduction of unnecessary documents and procedures, and issuance of the guideline, “Standard Operation Procedures on Screening, Assessing and Permitting on Endorsements by the State and Region Investment Committees”. For instance, DICA reduced fees for incorporation of private companies and overseas corporations, from Kyat 250,000 to Kyat 150,000, with effect from 1 October 2019.

The Government continued to identify areas to further streamline and improve the country’s investment environment. A team to review investment-related licence and permit was formed on 12 April 2021 to facilitate and promote domestic and foreign investment. The team is tasked to review certain documents, procedures, time, cost and online approval of investment-related licences and permit and make recommendations to relevant ministries and agencies. The intention is to reduce the number of documents required for submission, reduce steps and procedures, and shorten the duration of obtaining investment permits and licences. Efforts are undertaken to look into areas to apply and improve on the use of digital technology to facilitate investment and increase efficiency.

Use of digital technologies and single digital platform

To further facilitate business, the Government is adopting technology and e-systems such as for tax payment, investment application and visa extension. An online investment application system is being developed and is to be managed by DICA. Similarly, an investment monitoring system is in the process of being developed.

MyCO is adopting further digital technologies to facilitate investment. For instance, application for visa permits or extensions can be conducted online. A single digital platform is being developed.

Assistance and advisory services to investors

Notification No. 9/2020, “Investor Grievance Mechanism”, was issued on 7 April 2020. It involves administrative processes to address investors’ grievances but does not provide an avenue to resolve disputes between investors, or between investors and communities or between investors and the State.

An Investor Grievance Mechanism Committee was formed on 21 December 2020 with responsibility for solving disputes between investors and the State transparently by giving advice on the covered investment, to address obstacles affecting investment and to suggest recommendations on the development of investment policies, the investment regime and the legal framework. Consultation to discuss grievances and find solutions may involve in-person appointments with the Minister or the Director General or the respective Directors.

Investors can send inquiries and complaints to DICA through the DICA website and the MyCO website. They can also submit complaints to the Chairman of the Myanmar Investment Commission (MIC) or the DICA Director General. The DICA Online Solution, launched on 1 April 2022, provides 24/7 online appointments and supports inquiries on any investment matters.

Independence of competent authorities

DICA is the main agency for investment. It has established a one-stop shop. It provides an integrated system to assist investors obtain necessary information from across all government departments and ministries, and provide guidance and help investors obtain permits and licences to operate in the country. The OSS service aims to reduce unnecessary documents, simplify and streamline steps, reduce costs and time to obtain permits and licences. The application process can be monitored to increase transparency and to facilitate investment operation. The OSS is evolving and is expected to eventually offer a single window for application of all business-related licensing requirement.

Thilawa SEZ also offers a similar OSS, providing information related to conducting business in the zone. It has authority to issue permits and licences on behalf of the various ministries represented in the SEZ. Officials at the Thilawa OSS have autonomy to make decisions on behalf of their ministries, which help expedite the investment process.

Temporary entry and stay of business persons for investment purposes

During the pandemic, Myanmar launched the use of online recommendation letters for visa extensions and the MIC Permitted Companies Online Visa Application System, on 1 August 2020 and on 1 November 2021 respectively. The former is dedicated to facilitating stay permits and business visa extensions for any member of the board of directors of a foreign company incorporated in Myanmar, along with their family members, as well as for foreign technicians employed by foreign and local companies. The latter relates to recommendation letters for the application process for stay visas, re-entry visas and labour cards for foreign directors and experts of companies as well as their family members. The application can be made through <https://visaonline.dica.gov.mm/> and <http://movas.dica.gov.mm/> respectively as well as MyCO (<https://www.myco.dica.gov.mm/>).

Contact points or dedicated unit have been established to follow through on enquiries relating to the entry and stay of investors. Under licences issued by the MIC, enterprises can hire foreign workers but must make efforts to employ Myanmar citizens. Positions that do not require a specific skill must be filled with local hires.

Facilitation of investment-supporting factors

DICA provides information on local suppliers and arranges meetings between foreign investors and potential suppliers but does not keep a systematic database of local suppliers. MyCO acts as a company registrar and has a large database of companies operating in Myanmar.

Business matchmaking events are usually held and led by DICA in cooperation with domestic and foreign investments. DICA takes the facilitation role and closely engages with local and foreign investors by countries and by sectors. The business matchmaking events and investment forums are held frequently.

Consultative mechanisms for investment policies

Online and offline consultation sessions, investment forums and investment fairs are conducted with stakeholders. Investors are regularly consulted on draft laws, strategic plans and feedback on challenges they face in investing in the country. The Investment Promotion Committee, established under the MIPP in May 2019, is a cross-ministerial coordination mechanism that gathers opinions about policies and planned measures from the private sector through regular dialogue, including with foreign investors.

DICA also regularly engages with the investor community to receive feedback on experiences and suggestions, which are then communicated to the Government; however, there is no systematic procedure in place for this. Investment forums between investors and government are held with the involvement of a national chamber of commerce three or four times a year.

Cooperation

Myanmar has a bilateral investment cooperation arrangement with Singapore. The Myanmar-Singapore Joint Ministerial Working Committee meets every two years; the 7th meeting was held on 24 September 2019 in Yangon. The main objective of the Committee is to promote and facilitate bilateral trade and investment activities.

Pandemic investment facilitation support measures

The Government adopted a COVID-19 Economic Relief Plan in April 2020. The plan covers a range of specific fiscal measures and policy responses to help investors or expedite implementation of projects. These measures included (i) fast-tracking large-scale private investment projects, (ii) reviewing the status and impact of approved or implemented projects and (iii) prioritizing high-impact or near-completion projects in health care and key economic infrastructure. Investment procedures to manufacture medical products related to COVID-19 were simplified, especially those that targeted using vacant State-owned factories.

A 50 per cent reduction of investment application fees for both domestic and foreign investors took effect on 20 April 2020. In supporting the health care sector, it expedited import clearance and fast-track investment approval related to personal protective equipment, medical equipment and medicines. It waived taxes and duties on medical supplies related to the prevention, control and treatment of COVID-19.

Many investment-related public services were kept open during the pandemic, by providing more facilities online such as for investment applications and business licences. DICA facilitated digital applications for stay permits and visa extensions for employees of foreign companies. It also established the DICA Online Solution for consultation on investment matters with MIC officials and the DICA Info mobile application for quick access to any investment information.

Following a hindrance in Internet access that occurred during the first quarter of 2021, Notification No. 110/2021 was issued to provide temporary relief on late filing fees for the annual return to be paid by companies between 1 February and 30 April 2021. Following Notification No. 115/2021, the temporary relief was extended from 1 May 2021 to 31 May 2021.

Industrial facilities

The Special Economic Zone Law, enacted in 2014, paved the way for development of SEZs in Myanmar. Two SEZs are in development (Kyauk Phyu in Rakhine State, Dawei in Thanintharyi Region) and one is in operation (Thilawa in Yangon Region). In each SEZ, there can be free zones and promotion zones, which enjoy different ranges of investment incentives. The Thilawa SEZ is divided into a promotion zone and a free zone, with each offering different tax benefits. Companies in the free zone tend to focus on goods manufactured for export. In contrast, businesses in the promotion zone focus on the domestic market.

Institutional support

DICA is the key government agency responsible for promoting and facilitating FDI, and assisting investors. It is the primary interface between businesses and the Government. It has various mandates to facilitate investment across many key functions, which include the following:

- Regulate investment and companies
- Register companies
- Draft, negotiate and approve bilateral investment promotion and protection agreements
- Act as an IPA
- Act as the secretariat of the MIC

g. Investment facilitation in the Philippines

Since the 1980s, investment policy has in general involved liberalization, deregulation and privatization. The Government has recently focused on improving transparency and public-private dialogue.

Investment policy

The Board of Investment (BOI), a government agency responsible for investment promotion and facilitation, annually updates the Investment Priorities Plan. The plan reflects the government's priority to boost investment in the country; it can be accessed through the BOI website. In March 2022, the Government adopted a new investment Act, which established an inter-agency body to promote and facilitate FDI.

Investment facilitation tools, measures and processes

Over the years, various tools and measures aimed at facilitating investment and making it easier to do business in the country have been adopted.

Transparency and provision of investment information

The BOI has launched the BOI-One Window Network to serve as a centralized databank for investment-related information. It also allows investors to raise concerns online and provides real-time notification on the status of responses to the concerns.

Various channels are used to provide information to investors. They include online platforms, face-to-face meetings, awareness seminars and forums.

Streamlining and speeding up administrative procedures and requirements

In 2018, Republic Act 11032, the “Ease of Doing Business and Efficient Government Service Delivery Act”, was enacted. The law streamlined the systems and procedures of government services. It mandated government agencies to simplify procedures, reduce red tape and expedite transactions.

The law provides guidance on key administrative matters, such as the following:

- (i) Submission of the agency's Citizen's Charter, which outlines a comprehensive checklist of requirements, step-by-step procedures and a schedule of fees
- (ii) Prescribed processing times for the issuance of licenses, clearances or permits – a maximum of 3 working days for simple applications, 7 working days for complex applications, and 20 working days for applications that require technical evaluations and other conditions, subject to qualifications
- (iii) Upon lapse of the processing time, submission of complete documents and payment of all fees, the licenses, clearances or permits are automatically deemed approved or extended
- (iv) Establishment of a National Policy on Anti-Red Tape and Ease of Doing Business, which refers to a comprehensive business registration and regulatory management policy to improve competitiveness and ease bureaucratic and regulatory burdens on businesses. The policy also adopts a whole-of-government approach, where agencies focus on providing integrated and streamlined public services.

Administrative Order No. 23, signed on 21 February 2020, directs national government agencies to hasten reforms of their processes to eliminate overregulation and promote the efficiency of government processes. The BOI is also mandated to conduct regulatory impact assessment at least once a year.

Use of digital technologies and single digital platform

The Government has established InvestPhilippines to support investment, respond to enquiries and enable investors to obtain information.

The BOI has also established an online Customer Relation Management system (the One Window Network) and the Fiscal Incentives Registration and Monitoring System (known as FIRMS), an online registration and incentives application portal. Investors can monitor applications for incentives in any of the IPAs. The online system supports the use of electronic copies of documents. Investors have the option to pay fees and charges electronically with relevant authorities (including fees for processing investment applications).

The country's single digital platform is the Philippine Central Business Portal.

Assistance and advisory services to investors

The Presidential Complaint Centre receives and acts on complaints of corruption. It can be reached through a hotline, text service and social media sites. An Investment Ombudsman has been created to act on investment-related complaints involving violations of commitments of government agencies. It handles grievances and offers assistance to investors. Grievances that the Ombudsman handles include the following:

- Delays in the delivery of front-line services relating to the establishment or conduct of business
- Issuance of business licences, permits and certificates to any person not qualified or legally entitled
- Solicitation, demand or request by a government official in exchange for issuing licences and permits, customs, as well as fees collected for other business-related matters
- Any other delay or refusal to comply with the referral or directive of the Investment Ombudsman Team

To minimize recurring issues, the BOI regularly conducts awareness seminars with stakeholders.

Independence of competent authorities

The Philippines offers investors several one-stop shops with different services. The services of the Philippines Economic Zone Authority (PEZA) include issuing building and occupancy permits, and import and export permits, as well as facilitating online procedures (e.g., e-payment systems, environmental clearance certificates and special expatriate visas).

The BOI also has a one-stop action centre. The Philippines Business Registry is a government initiative that integrates all agencies involved in business registration to streamline the process and reduce corruption, red tape and bureaucracy. This is an online service and serves as a one-stop shop for enterprises that need to transact with several agencies to operate their business. All registration processes can be done online through this website.

The BOI and PEZA offered several aftercare and advisory services to investors during the pandemic. They include the continued services and support provided during the pandemic, continued investment processing and approval (e.g., permits and certification process) and the use of a digital application that offers investors greater convenience. They assisted investors by keeping factories open while observing health protocols. PEZA provided shuttle buses for transportation of employees to factories to avoid delays at checkpoints. IPAs in the country also regularly visit and stay in touch with existing investors to follow up on their experience and provide further support if needed.

The National Economic Research and Business Assistance Centre established a one-stop to provide assistance to enterprises, particularly to support business registration and licensing, and knowledge management. It houses representatives from 13 government agencies.

Temporary entry and stay of business persons for investment purposes

The Government introduced the Innovative Start-up Act, which facilitates the movement of people. It includes the creation of Start-up Visas for foreign participants and the operationalization of the Asia-Pacific Economic Cooperation Business Travel Card. Likewise, companies registered with an IPA can apply to employ foreign nationals, including obtaining visas for employees and their families. Investors can submit enquiries and seek assistance through the One Window Network system established by the BOI.

Facilitation of investment-supporting factors

The Bureau of Small and Medium Enterprise Development is one of the main SME promotion agencies. It implements programmes and projects addressing specific SME needs. It also supports marketing and promotion of SMEs through trade fairs, which provide opportunities for SMEs to connect with MNEs and create linkages. Some local government units work with PEZA to offer specialized business development services to SMEs to help with product and market development, to enable them to better engage with MNEs.

The BOI also regularly invites local enterprises to meet with potential investors, arranges meetings between potential investors and industry associations, and invites chambers of commerce to give investment briefings to potential investors. It also organizes matchmaking meetings for investors and SMEs. The new Investment Promotion Plan highlights the importance of developing value chains and, therefore, the BOI and other government agencies have focused on developing SMEs and promoting linkages.

Consultative mechanisms for investment policies

Aside from regular reviews of investment procedures and requirements with chambers of commerce and other stakeholders, the BOI has also established a strategic investors aftercare programme to receive inputs and feedback from investors.

Cooperation

The Philippines is involved in investment cooperation with neighbouring countries under the BIMP-EAGA arrangement.

Pandemic investment facilitation support measures

The Government implemented a stimulus package to aid in the country's economic recovery and to assist businesses impacted. The Bayanihan to Heal as One Act was enacted on 24 March 2020 to support the supply and production of medical supplies and services. In addition to investment incentives, the BOI extended other support to foreign companies. It endorsed executives of foreign companies wishing to travel to the Philippines on essential business (e.g., manufacturing or exporting activities or those involved in the trading and retailing of essential goods) during the pandemic.

As part of a broader campaign to support businesses during the pandemic, the Philippines assisted manufacturers in strengthening their capabilities through support for repurposing existing product lines to support health-care responses to COVID-19 (e.g., alcoholic liquor used to create alcohol-based disinfectants, ready-to-wear garments transformed into protective uniforms or medical gloves fashioned from rubber destined for balloons). The BOI helped manufacturers create linkages with raw material suppliers and ensure a steady supply of medical products in the country. It provided assistance and expertise to help businesses strengthen their capabilities related to personal protective equipment.

During the pandemic, the business application and approval process was expedited. Business permits, licences, certificates and authorizations were considered and approved within seven working days. Deadlines for filing of tax returns and payment of taxes and fees were extended. In addition, PEZA assisted investors by keeping their factories running in economic zones, with the issuance of operation permits while respecting the health protocol.

Industrial facilities

The Philippines has 415 economic zones. Many of these are privately managed, but PEZA is responsible for providing incentives and overseeing the development of zones. There are more than 21 agro-industrial economic zones, 216 IT parks and centres, 64 manufacturing economic zones, 19 tourism economic zones and 2 medical tourism zones to facilitate investment. A Special Economic Zone Act was enacted to provide guidance and assist businesses locating in SEZs (including provision of investment incentives).

Institutional support

The Philippines has a strong institutional framework for promoting and facilitating investment, with 18 IPAs and SEZ authorities. Some of these are intended to channel investment into remote regions, while others are sector-specific.

To improve coherence and synchronize various IPAs and their activities, the Government created the Philippines Investment Promotion Plan network. The result has been a common platform and website called Invest Philippines. The plan's steering committee and the BOI also aim to ensure that all investment promotion activities conform to the plan and form sector or regional specific clusters of IPAs that can work together based on the strengths, location and sector of each IPA. IPAs across the country have also agreed to share information and data, and to undertake joint activities.

h. Investment facilitation in Singapore

Singapore has a liberal investment regime and an efficient business ecosystem. There are few restrictions on FDI, and investors are supported by a wide range of business and investment measures, including institutional support from various key government agencies.

Investment policy

In strengthening the country's investment environment, the Government has established dedicated and specialized industrial parks to facilitate investment. These parks aim to attract high-tech investment activities, R&D, technology hubs and centres of excellence offering agglomeration benefits. To further facilitate high-tech and knowledge content activities, the Government offers incentives and other supports such as links with local science and technology parks, universities and R&D hubs. Another key policy support is the drive to attract global talent to help develop the country's industrial, technology and knowledge ecosystems.

Investment facilitation tools, measures and processes

To facilitate investment, the Government has adopted various tools and measures to make it easier to conduct business and invest in the country.

Transparency and provision of investment information

Singapore publishes and provides updates on investment policies and regulatory matters to investors. These include investment laws, regulations, procedures and administrative requirements, which are also made available online. Other information provided covers how to start a business, register a business and obtain government assistance (e.g., incentives).

The processes of applying for and obtaining licences and permits (including multiple licences) are transparent and easily accessible through the online licensing portal (i.e., LicenceOne). Much of this information can be found on the websites of the Economic Development Board (EDB) and other agencies. Investors can also visit these institutions for consultation and advice on setting up operations in the country. In addition, seminars, workshops and other dissemination events are held regularly for investors.

The EDB's website provides detailed information on how to set up a business in Singapore, the incentives and schemes offered, and a directory of business partners and services to assist with conducting business in the country. Other government ministries and agencies also provide related information on their websites to assist investors.

The *Singapore Investment Clinic*, established under the EDB, provides a single location for businesses to interact with the Government and for investing in Singapore. It offers a wide range of information on important investment topics such as applying for visas, claiming tax deductions and accessing innovation networks. There are also online chat services for prospective investors to chat or consult with EDB officers. Other information provided addresses managing talent, navigating industries and setting up operations.

From 1 April 2021, information from multiple government agencies that is needed to start a new business has been consolidated in the new *GoBusiness* portal, which acts as a single

digital touchpoint for businesses to transact with the Government. Access to information on government e-services such as applications for obtaining licences and permits (including multiple licences) can be accessed through the GoBusiness portal. The portal is expected to (i) reduce the need for new business owners to have to refer to and cross-validate information across multiple government websites and (ii) enable businesses to start faster and with reduced consulting costs.

From February 2021, Singapore's Unique Entity Number website has implemented a chatbot called "Ask ADA" (the Accounting and Corporate Regulatory Authority (ACRA) Digital Assistant), which utilizes Google Dialogflow to interact with users. Ask ADA is intended to answer customer enquiries, reduce manual intervention by officers and minimize the need for businesses to continuously review content for the frequently asked questions section.

Streamlining and speeding up administrative procedures and requirements

Investors generally do not need to make an application for their investment unless specifically required by the laws and regulations governing the sector that the investment relates to. Singapore reviews its investment procedures continuously on a rolling basis. The Government has taken steps to simplify and streamline investment procedures. It has designed policies and procedures that are quick and efficient to complete. For example, it takes 15 minutes to register a company online; it takes 1.5 days to set up a business; and it costs less than \$100 to set up a company.

Use of digital technologies and single digital platform

The Government is encouraging and supporting the use of digital technologies for investment-related administration purposes, including online systems and a single digital platform (e.g., the GoBusiness Portal, the EDB website). Everything related to doing business in Singapore can be done online. The EDB website provides several tools and information portals on setting up and running a business, connecting with suppliers and talent, paying fees and applying for permits and licences.

ACRA's BizFile+ is an online portal for business set-up, renewal of business registration (if applicable) and aftercare (for services related to filing requirements). A single digital platform has been established.

Singapore uses digital ID systems such as CorpPass, which is a national authorization system for entities to manage employee access to digital services. To date, the Government has over 200 government digital services.

Electronic copies of documents are acceptable under Singapore's Electronic Transactions Act. Investors can make electronic payments for fees in ACRA's BizFile+ portal, including fees for incorporation.

With effect from December 2019, the online annual tax return form, which all companies must file, has been simplified and streamlined to reduce the administrative burden and improve the ease of doing business. Most information in the annual return form is now pre-filled on the

basis of information provided in previous annual return filings and annual return filers need only verify the pre-filled information. In addition, the user interface for the annual tax return form has been enhanced with a more intuitive layout and fewer pages and steps to update or review the information.

GoBusiness is the country's single digital touchpoint for businesses to interact with the Government. Since 1 April 2021, information from multiple government agencies that is needed to start a new business has been consolidated on the GoBusiness portal. The platform redirects investors to all the applicable portals or websites for investment applications, submission of all documents, licences, provisions relating to investment, incentives and other information and services.

Assistance and advisory services to investors

ACRA provides open access for investors to lodge a complaint regarding any alleged statutory breach. These complaints could relate to businesses, business owners or officers, and corporate service providers. The Monetary Authority of Singapore also provides channels to report regulatory breaches or misconduct (of supervisory concern, such as violations of rules and regulators, and breaches of relevant codes of practice and guidelines).

Besides providing feedback through the complaints mechanism, ACRA actively solicits feedback and recommendation on recurrent issues that may warrant policy and legislative review. This is done through both formal and informal feedback mechanisms such as policy and bill consultations that are made public, periodic focus groups and dialogues in partnership with professional bodies.

Independence of competent authorities

EDB is the main authority governing investment matters (see institutional support). It provides a wide range of services, including one-stop shop and consultations. There are also other institutions that EDB works closely with to provide various types of services to investors.

The Singapore Economic Development Board provides a host of aftercare services and information to ensure a fair and transparent investment regime and to improve the ease of doing business in the country. Consultation services are offered to investors and they are often visited by EDB officials to follow up on their experience and support needed to invest or expand in the country.

Temporary entry and stay of business persons for investment purposes

Investors may reach out to the Immigration and Checkpoints Authority or Ministry of Manpower on their queries regarding entry or stay in Singapore and on types of entry permits. There are other contact points/units, such as the Economic Development Board who deal with specific requests (e.g., requests relating to the EDB's Global Investor Programme, which accords global investors Singapore Permanent Resident status).

Numerous schemes have been established to attract foreign talents, particularly in the technology sector, Industry 4.0 activities and in higher managerial corporate roles or personnel. Some of these schemes include the following:

- *Tech@SG Programme*: This aims to help fast-growing companies establish their core teams in Singapore and more quickly capture business opportunities there. The programme facilitates the entry of global technology talent for eligible companies by providing endorsement to the appropriate government ministries.
- *Tech.Pass*: this is a visa that allows established tech entrepreneurs, leaders, or technical experts from the around the world to come to Singapore to perform frontier and disruptive innovations.

Facilitation of investment-supporting factors

The EDB aids with matters such as business connections, suppliers and labour issues.

The Monetary Authority of Singapore and Enterprise Singapore launched a forum to connect Singapore-based start-ups with potential investors. This forum enables investors and start-ups of a specific industry to find each other and make deals and provides opportunities for SMEs and start-ups to connect and create linkages with MNEs in Singapore.

The Connections Concierge is a service offered by EDB that links businesses to a curated network of service providers who offer professional solutions for setting up business in Singapore. This provides direct and free access to Singaporean enterprises who are available to help with any queries or questions that investors might have about investing in Singapore.

Non-financial facilitation schemes

In addition to incentives and schemes, the Government also provides non-financial support and mechanisms aimed at facilitating and boosting productivity in the country, which has implications for increasing production efficiency. These schemes include the following two:

- *Resource Efficiency Grant for Energy*: This is a grant to support manufacturing facilities and data centres to be more energy efficient and improve competitiveness. Businesses receive grant support for the costs of offsetting the amount of carbon emissions their production releases.
- *Corporate Venture Launchpad*: This S\$10 million pilot programme was designed to enable corporates to launch new ventures from Singapore. Corporates will partner with venture capital studios in Singapore and utilize their expertise to build and scale new ventures from Singapore with innovative products, services and business models. Businesses will be eligible for up to S\$500,000 of grant funding under the scheme.

Consultative mechanisms for investment policies

The Government regularly consults the private sector, including through seminars and other consultation channels, on changes to laws, policies and regulatory issues. For example, business associations such as the Singapore Business Federation act as intermediaries

between government agencies and businesses to facilitate consultation with stakeholders and investors in Singapore. Government agencies also conduct direct consultations where appropriate. For example, the Monetary Authority of Singapore issues regular consultation papers on proposed financial regulations that affect investors in the finance industry.

Cooperation

Singapore has a bilateral investment cooperation arrangement under the Indonesia-Singapore investment working group and a cooperation arrangement with Myanmar. It is also involved with investment cooperation under the Indonesia-Malaysia-Singapore Growth Triangle arrangement.

Pandemic investment facilitation support measures

During the pandemic, the Government adopted various measures to facilitate investment and assist investors. Among others, they included delays in tax and utilities payments, advisory counselling and support for greater use of digital and online facilities. The Government also provided a package of support measures for SMEs and start-ups.¹¹

Industrial facilities

Singapore provides efficient physical, digital and industrial infrastructure and has more than 75 industrial estates and business parks. The industrial infrastructure together with an efficient business ecosystem facilitates the ease of doing business and investing in the country. They have also helped lower the cost of doing business. Singapore does not offer SEZs with different tax and investment rules. Instead, the whole country operates with no taxes on capital imports, and incentives schemes are available throughout the country. The Government offers a number of industrial estates where certain industries tend to cluster to facilitate knowledge sharing and to ensure efficient supply and value chains.

Through the JTC Corporation, other agencies and the private sector (e.g., Sembcorp), the Government has continued to develop industrial parks and specialized hubs to facilitate setting up business operations. Some of the specialized parks with connected industrial infrastructure aim to attract clusters of related industries. They include the Aerospace Park, science parks, the Biomedical Park (for the life sciences industry), the Wafer Fab Park (for the semiconductor and electronics industries), the Jurong Innovation District (for advanced manufacturing and Industry 4.0 related investment activities) and the Advanced Remanufacturing Technology Centre (ARTC). Led by Agency for Science, Technology and Research (A*STAR) and Nanyang Technological University, the ARTC has more than 80 members in the cluster, ranging from global manufacturing industry leaders to SMEs.

Institutional support

The EDB is the country's IPA, responsible for strategies that enhance Singapore's ability to attract and retain business and investment. The EDB has a large mandate that covers promotion and industrial development. It provides information, helps investors connect with

partners, offers investment incentives and support schemes, and other supports to facilitate investment. It also works with other government agencies to develop Singapore as an efficient place to do business.

The Ministry of Trade and Industry has responsibility for investment facilitation and overall economic growth and development in the country. Several other ministries and agencies have different roles and responsibilities in facilitating investment within Singapore. Some of the key ones that focus on investment facilitation are as follows:

- *Digital Industry Singapore* is a government office that aims to establish Singapore as a technology hub.
- *Enterprise Singapore* is a government agency that aims to improve enterprise development in Singapore. The agency works with companies in Singapore to help them innovate and expand internationally.
- The *JTC Corporation* is responsible for developing Singapore's industrial landscape and developing infrastructure to help businesses grow and transform.
- The *Pro-Enterprise Panel*, under the Ministry of Industry, is a government agency that works to provide effective and practical solutions to address the regulatory concerns that businesses face. Businesses can report on government rules and regulations to ensure that they remain relevant and supportive of the business environment. Enterprises can also offer suggestions to the Panel which then acts as an advocate in the Government for businesses, to ensure a pro-enterprise commercial environment.
- *A*STAR* is a government organization that conducts research on science and innovative technology to drive economic growth and creates jobs by bridging the gap between academic research and industry.

i. Investment facilitation in Thailand

The Government of Thailand has continued to adopt measures to facilitate investment, improve transparency, streamline investment procedures, simplify processes and offer various types of support.

Investment policy

Investment policies fall under the purview of the BOI and executed mostly through the Office of the BOI. The 2015–2021 national investment strategy focused on a shift towards knowledge-based activities and R&D to drive Industry 4.0 transformation and attract investment in other targeted industries. Examples include smart farming, biotechnology, advanced electronics, affluent medical and wellness tourism, next-generation automotive, biofuels and biochemicals.

Investment facilitation tools, measures and processes

The Government has adopted tools and measures aimed at making it easier to conduct business and invest in the country.

Transparency and provision of investment information

The BOI and other agencies are making greater use of online services and websites, which are regularly updated with information relating to new laws, regulatory requirements, assistance (e.g. incentives) and provisions related to conducting business or investing in Thailand. Information on investment and business, including investment opportunities and statistics, are published regularly. In addition, seminars, workshops and other outreach events are regularly organized for investors abroad and in-country. There are in-person and online channels that respond to enquiries and provide consultation to investors and other stakeholders.

The BOI publishes the “Guide to the BOI” every year in various languages. It describes all sectors, activities, regions and special regimes that are eligible for general and special promotion schemes, including the corresponding criteria and procedures to obtain permits and licences.

For real estate registration, the Department of Lands in the Ministry of Interior has created the LandsMaps application. The application provides all kinds of information related to a certain piece of land, including the plat, location, surface conditions, estimated market price, and associated fees or charges.

Streamlining and speeding up administrative procedures and requirements

The Government has abolished certain requirements for business registration, which led to a significant reduction in the number of days required to register a company (from 27.5 days to 4.5). Starting a business was made less costly by introducing fixed registration fees, while getting electricity service was made easier by streamlining the number of procedures needed to obtain a new connection and making electricity tariff changes more transparent.

With the digital infrastructure base being developed under the Thailand 4.0 policy, the Office of the Public Sector Development Commission is shortening the regulatory process by 50 per cent, with a view to improving operational efficiency. The Government has further streamlined measures and reduced the number of steps required and amount of time needed for obtaining construction permits.

The Government is eliminating or amending laws and regulations that have become obstacles for businesses through the “Regulatory Guillotine” initiative. It is working on reducing the number of licences and associated manuals at the local government level to a minimum and retaining only licences issued by the central government.

To ensure that laws and regulations are up to date, transparent and in compliance with international standards, the Government has amended 268 Acts related to business sectors. In the pipeline are another 288 Acts, relating to matters such as ease of doing business, intellectual property and competition.

The Public-Private Partnership (PPP) Fast-Track and the Eastern Economic Corridor (EEC) Track have been created for PPP projects. Through these two channels, the time required for the approval process from project preparation to selection of private partners has been brought down from 40 months to just 20 months for PPP projects in general and 8-10 months for PPP projects in the EEC area.

To drive forward the Thailand 4.0 programme, the Government is reviewing legal acts, licences, procedures and regulations that are no longer necessary, out of date or constraints on living and doing business in Thailand in the following areas:

- Business: upgrading business working functions by reducing processing steps and documents, which can save cost and improve productivity
- Government agencies: reducing working processes and saving time

Use of digital technologies and single digital platform

The Government has focused on increasing the utilization of existing government e-services. An online document submission service (e-Submission) was launched in March 2020. This is in addition to existing e-services that have already been made available to investors (e.g., e-Investment for applications and e-Tax for corporate income tax exemptions). Investors can access the e-submission service through the BOI's website. The e-Investment Promotion Service is dedicated to administration of investment applications. Investors can check the status of investment applications online.

To further ease submission, the e-service is also applicable for submission of documents to all regional BOI offices in seven provinces (i.e. Chiangmai, Phitsanulok, Khon Kaen, Nakhon Ratchasima, Chonburi, Songkhla and Surat Thani). In addition, the Department of Business Development under the Ministry of Commerce has established an online portal for corporate registration and submission of financial data, along with a name reservation system. As their functions are integrated, they will work together as a single system.

The National Single Window, which was jointly developed by the Thai Customs Department, the Port Authority of Thailand and privately owned seaport companies, was designed as a digital customs procedure. Functions that can be processed electronically through the National Single Window include the vessel-to-vessel transition of goods and cargo permit matching.

Assistance and advisory services to investors

The Government of Thailand established the Complaint Centre for Foreign Investors in 2015 to promote transparency and integrity in the public sector and enhance the confidence of foreign investors conducting business in the country. The Centre assists investors by involving the relevant agency or government authority to examine complaints. To improve investor confidence, an Investment Ombudsman has been created to act on investment-related complaints.

Independence of competent authorities

The BOI is the main agency for investment matters, and it reports to the Prime Minister.

The Government established a one-stop shop (the One-Start One-Stop Investment Centre, or OSOS) through the BOI in 2009 to facilitate investment, reduce the cost of doing business, and provide all necessary information related to conducting business in Thailand under one roof.

The OSOS provides information and consultancy services on topics such as investment promotion privileges, company registration, foreign business licences, factory licence applications and related procedures, customs clearance, and import and export. The centre also facilitates site visits to industrial zones.

An Investment Services Centre was also established to assist investors in obtaining permissions and permits, which are issued by other government ministries. The BOI plays an important coordinating role in this regard. It has also established a system for monitoring and evaluating investment projects.

The one-stop service helps investors to access and obtain information, consultancy services and advice. The information provided includes laws and regulations, application procedures, forms and other necessary documents and materials, information on relevant licences and permission to do business in Thailand, and business and investment news and events, as well as useful contacts with key public and private organizations.

The one-stop shop provides a single point of contact, offering investors the convenience of having consultancy with multiple agencies in one location instead of having to move around the city. This enhances the service level at the same time as it reduces time and cost required. Investors can also find the One-Stop Service Centre for Visa and Work Permits, the Smart Visa Unit and the Strategic Talent Centre located at the OSOS. Investors can use the one-stop shop to arrange for industrial site visits.

The BOI assists enterprises to expand in Thailand. It draws on staff from numerous investment-related agencies to create an effective investment facilitation environment. It offers advisory services, consultancy and assistance to established investors to improve commercial operations.

Temporary entry and stay of business persons for investment purposes

The issuance of temporary entry and stay permits for business persons falls under the authority of the Ministry of Foreign Affairs and the Immigration Bureau. Applications for visas and work permits must be done through the Ministry of Foreign Affairs and the Ministry of Labour. The investment agency assists BOI-promoted companies with the application process. Information on visas and work permits is published on BOI's official website (<https://osos.boi.go.th/EN/how-to/218/Getting-Visa--Work-Permit/>). The BOI's promoted companies can use the Single Window for Visa and Work Permit System through e-Services at the BOI's official website or contact the OSOS.

Thailand has introduced measures to attract skilled foreign workers and has made it easier for MNEs to bring talent into the country. A SMART Visa Programme was introduced in 2018 to attract science and technology experts, senior executives, investors and start-ups. The SMART Visa is a new type of visa offered to foreign experts, executives, entrepreneurs and investors who wish to enter Thailand to work or to invest in the country's targeted industries. It offers significant benefits, such as no necessity for a work permit, submission of a one-year report instead of a 90-day report and no requirement for a re-entry permit.

Facilitation of investment-supporting factors

The BOI has established the Industrial Linkage Development Division to support industrial linkages. Services include sourcing and business matching, provision of information on subcontracting opportunities, organizing of seminars and workshops, and networking forums. The Division's website provides a database of companies, with information on products and services offered and contact details. The service helps investors find appropriate suppliers and support domestic linkages and value chain integration.

Consultative mechanisms for investment policies

The BOI regularly consults the private sector and other stakeholders on investment measures and matters relating to the investment environment, including dissemination of information to them.

BOI activities are complemented with support provided by other government institutions. Promotion activities are also undertaken by several actors at the national and subnational levels, including the Industrial Estate Authorities, the EEC, the Office of Small and Medium Enterprises Promotion and the SEZ Authority, which is managed through the SEZ committee under the National Economic and Social Development Board. Communication and coordination between these agencies and ministries are strong.

Cooperation

Thailand is involved in investment cooperation under the Indonesia-Malaysia-Thailand Growth Triangle arrangement.

Pandemic investment facilitation support measures

In 2020, the Government introduced several COVID-19 stimulus packages to attract and retain investment. One area of support provided was extension of the deadline for filing tax returns for businesses and employees. In response to the pandemic, the BOI offers online meeting services to answer queries from investors, thereby keeping investment services operating despite lockdown measures and health protocols.

Industrial facilities

Major transport, communication and industrial infrastructure is being developed to further improve connectivity and efficiency. This infrastructure includes development of (i) the High-Speed Rail-Linked 3-Airport Project; (ii) the U-Tapao International Airport, as a part of the U-Tapao and Eastern Airport City project; (iii) the Laem Chabang Deep Sea Port; and (iv) the EEC. The corridor prioritizes high-tech and R&D activities in targeted areas such as next-generation automotive, intelligent electronics, food for the future, advanced agriculture and biotechnology, aviation and logistics, and automation and robotics.

The BOI works with the Industrial Estates Authority to establish economic zones to facilitate industrial development and to attract investment. SEZs have been an important policy tool for attracting investment around the country, including in the poorer northern provinces.

Thailand 4.0

The Government is adopting a “Thailand 4.0” initiative that supports R&D, innovation and advanced manufacturing methodologies to enable growth in targeted industries. Thailand 4.0 focuses on four key areas of facilitation:

- (i) Digital government transformation
- (ii) Amendment and revocation of laws and regulations that are not business-friendly, and enactment of new ones that are beneficial to both Thai and foreign investors
- (iii) Review and simplification of processes for obtaining approval and permits, and reduction in the amount of paperwork by using standardized forms and digital channels
- (iv) Development of infrastructure and the country’s logistical structure to support domestic and regional business activities

Institutional support

The BOI, established in 1966, is Thailand’s IPA. It assists investors with investment applications, incentives, other investment benefits and information. It liaises with other government agencies on behalf of investors for investment permits and licences. The BOI is an autonomous public agency under the authority of the Prime Minister. Its scope and mandate has been expanded to focus on attracting foreign technical workers, entrepreneurs and other experts, securing land and land rights for promoted activities, and facilitating the import of machinery and other capital necessary in production.

The Industrial Estate Authority of Thailand is responsible for the development and establishment of industrial estates. It is responsible for approving and authorizing operations in the industrial estates and providing relevant additional privileges, incentives and facilitation arrangements for industrial operations. Other agencies and ministries that assist investors include the Ministry of Finance; the Ministry of Commerce, the Ministry of Higher Education, Science, Research and Innovation; the Ministry of Industry; the EEC Office of Thailand; the Office of Small and Medium Enterprises Promotion; and the Digital Economy Promotion Agency.

j. Investment facilitation in Viet Nam

The investment environment in Viet Nam has improved over the years, as corroborated by survey findings from foreign chambers of commerce based in the country. The Government has introduced measures to simplify requirements, reduce steps and streamline processes to facilitate investment.

Investment policy

The Government has continued to reform and take steps to further improve the country’s investment environment, including implementing resolutions and regulatory directives on strengthening information provision, simplifying processes and reducing administrative requirements. Some of these reforms include the following:

- *Resolutions No. 19-2016/NQ-CP and No. 19-2017/NQ-CP* on improvement of the business environment and promotion of national competitiveness. These resolutions also target elimination and simplification of 50 per cent of investment and business conditions, facilitating and encouraging the application of IT for administrative procedures and providing online services to stakeholders.
- *Law on Labour*: In 2016, the Government introduced two regulations concerning employment of foreign workers. The law made it easier for foreign workers to work and live in the country. *Circular 40/2016/TT-BLDTBXH* allows foreign workers to move to different provinces without having to apply for new work permits. The circular only requires foreign workers to give a written notification to the labour authority of the province.
- *Resolution 19-2017/NQ-CP* benchmarks efforts to bring the business environment on par with the average in the ASEAN-4 countries, aiming to make conditions for business start-ups comparable with those in the top 70 countries in the world by 2017 and minimizing the time for administrative formalities.
- *Decree number 100/2018/ND-CP* amended and annulled some regulations under the Ministry of Construction. The Decree targets simplifying 85 per cent of the 215 business and investment conditions, and eliminating 5 of the 17 conditional business lines.
- *The Investment Law 2020*, revised in June 2020 and January 2022, covers the country's efforts to attract FDI, including in certain activities such as university education, pollution mitigation and medical research. It also addresses granting of investment incentives to promoted activities.
- *The Public-Private Partnership Law*, adopted in June 2020, prioritizes key industries such as transportation, electricity grid and power plants, irrigation, water supply and treatment, health care and IT infrastructure for PPPs.
- *Decree 31/2021/ND-CP* (26 March 2021) provides guidance on the implementation of the Investment Law. It highlights efforts in the following areas: (i) creating an open mechanism, overcoming bottlenecks in investment and business activities; (ii) strengthening local decentralization; (iii) ensuring transparency; and (iv) providing additional investment incentives and special investment support.

Investment facilitation measures, mechanisms and processes

The Government of Viet Nam has put in place more investment facilitation measures in recent years to increase efficiency and improve the country's investment environment. The Ministry of Planning and Investment made greater use of digital technologies and online facilities during the pandemic to support investors.

Transparency and provision of investment information

The Government publishes information and updates on reforms, laws, policies and regulations relating to investment. Websites and online system for enquiries have been established and are in the process of being upgraded. The Government has mandated the Foreign Investment Agency (FIA) to manage the National Foreign Investment Information System of web portals

on procedures for issuance of investment registration certificates, and to post and update legislative documents, investment-related news, policies and investment conditions applied to foreign investors.

In implementing the revised Investment Law, the Government is transitioning from use of a positive list to use of a negative list of sectors in which investment is allowed. The transition is expected to help improve transparency and improve efficiency for foreign investors regarding information on sectors open for investment.

The FIA provides investment-related information in three languages (Vietnamese, English, Japanese) through its website (www.fia.mpi.gov.vn). The information is also published through www.vietnaminvest.gov.vn.

Streamlining and speeding up administrative procedures and requirements

In 2014, the Enterprise and Investment Law was introduced to streamline and narrow the scope of investment entry procedures and administrative requirements. It narrows the list of business sectors subject to investment condition and adopts a negative list approach, which improves transparency.

The Law on Investment 2020 and Decree No. 31/2021/ND-CP have strong reform elements aimed at creating an open mechanism, overcoming bottlenecks in investment and business activities, improving transparency, diversifying investment forms, and regulating each type of investment procedure.

Viet Nam does not charge any fees for administering investment applications. Aside from granting fiscal incentives, the Government also assists investors with other measures, such as the following:

- Exemption from, or reduction of, land-use fees
- Exemption from, or reduction of, land rental fees
- Preferential land lease terms
- Assistance with recruitment and training of skilled labour
- Assistance with immigration and residence procedures
- Reduced regulatory oversight in administrative and customs procedures

Investment procedures are reviewed quarterly or annually to identify areas to simplify procedures and eliminate investment barriers. The MPI conducts reviews with provincial authorities and the private sector for feedback. It then proposes to the higher authorities adjustments to laws if necessary. Each year, the FIA drafts the MPI's report on FDI, which is reviewed by the Prime Minister. The report highlights difficulties and potential policy suggestions regarding investment procedures. The FIA's annual FDI reports have been used to identify potential areas for revision of Viet Nam's investment framework.

Use of digital technologies and single digital platform

Vietnam has established the National Information System on Investment (NIIS). This online single window administers investment applications, renewal and aftercare services. It provides investment-related information such as relevant laws, rules, procedures and administrative requirements. Investors can submit scanned documents or electronically signed documents as part of their investment applications, renewal and aftercare needs for approval by the relevant investment-licensing authorities. The NIIS is being reviewed for upgrading with more functionalities.

For investment projects that are not subject to approval under investment policies, investors can submit applications and/or adjust the investment registration certificate online through the NIIS. The use of registered digital signatures is supported. This system facilitates the implementation of investment procedures, and helps save time and reduce costs for investors.

In providing and consolidating public information, a National Public Service Portal has also been established. It provides 2,890 online public services from 19 ministries, ministerial-level agencies, Vietnam Social Insurance and the Vietnam Electricity Authority. More online public services are being added to the portal.

Assistance and advisory services to investors

The FIA has a hotline for receiving complaints. It manages other types of complaints and recurrent issues through (i) on-site consultations, (ii) business forums and investment promotion events, and (iii) letters of intent. It works closely with local authorities in managing and addressing investor's complaints.

The Vietnam Business Forum, organized twice a year, is a mechanism to receive and address recommendations from businesses. The Government also has other channels to address business complaints, such as through the Inter-government Committee or seminars conducted between the Government and businesses.

Independence of competent authorities

The MPI is the main investment authority. The FIA supports and provides various services to investors, but it does not grant investment registration certificates.

The FIA is also responsible for providing aftercare services, to retain established companies and to encourage reinvestment by responding to investors' needs and challenges after their establishment. The FIA functions almost as a one-stop shop. The Government has also established a one-stop service in all provinces to support investors. The service covers a range of matters such as business registration, construction permits, land-use rights, legal counselling and advice, citizens' complaints and denunciations.

Temporary entry and stay of business persons for investment purposes

Information on requirements for temporary entry and stay of business persons is managed and posted by the Ministry of Foreign Affairs. Such information is provided by the Ministry at consulates and on their respective websites. Dedicated contact points and dedicated units on temporary entry and stay applications are established and managed by the Ministry.

Facilitation of investment supporting factors

The FIA organizes matchmaking events as part of its functions. Other agencies also support investors with other needs such as labour supply matters, investment locations or industrial sites, and business matchmaking and suppliers. The Government has taken steps to improve matchmaking and domestic linkages with MNEs. For example, a database of 500 firms in supporting industries has been developed and can be accessed online. A similar database for the agriculture sector is being developed.

Consultative mechanisms for investment policies

The FIA facilitates dialogue between the public and private sectors on concerns of businesses and in the process brings such concerns to the attention of relevant government authorities. One such consultation forum that the Government organizes regularly is the Vietnam Business Forum. It provides a platform to exchange information and to hear concerns of investors, including bureaucratic problems that could be mitigated.

Cooperation

Viet Nam and the Lao People's Democratic Republic have established the Vietnam–Laos Cooperation Committee to facilitate discussions on policy matters, including on investment.

Pandemic investment facilitation support measures

During the pandemic, the Government adopted further resolutions to facilitate investment by introducing measures to help reduce business cost, reform and streamline administrative procedures, and establish online public service delivery. These resolutions and regulatory instructions include the following:

- *Resolution No. 02/NQ-CP* (1 January 2021) aims to further improve the business environment and enhance national competitiveness.
- *Decree No. 52/2021/ND-CP* (19 April 2021) extended the deadline for payment of value added tax, corporate income tax, personal income tax and land rent in 2021, to support businesses facing difficulties caused by the epidemic.
- The State Bank directed credit institutions to implement online payment service fee exemption and reduction programmes to meet the demand for online payment and support businesses during the pandemic.
- Some localities implemented programmes to support digital signatures and e-invoices for newly established businesses in 2021.
- The Prime Minister issued *Decision No. 468/QĐ-TTg* (27 March 2021) on renewal of the implementation of the one-stop shop mechanism in handling administrative procedures.
- *Resolution No. 68/NQ-CP* (12 May 2020) advised authorities on reduction and simplification of regulations related to business activities in the country.

During the pandemic, the Government extended payment deadlines for value added tax and corporate income tax and land-use fees for businesses by five months. To stimulate demand

for specific products, the Government cut a registration tax by half and extended a deadline for excise tax payments on domestically produced or assembled cars.¹²

Industrial facilities

The Government has continued to establish various types of industrial facilities across the country. The development of such industrial facilities has contributed to the ease and efficiency of investing and operating in Viet Nam. There are more than 375 industrial zones in the country: 326 industrial parks, 4 export processing zones, 43 economic zones (among which 26 border-gate economic zones) and 3 high-tech parks.

The development of SEZs is an important part of the investment landscape in Viet Nam's efforts to facilitate FDI. There are 19 SEZs in operation. Provincial authorities are responsible for developing SEZs, with day-to-day administration in the hands of the Boards of Management of Industrial Parks and Economic Zones. The Department for Economic Zones Management at the MPI is in charge of overall coordination on SEZ development.

Institutional support

Investment promotion and facilitation are formally the responsibilities of the MPI. The FIA, established under the MPI, acts as the country's IPA. It has the following functions:

- (i) Act as a focal point for facilitating inward and outward investment
- (ii) Propose solutions to issues related to foreign investment
- (iii) Preside over the development and implementation of investment policy
- (iv) Propose solutions to impediments during the implementation of law, policy, mechanism of inward and outward investment
- (v) Preside over or coordinate with relevant bodies to monitor, check and inspect the implementation of regulations on inward and outward investment
- (vi) Preside over or coordinate with relevant bodies to provide procedures and guidance with respect to inward and outward investment

3.2.3. Regional cooperation

Regional integration is an important FDI determinant. Regional cooperation such as adoption and implementation of regional trade and investment agreements and harmonization of processes (e.g., custom facilitation) can strengthen the region's business environment and facilitate investment. These and other relevant regional cooperation initiatives have significant implications for improving the investment environment and increasing the ease of doing business within ASEAN.

Regional initiatives

Regional cooperation on investment facilitation is not new. ASEAN Member States have been cooperating on investment facilitation since the 1990s under the Framework Agreement on the ASEAN Investment Area (ASEAN Investment Area Agreement) (box 3.4). This Agreement,

the predecessor of the ASEAN Comprehensive Investment Agreement (ACIA), identified specific areas of investment facilitation. It included provision of information, actions towards simplification, expedition of investment applications and approvals, joint establishment of databases, promotion of public-private sector linkages and dialogue, and technical cooperation or capacity-building.

Box 3.4. ASEAN Investment Area Agreement: Schedule 1

The ASEAN Investment Area Agreement was signed on 7 October 1998. Investment facilitation is a major aspect of the Agreement, which contained a specific schedule devoted to investment facilitation.

“Cooperation and Facilitation Programme”

In respect of the Cooperation and Facilitation Programme, Member States shall take;

- a. Individual initiative to;
 - (i) Increase transparency of Member State’s investment rules, regulations, policies and procedures through the publication of such information on a regular basis and making such information widely available;
 - (ii) Simplify and expedite procedures for applications and approvals of investment projects at all levels; and
 - (iii) Expand the number of bilateral Double Taxation Avoidance Agreements among ASEAN Member States.
- b. Collective initiative to;
 - (i) Establish a Database for ASEAN Supporting Industries and ASEAN Technology Suppliers;
 - (ii) Establish an ASEAN database to enhance the flow of ASEAN investment data and information on investment opportunities in ASEAN;
 - (iii) Promote public-private sector linkages through regular dialogues with the ASEAN business community and other international organizations to identify investment impediments within and outside ASEAN and propose ways to improve the ASEAN investment environment;
 - (iv) Identify target areas for technical cooperation, e. g., development of human resources, infrastructure, supporting industries, small and medium-sized enterprises, information technology, industrial technology, R&D and coordinate efforts within ASEAN and other international organizations involved in technical cooperation)
 - (v) Review and where possible improve the ASEAN Agreement for the Promotion and Protection of Investment, and
 - (vi) Examine the possibility of an ASEAN Double Taxation Agreement.”

Source: ASEAN Investment Area Agreement (1998).

Major regional agreements with important investment facilitation implications include the implementation of the ASEAN Economic Community Agreement, the ACIA (box 3.5), the ASEAN Agreement on Electronic Commerce, the ASEAN Trade in Services Agreement, the ASEAN Comprehensive Recovery Framework and the ASEAN Single Window (AIR 2020-2021).

Specifically, in 2021 the AIFP Agreement was adopted and is currently being implemented. The benefits arising from the implementation of the AIFP at the regional level apply also to all investors at the national level, including local investors. Once a measure such as an administrative procedure is streamlined or an investment rule is published online, it applies to all investors, not just investors from ASEAN Member States.

Box 3.5. ACIA and provisions related to investment facilitation

The ASEAN Comprehensive Investment Agreement (ACIA) was signed in 2009. It aims to create a competitive investment environment in the region. The Agreement covers investment liberalization, protection, facilitation and promotion. The implementation of the ACIA is expected to benefit investors through the following mechanisms: (i) progressive liberalization of existing investment restrictions in manufacturing, agriculture, fishery, forestry and mining and the services incidental to these sectors; (ii) significant strengthening of investment protection; (iii) promotion of equality of treatment for all ASEAN investors; and (iv) assurance of transparency of investment laws, regulations and administrative guidelines (ASEAN Secretariat, 2013).

A few provisions under the ACIA made specific reference to investment facilitation. They included the following:

Article 2 (Guiding Principles): The Agreement calls for creation of a liberal, facilitative, transparent and competitive investment environment in ASEAN, through among others, adhering to providing for investment liberalization, protection, investment promotion and facilitation.

Article 21 (Transparency): Each Member State shall make publicly available, all relevant laws, regulations and administrative guidelines of general application that pertain to or affect investments in the territory of the Member State; and establish or designate an enquiry point where all information relating to the measures required to be published or made available promptly.

Article 22 (Entry, Temporary Stay and Work of Investors and Key Personnel): “Subject to its immigration and labour laws, regulations and national policies relating to the entry, temporary stay and authorization to work, and consistent with its commitments under AFAS, each Member State shall grant entry, temporary stay and authorization to work to investors, executives, managers and members of the board of directors of a juridical person of any other Member State, for the purpose of establishing, developing, administering or advising on the operation in the territory of the former Member State of an investment to which they, or a juridical person of the other Member States that employs such executives, managers and members of the board of directors, have committed or are in the process of committing a substantial amount of capital or other resources.”

Article 25 (Facilitation of Investment): “Member States shall endeavour to cooperate in the facilitation of investments into and within ASEAN through, among others:

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Box 3.5. ACIA and provisions related to investment facilitation (Concluded)

- (a) creating the necessary environment for all forms of investments;
- (b) streamlining and simplifying procedures for investment applications and approvals;
- (c) promoting dissemination of investment information, including investment rules, regulations, policies and procedures;
- (d) establishing one-stop investment centres;
- (e) strengthening databases on all forms of investments for policy formulation to improve ASEAN's investment environment;
- (f) undertaking consultation with the business community on investment matters; and
- (g) providing advisory services to the business community of the other Member States."

Source: ASEAN Secretariat and ASEAN Comprehensive Investment Agreement.

Note: AFAS = ASEAN Framework Agreement on Service.

Other regional initiatives (e.g., infrastructure connectivity and customs integration) impact favourably on the region's investment environment and on reducing transaction costs. Member States are cooperating on digital integration, the ASEAN Digital Masterplan 2025 and industrial transformation to Industry 4.0 – all of which will help improve efficiency and digital connectivity and will significantly improve the investment environment. In November 2019, Member States adopted the ASEAN Declaration on Industrial Transformation to Industry 4.0. The Declaration set the objectives for countries in the region to prepare for and maximize opportunities from Industry 4.0, by adopting and diffusing innovations and technologies such as industrial automation, the Internet of Things, big data, cloud-based technology, artificial intelligence and additive manufacturing (*AIR 2020-2021*). Other regional initiatives that have implications for improving the efficiency of ASEAN for business and investment include the ASEAN Smart Cities Network.

In supporting the development of e-commerce and the Internet economy, Member States are cooperating to help businesses and citizens benefit from opportunities presented by the rapidly growing digital economy. The ASEAN Agreement on Electronic Commerce, signed on 22 January 2019, facilitates cross-border e-commerce transactions, creates an environment of trust and confidence in the use of e-commerce and builds greater digital connectivity in the region. The ASEAN Digital Integration Framework, adopted on 29 August 2018, led to other significant regional initiatives and institutional development, such as the ASEAN Data Management Framework, the ASEAN Framework on Personal Data Protection and the ASEAN Cross-Border Data Mechanism. To guide digital cooperation in 2021–2025, the ASEAN Digital Masterplan 2025 was adopted at the first meeting of the ASEAN Digital Ministers on 22 January 2021.

In the area of customs integration and cooperation, an ASEAN-wide Self-Certification (AWSC) was implemented on 20 September 2020 to facilitate trade in the region, which supports regional production network, intraregional trade and market-seeking FDI activities.

The AWSC simplifies customs procedures by allowing certified exporters – i.e., exporters who have demonstrated competence to comply with the rules of origin requirements of the ASEAN Trade in Goods Agreement (ATIGA) – to self-certify the origin status of their goods to benefit from preferential tariffs under the ATIGA.¹³

On 2 November 2020, ASEAN has officially launched the live operation of the ASEAN Customs Transit System, a regional transit system, established to facilitate cross-border land transport of goods between the participating countries.¹⁴ The system aims to improve efficiency in delivery, reduce costs and provide better connectivity in movement of goods through land transportation across the participating Member States.

Customs integration was further extended with live exchange of ATIGA e-Form D in December 2019, through the ASEAN Single Window, which connects and integrates national single windows, and facilitates exchange of electronic trade-related documents. The e-Form D exchange had significantly facilitated intraregional trade, reduced cost and supported regional production networks. In 2020, more than 800,000 forms were exchanged in the region.¹⁵ In December 2020, Cambodia, Myanmar and Singapore started exchanging the ASEAN Customs Declaration Document through the ASEAN Single Window. The system enables a single submission of data, and synchronous processing of information and decision-making for customs release and clearance in the region.

To facilitate investment, the *InvestASEAN* website has been established (box 3.6). The region, with the support of the United Nations Conference on Trade and Development (UNCTAD) and ASEAN-Australia Development Cooperation Programme, has been publishing the annual flagship *ASEAN Investment Report* since 2012. In supporting transparency and to enhance a better understanding of FDI developments in ASEAN, the annual report series provides analysis and up-to-date information on FDI trends, policies, related industrial development and topical investment issues. The report series can be accessed through InvestASEAN (<http://investasean.asean.org>) and UNCTAD (<https://unctad.org/publications>).

Box 3.6. InvestASEAN

InvestASEAN was developed from the initial concept of the ASEAN Investment Portal, which aims to integrate major elements to build a substantive regional digital platform that support investors investing in ASEAN. The portal is to consist of user-friendly website, an advanced search engine facility and significant content provision, covering a wide range of useful and up-to-date investment information from investment processes, forms, comprehensive facts and figures for doing business in ASEAN, to investment opportunities, frequent investment news alerts on relevant regional developments, and regular updates on investment policies and measures.

Although *InvestASEAN* is a part of the portal, it has attempted to provide a certain level of investment information through the website (<http://investasean.org>), hosted at the ASEAN Secretariat. It has information about ASEAN, why to invest in ASEAN, regional investment agreements and free trade agreements (FTAs), national investment policies, investors' testimonials and success stories, links to respective IPAs' websites, and some ASEAN investment publications.

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Box 3.6. InvestASEAN (Concluded)

InvestASEAN is a good start but there is room to improve, strengthen and maintain the website to make it a more effective mechanism to bridge the investor community and other stakeholders with the region. One aspect would be to enrich the content and develop a feature similar to UNCTAD's Global Enterprise Registration index (<https://ger.co/>), which measures the effectiveness of online information portals and online single windows implemented by Member States.

Source: ASEAN Secretariat and InvestASEAN.

Member States, through the ASEAN Coordinating Committee on Investment, meet regularly to exchange views and experiences and discuss agenda items relating to investment cooperation, including work activities under the ACIA. Representatives of the Investment Committee also jointly participate in capacity-building events and regional investment forums based on topical issues. These events have been organized as part of the preparation of the *ASEAN Investment Report*, which involves insights from industry, consultancy firms, business leaders and international experts. The last ASEAN Investment Forum, held in 2019 before the pandemic, focused on attracting FDI in health care.

International investment agreements

International investment agreements (IIAs) such as free trade agreements (FTAs) between ASEAN and partner economies, bilateral FTAs and bilateral investment treaties (BITs) can strengthen the investment environment. FTAs that include a chapter covering investment are referred to as treaties with investment provisions (TIPs). The implementation of these agreements can lead to a more conducive environment for investment.

Over the past 10 years, individual ASEAN Member States have also entered into new IIAs with many economies outside the region or upgraded older agreements to promote and facilitate investment. The IIAs between ASEAN and partner economies include FTAs and BITs. As of 2021, there were 221 TIPs signed under the framework of bilateral FTAs and 288 BITs involving ASEAN Member States with a non-ASEAN country or region (table 3.3). Between 2011 and 2021, the number of TIPs signed by ASEAN Member States rose 36 per cent and the number of BITs with non-ASEAN countries by 12 per cent. The proliferation of many TIPs and BITs underscores the commitment of ASEAN Member States to promoting FDI and strengthening investment relationships with partner economies or regions.

Across geographical regions, recently concluded BITs and TIPs include many reform-oriented provisions aimed at ensuring a balance between investment protection and the right of States to regulate (*WIR 2021*). Sustainable development-oriented IIA reform may also include adding new treaty elements that go beyond the traditional investment protection standards. These include, for example, investment facilitation provisions that can help make a country's investment climate more attractive (*WIR 2017*). IIAs have traditionally focused too much on the protection of investors and not enough on investment facilitation (e.g., facilitating the entry and sojourn of personnel, furthering transparency of relevant laws and regulations,

Table 3.3. International investment agreements signed by ASEAN member States as of 2011 and 2021 (Number)

Countries	As of 2011			As of 2021		
	TIPs	BITs with other ASEAN countries	BITs with non-ASEAN countries	TIPs	BITs with other ASEAN countries	BITs with non-ASEAN countries
Brunei Darussalam	16	0	7	21	0	7
Cambodia	13	6	14	16	6	20
Indonesia	14	2	38	21	3	38
Lao People's Democratic Republic	14	6	16	17	6	17
Malaysia	19	3	62	26	3	63
Myanmar	12	4	3	16	5	6
Philippines	13	5	32	17	5	32
Singapore	26	3	22	37	5	38
Thailand	20	6	32	24	6	33
Viet Nam	16	7	31	26	8	34
Total	163	42	257	221	47	288

Source: UNCTAD, IIA Navigator (<https://investmentpolicy.unctad.org/international-investment-agreements>).

Note: TIPs include bilateral and regional FTAs with investment chapter. Data for 2011 is as of December 2011 and 2021 is as of April 2021.

enhancing exchange of information on investment opportunities; *WIR 2021*). Only recent agreements, which often follow guidance set out in UNCTAD's Investment Policy Framework for Sustainable Development (UNCTAD, 2015), pay more attention to facilitating investment for development. The Regional Comprehensive Economic Partnership (RCEP) Agreement, for example, includes in Article 10.17 provisions on investment facilitation, focusing on simplifying procedures for investment applications and approvals; promoting the dissemination of investment information, including investment rules, laws, regulations, policies; and establishing or maintaining contact points or one-stop investment centres. Despite these developments, the overwhelming majority of the existing IIAs lack concrete provisions on investment facilitation (UNCTAD, 2016).

At the multilateral level, over 110 members of the WTO (including seven ASEAN Member States) are participating in the Joint Initiative on Investment Facilitation for Development. In February 2022, participants agreed to establish a working group of international organizations that work on investment facilitation (including UNCTAD) to develop a self-assessment guide to help developing and least developed countries assess their needs in terms of implementing the future agreement.¹⁶

RCEP

The RCEP Agreement signed on 15 November 2020 came into force in early 2022. The RCEP involved all ASEAN Member States plus Australia, China, Japan, the Republic of Korea and New Zealand. It establishes the world's largest economic bloc and is expected to have significant implications for FDI in ASEAN (see *AIR 2020-2021*). The Agreement contained provisions with implications for investment (e.g. coverage of services, e-commerce, rules of origin, customs and other trade facilitation measures). On investment, it aims to create an enabling environment by providing investment protection, liberalization, promotion and facilitation. The investment chapter includes a provision relating to investment promotion and facilitation, which address simplification of investment approval procedures, investment assistance and provision of advisory services and information.

3.3 PERSPECTIVES OF INVESTORS

This section provides key findings of a survey on investment facilitation in ASEAN and insights from interviews with MNEs conducted for the preparation of this report. Findings of other surveys on investment sentiments in the region are also provided.

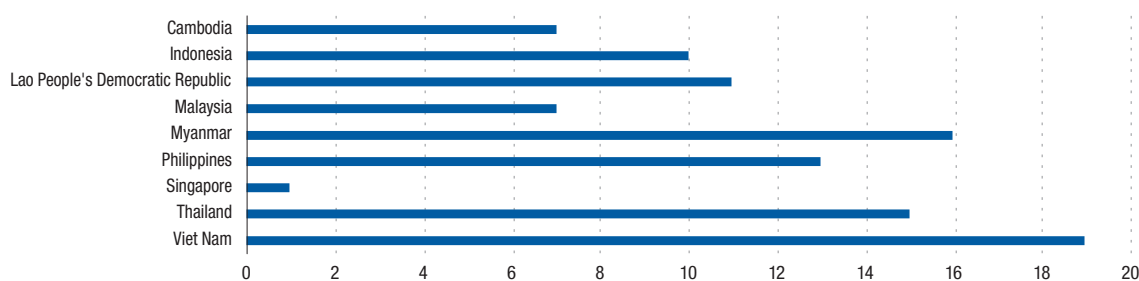
3.3.1 Survey of investment facilitation in ASEAN

An electronic enterprise survey on investment facilitation in ASEAN was conducted between May and June 2022 (box 3.7). The questionnaire was sent out to foreign companies operating in the Member States. Key findings of the survey are presented in the following sections.

Box 3.7. Survey on investment facilitation in ASEAN

A total of 649 companies were contacted directly or through SEZ administrative offices, chambers of commerce and business associations based in the region. Sixty-seven responses were received; distribution by location is shown in box figure 3.7.1, and by industry in box figure 3.7.2.

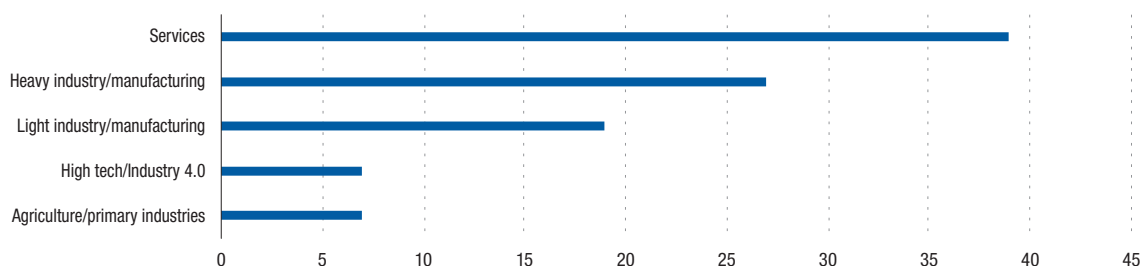
Box figure 3.7.1. Investment facilitation survey: distribution of respondents by ASEAN Member State (Per cent)



Source: ASEAN Investment Report 2022 survey of investment facilitation in ASEAN.

Note: No firms in Brunei Darussalam participated in the survey.

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Box 3.7. Survey on investment facilitation in ASEAN (Concluded)**Box figure 3.7.2. Investment facilitation survey: distribution of respondents by industry (Per cent)**

Source: ASEAN Investment Report 2022 survey of investment facilitation in ASEAN.

The questionnaire contained four key sections, which covered the following set of issues:

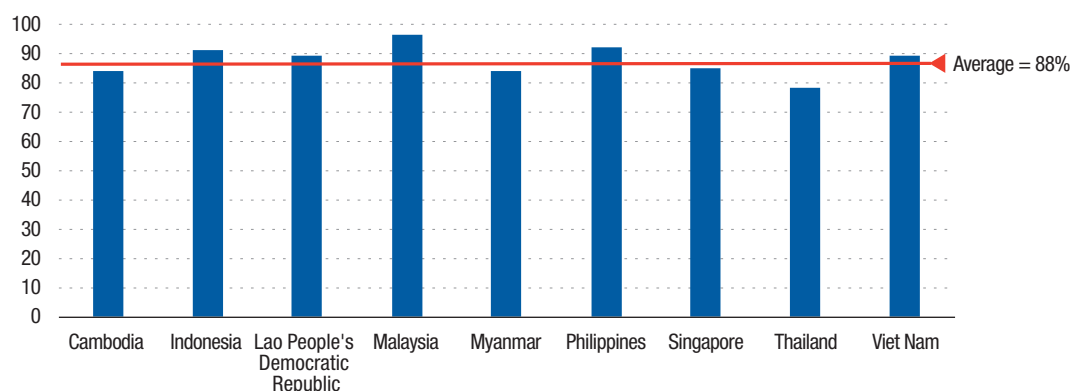
1. *Investment facilitation*: This section asked respondents to rate the importance of different types of investment facilitation measures and the services provided in relation to each measure.
2. *Aftercare services*: This section covered questions on the importance of aftercare services and the services rating associated with aftercare measures. Respondents were also asked their views on improving the provision of aftercare services.
3. *Regional investment agreements*: This section asked respondents about their awareness and the benefits of regional investment agreements.
4. *Final thoughts*: Respondents were asked to identify two investment facilitation measures or initiatives that they thought could be improved or adopted in their host country.

Source: ASEAN Investment Report 2022 survey on investment facilitation in ASEAN.

a. Investment facilitation measures and service ratings

- Some 94 per cent of firms indicated that investment facilitation measures, tools, and policies were important or very important considerations supporting investment.
- On average, 88 per cent of firms thought that investment facilitation measures adopted or in place by ASEAN Member States were important or useful (figure 3.4).
- Fifty-two per cent of firms considered that investment facilitation services provided by authorities were satisfactory or exceeded expectations (figure 3.5). They also thought that there was room for improvement in the provision of investment facilitation services by ASEAN Member States.

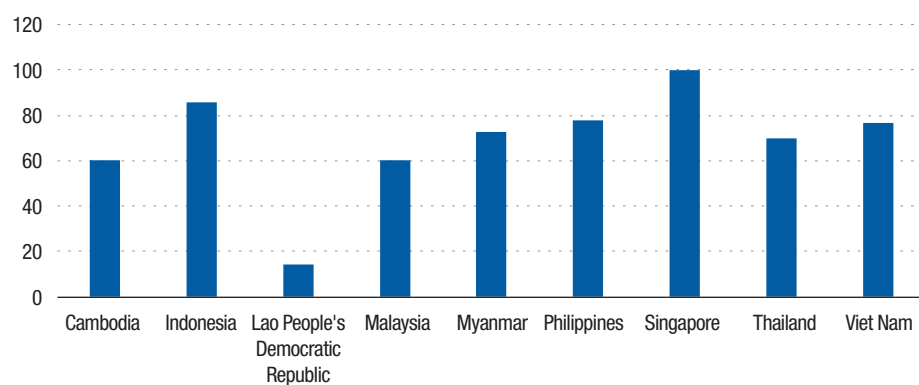
The service rating differs markedly between developed and least developed Member States (figure 3.6). In many cases, more than 60 per cent of firms rated investment facilitation services provided as either satisfactory or exceeding expectations.

Figure 3.4. Importance of investment facilitation measures in ASEAN Member States (Per cent of respondents in each location)

Source: ASEAN Investment Report 2022 survey of investment facilitation in ASEAN.

Figure 3.5. Rating of investment facilitation services in ASEAN (Per cent of respondents)

Source: ASEAN Investment Report 2022 survey of investment facilitation in ASEAN.

Figure 3.6. Rating of investment facilitation services in ASEAN Member States (Per cent of respondents who rated services as satisfactory or exceeding expectations)

Source: ASEAN Investment Report 2022 survey of investment facilitation in ASEAN.

Note: No firms in Brunei Darussalam participated in the survey.

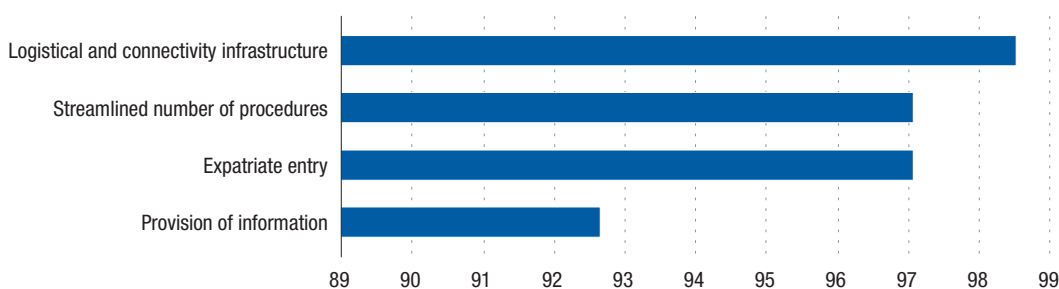
b. Most important investment facilitation measures and service ratings

Four categories of measures were deemed most important: efficient logistics and infrastructure connectivity (98 per cent of respondents), streamlining of investment procedures and requirements (97 per cent), expatriate entry and visa support (97 per cent), and transparency and provision of information (93 per cent) (figure 3.7). These four measures were highly ranked across all industry groups, size of firms and host locations. More than 80 per cent of respondents in most ASEAN Member States underscored the importance of provision of information and streamlining of procedures and requirements.

Although all investment facilitation measures were important, respondents deemed some less important, such as tracking applications, a corporate social responsibility coordinator within the IPA, and opportunities to preview proposed changes in policy and to provide feedback.

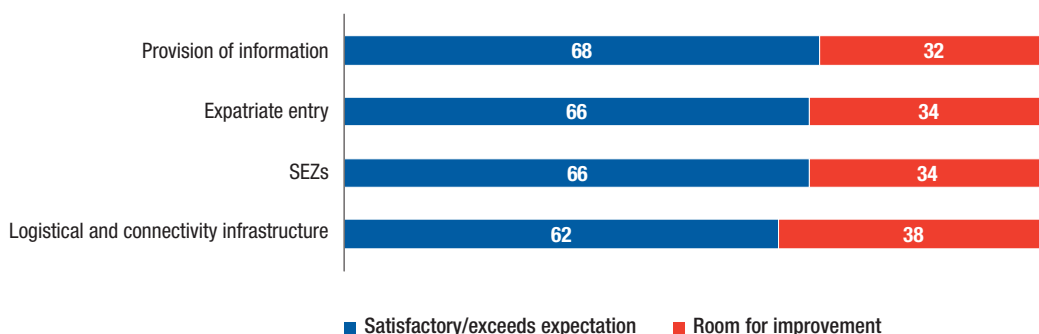
Four areas of investment facilitation services were most highly rated as satisfactory or exceeding expectations. They were provision of information (68 per cent), expatriate entry (66 per cent), SEZ facilities (66 per cent) and logistical and connectivity infrastructure (62 per cent) (figure 3.8).

Figure 3.7. Most important investment facilitation services in ASEAN (Per cent of respondents who rated each as important or very important)



Source: ASEAN Investment Report 2022 survey of investment facilitation in ASEAN.

Figure 3.8. Most highly rated investment facilitation services in ASEAN (Per cent of respondents for each)



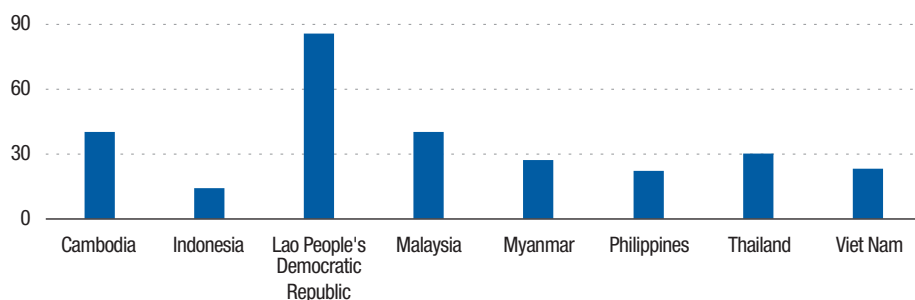
Source: ASEAN Investment Report 2022 survey of investment facilitation in ASEAN.

c. Room for improvement

On average, 48 per cent of firms indicated room for improvement in the provision of investment facilitation services in the region, with significant differences between developed and least developed Member States (figure 3.9). For instance, proportionately more respondents in the Lao People's Democratic Republic, Cambodia and Malaysia (in that order) indicated room for improvement in the quality of investment facilitation service. A reason for the higher rating in Malaysia could be the small number of respondents, which could skew the response. In all other Member States, more than 70 per cent of firms indicated service ratings that were either satisfactory or exceeding expectations.

The four investment facilitation services with the most room for improvement were coherence across ministries (53 per cent), complaints procedure (51 per cent), reducing the number of procedures (49 per cent) and digital infrastructure (online submission services) (45 per cent) (figure 3.10).

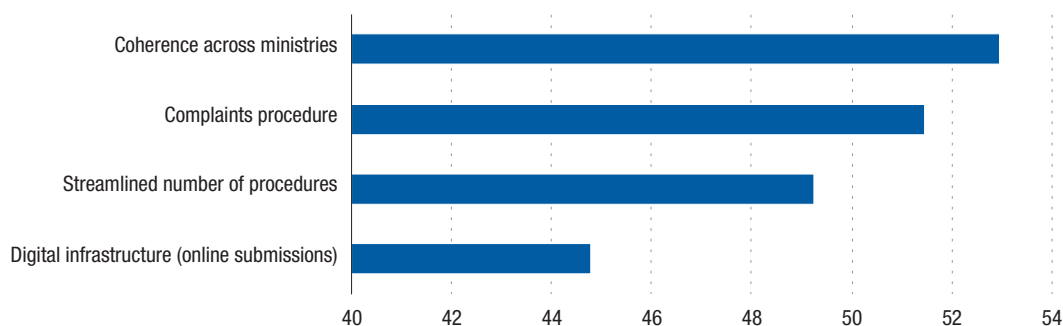
Figure 3.9. Room for improvement in investment facilitation service, by ASEAN Member State (Per cent of respondents identifying room for improvement)



Source: ASEAN Investment Report 2022 survey of investment facilitation in ASEAN.

Note: No firms in Brunei Darussalam participated in the survey. No firms in Singapore responded to this question.

Figure 3.10. Investment facilitation services with the most room for improvement (Per cent of respondents identifying room for improvement)



Source: ASEAN Investment Report 2022 survey of investment facilitation in ASEAN.

d. Final thoughts

Respondents were asked to list the two most important investment facilitation measures that ASEAN Member States could improve or put in place. A majority of respondents specifically stressed the need to streamline investment procedures, reduce the number of forms and provide detailed information regarding updates and changes to regulation.

e. Regional investment agreements

Nearly half of the firms indicated that they are aware of regional investment agreements, including the AIF. Sixty-two per cent of firms thought that regional investment agreements were either important or very important. This finding suggests a need to increase awareness of regional investment agreements and development in the investor community and how investors can benefit from the regional investment environment.

3.3.2. Interview insights

For the preparation of this report, subsidiaries of 18 MNEs based in ASEAN were interviewed to gain insight into how investment facilitation measures influence investment decisions (table 3.4). Key aspects of investment facilitation measures highlighted in the interviews include the following:

- (i) Provision of information and streamlining of investment requirements are important investment facilitation actions that could be further improved.
- (ii) Frequent updates on regulatory information and regular contact with IPAs (aftercare service) were cited as useful investment facilitation actions. These actions signal the importance of the authority and investors continuing to engage and communicate post-establishment.
- (iii) One-stop shops are significant for easing investing in the country.
- (iv) The use of online systems and digitalization of services can improve efficiency and save time and cost.
- (v) The role of IPAs in facilitating and supporting the continued operation of factories and movement of workers, while respecting health protocols, during the pandemic was specifically highlighted.
- (vi) The support of other government institutions such as research facilities and universities, and public organization that facilitate skills development and innovation played a role in the investment and expansion of operation in a host country (a few firms mentioned this issue).
- (vii) Albeit not directly an investment facilitation measure, all firms interviewed underlined the importance of investment incentives, which help reduce costs.

a. Transparency and provision of information

Transparency and the provision of information was frequently highlighted as an important measure. Regular updates on investment rules, procedures and new services by IPAs are important aftercare services and such actions help improve transparency and facilitate a better understanding of policy changes (especially during the pandemic), which greatly boosts investors' confidence.

Table 3.4. Firms interviewed

Company	Headquarters
Amkor Technology	United States
ASL Laboratory Group	Australia
British American Tobacco	United Kingdom
CamEd Business School	Cambodia
Civitas	Denmark
Continental	Germany
Cypress Manufacturing	Germany
Denso	Japan
Honda Motor	Japan
Inoue Rubber Vietnam	Japan
Lufthansa Technik Philippines	Germany
Nidec	Japan
PT Hyper Mega Shipping	Hong Kong, China
Schneider Electric	France
Silk Legal	Thailand
Toshiba Information Equipment (Philippines)	Japan
Toyota Aisin	Japan
Unilever EAC Myanmar	United Kingdom

Source: Interviews conducted for the ASEAN Investment Report 2022.

To improve the legislative environment, investors suggest that governments should provide clarification on how regulations and legal procedures apply, especially those related to taxation and employment, which have profound impacts on firms' operations. It is also helpful to organize frequent informational sessions to keep investors aware of changes in investment laws.

b. Streamlining and simplification of administrative procedures

Investors stressed that there is room for improvement in streamlining processes and requirements. Specifically, administrative procedures could be further streamlined to facilitate easier submission of documents and obtaining of permits.

There are opportunities for ASEAN Member States to streamline administrative procedures as a regional association. Member States could consider simplifying investment requirements and speeding up the processing and approval time for companies by establishing a presence in the IPA of other Member States. Another potentially helpful measure would be to relax customs procedures to facilitate cross-border logistical movements and trading of goods in the region. To further facilitate regional integration, Member States could consider the possibility of easing immigration regulations to allow for more flexible movement of workers.

c. One-stop shop

Investors highly value having access to one-stop centres that provide all necessary information and that act as a single entry point to obtain or apply for investment incentives, licenses and permits. Given the significance of one-stop centres, governments should continue to improve and expand the services of such centres so that they can act as a single entry point for investment procedures and submission of documents.

At the regional level, ASEAN Member States could evaluate the feasibility of an ASEAN one-stop shop with branches in each country where investors can get assistance with setting up businesses, not only in the host country but also in other Member States. This would enable the promotion of ASEAN as a single investment destination.

d. Digitalization of services

Companies report benefiting from higher administrative efficiency from digitalization of government services (investment applications, customs procedures, or informational and training sessions).

e. Aftercare services

Investors acknowledged the strong support of ASEAN Member States in facilitating investment during the pandemic. This facilitation included government support in obtaining necessary permits to help companies continue operations while observing safety protocols. Efforts to help companies apply for expatriate visas and obtain documents for employees to cross through multiple municipalities or to get workers into SEZs were greatly appreciated. Another helpful action acknowledged was the assistance of authorities in accessing pandemic tax relief. Governments' continued services and support for investment application and approval process during the pandemic were important.

There is demand for more extensive aftercare services. In some Member States, aftercare services are limited or implementation is in progress. Member States could consider setting up a centralized aftercare centre to accommodate investors' requests. Many investors expect to have frequent discussions and follow-up meetings with relevant authorities to make recommendations and resolve difficulties. IPAs could conduct regular surveys to gauge investors' opinions about the investment environment and propose appropriate changes to facilitate investment.

f. Industrial facilities and infrastructure

Access to available industrial facilities and development of an efficient infrastructure system that supports easy movement of information, resources and products were measures frequently cited by interviewees. ASEAN Member States could undertake further initiatives to improve physical and digital infrastructure connectivity across the region.

3.3.3. Secondary source information and perspectives

Findings of other business and investment sentiment surveys corroborated the main findings of this report on provision of information, streamlining requirements and the significance of aftercare services and regional integration (table 3.5).

Table 3.5. Findings of other surveys

Investment facilitation measure/action	Survey	Relevant findings
Transparency and provision of information	EU-ASEAN Business Council (2021), EU-ASEAN Business Sentiment Survey 2021 n=389 responses	52 per cent of respondents felt that there was a lack of transparency over forthcoming government policies and processes, making planning difficult.
	AmCham Singapore and United States Chamber of Commerce (2021), ASEAN Business Outlook Survey 2021 n=119 responses	53 per cent of respondents thought that improved transparency would make the ASEAN region more attractive to their company.
Simplification and streamlining administrative procedures	ASEAN Secretariat (2022), Business Sentiment Survey 2020-2021 n=1,115	60 per cent of respondents thought that government bureaucracy was the most significant business challenge, however this had improved from 70 per cent of respondents in 2020.
	AmCham Singapore and United States Chamber of Commerce (2021), ASEAN Business Outlook Survey 2021 n=119 responses	65 per cent of respondents agreed that the region was becoming more competitive in terms of ease of doing business. 45 per cent thought the region was becoming more competitive in terms of simplification of customs regulations and procedures.
Aftercare services	Australia-ASEAN Chamber of Commerce (2021), Australian Business in ASEAN, Survey 2021	37 per cent of businesses regarded access to skilled labour as a challenge to business operations in 2019. However, in 2021, this figure shrank to only 15 per cent.
Aftercare services	Australia-ASEAN Chamber of Commerce (2021), Australian Business in ASEAN, Survey 2021	46 per cent of respondents believe that ASEAN integration is integral for improving how business is conducted in the region.
	EU-ASEAN Business Council (2021), EU-ASEAN Business Sentiment Survey 2021	66 per cent thought that regional integration progress is too slow.
	ASEAN Secretariat (2022), Business Sentiment Survey 2020-2021	60 per cent of respondents were hopeful that further ASEAN economic integration would improve trade and growth. To do this, focus should be on transparency of regulation, and clear and simplified procedures on new business establishments in general.

Source: Respective surveys.

3.4 CONCLUSION

ASEAN Member States are actively engaged in adopting or putting in place various types of investment facilitation measures to improve the investment environment, enhance efficiency and the ease of investing, and reduce transaction costs. Investment facilitation is not new to countries in the region. The Member States are constantly taking actions to enhance investment facilitation to support new and existing investors.

Many investment facilitation measures are common to the ASEAN Member States, but there are differences in the level or sophistication of the services or measures being implemented or already in place. In facilitating investment, all Member States are actively using digital technologies, a trend accelerated by the pandemic. Many have, in recent years, taken actions to further streamline investment requirements and reduce administrative steps. Many Member States have also established single digital platforms where all services are integrated, which include investment application, information, consultation, and use of e-documents and e-registration. A few Member States are developing or examining the establishment of such a platform to improve efficiency.

ASEAN Member States have been cooperating on investment facilitation since 1998. More recently they have been cooperating on implementation of the AIFF, which was adopted in 2021. The implementation of measures in the AIFF would have widespread effects benefiting all investors, not just ASEAN investors. Detailed analysis on the AIFF is provided in chapter 4.

Key findings from the investment facilitation survey conducted for the preparation of this report highlighted that 94 per cent of firms thought that investment facilitation is important or very important in supporting and attracting investment. In general, 88 per cent of firms thought that the investment facilitation measures put in place by Member States were important or useful, and 52 per cent assessed the level of investment facilitation services provided as satisfactory or exceeding expectations. However, there are differences between Member States in the level of investment facilitation services provided and the measures in place, with the least developed Member States requiring more actions. On average, 48 per cent of firms indicated that there is room for improvement in several key investment facilitation measures or services such as in coherence across ministries, complaint procedures, reduced numbers of procedures and use of digital technologies (e.g., online submission services).

Respondents to the survey as well as interviewees underscored that the most important investment facilitation measures include (i) information provision (which corresponds to AIFF provisions number 1, 7 and 8); (ii) transparency of rules and regulations (AIFF provisions number 1 and 2); and (iii) streamlining of administrative procedures (AIFF provisions number 2, 3, 4).

About 50 per cent of firms are aware of existing regional investment agreements, such as the AIFF Agreement. They indicated the need to raise greater awareness of regional investment agreements in place and to explain how these agreements will benefit investors.

The synopsis of measures presented in this chapter suggests numerous observations that require attention from policymakers. First, the benefits arising from implementing investment

facilitation are universal, not specific. It is difficult to use investment facilitation for targeted FDI objectives. The benefits associated with implementation of an investment facilitation measure extend to all investors regardless of their nationality, where they plan to operate in the host country and the size of their investment. Local investors also benefit from implementation of investment facilitation measures. In contrast, the benefits of investment promotion measures (e.g. incentives) are selective and targeted to investment in an area, industry or SEZ. Regional cooperation on investment facilitation has the same effect: the benefits extend to all investors (intra- and extraregional). Regional cooperation on investment facilitation can be a catalyst to help advance national implementation of such measures.

Second, investment facilitation is relatively more important to SMEs, which often have limited resources for managing the challenges of internationalization. Compared with MNEs, they have less capacity and expertise for researching promotion benefits offered by host countries, and following up on investment applications. The impact of investment facilitation applies to all firms, but more so for SMEs.

Third, international tax reforms will have significant implications for efforts to attract FDI through the provision of tax incentives (*WIR 2022*). The use of investment facilitation will become even more important as the effectiveness of fiscal promotion measures is reduced. ASEAN Member States need to be aware especially of the implications for SEZs.

Fourth, ASEAN Member States should adopt a holistic approach to building a competitive investment facilitation environment. Investment facilitation should not just be confined to administrative issues but should also cover the broader context of the business environment, including support for setting up a business and obtaining business registration and approvals, licenses and other business-related administrative requirements and processes. Synergies should be sought between investment facilitation efforts and the activities and tools of authorities other than IPAs. Investment facilitation should cover business registration and approvals, licenses and other administrative requirements and processes, and tax-related and social security procedures, for example. Investors will consider the efficiency and effectiveness of a country's entire administrative process, from obtaining investment permits, to incentives, to the steps in registering and operating a business in the country.

Fifth, other government agencies such as economic zone authorities, business registry agencies, and state and provincial government administrators have important roles in facilitating investment. Some industry associations and chambers of commerce also assist investors by providing databases and business networks. Investment facilitation efforts should involve the participation of many stakeholders.

In supporting the provision of relevant information, the region could consider strengthening the ASEANInvest website with more content and providing more relevant information to facilitate investment and make investing in ASEAN easier. An enterprise registration portal similar to UNCTAD's Ger.co, which provides information at the regional level on online information portals and online single windows, could be established.

NOTES

- ¹ UNCTAD Investment Policy Monitor, No. 24, February 2021.
- ² World Bank, Doing Business, “Time required to start a business (days) – Brunei Darussalam”, (<https://data.worldbank.org/indicator/IC.REG.DURS?locations=BN>).
- ³ MIDA, “InvestMalaysia”, (<https://investmalaysia.mida.gov.my/EIP/InvestMalaysia.aspx>).
- ⁴ EDB, Singapore Investment Clinic (beta) (<https://edbsingapore.thinkific.com/>).
- ⁵ *Jakarta Post*, “Indonesia seeks to attract firms departing China”, 23 June 2020; BKPM, “BKPM Chairman Formed a Special Task Force to Attract Businesses Relocating from China”, press release, 20 June 2020 (<https://www3.bkpm.go.id/en/publication/press-release/readmore/2401601/59301>).
- ⁶ *Vietnam Investment Review*, “Vietnam sets up special working group to ride wave of investment relocation”, 25 May 2020.
- ⁷ See <https://cambodia.acclime.com/hr/immigration/work-permit>.
- ⁸ See <https://www.oss.go.id>. Following the enactment of the Omnibus Law and its implementing regulations which reform the licensing approach into risk-based approach, the Government of Indonesia has modified the previous OSS system into the new risk-based OSS system since August 2021.
- ⁹ See <https://www.bkpm.go.id/en/contact/public-complaint>. The Government of Indonesia, in particular Ministry of Investment/BKPM, also conducts regular private-public consultation forum to disseminate the new laws, regulations and procedures on investment licensing. Through the forum, inquiries and complaints are also received and further analyzed to provide relevant recommendation. Indonesia has also established special task force on investment acceleration, which consists of high level officials from various ministries. This task force will address various issues faced by investors in conducting investment in Indonesia and provide recommendation to relevant ministries or regional governments.
- ¹⁰ The measure was introduced to facilitate the movement of business travellers into Malaysia during the Movement Control Order period. As Malaysia reopened its borders to international travellers starting from 1 April 2022, this facilitation measure is no longer in operation.
- ¹¹ Enterprise Singapore, “What does Budget 2020 mean for your business?” (<https://www.enterprisesg.gov.sg/supplementary-budget-2020>).
- ¹² *Hanoi Times*, “Vietnam govt waives taxes to boost economic recovery”, 30 May 2020.
- ¹³ “ASEAN-Wide Self-Certification Scheme comes into effect on 20 September 2020”, joint press release, Singapore Customs and Ministry of Industry and Trade, 18 September 2020.
- ¹⁴ *The Straits Times*, “ASEAN customs transit system involving 6 members launched, may be expanded”, 30 November 2020.
- ¹⁵ ASEAN Secretariat, “ASEAN Single Window” (<https://asw.asean.org/about-asw>).
- ¹⁶ Some concerns have been raised by a number of countries on the potential application of investor-State dispute settlement provisions to investment facilitation measures, among others in the context of investment facilitation discussions at the WTO.

CHAPTER 4

ASEAN Investment Facilitation Framework and policy options

4.1. INTRODUCTION

Following from the analysis in chapter 3, this chapter highlights the findings of an initial assessment of the implementation of the ASEAN Investment Facilitation Framework (AIFF). It also identifies policy priorities to further strengthen investment facilitation and advance with implementation of the AIFF.

4.2. ASEAN INVESTMENT FACILITATION FRAMEWORK: AN ASSESSMENT OF INITIAL IMPLEMENTATION

The AIFF contains 10 major provisions and 23 specific or subcategory measures or action lines. These relate to major aspects of investment facilitation, including providing relevant investment information, streamlining and simplifying procedures and requirements, using digital technologies, establishing a single digital platform, offering assistance and advisory services to investors, and establishing a consultative mechanism for investment policies.

The framework has some specific features: (i) it is a non-binding instrument based on voluntary actions, (ii) it is not time-bound in terms of schedule for implementation and (iii) the ASEAN Coordinating Committee on Investment is to be updated regularly on the implementation. Many of the AIFF measures are also suggested in UNCTAD's Global Action Menu for Investment Facilitation (UNCTAD, 2016) and are being discussed at the World Trade Organization in the context of a prospective agreement on investment facilitation for development.

The analysis in this chapter synthesizes information reported in chapter 3 (sections 3.2.1 and 3.2.2) of this report. The country information is based on a review of a wide range of sources, including the websites of the Member States' investment promotion agencies and other government ministries. Inputs, based on a questionnaire, were also provided by members of the ASEAN Coordinating Committee on Investment. A mapping exercise was conducted to determine the initial stage of implementation of the AIFF. Investment facilitation measures in place or acted upon by Member States are categorized under each AIFF provision, following the AIFF typology explained in chapter 3. Table 4.1 provides an assessment of investment facilitation measures or action lines in place or under development in Member States. Some of the initial findings are described in the following subsections.

Table 4.1. AIFP: initial assessment

Action line/measure	Brunei		Lao People's Democratic Republic									
	Darussalam		Cambodia	Indonesia	Republic	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam	
1. Transparency of measures and information	●	●	●	●	●	●	●	●	●	●	●	
1.1 Provide information on laws, policies and regulations relating to investment	●		●	●	●	●	●	●	●	●	●	
1.2 Establish or maintain an appropriate mechanism to answer reasonable enquiries of governments, investors and other stakeholders	●		●	●	●	●	●	●	●	●	●	
2. Streamlining and speeding up administrative procedures and requirements	●	●	●	●	●	●	●	●	●	●	●	
2.1 Ensure all measures of general application related to investment are administered in a reasonable, objective and impartial manner	●		●	●	●	●	●	●	●	●	●	
2.2 Ensure that investment procedures do not act as a barrier for investment	●		●	●	●	●	●	●	●	●	●	
2.3 Ensure that investment procedures and documentation requirements are applied in a manner that does not unduly incur more time and cost	●		●	●	●	●	●	●	●	●	●	
2.4 Provide information regarding the status of an investment application within a reasonable period of time	●		●	●	●	●	●	●	●	●	●	
2.5 Review investment procedures and measures to determine whether specific measures should be modified, streamlined, expanded or repealed	●		●	●	○	●	●	●	●	●	●	
3. Use of digital and internet technologies	●	●	●	●	●	●	●	●	●	●	●	
3.1 Promote the adoption of digital technologies to improve the investment application, approval, renewal and aftercare processes	●		●	●	●	●	●	●	●	●	●	
3.2 Establish and maintain online platforms for the administration of investment applications, renewals and aftercare needs	●		●	●		●	○	●	●	●	●	
3.3 Use of electronic copies of documents in place of original documents	●			●		●		●		●	●	
3.4 Promote the use of electronic payments for fees and charges	●		●	●		●	●	●	●	●	●	

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Table 4.1. AIFF: initial assessment (Continued)

Action line/measure	Lao People's Democratic Republic									
	Brunei Darussalam	Cambodia	Indonesia	Myanmar	Philippines	Singapore	Thailand	Viet Nam		
4. Single digital platform										
4.1 Establish a single digital platform for investors to submit all documents and obtain up-to-date related investment information			●		●	●	●	●		●
4.2 Use a single digital platform for making payment of all fees and taxes associated with investment, acquisition, and expansion					●	●				
5. Assistance and advisory services to investors	●	●	●	●	●	●	●	●		●
5.1 Establish a complaints procedure for investors to amicably resolve any grievances through their investment activities. Provide assistance to investors where they are experiencing difficulties	●	●	●	○	●	●	●	●		●
5.2 Establish mechanisms to make recommendations addressing recurrent issues affecting investors to each Member State's competent authorities	●	●	●	○	●	●	●	●		●
6. Independence of competent authorities	●	●	●	●	●	●	●	●		●
6.1 Ensure independence of authorities involved in making investment approvals	●	●	●	●	●	●	●	●		●
7. Temporary entry and stay of business persons for investment purposes	●	●	●	●	●	●	●	●		●
7.1 Publish online information regarding requirements and regulations surrounding entry and stay of business persons	●	●	●	●	●	●	●	●		●
7.2 Establish contact points to respond to enquiries concerning entry and stay of business persons	●	●	●	●	●	●	●	●		●
7.3 Expediently process applications concerning the temporary entry and stay of business persons for investment purposes	●	●	●	●	●	●	●	●		●
8. Facilitation of investment supporting factors		●	●	●	●	●	●	●		●
8.1 Assist investors in identifying investment-supporting factors such as labour force, funding sources, domestic suppliers and business matchmaking opportunities		●	●	●	●	●	●	●		●

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Table 4.1. AIF: initial assessment (Concluded)

Action line/measure	Lao People's Democratic Republic									
	Brunei			Democratic Republic						
	Darussalam	Cambodia	Indonesia	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam	
9. Consultative mechanisms for investment policies										
9.1 Encourage mechanisms for regular consultation and dialogue with stakeholders and investors to improve the investment environment	●	●	●	●	●	●	●	●	●	●
9.2 Regularly evaluate and update investment measures to improve investment environment	●	●	●	●	●	●	●	●	●	●
10. Cooperation										
10.1 Facilitate communication and cooperation with other ASEAN Member States on matters relating to investment facilitation	●	●	●	●	●	●	●	●	●	●
11. Implementation										
11.1 Work towards the implementation of this framework and regularly update the ASEAN Coordinating Committee on Investment	○	○	○	○	○	○	○	○	○	○

Source: ASEAN Investment Report 2022, AIF assessment.

Note: ● = related measures in place or action taken, ○ = related measures in progress or future action.

4.2.1. Progress to date

ASEAN Member States have put in place many investment facilitation measures over the years. They have continued to adopt more such measures and upgrade investment facilitation services in recent years (e.g., use of digital technologies). During the pandemic they adopted more investment facilitation measures to assist investors, with the number of such measures in place rising from 6 in 2019 to 28 in 2020 (*AIR 2020–2021*).

The degree of implementation and ongoing activity on the AIFF by most Member States is relatively advanced, considering that the framework is less than a year old. However, there is still more work to do with respect to (i) implementing provisions, where actions by some Member States are not yet complete; (ii) improving the quality of investment facilitation measures or services provided to investors, (iii) realising a more competitive investment facilitation environment, with measures not covered in the existing framework, and (iv) offering investors an investment-business facilitation environment with a broader context.

ASEAN Member States have in place investment facilitation measures relating to 8 of the 10 main category provisions of the AIFF. Two require attention by some Member States, particularly those relating to a single digital platform and to facilitation of investment-supporting factors.

Many Member States have in place or are actively developing measures relating to the 23 subcategory provisions or action lines (table 4.1). There are significant gaps, which require attention. In eight subcategories, some Member States need to take action or put in place related investment facilitation measures.

4.2.2. Differences in degree and effectiveness of implementation

Despite the significant progress made in the implementation of the AIFF, the measures in place differ between Member States in terms of depth and the sophistication of investment facilitation actions because of different stages of countries' development. Least developed Member States tend to have less sophisticated one-stop shops, use of digital technologies, aftercare services and are in the process of developing single digital platform. In some cases, the information provided are basic. Table 3.1 in chapter 3 of this report provides an indicative assessment of the differences in the level of investment facilitation measures in place in ASEAN.

a. Key investment facilitation areas requiring attention

Eight key areas of AIFF subcategory provisions require attention for implementation. One Member State needs to establish investment procedures with a view to further streamlining, modifying or simplifying measures. Thailand implemented a regulatory guillotine process to assess all laws related to investment and streamline unnecessary laws and procedures. Indonesia has recently conducted a similar streamlining process (Omnibus Law). In most cases, Member States have institutionalized other mechanisms, which involve consultations with investors and other stakeholders to determine measures to be streamlined.

Three Member States are not ready to accept the use of electronic copies of documents in place of originals, and one with current digital systems that cannot yet facilitate online payment of charges and fees related to investment. Four Member States have yet to establish a single digital platform.

One Member State need to establish mechanisms to address recurring issues that affect investors. This could be done by instituting regular forums between the government and the private sector or through an online complaint and feedback procedure, as some Member States have done. Malaysia undertakes rigorous consultative review meetings with industry stakeholders when addressing recurrent issues affecting investors. Indonesia has set up a special task force on investment acceleration, which consists of high level ranking officials from different ministries to address recurrent issues affecting investors. There is also a need to ensure that recurring issues are considered for a decision by appropriate decision makers.

Three Member States lack aftercare and matchmaking services to assist investors more effectively. These services include facilities to assist investors in finding business-supporting factors for their operations such as labour, suppliers and opportunities for value chain integration. Some Member States offer advanced consultancy or support services to help investors with business-supporting factors and to assist them in connecting with local suppliers and industry networks. Regional benchmarking in this area could be useful.

b. Future assessments

Investment facilitation measures are continuously evolving as Member States put in place new investment facilitation actions and upgrade or improve services. Thus, assessments should continue to take stock of progress made in relation to the AIFF. Future exercises could focus on realising a full implementation of the AIFF and assessing the level of sophistication to benchmark against regional or international indicators.

This initial AIFF assessment makes two further contributions. First, it provides a methodology and an assessment tool that could be adapted for future assessment exercises under the AIFF or applied to similar assessment exercises covering other regional agreements or frameworks that could have important implications for the investment environment. Second, as recommended in chapter 3, it recommends adoption of an online tool for assessing information portals and online single windows, based on the methodology of UNCTAD's Global Enterprise Registration portal (Ger.co). This would help in assessing progress in the use of digital technologies and online facilities to support investors in terms of (i) investment requirements and (ii) more broadly, at business registration.

4.3. CHALLENGES

At the national level, although a wide range of investment facilitation measures have been put in place, challenges exist (figure 4.1). Developing an investment facilitation capacity-building programme and sharing experiences among Member States can be useful to advance the implementation of the AIFF.

Figure 4.1. Challenges of investment facilitation

Area	Challenge	Examples
National level		
Information	• Language • Information navigation	• Some relevant information available only in the local language • Difficult to find information, not in one place
Mechanism	• Consultation mechanism • Monitoring system	• Absent or ad hoc public-private sector consultation mechanisms • Services of one-stop shop not comprehensive • No monitoring of investment application process
Process	• Aftercare service	• Absence of regular follow-up with clients • In some cases, services that are not comprehensive (need regional benchmark)
Institutions	• Inter-agency coordination • One-stop shop	• Absent or ad hoc inter-agency coordination • Single digital platform lacking or still in development • Limited albeit increasing range of services
AIFF level		
AIFF implementation	• Voluntary nature • Differences between countries on measures • Not time-bound	• AIFF based on voluntary participation not on commitment • Deeper implementation of measures (e.g., one-stop shop, aftercare services, single digital platform) in some Member States than in others • Different degrees of depth and sophistication of investment facilitation services • No specific time frame

Source: ASEAN Investment Report 2022 research.

Note: AIFF = ASEAN Investment Facilitation Framework.

Findings from the survey conducted for this report reveal several other challenges. They include (i) missing translations (some investment information is available only in the local language), (ii) difficulty in navigating information, (iii) weak consultative and monitoring systems, (iv) insufficient aftercare service and (v) absent or not sufficiently developed single digital platforms.

Investors also expressed concern about insufficient investment facilitation measures (e.g., in transparency and provision of information, streamlining of requirements, efficiency of digitalization mechanism, quality of aftercare services and consistency or coherence of policy implementation) that could hamper investment (table 4.2).

At the regional level, full implementation of the AIFF would depend on (i) filling the existing gaps, (ii) considering how to bridge the difference in the depth and quality of investment facilitation services implemented by Member States and (iii) establishing a time frame and target for the AIFF (see figure 4.1).

Table 4.2. Investment facilitation challenges and concerns of investors

Investment facilitation challenges	Concerns of investors	Share of respondents expressing concern (%) ^a
Streamlining and simplification of administrative procedures	Overly lengthy procedures for obtaining licenses	50
One-stop shop	Missing some processes associated with investment	42
Provision of information	Insufficient information provided when laws or investments change	50
	Unclear or hard-to-follow guidelines	43
	Lack of access to a contact person or contact point, either in person or online	38
Digitalization	Online applications that do not incorporate all steps in the investment process	51
Aftercare services	Insufficient systematic procedures for aftercare services to improve transparency	54
	Lack of regular surveys of investors to understand their needs and concerns (with clarity on what is suggested and could be implemented)	53
Government-private sector consultations	Lack of a government consultation and suggestion mechanism for investment problems	41
	Lack of regular discussions between relevant authorities and investors	41
Coherency of regulations	Concern about consistency of regulations across sectors, ministries and businesses	53
	Concern about coherence of investment and business regulations and harmonized taxation across ministries, and between central and subnational levels	53

Source: Survey on investment facilitation conducted for the preparation of the *ASEAN Investment Report 2022*.

^a The survey covered 67 foreign companies operating in ASEAN.

4.4. POLICY OPTIONS AND WAYS FORWARD

Some policy options to strengthen the investment facilitation environment at the national and regional level (AIFF) could be considered.

4.4.1. National level

At the national level, the efforts of Member States to continuously upgrade or strengthen investment facilitation services should continue. Some Member States need to consider expanding or strengthening the quality of their investment facilitation services. These efforts could include (i) providing more information with easier-to-navigate systems, (ii) strengthening certain mechanisms (e.g., public-private sector consultation and matchmaking, business networking and databases) and aftercare services, (iii) fortifying inter-agency coordination and one-stop shops, and (iv) expediting development of single digital platforms. The concerns of investors, highlighted in table 4.2, should be considered; responses could include strengthening relevant investment facilitation services and establishing mechanisms to facilitate structured government-private sector consultation and single digital platforms.

Industrial infrastructure, parks and special economic zones are highly relevant factors in investment facilitation. They ease the process and help lower the cost of investing, and they support quick set-up of operations (e.g., overcoming the complications of land ownership, tenancy and securing provision of utilities). In making these industrial facilities more effective, Member States could consider upgrading or developing green facilities that are Industry 4.0 ready and use renewable energy.

Interview insights further suggest the need for consistent policy implementation supported with measures to reduce the cost of doing business, and developing both skilled human resources and more efficient infrastructure facilities (box 4.1).

Box 4.1. Interview insights: policy options for strengthening investment facilitation

Companies interviewed for this report highlighted some areas to improve in the provision of investment facilitation (see section 3.3.2). They are summarized in box table 4.1.1.

Box table 4.1.1. Areas for strengthening investment facilitation

Category	Remarks
Predictability and consistency of policies	• Be consistent in the implementation of investment laws and policies • Avoid constant changing of policies, as that does not help investors with investment plans (especially for expansion and new investment)
Streamlining and simplification of requirements	• Streamline investment procedures and business requirements • Review investment procedures to eliminate redundancy (e.g., despite implementing a one-stop shop, other agencies still request another set of the same documents for registration)
Reduction of cost of doing business	• Reduce bureaucracy • Lower the cost of doing business • Reduce high energy costs, offsetting them by providing incentives and support to encourage the use of green energy • Provide incentives for R&D activities, including manufacturability of design services or export of design services
Consultation on policy changes	Consult the investor community on changes to laws or policies affecting investors
Skilled labour for emerging industries (Industry 4.0)	Establish a strong public-private-academia partnership to offer a value added curriculum for developing skills for emerging industries
Infrastructure and industrial facilities	• Develop highways, mass transportation and connecting ports • Develop efficient power plants with low-carbon footprints • Upgrade communication systems with high-speed internet, data and voice facilities • Improve customs infrastructure, including harmonization of digital platforms and procedures

Source: Interviews with companies during ASEAN Investment Report 2022 research.

Facilitating investment is not sufficient by itself to provide a competitive investment environment. Investors must meet various types of administrative requirements when operating in a host country, from business registration to customs and tax compliance to various permits or licenses. From the investor perspective, meeting these administrative requirements could be made more efficient by consolidating them into one integrated process, creating an efficient environment for doing business. It does not help investors, especially small and medium-size enterprises (SMEs), if they go through a perfectly efficient investment approval process, only to be stymied by a slow and inefficient process for business registration, licenses or permits, or other fundamental procedure for establishing a business.

More countries are putting in place investment facilitation measures to attract foreign direct investment. A recent UNCTAD study found that since 2016 more and more developing economies have been establishing and using digital information portals and digital single windows (UNCTAD, 2022). The study recommended improving the effectiveness of investment facilitation, focusing in particular on synergies and economies of scope. Through facilitation activities and tools (such as information portals and single windows), investment authorities could synergise efforts with other authorities such as business registries and tax authorities to provide a broader, more holistic environment of investment-business facilitation. Developing a regional registration portal within UNCTAD's Global Enterprise Registration portal (GER.co) can be useful.

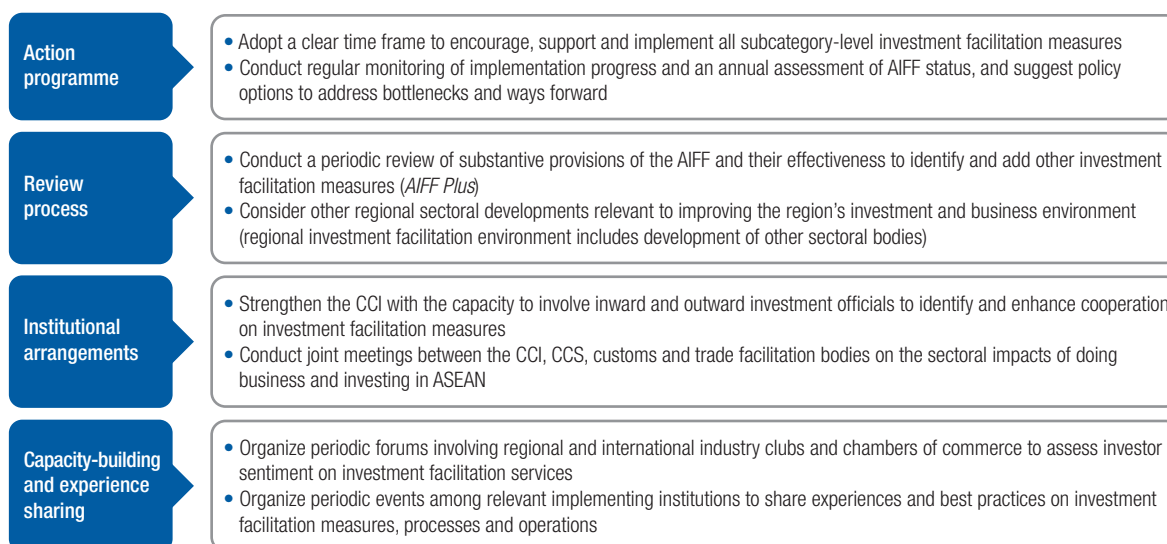
Many investment facilitation measures contribute to an efficient investment environment. Given the limited resources, Member States could focus on the highest-impact measures, particularly (i) information provision for investors (also covered in AIFF provisions 1, 7 and 8); (ii) transparency of rules, regulations and process (AIFF provisions 1 and 2); and (iii) streamlining of administration procedures (AIFF provisions 2, 3 and 4). The high impact of these investment facilitation measures is corroborated by the findings of the survey conducted for this report.

4.4.2. Regional action

The implementation challenges of the AIFF require attention. They cover the need to (i) establish a clear timetable to complete the AIFF, (ii) assess the quality of measures implemented, (iii) conduct a regular review process, (iv) strengthen institutions and (v) undertake capacity-building. Some possible actions are highlighted in figure 4.2.

In conducting a regular review of AIFF implementation, the Coordinating Committee on Investment could consider adopting a regional capacity-building programme on investment facilitation. This could include sharing regional or international experiences and best practices and identifying how else to improve or strengthen AIFF implementation. Capacity-building and sharing of experiences could involve participation by and gaining of insights from investors and relevant private sector associations.

As with the ASEAN Comprehensive Investment Agreement, many investors are not aware of the AIFF, and those that are aware may not appreciate how implementation of it would translate to benefits for their investment in the region. Active promotion of and awareness-

Figure 4.2. Strengthening implementation of AIFF: policy options

Source: ASEAN Investment Report 2022 research.

Note: AIFF = ASEAN Investment Facilitation Framework, CCI = Coordinating Committee on Investment, CCS = Coordinating Committee on Services.

raising about the AIFF is needed. Outreach activities could be conducted through national and regional forums in partnership with industry associations and chambers of commerce. In addition to promoting the AIFF to them, they could be engaged to provide input and feedback on ways to strengthen investment facilitation measures in relation to the AIFF.

Despite efforts at the regional level to provide information – through the InvestASEAN website, in particular – there are at least three challenges: First, the types of information provided are general and not extensive. Specific information on investment facilitation measures and actions, and on liberalization should be included in the content and updated regularly. Second, the content and links need to be improved. In addition, the site navigation needs to be improved to help users easily find information on the investment process, regional investment development, relevant and related agreements, and treaties with investment provisions. Third, the website is not well promoted. Developing a single regional digital platform for investment or strengthening the InvestASEAN site can be useful for providing more investors with more relevant information related to investing in ASEAN. The site could be expanded with an information portal and online single window, as developed in UNCTAD's Global Enterprise Registration portal, Ger.co.

4.5. CONCLUSION

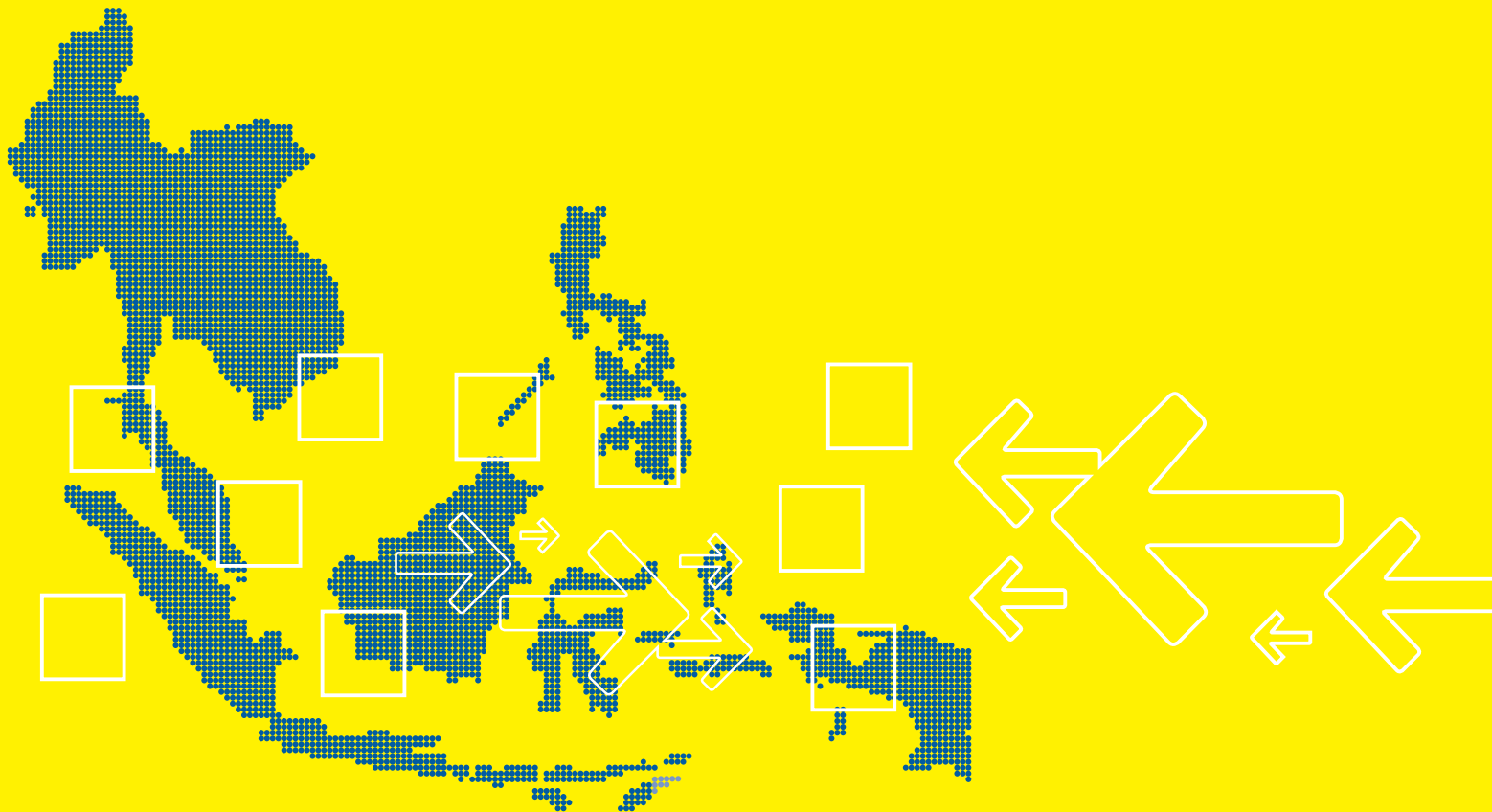
Investment facilitation is not new to the ASEAN Member States. They have been actively engaged in developing and putting in place investment facilitation measures, many of them listed in the AIFF, before the signing of the framework last year.

At the main category level of the AIFF, all Member States either have in place or are working on 8 of the 10 measures. They are being implemented with varying levels of sophistication because the countries are at different stages of industrial development. Two of the measures (i.e., single digital platforms and facilitation of investment-supporting factors) require action by some Member States. At the subcategory level of 23 measures or action lines, there are gaps to fill. In particular, eight of these measures require attention by some Member States.

Despite the progress made, much work remains, especially (i) to bridge the gaps between the Member States that have in place investment facilitation measures listed in the AIFF and those that either do not or are beginning to implement them, (ii) to increase the depth and sophistication of the investment facilitation measures covered in the AIFF, (iii) to broaden the context of the investment facilitation environment by coordinating with business and tax authorities to integrate business facilitation, and (iv) to go beyond the 10 main categories of AIFF provision (to *AIFF Plus*) to offer investors a competitive investment facilitation environment in ASEAN. As the framework is less than a year old, subsequent assessment exercises should be considered to benchmark against acceptable indicators, especially for the scope and quality of services provided.

In strengthening the investment facilitation environment at the national level, Member States could focus on the highest-impact measures such as (i) information provision for investors (covered in AIFF provisions 1, 7 and 8); (ii) transparency of rules, regulations and process (AIFF provisions 1 and 2); and (iii) streamlining of administration procedures (AIFF provisions 2, 3 and 4). At the regional level, investment facilitation capacity-building and sharing of experiences among Member States can be useful to advance the implementation of the AIFF. The voluntary nature of the framework and the lack of a time frame are other important aspects to consider.

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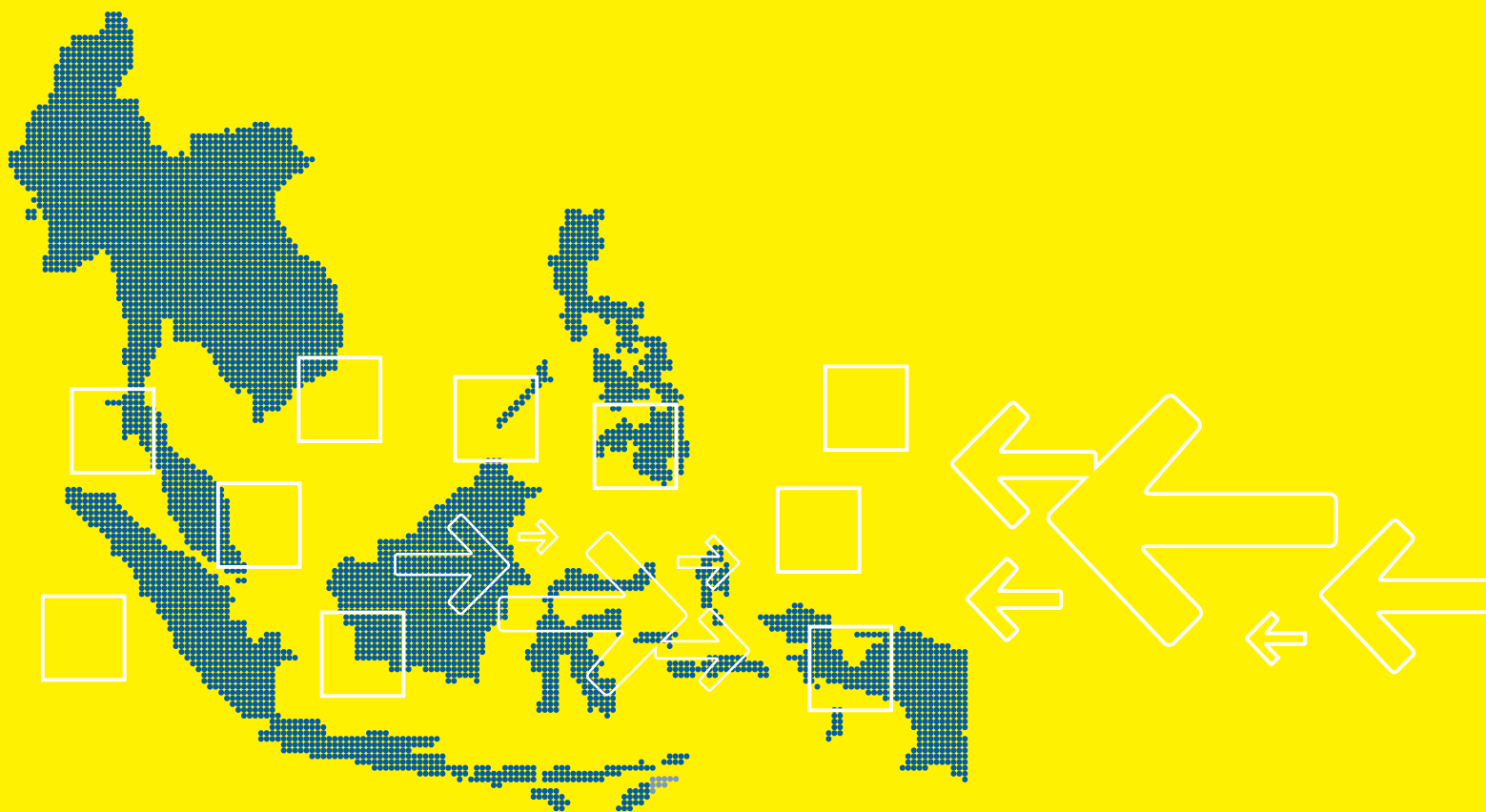
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ANNEXES



Annex table 1.1. Intra-ASEAN investment, by source country and industry, 2020 and 2021 (Millions of dollars)

2020

Source country											
	Brunei Darussalam	Cambodia	Indonesia	Lao People's Democratic Republic	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam	Total
Agriculture, forestry and fishery	..	0.1	0.1	0.0	(61.4)	..	1.8	(10.6)	18.2	68.9	17.2
Mining and quarrying	(2.0)	0.0	169.5	0.0	23.6	0.0	0.7	388.4	286.7	124.4	991.3
Manufacturing	(1.5)	7.5	(70.5)	0.9	51.3	0.5	125.2	3 424.4	480.3	3.2	4 025.6
Electricity, gas, steam and air conditioning supply	..	2.3	2.9	0.2	23.0	..	30.7	987.8	212.9	..	1 259.8
Water supply and sanitation	..	0.0	0.0	0.0	0.6	..	0.6	35.2	4.2	..	40.8
Construction	..	7.5	(1.2)	0.0	(34.1)	0.1	0.1	252.3	34.6	5.1	261.2
Wholesale and retail trade	(4.0)	0.7	244.1	1.6	118.1	4.0	47.0	1 940.4	693.1	17.0	3 083.7
Transportation and storage	(0.0)	0.5	(188.7)	0.0	(212.9)	1.9	(3.4)	388.6	166.8	0.5	153.4
Accommodation and food	(57.3)	0.4	1.8	0.0	6.2	(0.2)	4.7	200.8	8.7	0.1	163.3
Information and communication	(0.2)	0.1	4.6	0.0	(55.0)	(7.7)	(0.3)	461.2	17.6	8.5	426.9
Finance and insurance	(17.2)	1.4	(77.5)	0.5	2 395.9	(69.6)	258.1	2 735.8	3 406.1	144.8	8 798.8
Real estate	3.2	24.9	(17.2)	3.3	217.2	0.2	24.5	1 537.0	331.8	460.1	2 644.1
Other services	(0.6)	0.8	(58.9)	0.1	16.8	(2.0)	74.8	748.0	254.5	(11.6)	1 021.3
Unspecified	(0.2)	0.0	0.0	0.0	0.0	12.4	8.8	0.5	0.1	..	0.6
Total	(79.6)	46.2	9.1	6.6	2 489.3	(60.4)	573.4	13 089.7	5 915.7	821.0	22 888.0

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Annex table 1.1. Intra-ASEAN investment, by source country and industry, 2020 and 2021 (Millions of dollars) (Concluded)

2021

	Source country										Total
	Brunei Darussalam	Cambodia	Indonesia	Lao People's Democratic Republic	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam	
Agriculture, forestry and fishery	0.0	0.3	0.0	0.0	24.6	0.0	0.5	88.3	64.6	30.2	208.5
Mining and quarrying	3.0	0.0	246.4	0.0	(81.3)	0.0	0.2	181.1	2 045.1	83.7	2 478.1
Manufacturing	4.6	0.3	548.4	0.4	106.5	(1.6)	62.3	6 839.4	122.7	(5.5)	7 678.5
Electricity, gas, steam and air conditioning supply	0.8	0.4	28.4	0.0	7.1	0.0	5.7	1 943.8	241.2	..	2 227.2
Water supply and sanitation	0.0	0.0	0.0	0.0	0.1	0.0	0.1	116.4	1.0	..	117.5
Construction	0.1	3.2	4.4	0.0	0.8	0.0	(2.3)	(105.6)	6.5	1.8	(87.3)
Wholesale and retail trade	(0.9)	1.6	(28.6)	0.0	679.0	(1.7)	249.4	1 261.4	(596.5)	(25.7)	1 538.0
Transportation and storage	0.1	0.1	5.1	0.0	(12.8)	(0.3)	(1.2)	181.2	12.3	0.4	185.0
Accommodation and food	(0.0)	0.0	(3.5)	0.0	6.8	0.0	42.8	220.9	5.1	0.5	272.4
Information and communication	0.1	0.1	210.1	(0.0)	105.5	(1.5)	20.3	(308.9)	3.5	260.9	291.9
Finance and insurance	(10.9)	5.3	(49.3)	(1.8)	1 241.6	(5.5)	2.0	1 216.2	651.9	(63.1)	3 003.9
Real estate	0.8	20.0	(32.3)	14.7	541.1	0.0	10.8	1 056.1	50.0	72.1	1 913.8
Other services	2.3	0.1	284.6	0.1	85.8	0.2	23.3	653.7	41.5	2.1	1 096.3
Unspecified	(5.5)	..	..	..	..	16.2	35.0	..	1.2	..	1.2
Total	(5.6)	31.3	1 213.6	13.3	2 704.8	5.8	448.8	13 343.9	2 649.8	357.2	20 925.0

Source: ASEAN Secretariat.

Annex table 1.2. Other semiconductor MNEs in ASEAN

Company	Headquarters	Products	Presence in ASEAN
Amkor	United States	Semiconductor product packaging and test services provider	Malaysia (packaging, testing, manufacturing facility) Philippines (packaging, testing, manufacturing facility) Singapore (wafer bump, probe and final test service, manufacturing facility, sales and support operations)
ASE Group	Taiwan Province of China	Semiconductor assembling and test manufacturing services	Malaysia (assembly and testing facilities) Singapore (front-end test and wafer sort, and close work with ASE Malaysia to form a total semiconductor manufacturing supply chain from front-end testing to back-end IC packaging and testing)
ASM International	Netherlands	Semiconductor process equipment for wafer processing	Malaysia (sales and services) Singapore (manufacturing facility, supply chain management, worldwide IT, among others)
Broadcom	United States	Semiconductor and infrastructure software products	Malaysia (centralization of its back-end operations in Penang) Singapore (manufacturing and R&D, sales)
Flextronics	United States and Singapore	Contract manufacturing services (electronics including semiconductor product – circuit boards)	Indonesia (manufacturing facility including PCBs) Malaysia (design services, mechanical design and manufacturing, engineering services, manufacturing, PCB assembly, systems integration) Philippines (design services) Singapore (box-build, subassembly, systems integration, testing and forward and reverse logistics)
GlobalFoundries	United States (ultimately owned by the United Arab Emirates)	Silicon wafers for mobile devices, Internet-of-Things devices, communications infrastructure and data centre, autos and PCs	Singapore (regional office, fabrication plant, R&D, design centre)
GlobalWafers	Taiwan Province of China	Silicon wafers	Malaysia and Singapore (sales office)
Graphcore	United Kingdom	Intelligence processing unit specially for AI computing	Singapore (South-East Asia Hub)
Hayward Quartz Technology	United States	Support original equipment manufacturers in the semiconductor business segment	Viet Nam (construction started 2021)
Indeff	United States	Industrial automation and semiconductor equipment	Singapore and Thailand
Jiangsu Changjing Electronics Technology	China	Package design, product R&D, and after-sale services	Singapore (wafer level packaging, wirebond and test)
Minebea Mitsumi	Japan	Electronic components including HDDs and PCBs	Cambodia (sales) Malaysia (sales) Philippines (sales, production of ICs) Singapore (sales, R&D) Thailand (sales, R&D, manufacturing facilities including for PCBs and HDDs) Viet Nam (representative office)

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Annex table 1.2. Other semiconductor MNEs in ASEAN (Concluded)

Company	Headquarters	Products	Presence in ASEAN
Murata Manufacturing	Japan	Multilayer ceramic chip capacitor, other products	Malaysia (manufacturing facilities, sales) Philippines (manufacturing facilities, sales) Singapore (regional offices, manufacturing facilities, sales) Thailand (manufacturing facilities, sales) Viet Nam (sales)
Nexperia	Netherlands (company ultimately Chinese-owned)	Bipolar transistors, diodes, semiconductors, and other components	Malaysia (R&D; assembly and testing manufacturing facility) Philippines (manufacturing facility - assembly and testing specializing in clip bond and power package capabilities) Singapore (sales)
Noble Electronics	Japan	Electronics and semiconductor components and products	Thailand (manufacturing facility) Viet Nam (manufacturing facility including semiconductor components)
Powertech Technology	Taiwan Province of China	Outsourced semiconductor assembly and test services	Singapore (manufacturing facility)
Seagate Technology	United States	Data storage solutions (hardware and software)	Malaysia (manufacturing, assembly and testing) Singapore (production of media, design, marketing and administrative) Thailand (subassemblies and assemblies)
Siltronic	Germany	Hyperpure silicon wafers used for extremely complex semiconductor components	Singapore (manufacturing facilities)
Simmtech	Republic of Korea	PCB and packaging substrate	Malaysia (manufacturing facility for PCBs)
Soitec	France	Semiconductor materials for smartphones, cars and connected devices	Singapore (300 mm wafer fabrication plant)
Toshiba Semiconductors	Japan	Discrete semiconductors	Thailand (manufacturing facility – back-end processes, assembly and testing of small signal devices and opto devices)
Tongfu Microelectronics	China	IC assembly and testing	Malaysia (joint venture with AMD in 2016 to produce high-volume, advanced, 7 mm multi-chip modules and single-chip modules)
Universal Scientific Industrial (Shanghai)	China	Circuit boards	Viet Nam (produce electronic circuit boards for wearable devices)
Mazak	Japan	Advanced industrial machine manufacturing (including for semiconductor industry)	Indonesia (technical centre) Malaysia (technical centre) Singapore (manufacturing facility and technology centre) Thailand (technology centre) Viet Nam (technical centre)

Source: Company websites, GlobalData, media and industry reports.

Note: AI = artificial intelligence, HDD = hard disk drive, IC = integrated circuit, IT = information technology, PC = personal computer, PCB = printed circuit board, R&D = research and development.

Annex table 2.1. Top 50 ASEAN-based venture capital firms, by number of investments, as of May 2022 (Number)

Name	Industry	Headquarters	Description	No. of total investments	No. of investments in ASEAN
Temasek Holdings	Angel investment, finance, financial services, venture capital	Singapore	An SWF	500	199
BEENEXT	Financial services, internet, venture capital	Singapore	A venture capital firm investing in start-ups in ASEAN, India, Japan and United States	253	66
GIC	Fintech, impact investing, real estate investment, social impact, venture capital	Singapore	An SWF	242	17
Gobi Partners	Finance, financial services, venture capital	Malaysia	A venture capital firm with interests in ASEAN, North Asia and South Asia	180	61
JAFCO Asia	Finance, financial services, venture capital	Singapore	A venture capital firm with interests in the Asia Pacific region	159	15
EDBI	Financial services, fintech, information and communications technology, venture capital	Singapore	A global fund focusing on investments in knowledge and innovation-intensive sectors	152	43
HATCHER+	Artificial intelligence, big data, fintech, machine learning, venture capital	Singapore	Invests in early-stage start-ups	105	2
Jungle Ventures	Fintech, media and entertainment, venture capital	Singapore	Invests in and helps build tech category leaders from Asia	105	68
Golden Gate	Angel investment, finance, financial services, fintech, impact investing, venture capital	Singapore	Invests in business processes and services, mobile, and Software-as-a-Service	105	86
DSG Consumer Partners	Consumer goods, financial services, venture capital	Singapore	Invests in consumer businesses in ASEAN and in India	100	14
Insignia Ventures Partners	Financial services, impact investing, venture capital	Singapore	Invests in start-ups in Asia	96	92
Quest Ventures	Angel investment, fintech, venture capital	Singapore	A venture capital firm with investment interest in Asia	92	67
Alpha JWC Ventures	Financial services, fintech, venture capital	Indonesia	Invests in fintech and the consumer technology sector	84	82
MDI Ventures	Finance, financial services, venture capital	Indonesia	A multi-stage venture fund	80	62
SGInnovate	Agtech, artificial intelligence, autonomous vehicles, medical device, quantum computing, venture capital	Singapore	Helps entrepreneurial scientists build deep-tech start-ups	75	61
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Annex table 2.1. Top 50 ASEAN-based venture capital firms, by number of investments, as of May 2022 (Number) (Continued)

Name	Industry	Headquarters	Description	No. of total investments	No. of investments in ASEAN
Openspace	Venture capital	Singapore	Backs transformative companies in Southeast Asia	73	65
Seeds Capital	Financial services, information technology, venture capital	Singapore	An investment arm of Enterprise Singapore that co-invests with independent investors in innovative start-ups	71	67
Blockchain Founders Fund	Blockchain, cryptocurrency, financial services, fintech, venture capital	Singapore	An early-stage venture capital fund that invests in top-tier blockchain start-ups globally	66	6
K3 Ventures	Finance, financial services, information technology, venture capital	Singapore	A venture capital firm that invests in technology start-ups	63	36
Arbor Ventures	Big data, financial services, fintech, venture capital	Singapore	A fintech-focused venture capital firm	61	9
Monks Hill Ventures	Finance, financial services, fintech, venture capital	Singapore	A venture capital firm investing in early-stage technology start-ups in ASEAN	58	46
UOB Venture	Banking, financial services, venture capital	Singapore	An investment firm that finances privately held companies through direct equity investment	55	24
RB Investments	Financial services, information technology, venture capital	Singapore	A venture capital firm that invests in people with visionary ideas	53	4
Vickers Venture Partners	Venture capital	Singapore	A venture capital firm focused on angel investments in Asia and beyond	51	20
Convergence Ventures	Finance, financial services, venture capital	Indonesia	An early-stage venture capital fund that focuses on technology companies in Indonesia	51	48
Signum Capital	Blockchain, finance, financial services, venture capital	Singapore	Invests exclusively in blockchain-enabled companies	50	11
VSV Capital - Vietnam Silicon Valley	Consulting, financial services, fintech, venture capital	Viet Nam	An accelerator and early-stage venture capital firm that invests in early-stage technology start-ups	49	44
iGlobe Partners	Venture capital	Singapore	A venture capital firm focused on tech and biotechnology	43	16
Praselia Dwidharma	Venture capital	Indonesia	Invests in early-stage technology start-ups, mostly in Southeast Asia	40	38
Qualgro Venture Capital	Big data, financial services, information technology, software, venture capital	Singapore	Invests in technology start-ups across Southeast Asia	39	19

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Annex table 2.1. Top 50 ASEAN-based venture capital firms, by number of investments, as of May 2022 (Number) (Continued)

Name	Industry	Headquarters	Description	No. of total investments	No. of investments in ASEAN
SMDV	Fintech, venture capital	Indonesia	Finances and mentor tech companies	37	35
Ruvento	Angel investment, impact investing, robotics, venture capital	Singapore	A seed capital firm that funds start-ups in the Internet of Things, robotics, and emerging technologies across Asia and the United States	35	11
Cradle Fund	Crowdfunding, developer platform, financial services, impact investing, information technology, venture capital	Malaysia	Invests in ICT entrepreneurship, biotechnology and life sciences, material sciences, and technology industries	35	33
NEXEA Venture Capital & Angel Investors	Angel investment, business development, financial services, information technology, internet, venture capital	Malaysia	A venture capital firm and accelerator that invests in early-stage companies	34	29
Kickstart Ventures	Finance, financial services, venture capital	Philippines	Provides funding, facilities, expertise and business connections for start-ups	33	29
Patamar Capital	Venture capital	Singapore	A venture capital firm investing in early-stage businesses serving the emerging middle class in South and South-East Asia	32	14
KK Fund	Finance, financial services, venture capital	Singapore	A venture capital firm investing in seed stage internet and mobile start-ups across ASEAN, Hong Kong (China) and Taiwan Province of China	32	30
Venturra Capital	Angel investment, financial services, venture capital	Indonesia	A venture capital firm focusing on South-East Asia and investing in early-stage consumer technology-enabled internet businesses	32	29
Intudo Ventures	Business development, financial services, venture capital	Indonesia	A venture capital firm concentrated on portfolio approach	28	27
Anthill Ventures	Finance, financial services, venture capital	Singapore	Helps early-growth start-ups in Pre-Series 'A'	28	2
SeedPlus	Business development, financial services, venture capital	Singapore	An early-stage fund	26	24
1982 Ventures	Financial services, fintech, information technology, venture capital	Singapore	An early-stage venture capital firm focused on fintech in ASEAN	25	22
Ardent Capital	E-commerce, finance, venture capital	Thailand	Invests in early-stage technology companies across South-East Asia with a focus on e-commerce (B2B, B2C, logistics)	24	20

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Annex table 2.1. Top 50 ASEAN-based venture capital firms, by number of investments, as of May 2022 (Number) (Concluded)

Name	Industry	Headquarters	Description	No. of total investments	No. of investments in ASEAN
True Global Ventures	Venture capital	Singapore	Helps early-growth start-ups in Pre-Series 'A'	24	3
GDP Venture	Information technology, internet, venture capital	Indonesia	A venture builder for digital communities, media, commerce and solution companies in the consumer internet industry	24	17
QCP Capital	Consulting, cryptocurrency, financial services, venture capital	Singapore	A digital asset trading firm that provides digital payment token services	23	5
Kejora Capital	Financial services, venture capital	Indonesia	A venture capital firm that invests in entrepreneurs and helps them establish high-growth digital firms	22	21
Manila Angel Investors Network	Association, venture capital	Philippines	A network of independent and private investors	21	20
Cento Ventures	Finance, financial services, venture capital	Singapore	Invests in digital entrepreneurs in South-East Asia and other growth markets	21	21
Startup-0	Internet, venture capital	Singapore	Global Venture Platform – Assessments, Investments & Cross Border Scaling	20	10

Source: ASEAN Investment Report 2022 research, based on data from Crunchbase, company websites and Dealroom.co.

Note: ICT = information and communication technology, SWF = sovereign wealth fund.

Annex table 2.2. Evolution of the most-funded start-ups in ASEAN in 2018

Rank	Name	Home country	Industry	Funding raised by 2018	Funding raised by 2022	Presence in ASEAN in 2018	Additional presence in ASEAN in 2022
1	Grab	Singapore	Transport, food delivery and payment solutions	\$5.8 billion	\$15.5 billion	Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Thailand, Viet Nam	No change
2	Sea (Garena)	Singapore	Consumer Internet platform	\$2 billion	\$8.6 billion	Indonesia, Philippines, Malaysia, Thailand, Viet Nam	No change
3	Tokopedia	Indonesia	Online marketplace	\$1.1 billion	\$2.8 billion	None	No change
4	Jobstreet	Malaysia	Recruitment	\$586 million (acquired)	Acquired	Indonesia, Philippines, Singapore, Viet Nam	Acquired
5	Go-Jek	Indonesia	Transport	\$585 million	\$5.3 billion	None	Philippines, Singapore, Thailand, Viet Nam
6	Traveloka	Indonesia	Travelling	\$500 million	\$1.2 billion	Malaysia, Philippines, Singapore, Thailand, Viet Nam	No change
7	AirTrunk	Singapore	Wholesale data centres	\$307 million	Acquired	None	Acquired
8	Bigo	Singapore	Broadcasting, digital media	\$272 million	Acquired	Malaysia, Thailand	Acquired
9	Iflix	Malaysia	Entertainment industry, video streaming	\$223 million	\$348 million (acquired)	Philippines, Singapore, Thailand	Acquired
10	Trax Image Recognition	Singapore	Image recognition	\$208 million	\$1 billion	None	No change
11	MatahariMail	Indonesia	E-commerce platforms	\$142 million	\$616 million	None	No change
12	Carousell	Singapore	Marketplace	\$120 million	\$288 million	Indonesia, Malaysia and Philippines	Cambodia
13	MyRepublic	Singapore	Telecommunications	\$112 million	\$156 million	Indonesia	Brunei Darussalam
14	PT Indo Lotte Makmur (iLOTTE)	Indonesia	E-commerce platforms	\$100 million	No change	None	No change
15	HOOG	Singapore	Digital	\$95 million	Acquired	Indonesia, Philippines, Thailand	Acquired
16	Ninja Logistics (Ninja Van)	Singapore	Postal and courier services	\$87 million	\$975 million	Indonesia, Malaysia, Philippines, Thailand, Viet Nam	Myanmar

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Annex table 2.2. Evolution of the most-funded start-ups in ASEAN in 2018 (Continued)

Rank	Name	Home country	Industry	Funding raised by 2018	Funding raised by 2022	Presence in ASEAN in 2018	Additional presence in ASEAN in 2022
17	TenX	Singapore	Fintech	\$81 million	\$125 million	None	No change
18	Tessa Therapeutics	Singapore	Biopharmaceuticals	\$80 million	\$130 million	Malaysia	No change
19	SunSeap	Singapore	Clean energy	\$80 million	Acquired	Cambodia, Malaysia, Philippines, Thailand, Viet Nam	No change
20	Zilingo	Singapore	Marketplaces, mobile commerce	\$79 million	\$308 million	Indonesia, Malaysia, Thailand	Philippines
21	M17 Entertainment	Singapore	Social media platforms	\$75 million	Acquired	Indonesia, Malaysia	
22	Carro Singapore	Singapore	Car marketplace	\$72 million	\$705 million	Indonesia, Thailand	Malaysia
23	Mobile Credit Payment	Singapore	Payments and remittances	\$67 million	Acquired	Indonesia, Malaysia and Thailand	Acquired
24	aCommerce	Thailand	E-commerce for tools and services	\$65 million	\$119 million	Indonesia, Malaysia, Philippines, Singapore	No change
25	MOL (Money Online)	Malaysia	Payments and remittance	\$61 million	Acquired	Indonesia, Philippines, Singapore, Thailand, Viet Nam	Acquired
26	Qtum	Singapore	Enterprise application	\$52 million	No change	None	No change
27	KyberNetwork	Singapore	Fintech	\$52 million	\$60 million	None	Viet Nam
28	Advance.AI	Singapore	Cybersecurity	\$50 million	\$130 million	Indonesia	Philippines, Viet Nam
29	Singapore Life	Singapore	Insurance tech	\$50 million	\$180 million	None	No change
30	Art of Click	Singapore	Mobile advertising	\$45 million	Acquired	Indonesia, Philippines, Thailand	Acquired
31	oBike	Singapore	Transportation	\$45 million	Dissolved	Indonesia, Malaysia, Thailand	Dissolved
32	Tiki.vn	Viet Nam	Retail, e-commerce	\$44 million	\$405 million	None	No change
33	PT MCash Integrasi	Indonesia	Internet of Things	\$43 million	No change	None	No change
34	Aelf	Singapore	Cloud infrastructure	\$40 million	No change	None	No change

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Annex table 2.2. Evolution of the most-funded start-ups in ASEAN in 2018 (Concluded)

Rank	Name	Home country	Industry	Funding raised by 2018	Funding raised by 2022	Presence in ASEAN in 2018	Additional presence in ASEAN in 2022
35	Cogito	Philippines	Cloud infrastructure	\$37 million	No change	Singapore	No change
36	iCar Asia	Malaysia	Transport	\$37 million	Acquired	Indonesia, Thailand	Acquired
37	Wanchain	Singapore	Fintech	\$36 million	No change	None	No change
38	Pundi X	Indonesia	Payments and remittance	\$35 million	No change	Singapore	Philippines, Thailand
39	Frontier Digital Ventures	Malaysia	Classifieds	\$34 million	\$67 million	Myanmar, Philippines, Viet Nam	No change
40	Funding Societies	Singapore	Fintech	\$32 million	\$401 million	Indonesia, Malaysia	Thailand
41	Paktor	Singapore	Online dating, social networking	\$32 million	Acquired	None	Acquired
42	Republic Protocol	Singapore	Fintech	\$31 million	\$34 million	None	No change
43	Zimplistic (Rotimatic)	Singapore	Consumer electronics, robotics	\$30 million	\$49 million	None	No change
44	Pomelo	Thailand	Fashion, e-commerce platforms	\$30 million	\$118 million	Indonesia, Singapore	Malaysia
45	FinAccel (Kredivo)	Indonesia	Fintech	\$30 million	\$310 million	Singapore	Viet Nam
46	Cloud Alliance	Singapore	Development platforms	\$30 million	No change	None	No change
47	Electrify	Singapore	Energy efficiency	\$30 million	No change	Acquired	No change
48	Tryb	Singapore	Fintech	\$30 million	No change	None	No change
49	C88 (CekAja, eCompareMo, Premiro)	Singapore	Fintech	\$28 million	No change	Indonesia, Philippines	Thailand
50	Sale Stock	Indonesia	Fashion	\$27 million	Acquired	None	..

Source: ASEAN Investment Report 2018, company websites, Crunchbase and media.

Annex table 2.3. Unicorns in ASEAN, 2021

Company	Country	Main activity	Year established	Year of unicorn status	Valuation (\$ billion)	Total funding (\$ million)	Other ASEAN countries with operations	Top five venture capital backers
GoTo	Indonesia	Ride-hailing, food delivery and other services	2021	2021	28.5	1 300	Gojek: Singapore, Thailand, Viet Nam	Tencent (China) Google (United States) Temasek Holdings (Singapore) Primavera Capital Group (China) Abu Dhabi Investment Authority (United Arab Emirates)
Grab	Singapore	Ride-hailing, financial services, food delivery, transportation, health	2012	2014	14.3	12 523	Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Thailand, Viet Nam	SoftBank (Japan) SoftBank Vision Fund (United Kingdom) Invesco (United States) GGV Capital (United States) 500 Startups (United States)
J&T Express	Indonesia	Freight service e-commerce company	2015	2021	7.8	4 700	Singapore	Tencent (China) Hillhouse Capital Group (China) Sequoia Capital China (China) Susquehanna International Group (SIG) (United States) Boyu Capital (China)
HyalRoute	Singapore	Communication infrastructure, telecommunication, wired telecommunication	2015	2020	3.5	263	Cambodia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines	Kuang-Chi Science (China)
Lazada Group	Singapore	E-commerce, fashion, Internet shopping	2012	2017	3.15	4 209	Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam	Temasek Holdings (Singapore) Alibaba Group (China) Rocket Internet (Germany) Summit Partners (United States) HV Capital (Germany)
Sky Mavis	Viet Nam	Internet software and services	2019	2021	3	161	..	FTX (Bahamas) Animoca Brands (Hong Kong, China) Andreessen Horowitz (United States) 500 Startups (United States) BlockTower Capital (United States)

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Annex table 2.3. Unicorns in ASEAN, 2021 (Continued)

Company	Country	Main activity	Year established	Year of unicorn status	Valuation (\$ billion)	Total funding (\$ million)	Other ASEAN countries with operations	Top five venture capital backers
Traveloka	Indonesia	Online travel aggregator	2012	2017	3	1 170	Malaysia, Philippines, Singapore, Thailand, Viet Nam	East Ventures (Japan) Sequoia Capital (United States) Hillhouse Capital Group (China) Global Founders Capital (Germany) JD.com (China)
Ovo	Indonesia	Digital payment, information services	2017	2019	2.9		Indonesia	Grab (Singapore) Tokopedia (Indonesia) Tokyo Century Corporation (Japan)
Acronis	Singapore	Data protection, cybersecurity services in integrated solutions	2003	2019	2.5	408	Indonesia (distribution partnership), Malaysia, Philippines, Thailand	CVC Capital Partners (Luxembourg) BCS Venture (United States) Goldman Sachs (United States) Insight Partners (United States) OpenView (United States) ABRT (United States)
Edotco	Malaysia	Integrated telecommunications infrastructure services	2012	2021	2.2	700	Cambodia, Lao People's Democratic Republic, Myanmar, Philippines	Innovation Network Corporation of Japan (Japan) Khazanah Nasional (Malaysia) Kumpulan Wang Persaraan (Diperbadankan) (Malaysia)
VNG	Viet Nam	Internet software and services	2004		2.2	161	..	Tencent (China) CyberAgent (Japan)
Advance Intelligence Group	Singapore	AI-driven technology solutions	2016	2021	2	536	Indonesia, Malaysia, Philippines, Thailand, Viet Nam	SoftBank Vision Fund (United Kingdom) Warburg Pincus (United States) GSR Ventures (United States) ZhenFund (China) Farallon Capital Management (United States)
Mynt	Philippines	Financial services, fintech, microlending	2015	2021	2	475	Philippines	Bow Wave (United States) Ant Financial (China) Warburg Pincus (United States) Insight Partners (United States) Amplio (United States) Globe Telecom (Philippines) Ayala Corporation (Philippines)

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Annex table 2.3. Unicorns in ASEAN, 2021 (Continued)

Company	Country	Main activity	Year established	Year of unicorn status	Valuation (\$ billion)	Total funding (\$ million)	Other ASEAN countries with operations	Top five venture capital backers
Ascend Money	Thailand	Financial services, fintech	2015	2021	1.5	150	Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Singapore, Viet Nam	Ant Group (China) Charoen Pokphand Group (Thailand) Bow Wave Capital Management (United States)
Secretlab	Singapore	Gaming chair manufacturing	2014	2021	1.5	7.4	..	Heliconia Capital Management (subsidiary of Temasek/GIC-Singapore)
Carsome	Malaysia	Online used-car platform	2015	2021	1.3	307.4	Indonesia, Thailand, Singapore	Gobi Partners (Malaysia) Burda Principal Investments (Germany) Catcha Group (Malaysia) Asia Partners Fund Management (Singapore) IdeaRiverRun (Malaysia)
Trax	Singapore	Analytics, artificial intelligence, computer vision, e-commerce, image recognition, retail technology	2010	2019	1.3	1 027	Singapore	BCS Venture (United States) SoftBank Vision Fund (United Kingdom) BlackRock (United States) Warburg Pincus (United States) Investec (South Africa)
Akulaku	Indonesia	Fintech (banking and digital finance platform)	2014	2019	1.1	179.4	Malaysia, Philippines, Viet Nam	Ant Group (China) Qiming Venture Partners (China) Sequoia India (India) Arbor Ventures (Singapore)
Carousell	Singapore	Classifieds, consumer goods, e-commerce, marketplace, mobile apps	2012	2021	1.1	288	Indonesia, Malaysia, Philippines	Rakuten (Japan) Naver (South Korea) Sequoia Capital India 500 Startups (United States) Quest Ventures (Singapore)
Sicepat	Indonesia	Last-mile delivery, warehousing and fulfilment and middle-mile logistics	2004	2021	1.1	273.5	Indonesia	Indies Capital Partners (Singapore) Trihill Capital (Australia) Falcon House Partners (Singapore) Daiwa Securities Group (Japan) KfW DEG (Germany) Kejora Capital (Indonesia) MDI Ventures (Indonesia)

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Annex table 2.3. Unicorns in ASEAN, 2021 (Continued)

Company	Country	Main activity	Year established	Year of unicorn status	Valuation (\$ billion)	Total funding (\$ million)	Other ASEAN countries with operations	Top five venture capital backers
Ajaib	Indonesia	Finance, financial services, fintech, trading platform	2018	2021	1	245	Indonesia	Ribbit Capital (United States) DST Global (Hong Kong, China) Y Combinator (United States) Institutional Venture Partners (United States) Horizons Ventures (Hong Kong, China) SoftBank Ventures Asia (South Korea) Insignia Ventures (Singapore)
Air Asia Digital	Malaysia	Innovation and entrepreneurship	2018	2021	1	60	Thailand	Internally funded by Air Asia
Bibli	Indonesia	E-commerce	2010	2021	1		Indonesia	..
Bolttech	Singapore	Finance, insurance, insurtech, risk management	2020	2021	1	210	Indonesia, Malaysia, Philippines, Thailand, Viet Nam	Activant Capital (United States) EDBI (Singapore) Alma Mundi Ventures (Spain) Tarsadia Investments (United States)
Carro	Singapore	Automotive, direct sales, e-commerce platforms, marketplace	2015	2021	1	590	Indonesia, Malaysia, Thailand	SoftBank Vision Fund (United Kingdom) B Capital Group (United States) Insignia Ventures Partners (Singapore) Alpha JWC Ventures (Indonesia) Quest Ventures (Singapore)
Flash Express	Thailand	Courier service, delivery service, e-commerce, freight service, logistics, transportation	2017	2021	1	350	Lao People's Democratic Republic (through a joint venture), Philippines	Alibaba (China) Gaorong Capital (China) SCB 10X (Thailand) eWTP Technology & Innovation Fund (China) Krungsri Finnovate (Thailand) Buer Capital (Singapore)
JD.ID	Indonesia	E-commerce	2015	2020	1	N/A	Subsidiary of JD.Com (China)	Funded by Gojek (major funders of Gojek: Google (United States), JD.com and Tencent (both China), Mitsubishi (Japan))
JustCo	Singapore	Coworking space	2011	Singapore	1	160.4	Indonesia, Thailand	Daito Trust Construction (Japan) Fraser Property (Singapore)

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Annex table 2.3. Unicorns in ASEAN, 2021 (Continued)

Company	Country	Main activity	Year established	Year of unicorn status	Valuation (\$ billion)	Total funding (\$ million)	Other ASEAN countries with operations	Top five venture capital backers
Lineman Wongnai	Thailand	Restaurant review website and mobile application	2010	2021	1	0.55	Thailand	Google Launchpad Accelerator (United States) InVent (Thailand) Recruit (Japan) Recruit Strategic Partners (Japan)
Matrixport	Singapore	Cryptocurrency, financial services, fintech	2019	2021	1	100	Singapore	Polychain (United States) DST Global (Hong Kong, China) IDG Capital (China) Tiger Global Management (United States) Qiming Venture Partners (China)
Moglix	Singapore	B2B, e-commerce, marketplace, mobile	2015	2021	1	222	Singapore	Falcon Edge Capital (United States) Harvard Management Company (United States) Tiger Global Management (United States) Sequoia Capital India (India) Venture Highway (India) Innoven Capital (Singapore)
Ninja Van	Singapore	Delivery, logistics, transportation	2014	2021	1	222	Indonesia, Malaysia, Philippines, Thailand, Viet Nam	Alibaba (China) B Capital (United States) Monk's Hill Ventures (Singapore) Geopost and DPD Group (both France) Facebook (United States)
NIUM	Singapore	Finance, financial services, fintech, payments, transaction processing	2015	2021	1	280	Singapore	Ripple (United States) Temasek Holdings (Singapore GIC) Visa (United States) MDI Ventures (Indonesia) Rocket Internet (Germany)
PatSnap	Singapore	Analytics, artificial intelligence, business intelligence	2007	2021	1	352	Singapore	Tencent (China) SoftBank Vision Fund (United Kingdom) Temasek Holdings (Singapore) Summit Partners (United States) Shunwei Capital (China)
Revolution Precrafted	Philippines	Architecture, building material, interior design, real estate	2015	2017	1	15.4	Philippines	K2 Global (United States) 500 Startups (United States)

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Annex table 2.3. Unicorns in ASEAN, 2021 (Concluded)

Company	Country	Main activity	Year established	Year of unicorn status	Valuation (\$ billion)	Total funding (\$ million)	Other ASEAN countries with operations	Top five venture capital backers
PropertyGuru	Singapore	Online property rental and sale listing platform	2007	2020	1	544.4	Indonesia, Malaysia, Thailand, Viet Nam	Kohlberg Kravis Roberts (United States) TPG (United States) Emtek Group (Indonesia) Square Peg Capital (Australia) Immobilienscout 24 (Germany) Finn Evdemon Capital Partners (Singapore) Tigris Capital (Singapore)
Tiket.com	Indonesia	Online travel booking platform	2011	2021	1	1	Indonesia	Djarum Group (Indonesia)
Xendit	Indonesia	Banking, finance, financial services, fintech, payments	2014	2021	1	215	Philippines	Amasia (United States) East Ventures (Japan) Tiger Global Management (United States) Y Combinator (United States) Accel (United States) Berkeley SkyDeck (United States)
VinaPay	Viet Nam	Electronic payment services	2007	2020	1	..	Viet Nam	GIC (Singapore) Softbank Vision Fund (United Kingdom)
Ruangguru	Indonesia	Edutech, education training	2014	2021	0.8	205.1	Thailand (StarDee), Viet Nam (KienGuru)	GGV Capital (United States) Tiger Global Management (United States) EV Growth (Singapore) UOB Venture (Singapore) East Ventures (Japan)

Source: ASEAN Investment Report 2022 research, based on data from Credit Suisse 2021, "ASEAN Unicorns" and CB Insights, "Complete List of Unicorns" (as of 1 January 2022) (www.cbinsights.com/research-unicorn-companies).

Annex table 2.4. Cross-border activities by unicorns in ASEAN, 2019–2022 (Selected cases)

Unicorns	FDI activities	M&As	Strategic alliances and other investment activities
Gojek* (Indonesia)	- Expanded operations in the Philippines, Singapore, Thailand and Viet Nam - In Viet Nam, launched a four-wheeled transportation service - In Singapore, launched in 2021 a taxi ordering service	- Acquired a fintech start-up, Coins.ph (Philippines), for \$72 million in 2019 - Acquired a majority stake in a fintech start-up, WePay (Viet Nam), in 2020 to secure an e-wallet licence and to expand in that host country	- Through its venture fund, Go Ventures, invested in 24 start-ups in the home country and in other ASEAN Member States - Joint venture with Gogoro (Taiwan Province of China) in 2022 to build EV infrastructure - Collaborated with Gogoro in 2021 for a battery-swapping ecosystem.
Grab (Singapore)	Operates in Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, Thailand and Viet Nam	- Acquired a 16.3 per cent stake in Bank Fama International (Indonesia) in 2022 - Acquired a grocery chain, Jaya Grocer Holdings (Malaysia), and a majority stake in a unicorn, OVO (Indonesia), in 2021 to expand in that host country - Acquired a 4.6 per cent stake in Elang Mahkota Teknologi (Indonesia), the largest shareholder of Bukalapak (Indonesia), in 2021 to form an alliance to focus on digitalization of MSMEs in Indonesia - Acquired Uber's South-East Asia businesses in 2018.	- Partnership with Mastercard (United States) in 2021 to advance digital and financial business in South-East Asia - Partnership with Tri Adi Bersama (Indonesia), a logistics start-up, in 2021 using Grab's digital application to reach more customers throughout Indonesia - Partnership with Hyundai Motor Group (Republic of Korea) in mobility services in 2018; In a new phase in 2021, focused on accelerating EV adoption in South-East Asia. - Partnership with Unilever (United Kingdom) in 2020 to cover Grab's digital services in Indonesia, Malaysia and Philippines - Partnership with the Malaysian Government in 2020 to accelerate Malaysian business recovery cashless adoption (e-Pinjana initiative) through use of e-wallet, GrabPay.
Air Asia Digital (Malaysia)	Expanded operations in Thailand	Acquired the Thailand business of Gojek (Indonesia) in 2021	- Partnership with Trip.com Group (China) in 2020 to provide services such as flights, hotels, airport transfers and travel activities - Partnership with Turkish Airlines in 2021 for cross-promotion of flight inventory with AirAsia flights
J&T Express (Indonesia)	- Presence in Cambodia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam. - In 2022, opened its largest transit centre in Viet Nam and a second sorting hub in Singapore	Acquired the express business of Best (China) in China in 2021 for \$1.1 billion	Partnership with e-commerce platform Shopee (Singapore) in 2019 to strengthen operations for online retailers in the Philippines

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Annex table 2.4. Cross-border activities by unicorns in ASEAN, 2019–2022 (Selected cases) (Continued)

Unicorns	FDI activities	M&As	Strategic alliances and other investment activities
Lazada (Singapore)	• Presence in Indonesia, Malaysia, the Philippines, Thailand and Viet Nam. • Expanding cross-border operations for international brands and merchants to expand reach to consumers in South-East Asia since 2019	..	• Partnership with a fintech, OVO (Indonesia), in 2020 on an e-wallet for Lazada's customers in Indonesia • Partnership with Unilever (United Kingdom) for fast-moving consumer goods in the online retail market in South-East Asia • Identifies and nurtures the top 300 brands among all cross-border sellers in countries where the company operates
Hyalroute (Singapore)	• Presence in Cambodia, the Lao People's Democratic Republic, Malaysia, Myanmar and the Philippines • Invested an initial \$500 million in 2021 to complete a portion of a Philippine Internet backbone	..	..
Traveloka (Indonesia)	Presence in Malaysia, the Philippines, Singapore, Thailand and Viet Nam	Acquired three online travel agencies in 2018 to expand in the region: Pegipegi (Indonesia), Mytour (Viet Nam) and Travel Book (Philippines)	• Partnership with SCB 10X, the venture capital subsidiary of Siam Commercial Bank (Thailand), in 2021 to expand fintech business in Thailand • Collaborated with the Singapore Tourism Board in 2019 to promote Singapore to visitors from Indonesia, Malaysia, the Philippines, Thailand and Viet Nam
Ovo (Indonesia) ^b	..	..	Partnership with Lazada (Singapore) in 2020 on application of Ovo's e-wallet on Lazada's platform for Indonesian customers
Quest Global Services (Singapore)	Subsidiary Synapse (United States) has design centres in Malaysia and Viet Nam	Acquired Synapse (United States) in 2021 to provide design and consulting services and software development for the semiconductor industry	Partnership with NXP Semiconductors (Netherlands) in 2021 to deliver software support Partnership with Bombardier Transportation (Canada) in 2020 to develop engineering capabilities for the rail industry ^c
Acronis (Singapore)	..	Acquired Cyberlynx (Israel), which specializes in security audits, pen-tests, cyberforensics and training services, in 2020	Partnership with ZNet Technologies (India), a leading cloud services distributor, in 2021, to expand distribution of Acronis cyberprotect cloud services in Southeast Asia (e.g., Indonesia, Malaysia, the Philippines and Thailand)

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Annex table 2.4. Cross-border activities by unicorns in ASEAN, 2019–2022 (Selected cases) (Continued)

Unicorns	FDI activities	M&As	Strategic alliances and other investment activities
Kredivo (Indonesia)	• Presence in Viet Nam • Joint venture with Phoenix Holdings (Viet Nam) in 2021 on “buy now, pay later” service in Viet Nam	..	• Partnership with Standard Chartered Bank (United Kingdom) in 2021 for to support e-commerce business growth • Collaborate with Samsung Electronics (Republic of Korea) in 2021 on instant credit solution for Samsung customers
Momo (Viet Nam)	..	..	Partnership with Uber (United States) in 2017 for Uber riders to pay for trips using MoMo's e-wallets
Edotco (Malaysia)	Presence in Cambodia, the Lao People's Democratic Republic, Myanmar and the Philippines Expanded into the Philippines in 2019 through a joint venture with ISOC Infrastructure (Philippines)	..	Partnership with Metfone, a leading mobile operator in Cambodia, in 2021 to deploy new telecommunication sites to expand Metfone's 2G, 3G and 4G coverage in Cambodia
VNG (Viet Nam)	Invested \$22.5 million in 2022 in Funding Societies (Singapore), a digital capital funding platform for SMEs in South-East Asia that operates in Singapore and Indonesia.	..	..
Advance Intelligence Group (Singapore)	Presence in Indonesia, Malaysia, Philippines, Thailand and Viet Nam. Advance Intelligence Group is the parent company of buy-now-pay-later platform Atome (Indonesia) and Indonesian lending platform Kredit Pintar.	Atome Financial acquired PT Mega Finadana Finance in Indonesia in 2021. The acquisition helps Atome Financial expand in Indonesia.	Partnership with Standard Chartered in 2021 to deliver financial services in Asia (including Atome's buy-now-pay-later service rolled out in Indonesia, Malaysia, Singapore and Viet Nam)
Mynt (Philippines)	..	..	Partnership with an insurtech start-up, Igloo (Singapore), in 2021 on online shopping insurance
V3 Group (Singapore)	..	..	Partnership with global cybersecurity platform Istari International (United Kingdom) and cybersecurity service provider Ensign InfoSecurity (Singapore) in 2020 to strengthen infrastructure for digital financial services
Ascend Money (Thailand)	Presence in Cambodia, Indonesia, Malaysia, Myanmar, the Philippines and Viet Nam	..	Partnership with Omise (Japan/Thailand) in 2019 to integrate TrueMoney Wallet into e-commerce platforms
Secretlab (Singapore)	..	..	Market presence in Indonesia, the Philippines and Thailand on gaming chairs

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Annex table 2.4. Cross-border activities by unicorns in ASEAN, 2019–2022 (Selected cases) (Continued)

Unicorns	FDI activities	M&As	Strategic alliances and other investment activities
Carsome (Malaysia)	Presence in Indonesia, Thailand, Singapore. Invested in Universal Collection (Indonesia), an offline car and motorcycle auction service company, in 2021 to expand in Indonesia.	Acquired a 19.9 per cent stake in iCar Asia Ltd. (Singapore/Malaysia) in 2021.	..
Trax (Singapore)	Presence outside ASEAN (e.g., China, Americas, EMEA)	Acquired Planorama (France) in 2019, Survey.com (United States) and Qopius (France) in 2020 to strengthen markets and technical capabilities.	Partnership in 2021 with Stor.ai (Israel and United States), a digital commerce solution for groceries, and Google.com (United States) for market reasons. Partnership with Project44 (United States), a supply chain platform for shippers and logistics service provider, in 2022.
Akulaku (Indonesia)	Presence in Malaysia, Philippines, Viet Nam	..	Partnership with Igloo (Singapore) and Union Bank of the Philippines in 2020 to offer micro-insurance policies.
Carousell (Singapore)	Presence in Indonesia, Malaysia, Philippines (and other Asia Pacific countries)	M&A with 701Search (owned by Telenor Group (Norway)) in 2019. The M&A provides access to 701Search online marketplaces (e.g., Mudah in Malaysia, Cho Tot in Viet Nam and Onekyat in Myanmar). OLX Group (Netherlands) invested \$56 million for a 10 per cent stake in Carousell.	Partnered with mMobi (India) to monetize ad formats in ASEAN in 2021. Partnership with Gogox (Hong Kong, China), an app-based logistics platform, targeting small local businesses. Collaborate with MDEC (Malaysia) in 2020 to support Malaysian MSMEs under the Penjana e-commerce initiative.
Bolttech (Singapore)	Presence in Indonesia, Malaysia, Philippines, Thailand, Viet Nam	Acquired I-surance (Germany) in 2021 to strengthen international expansion to 26 markets across North America, Asia and Europe.	Partnership with Lazada Thailand in 2021 to launch mobile protection plans on Lazada's virtual mall. Partnership with Tiki (Viet Nam), an e-commerce platform, in 2021 to reach out to customers in Viet Nam. Expansion of partnership with Samsung (Republic of Korea) in 2021 on device protection for the Malaysian market.
Carro (Singapore)	Presence in Indonesia, Malaysia, Thailand	Acquired Jualo (Indonesia), an e-classified marketplace, in 2019.	Collaborate with Tokopedia (Indonesia) in 2021 for selling certified use cars on Tokopedia platform.
Flash Express (Thailand)	Presence in Lao People's Democratic Republic and the Philippines. Joint venture with AIF Group (Lao People's Democratic Republic) in 2021 to expand logistics in that host country.	..	..

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Annex table 2.4. Cross-border activities by unicorns in ASEAN, 2019–2022 (Selected cases) (Continued)

Unicorns	FDI activities	M&As	Strategic alliances and other investment activities
JD.ID (part of JD.Com (China))	JD.com (China) expands in Indonesia through its spin-off, JD.ID (Indonesia).	..	Collaborate with Bank Negara Indonesia to launch BNI JD.ID credit card in 2021. Partnership with TECHNO, a subsidiary of Shenzhen Transsion Holding (China), in 2021 on smart terminals.
Justco (Singapore)	Presence in Indonesia, Thailand and locations outside ASEAN	..	..
Matrixport (Singapore)	..	..	Market presence outside ASEAN. Partnership with foreign companies to increase payment services efficiency (e.g., Circle (United States, Simplex (Israel) and CoinEx (Hong Kong, China).
Moglix (Singapore)	..	..	Presence outside ASEAN
Ninja Van (Singapore)	Presence in Indonesia, Malaysia, the Philippines, Thailand and Viet Nam	DPDgroup (France) increased its stake to 40 per cent in 2021	Partnership with Grab (Singapore) Collaborated with Google Cloud (United States) in 2022 to improve website traffic efficiency Partnership with Ministop (Philippines) in 2021 to expand retail footprint in the host country
NIUM (Singapore)	Presence outside ASEAN (e.g., India, United States)	Acquired Ixaris (United Kingdom) and Wirecard Forex India in 2021 to improve payment system efficiency	Partnership with Krungsri (Bank of Ayudhya) (based in Thailand) in 2021 to support Krungsri's international transfer offerings to customers
PatSnap (Singapore)	Presence in outside ASEAN	..	..
PropertyGuru (Singapore)	Presence in Indonesia, Malaysia, Thailand and Viet Nam	Acquired REA Group (Singapore) in 2021, which includes platforms such as iProperty.com.my and Brickz.my in Malaysia and thinkofliving.com and Parkard.com in Thailand Acquired MyPropertyData (Malaysia) in 2021	
One Championship (Singapore)	..	..	Partnerships with leading global brands including JBL, Red Bull, Lazada, Foodpanda, Hugo Boss, Harvey Norman, Secretlab, California Fitness, Kredivo, Reckitt Benckiser and Unilever to leverage multiple platforms for synergy between the business, martial arts and e-sports communities

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Annex table 2.4. Cross-border activities by unicorns in ASEAN, 2019–2022 (Selected cases) (Concluded)

Unicorns	FDI activities	M&As	Strategic alliances and other investment activities
Xendit (Indonesia)	Presence in the Philippines Invested in DragonPay (Philippines), a payment platform, in 2021	..	Partnership with Mynt's GCash (Philippines) in 2022 to provide payment solution to customers in the Philippines Partnership with Ecwid (United States) in 2021 to offer new ways to sell online and enable sellers to accept online payments
Ruangguru (Indonesia)	Presence in Thailand (StartDee) and Viet Nam (KienGuru)	..	..
Lineman Wongnai (Thailand)	..	Merger in 2020 between delivery app Line Man, a unit of Japanese chat app LINE Corp, and Wongnai (Thailand), an online food directory platform	Collaborate with Huawei (China) in 2020 to power Lineman Wongnai apps

Source: ASEAN Investment Report 2022 research, based on data from Crunchbase, company websites, industry reports, Nikkei Asia and media.

^a Gojek merged with another unicorn, Tokopedia, in May 2021 to form GoTo.

^b Grab (Singapore) acquired a majority stake in the company.

^c <https://www.railway-technology.com/news/bombardier-partners-with-quest-global-for-engineering-capabilities>.

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