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ASEAN Investment Report 2024

ASEAN Economic Community 2025 and Foreign Direct Investment

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United Nations

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ASEAN Investment Report 2024

ASEAN Economic Community 2025 and Foreign Direct Investment

The ASEAN Secretariat

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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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The map in this publication is only indicative and is not drawn to scale.

FOREWORD

In an era marked by shifting global economic dynamics, including the redirection of investment flows and the diversification of supply chains to mitigate geopolitical risks, ASEAN has consistently proven its resilience and appeal as a leading destination for Foreign Direct Investment (FDI). For three consecutive years, ASEAN has maintained its position at the top of FDI recipients among developing regions. In 2023, FDI inflows to ASEAN reached another historical level of US$230 billion, despite an overall decline in global FDI flows.

The shifting patterns and priorities in global FDI, particularly the growing focus on digital and green technologies, are also strongly manifest in the region. Major international investment trends in 2023 underscored ASEAN's rising prominence as as a global hub for financial and digital services as well as manufacturing. This is evident from the increasing investor interest in these sectors as well as robust investments in renewable energy (RE), electric vehicle (EV), and digital economy in recent years. Over the past decade, the FDI from Multi-National Enterprises (MNEs) in the manufacturing sector has significantly advanced the region's economic integration, technology upgrading, and sustainability agenda.

All these developments and trends are reflected in the ASEAN Investment Report 2024. Arriving at a critical moment as the ASEAN Economic Community (AEC) 2025 Blueprint approaches its final year of implementation, the Report provides a thorough assessment of the shifting investment landscape within ASEAN in the past decade. It highlights the substantial growth of FDI performance in the region during this period, along with key regional policy developments that have driven this progress. It also identifies areas where overall intra-ASEAN investment can still be improved.

Going forward, this Report presents specific policy recommendations for the post-2025 period. It emphasises the need to address existing implementation gaps and tackle issues affecting the regional investment climate in various domains, including trade, services, digital, public-private partnerships, skills and technology. Additionally, the Report underscores the importance of enhancing the alignment between the AEC and the Sustainable Development Goals (SDGs), including the focus on gender development and inclusivity.

As the global economy continues to evolve with potentially more disruptions and uncertainties, ASEAN stands ready to maintain and enhance the region's attractiveness as a single FDI destination. It is increasingly crucial to not only attract more FDI but also focus on investments that foster regional integration, resilience, and sustainability. Such efforts will further solidify the region's position as a global value chain hub. I trust that policymakers and business stakeholders will find this Report instrumental in advancing a sustainable investment landscape in ASEAN and beyond.

Dr. Kao Kim Hourn
Secretary-General of ASEAN

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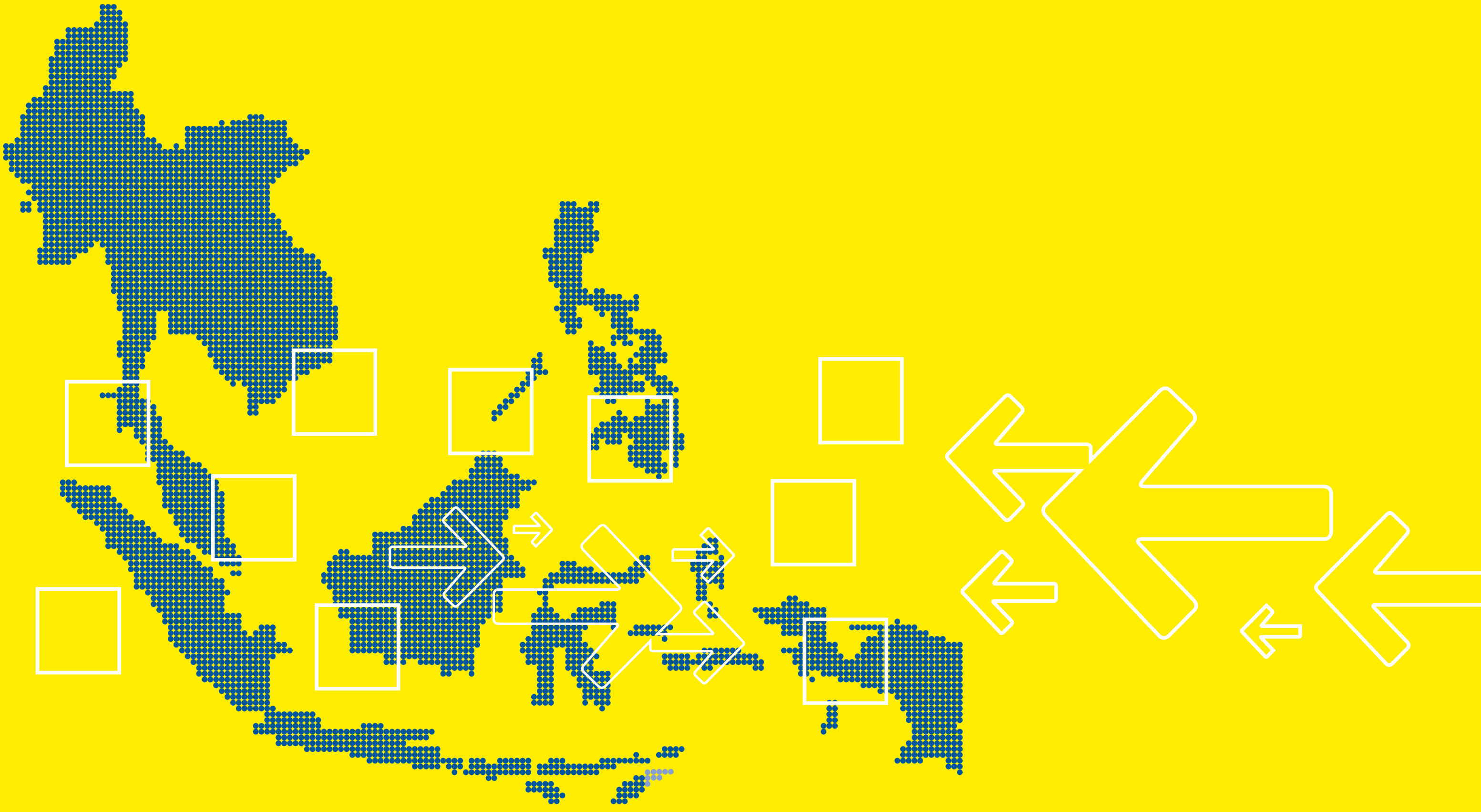
ABBREVIATIONS

ACIA	ASEAN Comprehensive Investment Agreement
ACRF	ASEAN Comprehensive Recovery Framework
AEC	ASEAN Economic Community
AFAS	ASEAN Framework Agreement on Services
AIFF	ASEAN Investment Facilitation Framework
AIR	ASEAN Investment Report
ASEAN	Association of Southeast Asian Nations
ASFF	ASEAN Services Facilitation Framework
ASSIST	ASEAN Solutions for Investments, Services and Trade
ASW	ASEAN Single Window
ATIGA	ASEAN Trade in Goods Agreement
ATISA	ASEAN Trade in Services Agreement
ATFF	ASEAN Trade Facilitation Framework
BEPS	Base Erosion and Profit Shifting (project)
BITs	bilateral investment treaty
BRI	Belt and Road Initiative
CAGR	compound annual growth rate
CLMV	Cambodia, the Lao People's Democratic Republic, Myanmar, Viet Nam
DEFA	Digital Economy Framework Agreement
EU	European Union
EV	electric vehicle
FDI	foreign direct investment
FIT	feed-in tariff
FTA	free trade agreement
GDP	gross domestic product
GW	gigawatt
HEV	hybrid electric vehicle
IEA	International Energy Agency
IIA	international investment agreement
IPF	international project finance
IRENA	International Renewable Energy Agency
Lao PDR	Lao People's Democratic Republic
LDCs	least developed countries
M&As	mergers and acquisitions

MDB	multilateral development bank
MNE	multinational enterprise
MSMEs	micro, small and medium-sized enterprises
MW	megawatts
OEM	original equipment manufacturer
PCB	printed circuit board
PPP	public-private partnership
R&D	research and development
RCEP	Regional Comprehensive Economic Partnership
SDGs	Sustainable Development Goals
SEZ	special economic zone
SMEs	small and medium-sized enterprises
SUV	sports utility vehicle
TIP	treaty with investment provisions
UNCTAD	United Nations Trade and Development
WIR	World Investment Report

OVERVIEW



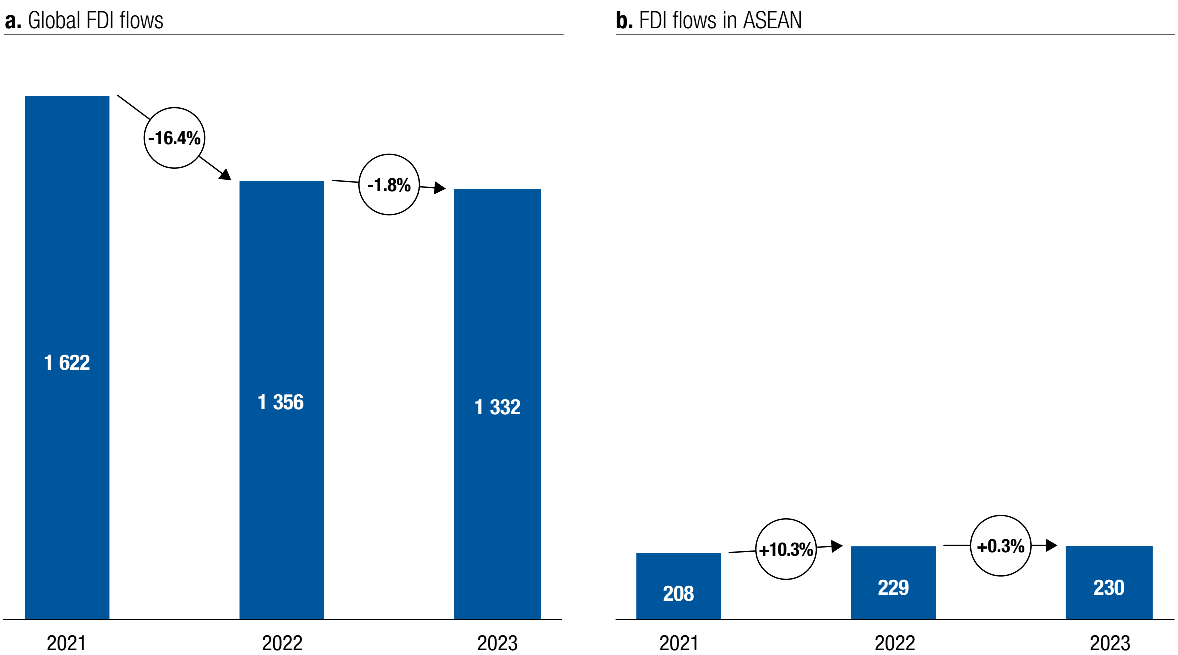
OVERVIEW

RECENT FDI TRENDS IN ASEAN

Foreign direct investment (FDI) inflows to ASEAN reached a record $230 billion in 2023 (figure 1). The increase was marginal – less than 1 per cent – but it occurred despite a 10 per cent decline in global FDI. The third consecutive annual increase solidified ASEAN's position as the largest FDI recipient among developing regions, accounting for 17 per cent of global inflows, up from 16.5 per cent in 2022.

In 2023, the top five industries accounted for 86 per cent of inflows. FDI in financial activities (including banking, insurance, investment funds, and finance functions of industrial multinational enterprises or MNEs) increased by 53 per cent to $92 billion. Investment in high value-added services, including professional, scientific and technical (research and development) activities, rose from $0.3 billion to $21 billion. Investment in knowledge-based and higher value-added activities is supporting industrial upgrading in several Member States.

Figure 1. Global FDI flows and in ASEAN, 2021–2023 (Billions of dollars and per cent)



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

Investment in manufacturing, wholesale and retail trade, and transportation and storage declined. However, manufacturing remained important with more than $50 billion of FDI inflows, or 22 per cent of the total. Moreover, the number of new greenfield investment project announcements in manufacturing more than doubled in 2023.

Investment from the top 10 sources constituted 80 per cent of total FDI in 2023, up from 75 per cent in 2022, underscoring the critical role of these investor home countries. The United States and China were particularly prominent, with flows from the United States more than doubling to $74 billion, representing a third of all FDI in the region. Intraregional investment fell by 35 per cent to $21.9 billion, lower than the 2020 pandemic level of $22.4 billion.

Investments by Chinese enterprises are increasingly shaping the regional FDI landscape. FDI flows from China are growing especially in manufacturing, with an average annual growth rate of 33 per cent since 2020. More first-time Chinese investors along with existing ones are expanding in ASEAN in industries such as automotive, electronics and renewables.

Another transformative trend is the growth of investment in the renewable energy supply chain. This includes investments in upstream (including mining and processing of critical minerals), midstream (component manufacturing) and downstream (renewable energy generation). During 2020–2023, renewable energy-related industries attracted an average of more than $27 billion annually in announced greenfield investment projects, about 25 per cent of the total.

Investment spending in renewable energy generation rose from an annual average of $11 billion in 2015–2019 to $14 billion in 2020–2023. About two thirds was in solar and wind power. Since 2020, the number of international investment projects in renewable energy generation increased by 15 per cent per year on average in ASEAN, compared to 11 per cent globally.

AEC 2025: INVESTMENT POLICY DEVELOPMENTS

The ASEAN Economic Community (AEC) Blueprint 2025 has been instrumental in improving the investment policy environment across the ASEAN region. It has done so (i) through the implementation of regional agreements and frameworks aimed at enhancing economic integration and stimulating growth in strategic sectors, (ii) through numerous national investment policy measures aimed at promoting and facilitating FDI, and (iii) through agreements and partnerships with third countries. Investors and business associations acknowledge that AEC 2025 has significantly contributed to enhancing the investment climate.

Key regional policy developments affecting FDI have included the ASEAN Comprehensive Investment Agreement (ACIA), the ASEAN Trade in Goods Agreement (ATIGA), the ASEAN Framework Agreement on Services (AFAS) and the ASEAN Trade in Services Agreement (ATISA), which collectively foster a more integrated and efficient regional market. Trade and investment have been streamlined through the ASEAN Trade Facilitation Framework, the ASEAN Single Window and the ASEAN Investment Facilitation Framework. Usage of the Single Window has accelerated in recent years, facilitated by the electronic certificate of origin and the ASEAN Customs Declaration Document.

Implementation efforts and broader investment policymaking at the national level has further contributed to liberalization and facilitation. During the AEC 2025 period, ASEAN Member States collectively adopted 149 new investment policy measures, a significantly higher number than in the period before. Over 90 per cent of these measures were favourable to investors, more than the global average of 77 per cent. Almost 40 per cent of measures eased FDI or ownership restrictions, compared to a 26 per cent global and developing-country average.

During the AEC 2025 period, ASEAN and its Member States signed, upgraded and expanded investment treaties and free trade agreements with investment chapters. Individual Member States added 42 bilateral investment treaties to the stock of more than 400. At the regional level, five agreements were concluded with Dialogue Partners. The implementation of the Regional Comprehensive Economic Partnership agreement further adds to the attractiveness of ASEAN for FDI. Together, these agreements are helping the region advance the objective of a global ASEAN.

Although progress has been made on 96 per cent of the action lines under the AEC 2025 blueprint and the investment policy climate has been strengthened significantly, important gaps remain. The coverage of the ACIA remains limited to specific sectors. Few advancements have been made on reducing reservations. The mitigation of investment impediments is progressing, but AIFF implementation and investment facilitation efforts – including through digital tools – are uneven. In the area of investment agreements, the focus has been on expanding treaty networks, contrasting other regions advocating treaty reforms. Given the importance for the investment climate of regulatory and administrative streamlining in trade, services, standards, and other policy areas affecting international business, links with other sectoral bodies, advancing the implementation of the AEC agenda can be strengthened.

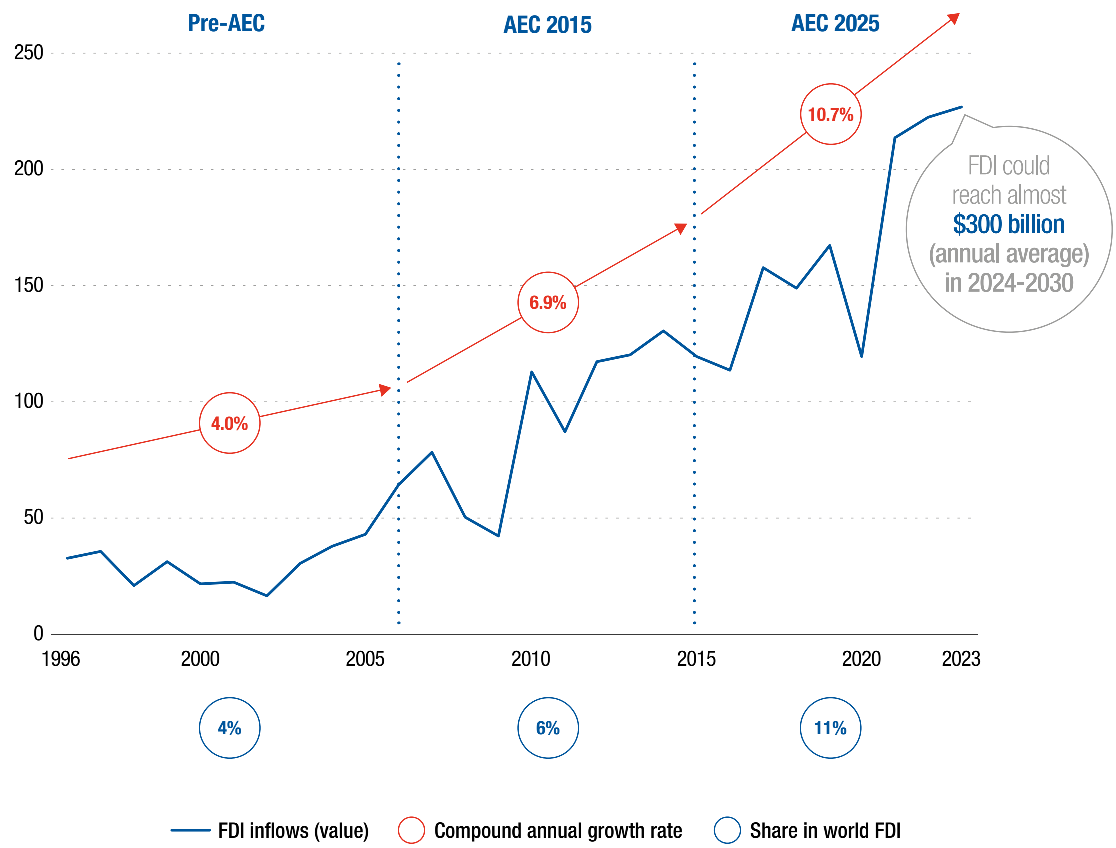
This AEC-FDI assessment has not identified any AEC policies affecting FDI in ASEAN that incorporates a gender development and inclusion gap (GDIG) perspective. This is an area ASEAN could consider developing in the next AEC programme, and in particular to specifically include GDIG principles in regional FDI policies and measures. The ACIA framework could also adopt GDIG principles to promote inclusive and gender development across the region. In addition, FDI policies could consider supporting advancing women in higher skilled jobs and in supervisory roles to close the development gap.

AEC 2025: FDI IMPACT

Under the AEC Blueprint 2025, ASEAN has witnessed robust growth in FDI (figure 2). Annual FDI inflows averaged $170 billion during the AEC 2025 period (2016-2023), almost double the $92 billion annual average seen during the previous AEC period (2006-2015). Annual average FDI inflows in the past three years (2021–2023) rose to $220 billion. The rapid rise in inflows pushed FDI stock in the region to $3.9 trillion in 2023, from $1.7 trillion in 2015.

ASEAN's share of global FDI increased significantly, from an average 6 per cent during AEC 2015 to 11 per cent during AEC 2025. Over the past three years (2021–2023), ASEAN attracted 15 per cent of world inflows. ASEAN's share in global FDI stock increased from 6.8 to 8.0 per cent.

Figure 2. Robust FDI performance during AEC 2025 (Billions of dollars, per cent)



Source: ASEAN Investment Report 2024 research.

Manufacturing has been a significant driver of FDI growth in the region. FDI in manufacturing doubled during the AEC 2025 period, with a particularly strong rebound following the pandemic. In 2022, manufacturing FDI reached an all-time high of $73 billion, confirming ASEAN's role as a global manufacturing hub. The region's ability to attract manufacturing investments is the result of national and regional policy efforts, external factors such as the global supply chain restructuring efforts of MNEs, and internal advantages including a growing industrial base and strong economic fundamentals.

While cross-border investment in industry has been strong, the growth of international project finance in infrastructure has been uneven. The growth in the number of infrastructure projects since 2015, at 19 per cent, has barely exceeded the developing-country average. Only the renewable energy sector has seen significantly faster growth in ASEAN than elsewhere, with the annual number of installations now more than 50 per cent higher than in 2015. Still, this implies only a modest annual growth rate, well below the level required to meet energy transition investment needs.

The top 10 largest investors continued to account for a high share – more than 70 per cent – of FDI inflows during the AEC 2025 period. Investment from key Dialogue Partners, including the United States, China, and the European Union, has continued to rise. FDI flows from the United States more than doubled during AEC 2025, driven by investments in finance and manufacturing, particularly in semiconductors and high-tech industries. FDI from China surged, with a nearly 10-fold increase of manufacturing FDI over the AEC 2025 period, highlighting the growing importance of Chinese enterprises in ASEAN's industrial landscape.

Intraregional investment has remained an important source of FDI in the two AEC periods. However, the pace of intra-ASEAN investment growth has slowed, with a compound annual growth rate of -2.3 per cent during AEC 2025 as compared with 12.5 per cent during AEC 2015. The share of intraregional FDI in the total remained stagnant at around 14 per cent, reflecting the success of the region in attracting investment from outside the region.

ASEAN hosts affiliates of more than 80 per cent of Global Fortune 500 companies, and more than 5,000 MNEs operate regional headquarters in the region. Regional networks of MNEs are a significant factor contributing to supply chain integration across the region's major export industries. Business surveys indicate that more firms plan to invest or expand in ASEAN, citing above-average profitability, expanding markets and benefits from regional integration. The investment outlook for the next decade to 2035 is promising. FDI inflows to the region could exceed an annual average of over $300 billion in 2024–2030.

AEC 2025: FDI, INDUSTRIAL DEVELOPMENT AND REGIONAL INTEGRATION

FDI has played an important role in the growth of export industries and strategic sectors in ASEAN. Over the AEC 2025 period (2016-2023), ASEAN has witnessed a surge in FDI in key sectors including electronics, semiconductors, automotive, and the emerging electric vehicle (EV) ecosystem, helping the region to solidify its position as a global manufacturing hub. Expanding supply chain linkages in these industries, combined with investments in physical and digital connectivity, have further enhanced the contribution of FDI to regional integration.

FDI in electronics and semiconductors has been a major source of industrial development and regional supply chain development. Average annual greenfield investment announcements in the semiconductor industry more than doubled during AEC 2025 to $5.6 billion, compared to $2.2 billion during AEC 2015. Investment in electronic components grew from $2.5 billion to $4.6 billion. The two industries account for almost 10 per cent of total announced greenfield investments. The world's largest semiconductor MNEs are in ASEAN; all of the top 25 operate in the region, many in multiple Member States. Suppliers and contract manufacturers have also continued to invest, strengthening the region's interconnected semiconductor ecosystem.

The automotive sector has expanded and transformed through FDI. Annual average announced greenfield investment in automotive production during AEC 2025 rose to $3 billion, from $1.9 billion during AEC 2015, with most of the growth related to investment in the EV supply chain, including critical minerals, processing, battery and EV production. Chinese and Korean companies have increasingly played a key role in expanding EV production. FDI in EVs is catalyzed by ASEAN's regional cooperation efforts, including the adoption of the Declaration on Developing a Regional Electric Vehicle Ecosystem.

International investment in the digital economy – in e-commerce, fintech, and digital infrastructure – has continued to rise. Annual announced greenfield investment in communication, data processing and hosting rose more than five-fold to $4.4 billion during AEC 2025, with particularly rapid growth since 2020. Digital infrastructure such as 5G networks and data centres provide the backbone for the growth of the digital economy, Industry 4.0 development and enhanced regional connectivity.

TOWARDS AEC 2035: AN FDI PERSPECTIVE

The analysis in this report of the investment policy developments spurred by the AEC 2025 Blueprint has indicated that several priorities remain on the agenda, including the further reduction of formal and informal barriers to investment, the strengthening of promotion efforts both across the board and in strategic industries, and the potential for increased coordination across sectoral workstreams in ASEAN.

Views from investors and business associations collected for this report confirm these priorities, highlighting the need to (i) address implementation gaps on liberalization and investment facilitation, (ii) address concerns affecting investment beyond the investment pillar of AEC in areas such as trade, services, digital, public-private partnerships, skills and technology, (iii) focus on measures that most affect the ability of firms to operate across borders within ASEAN, including non-tariff barriers, customs procedures and harmonization of standards, and (iv) consider practical tools to facilitate cross-border payments, trade financing and blended finance arrangements (e.g. regional digital platforms).

The assessment of the region's FDI performance under AEC 2025 – captured in the AEC FDI scorecard (table 1) – provides a perspective on progress across each of the five pillars of the AEC and on options for future policy orientation:

Regional integration – FDI and the presence of global MNEs have made a major contribution to the growth and development of regional production networks and supply chains, especially in export-oriented manufacturing industries. At the same time, there is room for faster growth of intraregional investment, possibly supported by outward investment promotion mechanisms.

Competitiveness – The high share of FDI in manufacturing and the rapid growth of investment in strategic industries have provided a major boost to the region's competitiveness and firmly established ASEAN as a global manufacturing hub. Harnessing FDI to further strengthen this role and broaden it to a wider range of emerging industries should remain a major component of the future agenda.

Table 1. AEC 2025 FDI scorecard

Pillars	FDI indicators	AEC 2025 trends
Pillar 1: A Highly Integrated and Cohesive Economy	Intra-regional FDI	Growth of intra-ASEAN FDI slowed from 7 per cent on average during AEC 2015 to less than 1 per cent during AEC 2025. The share of intraregional investment stagnated at 14 per cent (period average), down from 16 per cent.
	Regional value chain intensity	Regional value chain intensity increased, especially in strategic sectors such as semiconductors. ASEAN has an above average backward participation in global value chains and has increased its forward participation.
Pillar 2: A Competitive, Innovative and Dynamic ASEAN	Overall FDI growth	The rate of growth of FDI inflows increased to 9.3 per cent per year on average, from 6.3 per cent during AEC 2015. Total FDI inflows more than doubled to $220 billion. Global FDI in the same period declined.
	FDI in high value-added services	FDI in professional, technical, and scientific services, including R&D, grew by 56 per cent during AEC 2025.
	FDI in industry/manufacturing	The share of FDI in manufacturing increased from 23 per cent to 26 per cent during AEC 2025.
	FDI in strategic sectors	Annual average FDI grew by 80 per cent in electronics, 156 per cent in semiconductors, 59 per cent in the automotive sector, and 92 per cent in the renewable energy supply chain.
Pillar 3: Enhanced Connectivity and Sectoral Cooperation	FDI in physical infrastructure	The number of internationally financed projects in infrastructure increased by 34 per cent from 2015 to 2023. However, growth has been slower than the average for developing countries (40 per cent).
	FDI in digital infrastructure	International investment projects in digital infrastructure and services (communications networks, datacenters, hosting and services) grew nearly six-fold during AEC 2025.
Pillar 4: A Resilient, Inclusive, People-Oriented and People-Centered ASEAN	Geographic distribution of FDI	The concentration of FDI in the region has remained high. The average share of the top 3 recipients (Singapore, Indonesia, and Malaysia) increased from 75 per cent to 81 per cent during AEC 2025.
	SDG investment	Investment project numbers in SDG-related sectors grew by 29 per cent during AEC 2025. The average for developing countries remained stagnant. Projects in human capital sectors (health, education, water and sanitation) increased only slightly faster in ASEAN than elsewhere.
Pillar 5: A Global ASEAN	Share of global inflows	ASEAN's share of global FDI increased from 6 per cent during AEC 2015 to 11 per cent during AEC 2025.
	FDI from Dialogue Partners	The share of FDI inflows originating from major Dialogue Partners remained stable at just over 60 per cent during AEC 2025.

Source: ASEAN Investment Report 2024 research.

Connectivity – The interconnectedness of regional supply chains and the growth of investment in the digital economy have significantly enhanced regional connectivity. At the same time, there is room to further promote and facilitate international project finance in physical infrastructure.

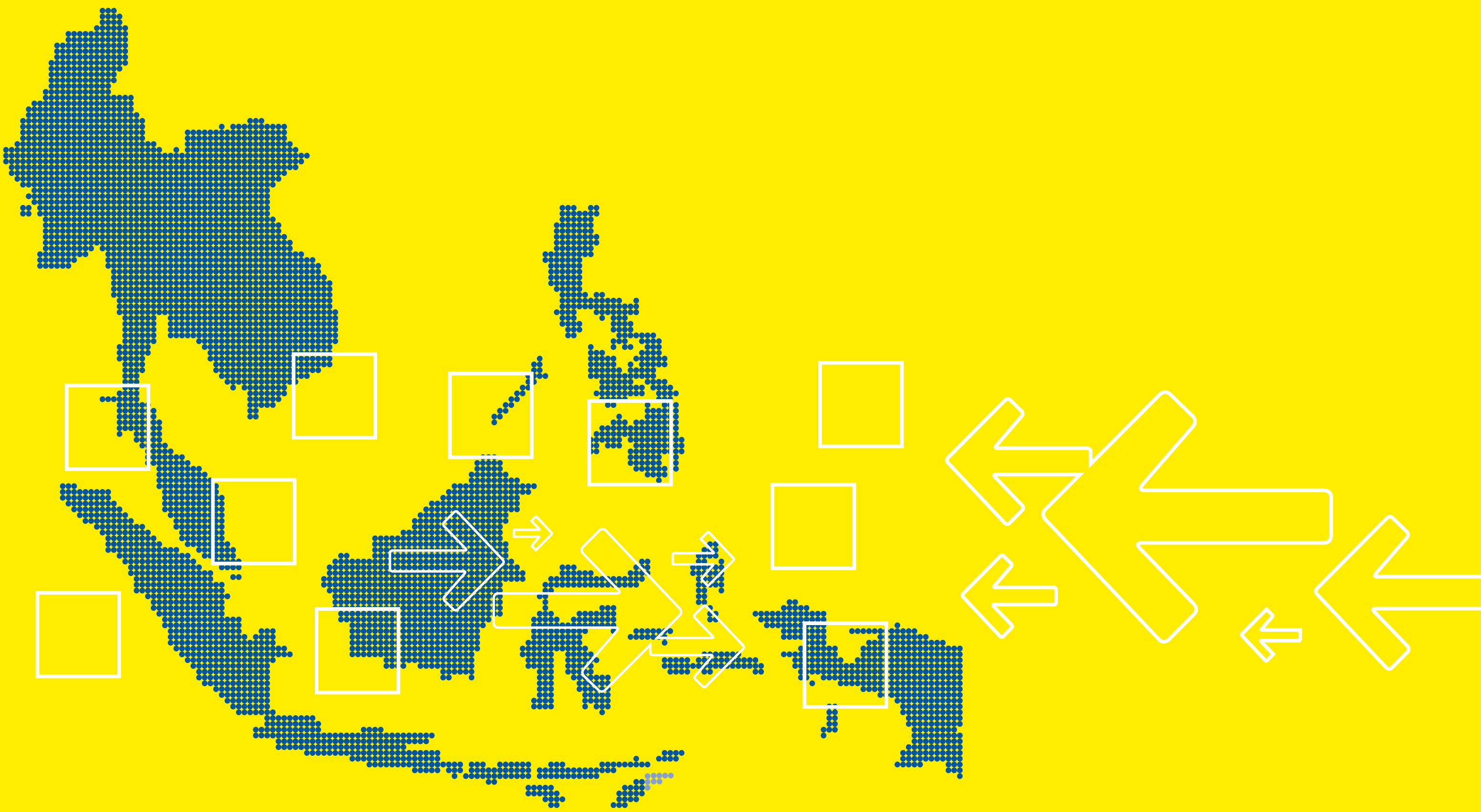
Inclusiveness – FDI flows within ASEAN remain concentrated in few economies; although this is driven in part by the hub function of Singapore, more distributed flows could benefit smaller economies and communities in the region. Furthermore, the growth of international investment in several sectors relevant to the Sustainable Development Goals, including water and sanitation, health, rural development, lags other developing countries.

Global ASEAN – The overall growth of FDI from outside the region and the share of ASEAN in global FDI point to rapid integration of the region in the global economy. The focus on Dialogue Partners contributes to continued concentration of the sources of FDI flows, which could be broadened to include further partner economies.

In conclusion, the post-AEC 2025 agenda should continue to leverage the symbiotic relationship between FDI, industrial development and regional integration. To maintain the FDI momentum achieved during AEC 2025, ASEAN needs to further deepen regional cooperation, develop human resources and skills for emerging industries, attract technology- and knowledge-oriented investment, advance industrial upgrading and strengthen public-private partnerships in industrial ecosystem development.

PART ONE

FDI AND MNE DEVELOPMENT IN ASEAN



Chapter 1

FDI trends and developments in ASEAN

1.1. INTRODUCTION

Global flows of foreign direct investment (FDI) in 2023 declined by 2 per cent to $1,332 billion, for a second consecutive year of decline. Excluding flows to conduit countries, global inflows tumbled by 10 per cent (*WIR 2024*). Inflows to developing regions fell by 7 per cent, to $867 billion. The downturn was widespread across most regions. Key reasons included concern about global economic uncertainties, inflationary pressures, geopolitical tensions and rising interest rates.

This chapter delves into trends in FDI and other modes of international investment in ASEAN (i.e. announced greenfield projects, international project finance, and cross-border mergers and acquisitions (M&As)). It also analyses the region's investment prospects and major developments shaping the FDI landscape, which have important implications for future FDI patterns and trends.

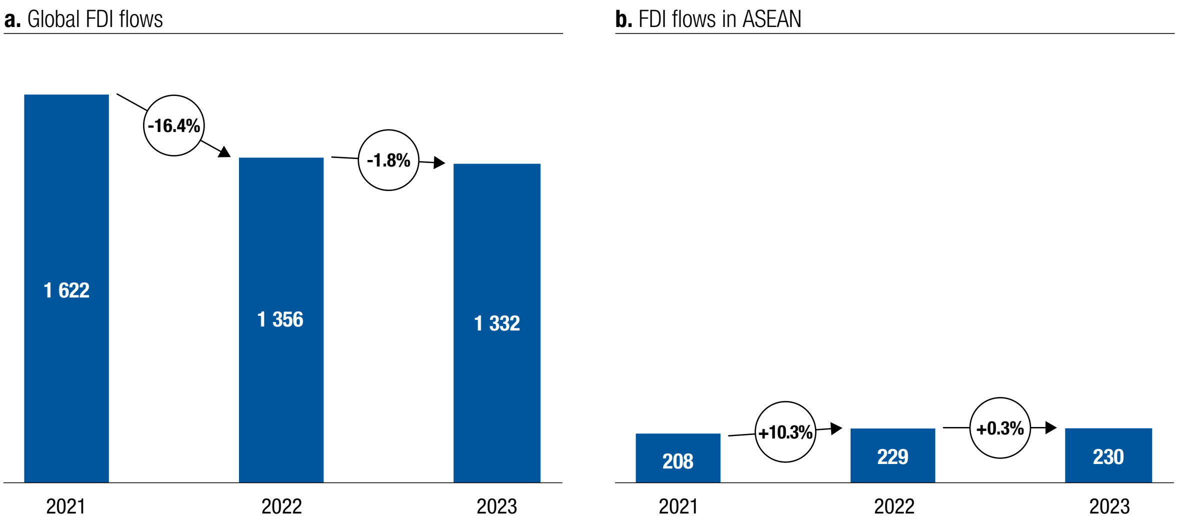
1.2. FDI TRENDS IN ASEAN

Against the decline in global FDI inflows, investment in ASEAN increased in 2023 but by less than 1 per cent, to $230 billion (figure 1.1). This nevertheless marked another record year and the third consecutive year of increase for the region.

Among developing regions, ASEAN remained the largest recipient of FDI. The region attracted 17 per cent of global FDI inflows, up from 16.5 per cent in 2022; its share has been growing each year since 2019. The region's FDI stock has risen by 56 per cent since 2014, from $2.5 trillion to $3.9 trillion in 2023 or from 6.9 per cent of global stock to 7.9 per cent in the same period. It has been pushed up by the robust growth since 2021, characterized by levels exceeding $200 billion annually.

Major factors underpinning the upward FDI trend have included growing investor interest in such key industries as finance and renewable energy, as well as in the development of the electric vehicle (EV) value chain and international supply chain restructuring. These factors reflect the underlying strength of the region as an important financial services and manufacturing hub, an improving investor perception to invest in ASEAN, and the expansion of investment opportunities.

Figure 1.1. Global FDI flows and in ASEAN, 2021–2023 (Billions of dollars and per cent)



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

International companies continued to invest in strengthening supply chain capacity in the region (*AIR 2023*). Other major developments, such as the significant rise of FDI from the United States and China, and growing investor interest in renewable energy, also contributed to the region's evolving investment landscape.

1.2.1. FDI by industry

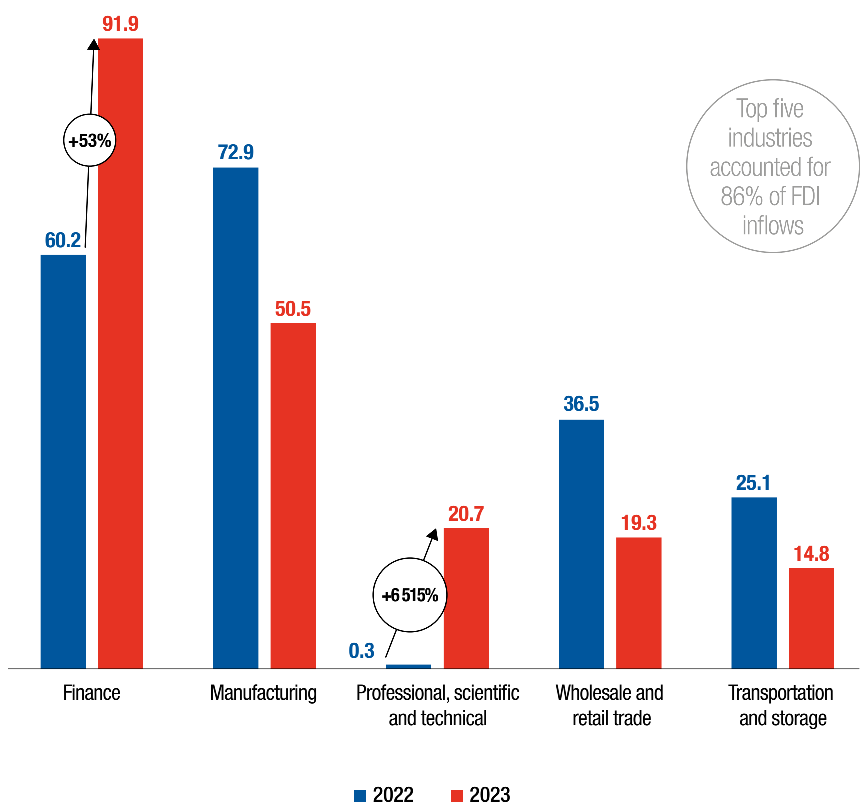
The top five industry recipients accounted for 86 per cent of inflows, with FDI in financial activities (including banking, insurance and finance functions of industrial MNEs and funds) rising the most in value, to $92 billion (+53 per cent). FDI in finance and in professional, scientific and technical (R&D) activities rose by $52 billion, $2 billion more than the combined investment in the other top three industries (manufacturing, wholesale and retail trade, and transportation and storage), which all saw declines (figure 1.2).

Professional, scientific and R&D activities saw the largest rise, from $0.3 billion in 2022 to $21 billion. Most R&D and innovation-related investments were concentrated in Singapore, with a few other ASEAN Member States also attracting this type of FDI (table 1.1). Multinational enterprises (MNEs) are giving more attention to investment in knowledge-based or high-value added activities, supporting the industrial upgrading efforts of some Member States. The challenge is to sustain this upward trend and to achieve a more widespread distribution of such investment across the region. Building relevant productive capacity, including upgrading skills, cultivating talent and developing human resources, are critical prerequisites. The significant rise in FDI in finance and in professional and administrative services in Singapore pushed up investment in these areas in the region (box 1.1).

Outside the top five industries, FDI also rose in the extractives industry (mainly in critical minerals) and in electricity generation. Another significant development propping up inflows is the 43 per cent increase (to $12 billion) in FDI in real estate, reflecting greater investor interest in the face of industrial growth and demand for residential, commercial and industrial parks. Investment in regional headquarters functions and financial holding entities continued to receive increasing attention (table 1.2), mirroring global trend (*WIR 2024*).

Although FDI in manufacturing declined, inflows remained high at more than $50 billion – $4 billion less than the combined inflows of the professional and R&D, wholesale and retail trade, and transportation and storage industries. Manufacturing switched places with finance as the largest recipient, but the two remained the largest industry recipients, accounting for 62 per cent of all FDI inflows, up from 58 per cent in 2022. Manufacturing remained an important industry recipient, which accounted for 66 per cent of all announced greenfield investment project values in ASEAN, up from 50 per cent in 2022. Announced greenfield manufacturing investment in ASEAN rose by 114 per cent in 2023, compared to a 74 per cent in developing economies.

Figure 1.2. ASEAN: Top 5 industry recipients, 2022–2023 (Billions of dollars and per cent)



Source: ASEAN Secretariat.

Table 1.1. ASEAN: R&D and innovation investment, 2023 (selected cases)

Company	Headquarters	Industry	ASEAN location	Remarks
Aon	United Kingdom	Management consulting services	Singapore	A climate innovation hub
Avantor	United States	Biotechnology, chemicals and pharmaceuticals	Singapore	Expansion of a manufacturing and control laboratory
AWS-IMDA	United States and Singapore	Technology	Singapore	A joint innovation centre with Singapore Government authority
Biotronik	Germany	Cardiac rhythm management	Singapore	A 20,000 m^2 Asia-Pacific manufacturing and R&D hub
Desmet	Belgium	Food, feed and biofuels industries	Malaysia	An innovation centre to test products
DKSH	Switzerland	Market expansion services	Thailand	A 2,270 m^2 demonstration laboratory and calibration centre
Expedera	Canada	Semiconductor intellectual property	Singapore	An R&D centre for artificial intelligence inference and related technologies
Huawei	China	Digital communications technology	Singapore	A regional joint solution innovation centre for ecosystem cooperation
Hyundai	Republic of Korea	Automotive	Singapore	Hyundai Motor Group Innovation Center Singapore
Kajima	Japan	Architectural and engineering	Singapore	A regional headquarters and an innovation hub for research sustainability
Kerry Group	Ireland	Food	Indonesia	A 50,000 m^2 taste facility, including an R&D pilot plant and a sampling hub
LG Electronics	Republic of Korea	Electronics	Indonesia	A 40,000 m^2 television R&D centre
Mars Petcare	United States	Petcare	Thailand	A 3,360 m^2 R&D centre
Neste	Finland	Oil refinery	Singapore	An innovation centre
Reckitt Benckiser	United Kingdom	Consumer goods	Singapore	A 5,000 m^2 innovation hub
SCG Cell Therapy	Germany and Singapore	Oil refinery	Singapore	A cell therapy manufacturing and R&D centre
Volvo	Sweden	Automotive	Singapore	A technology centre for data analytics, technology and software development

Source: Company websites and press releases, and media.
Note: R&D = research and development.

Box 1.1. Singapore: the rise in investment by family offices and in finance

A key finance phenomenon in Singapore is the rapid growth of single- and multi-family offices, established for high-net-worth families and individuals, especially from abroad (e.g. from China, Hong Kong (China), India, Indonesia, Malaysia, Thailand, the United Kingdom and the United States, as well as Europe). Some 7 per cent of such offices worldwide are located in Singapore, where the number rose from just 400 in 2020 to 1,400 by the end of 2023.[a] Family offices conduct fund management and management consultancy activities,[b] bringing in significant investment funds. In 2021, single-family offices that were granted tax incentives by the Monetary Authority of Singapore had more than $67 billion in assets under management.[c] This number rose by more than 50 per cent in 2022, to $102 billion, equivalent to 22 per cent of the country's gross domestic product.[d] Three quarters of these assets came from outside Singapore. The number excludes offices that were not granted tax incentives or did not apply for tax incentives, as well as family offices involving multiple families.

Many family offices invest in start-ups and enterprises based in ASEAN and farther afield in a wide range of industries such as advanced technologies, finance, education, health care and medical research, energy and renewables, infrastructure and real estate (box table 1.1.1). Some family offices have evolved to become licensed asset or fund management entities, managing their own funds as well as those of other individuals and families, and fund management advisory services.

To attract family offices, Singapore offers targeted tax incentives, a 17 per cent corporate tax rate and permanent resident status. The investment fund must be deployed in any of four categories: (i) equities, real estate investment trusts or business trusts listed on Singapore-approved exchanges; (ii) qualifying debt securities listed on the enquiry system of the Monetary Authority of Singapore; (iii) funds distributed by Singapore-licensed or -registered managers or financial institutions; and (iv) private equity investments in non-listed, Singapore-based operating companies.[f]

Start-ups are benefitting from investments by family offices. For example, car-sharing start-up GetGo (Singapore) raised $20 million from family-led investment firm Treis Group in 2023.[g] Apricot Capital, the family office of David Teo, invested $1.1 million in Geniebook (Singapore), a start-up that provides an online, assessment-led learning tool using artificial intelligence, and in Popsical (Singapore), which offers a cloud-based karaoke system.[h]

Nearly 75 per cent of conglomerates in Southeast Asia are family owned, underlining the growth potential for family offices and the significant funds that they hold, which could be channelled to finance cross-border investment activities in the region.[i] More than 60 per cent of the family offices in the region have been in operation for less than 10 years.[j] There is thus strong potential for family offices to evolve, including those coming from outside ASEAN to invest in the region's burgeoning economy, and they have significant potential for funding cross-border investment activities, including enterprise and industrial development and start-ups in ASEAN.

/...

Box 1.1. Singapore: the rise in investment by family offices and in finance (Concluded)

Box table 1.1.1. Singapore: family offices and their investments (selected cases)

Name	Ownership	Nationality	Fund size ($ million)	Investments in ASEAN (selected cases)	Remarks
Golden Alpha	Sohmen family	Hong Kong, China	1 000	• BW digital campus and data centre (Nongsa Digital Park, Batam Indonesia)	FDI
Horizon Ventures	Li Ka Shing	Hong Kong, China	>1 000	Investment in Indonesia: • Alva Auto, electric two-wheeler vehicle manufacturer • Ajaib, fintech • Bank Jasa • Kopi Kenangan, unicorn food and beverage retail chain expanding in ASEAN • Bobobox, chain of high-tech capsule hotels	Cross-border investment in start-up
Indorama Capital Holdings	Lohia family	Indonesia	17 340	Through its Indorama Ventures: • ECORAMA brand of recycled polyester fibres and yarns products (Thailand) • Recycling plant in Nakhon Pathom (Thailand)	FDI
Omidyar Network	Pierre and Pam Omidyar (founder of eBay)	France	1 500	• Qoala (Indonesia), omnichannel insurtech company • Cognicept Systems (Singapore), remote intervention operating system for solving reliability issues in robotic systems • InVideo (Singapore), video creation using artificial intelligence and for public access	Cross-border investment in start-up
Oppenheimer Generations Asia	Nicky and Jonathan Oppenheimer (De Beers and Anglo American)	United Kingdom	>5 000	• More than 10 investments in funds and companies domiciled in Singapore, with the majority of the fund invested in the region	Cross-border investment
Sunrise Capital Management	Shu Ping (Hadilao International Holding)	China	7 700	• $42 million real estate property in Singapore	Real estate investment
Maitri Asset Management	Tolaram Group (Seth Tolaramy)	Indonesia	1 500	• Bank Amar • Tunaiku • Insureka	Cross-border investment in start-ups
				• TG Arla (joint venture with Arla (Australia) in Nigeria • Lekk Port (partnership with China Harbour Engineering) in Nigeria	Joint ventures with foreign companies for global expansion
Weybourne	James Dyson	United Kingdom	7 900	• Dyson Manufacturing (Singapore)	FDI

Source: Company websites, Fundcomb, SWF Institute, Crunchbase and media.

Source: Economic Development Board, Monetary Authority of Singapore, company websites and media.

[a] *The Asset*, “Singapore now home to 1,400 single family offices”, 7 March 2024; Economic Development Board, “Global Business Families”, 2024; *Nikkei Asia*, “Singapore sets response deadline for family office applications”, 26 March 2024.
[b] Monetary Authority of Singapore, “MAS written reply to Parliamentary Question on family offices”, 6 March 2024.
[c] Monetary Authority of Singapore, “Oral reply to Parliamentary Question on wealth inflows and family offices”, 10 May 2023.
[d] *Business Times*, “Asia’s family offices to play a bigger role in private markets”, 23 August 2023.
[e] Economic Development Board, “Global Investor Programme” (https://www.edb.gov.sg/en/grants/global-investor-programme.html).
[f] Economic Development Board, “Family offices in spotlight over how much value they bring to Singapore”, 10 July 2023.
[g] Crunchbase, “Seed Round – Geniebook” (https://www.crunchbase.com/funding_round/geniebook-seed--6f5931af).
[h] EY, “How Southeast Asian conglomerates can transform for long term success”, 8 May 2023.
[i] *Business Times*, “Asia’s family offices to play a bigger role in private markets”, 23 August 2023.

Table 1.2. ASEAN: Investment in regional headquarters, 2023 (selected cases)

Company	Nationality	Industry	ASEAN location	Remarks
Alberta Investment Management	Canada	Investment/finance	Singapore	Regional office to focus on investment opportunities in Asia-Pacific
AlixPartners	United States	Financial advisory/ global consulting firm	Singapore	Asia-Pacific office for regional expansion
Allianz	Germany	Insurance	Malaysia	Asia-Pacific regional delivery centre
AlphaSense	United States	Market intelligence and search platform	Singapore	Asia-Pacific regional hub
ARRI	Germany	Motion picture film equipment	Singapore	Move Asia-Pacific headquarters from Hong Kong (China)
Blackbird.AI	United States	Artificial intelligence	Singapore	Regional headquarters for expansion
Comexi	Spain	Packaging	Thailand	Asia-Pacific hub to expand presence in the region
Convergence	Canada	Finance	Singapore	Asia Pacific hub to expand blended finance and to mobilize private capital in the region
Ecolab	United States	Water, hygiene and infection-prevention solutions	Singapore	A regional office to help clients achieve the goals of the Sustainable Development Agenda and the Paris Agreement
Deloitte	United Kingdom	Management consultancy services	Malaysia	Southeast Asia Regional Capability Centre to serve clients in the region
Flagship Pioneering	United States	Finance/biotech incubator	Singapore	Regional office to focus on opportunities in health care and life sciences industries
HAL	India	Aeronautics	Malaysia	Regional marketing office
Mastercard	United States	Finance/credit card	Malaysia	Asia Pacific data and service hub
NIUM	United States/ Singapore	Fintech	Singapore	Corporate headquarters for business expansion across Asia Pacific, the Middle East and Africa
NorthStandard	United Kingdom	Insurance (maritime)	Singapore	Asia headquarters
NP Digital	United States	Performance marketing	Singapore	Southeast Asia regional office
NusaTrip	Indonesia	Online travel agency	Singapore	Regional office to increase accessibility and credibility
Quantexa	United Kingdom	Decision intelligence solutions	Singapore	Asia Pacific headquarters as part of a broader regional expansion plan
Tesla	United States	EV	Malaysia	Regional office for Southeast Asia and for launching Model Y in neighbouring countries
Vantage Data Centers	United States	Data centres	Singapore	Asia Pacific regional headquarters
Zebox	France	Connects start-ups with MNEs	Singapore	Asia-Pacific hub

Source: Company websites and press releases, and media.

1.2.2. FDI by source

Eighty per cent of FDI in ASEAN in 2023 came from the top 10 investors, up from 75 per cent in 2022 (table 1.3), underlining the significance of these investors in sustaining high-level inflows. FDI from investors in the United States and China stood out, with the highest-ever levels of investment in ASEAN.

Companies from the United States were the biggest investor group, with their FDI more than doubling to $74 billion – one third of total FDI inflows to the region. This investment was highly concentrated by country and industry, with more than 90 per cent of it going to Singapore and about 70 per cent going to finance (including in holding companies by industrial MNEs) and insurance, which grew eightfold.

FDI from investors in China rose by nearly 20 per cent, to $17 billion. More than 35 per cent of this FDI went to manufacturing, followed by about 20 per cent each in wholesale and retail trade, and in real estate (a traditional sector for Chinese FDI).

India returned to the list of top 10 investor home countries for the second time since its debut in 2012. FDI from Indian investors more than doubled, to $5.6 billion, with more than 80 per cent of it in finance activities. FDI from major sources other than Hong Kong (China) (e.g. intra-ASEAN, Japan, the Republic of Korea, the Netherlands) fell significantly.

Table 1.3. ASEAN: Top 10 sources of FDI, 2022–2023 (Billions of dollars)

Source	2022	Source	2023
Intra-ASEAN	33.5	United States	74.4
United States	30.0	Intra-ASEAN	21.9
Japan	24.2	China	17.3
Republic of Korea	14.9	Hong Kong, China	15.0
China	14.6	Japan	14.5
Hong Kong, China	14.5	Republic of Korea	10.9
United Kingdom	13.9	Netherlands	8.7
Taiwan Province of China	10.3	Taiwan Province of China	8.0
Netherlands	9.3	India	5.6
France	7.6	Switzerland	5.2
Total	172.7		181.5
Top 10 share of total FDI (%)	75.4		80.0
Total FDI in ASEAN	229.2		229.8

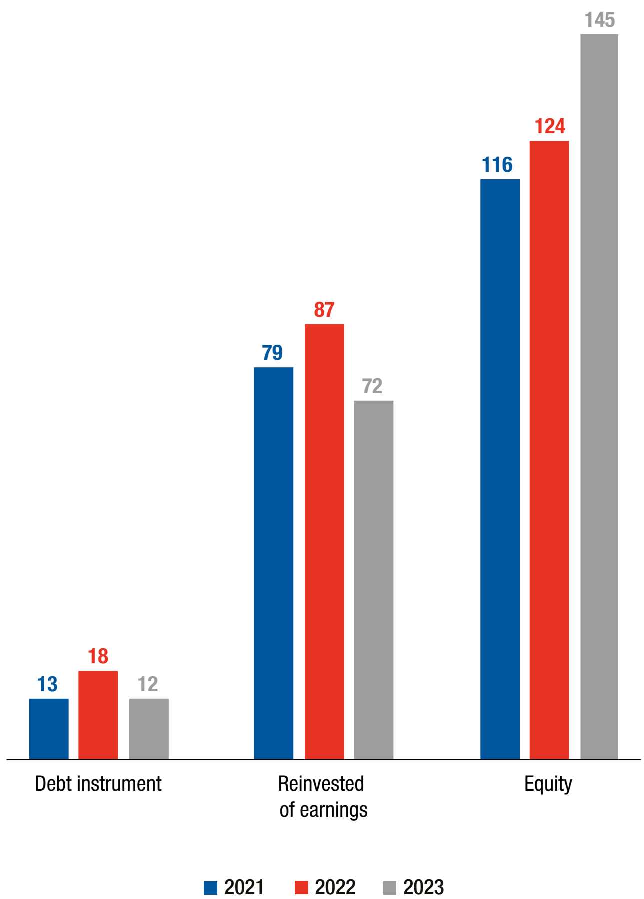
Source: ASEAN Secretariat.

A major and growing source of finance for FDI is the continuous injection of new or additional equity capital to projects (figure 1.3). Broadly, equity investment concerns new investment projects or M&As. Expansions are mostly financed by reinvested earnings or intra-company loans, in addition to other outside sources of capital.

The share of equity in the three FDI components (equity, reinvested earnings and intra-company loans) rose from 54 per cent in 2022 to 63 per cent in 2023. Of the three, only equity capital rose for three consecutive years, reflecting continued investment from new investors and fresh injections of equity capital from existing investors to finance expansion.

While reinvested earnings (an additional proxy measuring FDI expansion) fell by 17 per cent to $72 billion, they remained at a high level. This trend points to two salient aspects: (i) FDI activities have in general generated and accumulated encouraging levels of profit, and (ii) investors have positive experiences operating in the region, which encourages expansion.

Figure 1.3. ASEAN: FDI flows, by components, 2021–2023 (Billions of dollars)

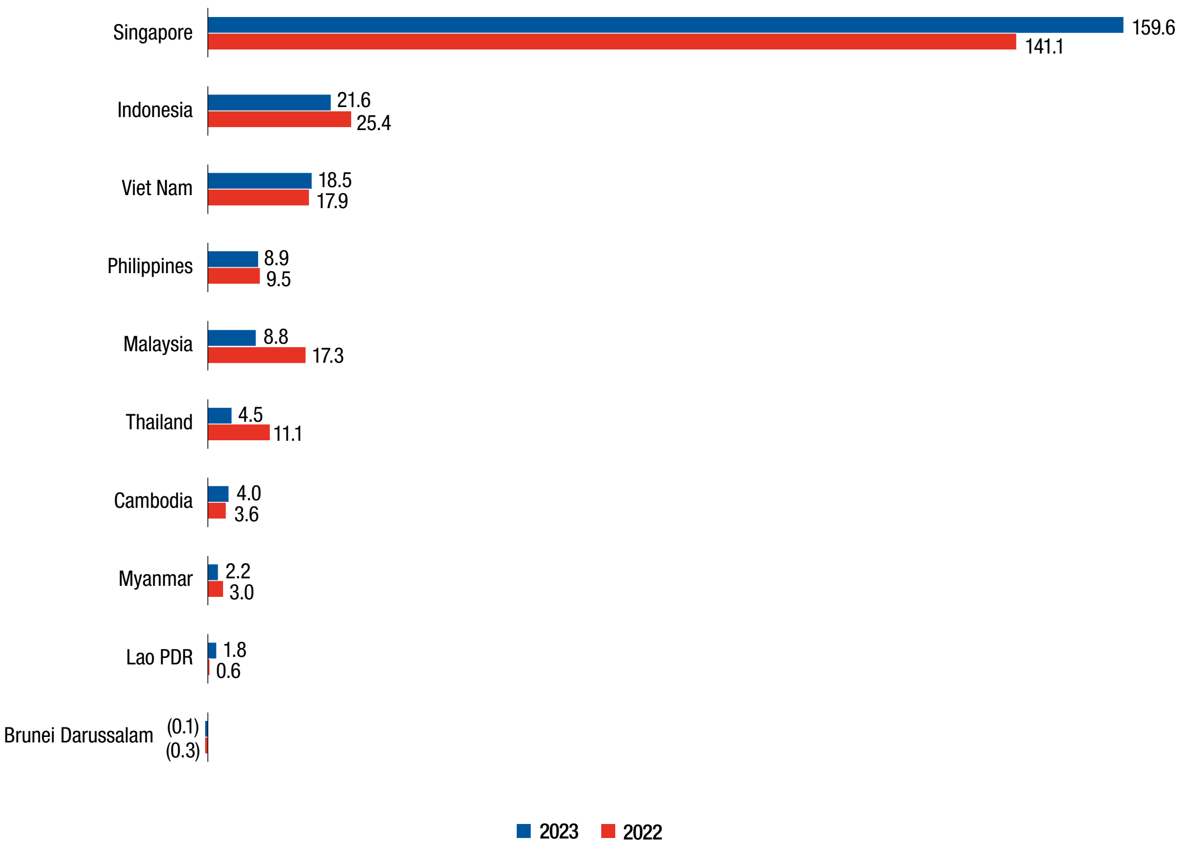


Source: ASEAN Secretariat.

1.3. FDI IN ASEAN MEMBER STATES

FDI in ASEAN Member States in 2023 was mixed. While most witnessed a decline in inflows, Cambodia, the Lao People's Democratic Republic (PDR), Singapore and Viet Nam saw investment escalate to all-time highs (figure 1.4). FDI to the CLMV countries (Cambodia, the Lao PDR, Singapore and Viet Nam) rose from $25 billion in 2022 to $26 billion, increasing the group's share of FDI flows in ASEAN from 11.0 to 11.5 per cent.

Figure 1.4. ASEAN: FDI flows, 2022–2023 (Billions of dollars)



Source: ASEAN Secretariat.

Brunei Darussalam

Disinvestment in Brunei Darussalam continued in 2023, albeit at a much lower level of -$57 million and due mostly to a -$204 million disinvestment in manufacturing. FDI in mining rose from -$209 million in 2022 to $121 million. Although FDI from United Kingdom firms, traditionally a major source, rose from -$178 million in 2022 to $176 million, it was not sufficient to cushion the decline in investment from other sources (e.g. Hong Kong, China).

Cambodia

FDI in Cambodia rose by 11 per cent to $4 billion, an all-time high. A key factor was robust investment in manufacturing, which increased by 76 per cent to $1.4 billion. FDI in finance fell by 19 per cent to $918 million. Together, these two industries accounted for 60 per cent of total inflows. Chinese companies were the largest investor group, accounting for half of the inflows. Other major investors – from the Republic of Korea, ASEAN and Japan, in that order – added another 28 per cent of investment.

Indonesia

Despite a record level of investment in manufacturing ($14 billion), total FDI inflows to Indonesia fell by 15 per cent, to $22 billion. Manufacturing FDI accounted for 64 per cent of investment in 2023. Significant declines in FDI in information and communications, finance, and wholesale and retail trade were the main contributory factors. Investment in these industries fell by $5 billion from the level seen in 2022. Singapore remained the largest investor, despite a 43 per cent decline in investment to $5.5 billion. The other two major investors were Hong Kong (China) and Germany, both with increasing investment. Investors from these three economies accounted for more than half of the inflows. FDI from firms in Japan and the Republic of Korea was flat, but investment from Chinese firms halved to $1.7 billion.

Lao PDR

FDI inflows to the Lao PDR rose by 180 per cent to $1.8 billion, mostly because of a significant increase in investment in hydropower projects. FDI in electricity generation rose 13-fold to $848 million, accounting for nearly half of all FDI inflows in 2023. Chinese companies were the largest investor group, with investment rising by 66 per cent to $1.6 billion. Companies from Japan were the second major investor group. Together, firms from the two countries accounted for 58 per cent of investment.

Malaysia

FDI in Malaysia halved in 2023, to $8.8 billion. The major factors were significant declines in investment in manufacturing, from $11.5 billion in 2022 to $1.2 billion in 2023. Firms from Singapore and from Hong Kong (China) were the two largest investor groups, with significant increases in investment. FDI from Singaporean firms rose by 92 per cent to $4.9 billion and from Hong Kong (China) firms by 156 per cent to $3.8 billion, but was not sufficient to prevent the overall decline.

Myanmar

FDI in Myanmar fell by 26 per cent to $2.2 billion, mostly because of a -$500 million disinvestment in information and communication. However, FDI rose in a few key industries. Investment in mining increased by 30 per cent to $1.2 billion, and investment in manufacturing quadrupled to $608 million. Investment in real estate rose by more than 25 times to $562 million. Companies from the Republic of Korea and China, in that order, were the two largest investor groups, accounting for nearly two thirds of inflows.

Philippines

FDI declined by 7 per cent to $8.9 billion. Investment fell in most industries, with the exceptions of manufacturing and renewable energy. Large wind power projects involving companies such as from Europe sustained investment in renewable energy. Companies based in Singapore invested significantly less, with a drop from $539 million in 2022 to $183 million in 2023, while FDI from companies in Japan rose by 8 per cent, to $849 million. Divestment or scaling down of operations by some MNEs in the face of challenges related to a value added tax rebate also contributed to the declining situation.[1]

Singapore

FDI in Singapore rose by 13 per cent to a new record of $160 billion. The country remained the largest recipient in the region, accounting for 69 per cent of inward FDI, up from 62 per cent in 2022. Key reasons were growth in investment in finance (by 69 per cent, to $86 billion) and a significant rise in investment in professional and administrative support services, including family offices, R&D and regional headquarters (see box 1.1) (from -$1.1 billion to $20 billion). These activities accounted for more than 66 per cent of FDI inflows in 2023. Announced greenfield projects in R&D rose from $35 million in 2022 to $200 million, and investment in regional headquarters rose from $92 million in 2022 to $144 million, suggesting robust future plans for investment in these business functions by international companies. A significant rise in FDI from United States firms – by $56 billion, to a record $73 billion – was a major factor pushing up investment in the country. FDI from other major investors such as firms in China ($7.2 billion) and in India ($5.0 billion) also rose, while investment from firms in the European Union was flat, at $22 billion.

Thailand

FDI in Thailand fell by 59 per cent to $4.5 billion – the lowest level since the pandemic. Major drivers of the decline were a 75 per cent drop in investment in manufacturing to $1.9 billion and an 84 per cent drop in investment in finance to $0.3 billion. Investment in real estate rose 28 per cent, to $2.2 billion, reflecting growing demand for residential and commercial properties. Investment from most major sources declined, however with a conspicuous fall emanating from Singapore, from $3.9 billion in 2022 to -$0.2 billion. Investment from economies such as China and Taiwan Province of China rose.

Viet Nam

FDI in Viet Nam rose to a record $18.5 billion, from $17.9 billion in 2022. Manufacturing remained the largest recipient, followed by real estate and electricity generation. Energy remained a bright spot, with large projects including the $2.0 billion Thai Binh liquefied natural gas power plant by a consortium involving Tokyo Gas and Kyunden (both Japan), a $1.5 billion photovoltaic cell production project by Jinko Solar (China) and a $1.1 billion electronic component manufacturing project by LG Innotek (Republic of Korea). Asian investors from China, Japan, Hong Kong (China), the Republic of Korea, Singapore and Taiwan Province of China were the largest group, accounting for more than 80 per cent of inflows.

1.4. INTRA-ASEAN INVESTMENT

Intraregional investment fell by 35 per cent to $22 billion, with most Member States receiving a declining intra-ASEAN investment (figure 1.5a and b). The share of intra-ASEAN investment in total FDI fell relatively more. This is in large part a function of the success of ASEAN in attracting FDI from outside the region. However, it does indicate that there is an opportunity for ASEAN to further increase the contribution of FDI to regional integration.

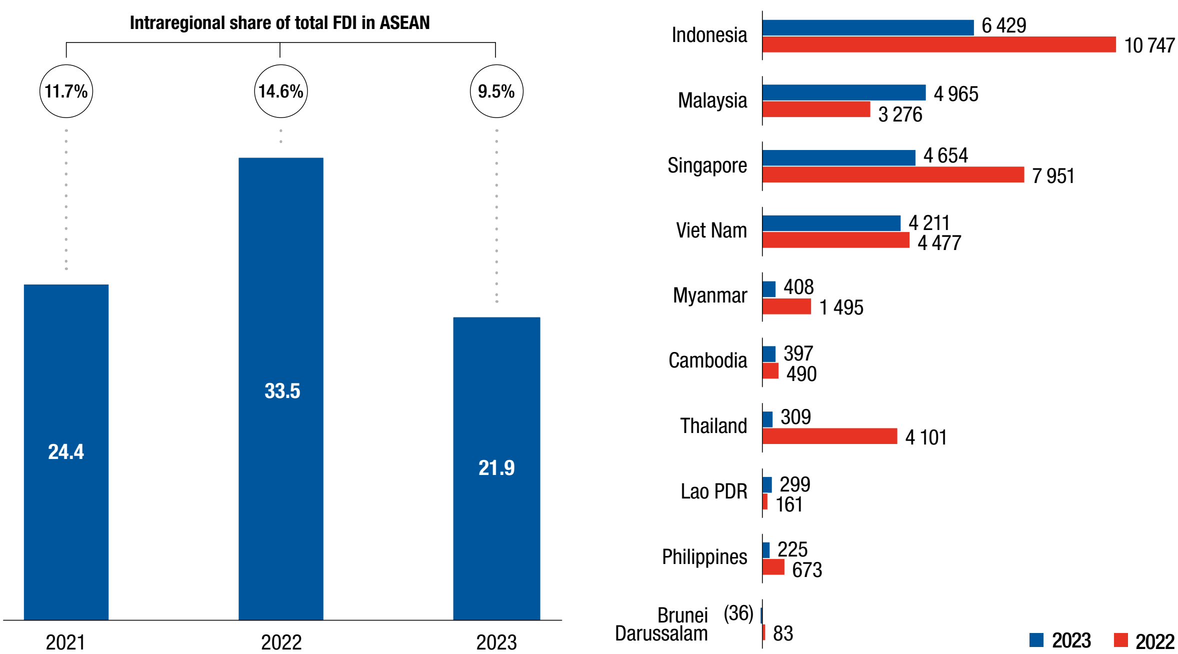
Not all intra-ASEAN investment is by domestic ASEAN companies. Foreign MNEs are involved in conduit investment, establishing business functions such as regional headquarters and financial holding entities in Member States with subsequent investment in other Member States (*AIR 2023*).

Intraregional investment in 8 of the 10 Member States declined; the exceptions were Malaysia and the Lao PDR. The two traditionally largest destinations, Indonesia and Singapore, saw intraregional investment fell by more than 40 per cent (figure 1.5b). Intra-ASEAN investment remained concentrated, with 90 per cent going to four Member States: Indonesia, Malaysia, Singapore and Viet Nam, in that order.

Figure 1.5. Intraregional investment flows, 2021–2023

a. Intra-ASEAN investment, 2021–2023
(Billions of dollars and per cent)

b. Intra-ASEAN investment, by host country, 2022–2023
(Millions of dollars)



Source: ASEAN Secretariat.

As a whole, companies from Singapore, Thailand and Malaysia (the three largest intraregional investors in that order) have invested less within ASEAN since 2019. In 2023, investment from Singapore plunged by 33 per cent to $14 billion, from Thailand by 41 per cent to $2.8 billion and from Malaysia by 16 per cent to $3.4 billion as compared with the levels in 2022. Economic uncertainties and reducing revenues were key reasons. Investors from these Member States still accounted for about 95 per cent of intraregional investment.

Manufacturing remained the largest recipient of intraregional investment in 2023, followed by real estate. Together, these two industries received about 50 per cent of intra-ASEAN investment.

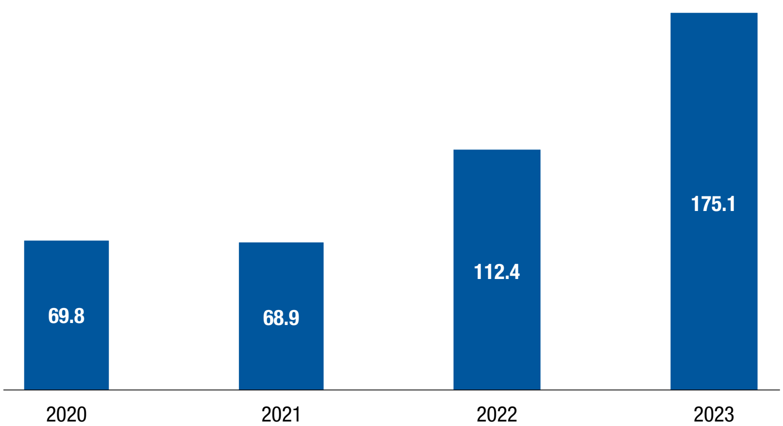
1.5. INTERNATIONAL INVESTMENT TRENDS

International investment through announced greenfield projects, international project finance and cross-border M&As was mixed, with important inferences. Announced greenfield investment and M&As rose significantly while international project finance declined for the second consecutive year. The record level of announced greenfield investment suggests promising future prospect of higher inflows, while declining project finance highlights the challenges in attracting investment in sectors relevant to the Sustainable Development Goals (SDGs), such as in water, sanitation and hygiene and in infrastructure.

1.5.1. Greenfield investments

The number of announced greenfield projects rose for the third consecutive year, from 762 in 2020 to 1,102 in 2022 and 1,568 in 2023. The rise led to a record value ($175 billion) in 2023 (figure 1.6), which has significant implications for the investment outlook. This upward trend points to favourable investor sentiment and future investment plans in the region.

Figure 1.6. ASEAN: Announced greenfield investment, 2020–2023 (Billions of dollars)

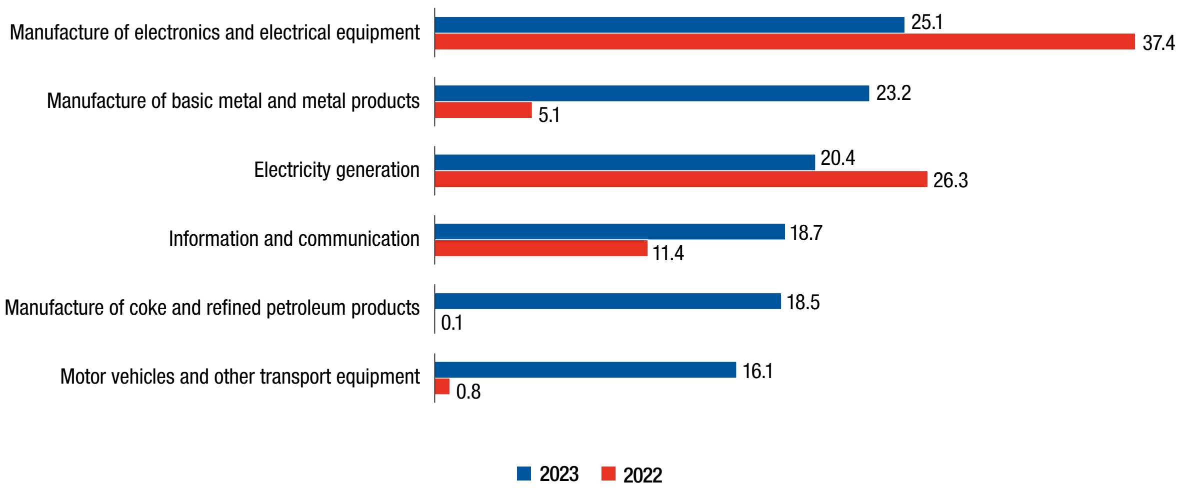


Source: UNCTAD, based on information from the *Financial Times Ltd*, fdi Markets (www.fdimarkets.com).

Manufacturing and services, in that order, were the main industrial targets for greenfield investment, accounting for 95 per cent of all projects by value. Projects in mining of critical minerals rose threefold to $800 million. Projects in manufacturing doubled to $111 billion, accounting for two thirds of total announced greenfield investment value. Announced greenfield investment in services was flat at $60 billion.

Some 70 per cent of announced greenfield investment went to six industries (figure 1.7). Four of them witnessed a rise in greenfield investment (basic metal and metal products, information and communication, coal and petroleum products, and automotive) since 2022, while investment in two (electronics and electrical equipment, and electricity generation) fell. Announced greenfield investment in information and communication rose by 64 per cent, to $19 billion, because of growing interest in data centres and data processing activities. Investment in EV-related industries continued to attract significant interest, with the value of announced greenfield projects in the automotive industry rising 16-fold to $16 billion, suggesting promising prospects for growth in EV production.

Figure 1.7. ASEAN: Top 6 announced greenfield investment industries, 2022–2023 (Billions of dollars)



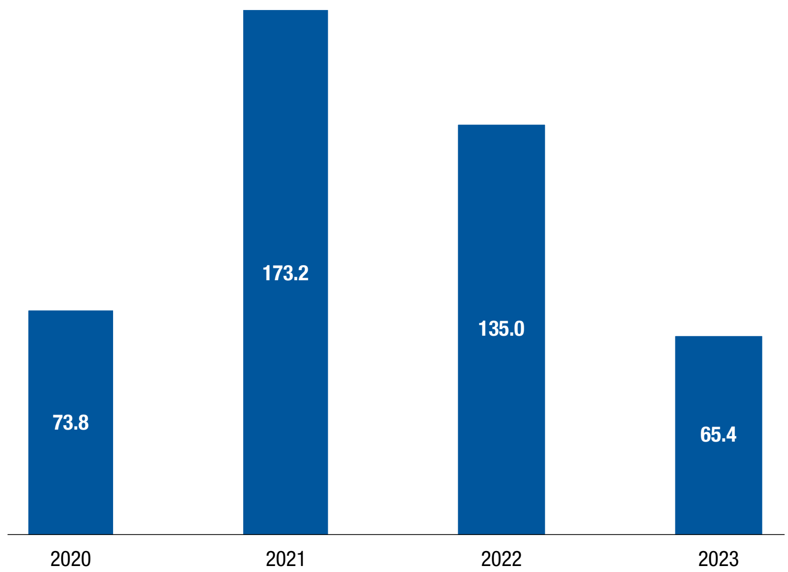
Source: UNCTAD, based on information from the *Financial Times Ltd*, fdi Markets (www.fdimarkets.com).

1.5.2. International project finance

International project finance deals in ASEAN, both by number of projects and by value, declined for the second consecutive year. The value fell by nearly half to $72 billion (figure 1.8), mirroring the global downturn in international project finance, which decreased by about a quarter, amid concerns over higher interest rates and geopolitical tensions (*WIR 2024*).

Project finance in sectors relevant to the SDGs such as health, education and infrastructure fell. In infrastructure it dropped by 55 per cent to $31 billion with significant declines in power

Figure 1.8. ASEAN: International project finance, 2020-2023 (Billions of dollars)



Source: UNCTAD, based on data from Refinitiv SA.

generation, telecommunication, transportation, and water and sanitation. Such trend confirms the growing challenges in attracting investment in sustainable sectors for some ASEAN Member States.

The number of megadeals (exceeding $500 million) fell from 60 in 2022 to 38 in 2023. Half (19) were in activities related to renewable energy, such as electricity generation, battery production, and critical minerals mining and processing. The megadeals were geographically concentrated, with about three quarters of them in just two Member States, Indonesia (18) and the Philippines (10), both of which are major global producers of nickel (*AIR 2023*).

The combined value of such megadeals declined by nearly half, to $51 billion, suggesting a significant decline in the appetite of international investors for funding projects.

1.5.3. Mergers and acquisitions

Cross-border M&As more than doubled in 2023 to $28 billion, driven by a fivefold increase in manufacturing M&As to $23 billion, mainly in the automotive industry. M&As in finance rose 126 per cent to $6.2 billion. These two industries accounted for the bulk of cross-border M&A values. Among these deals, Black Spade (Hong Kong, China) acquired VinFast Auto (Viet Nam) for $23 billion, BSG First Euro Investment acquired Bitdeer Technologies (Singapore) for $4 billion, Sumitomo Mitsui Financial Group (Japan) acquired a 15 per cent stake in Vietnam Prosperity JSC Bank (Viet Nam) for $1.5 billion and SK Capital Partners (United States) acquired the textile unit of Huntsman Chemical (Singapore) for $0.9 billion.

1.6. MAJOR DEVELOPMENTS SHAPING THE REGIONAL FDI LANDSCAPE

External and internal factors continued to influence the region's investment landscape. They included the energy transition drive, international supply chain restructuring, trade tensions and growing attention from new and existing investors expanding in the region (*AIR 2023*). Regional integration and the ASEAN Economic Community (AEC) programme weighed favourably on investment decisions because of opportunities to exploit economies of scale, to improve efficiency, to expand operations and to source intermediate inputs and raw materials.

As international companies continued to engage in supply chain development (*AIR 2023*), two other significant developments in the region's evolving investment environment are occurring. They are the rapid rise of investment by Chinese enterprises and the growing investment interest in renewable energy from international companies.

1.6.1. Rising investment from China

The rise in Chinese FDI is not new. Notable increases took place in the early 2010s and between 2015 and 2017. But the recent wave, since 2020, is significant in terms of magnitude, structural change and new industries – predominantly in activities related to manufacturing, EVs and technology.

A key feature of the recent change is the robust increase in manufacturing investment, which includes a growing number of first-time Chinese investors along with existing ones expanding in ASEAN. Major drivers are a confluence of factors, primarily market-, resource- and efficiency-seeking motives, including risk diversification and supply chain development.

In industries such as automotive, electronics and renewables, Chinese companies are relatively new entrants compared with other major investors, who played a role in the development of the ecosystems of these industries. The ASEAN–China Free Trade Agreement (ACFTA) and the Regional Comprehensive Economic Partnership (RCEP) (*AIR 2020–2021*; UNCTAD, 2020), in which ASEAN plays a central role, are additional factors influencing FDI by Chinese enterprises.

Chinese MNEs are not just investing in ASEAN through FDI but also are actively involved in international contracting and construction of physical, digital and renewable infrastructure, as sponsors or as engineering-procurement-construction companies. Many Chinese firms, such as banks and financial institutions, have provided finance and loans to projects in ASEAN, including projects associated with the Belt and Road Initiative (BRI). Investment opportunities in ASEAN and access to international project finance encourage more Chinese companies to engage in infrastructure development across the region, underpinning efforts being made in ASEAN towards achieving the SDGs (*AIR 2023*).

The upward investment trend underlines the growing significance of China as a major source of FDI and international contracting for the region. It reflects the expanding role of Chinese enterprises in strengthening bilateral investment and trade ties, including contributing to infrastructure and industrial development in the region (e.g. the EV value chain, the energy transition and the digital economy).

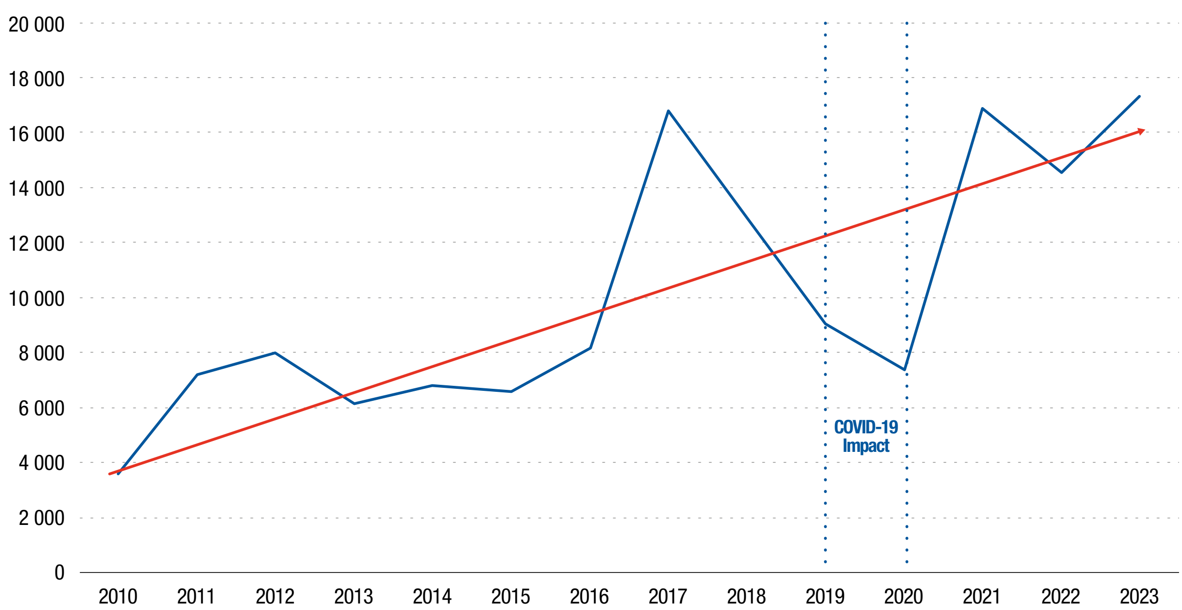
This section examines two key issues: (i) the reasons behind the robust rise in investment by Chinese enterprises in recent years and (ii) the outlook for Chinese investment in ASEAN.

(a) Direct investment trends

Chinese direct investment in ASEAN is on an upward trend. Inflows from China rose from less than $4 billion in 2010 to an all-time high of $17 billion in 2023 (figure 1.9). Chinese companies invested more than $140 billion in ASEAN in 2010–2023, with an annual average of $12 billion in direct investment during 2016–2018 (pre-pandemic period), which rose by 32 per cent to $16 billion in 2021–2023 (post-pandemic period). China has become a major source of FDI for ASEAN over the past decade. Combined FDI in ASEAN from Chinese investors in 2021–2023 ranked fourth, after United States, intra-ASEAN and Japanese investors, in that order.

Chinese companies from a diverse industrial background are actively investing and expanding in ASEAN. The number of Chinese enterprises operating in ASEAN grew from just 2,600 in 2012 to 6,500 in 2022 (Bulletin of China's FDI, 2022). In addition to larger MNEs, small and medium-size enterprises and contract manufacturers are establishing operations in the region. In Cambodia, more than 90 per cent of the garment factories are owned by such Chinese enterprises.[2]

Figure 1.9. ASEAN: FDI flows from China, 2010–2023 (Millions of dollars)



Source: ASEAN Secretariat.

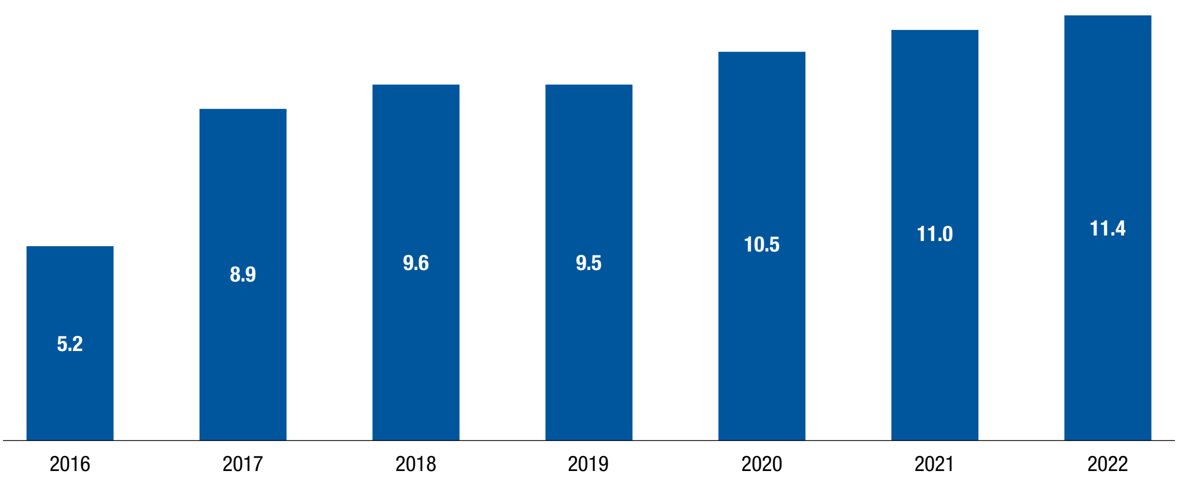
ASEAN's share of worldwide outward FDI flows from China increased from 5 per cent in 2016 to more than 10 per cent in 2022 (figure 1.10). Investment from China grew at 16.5 per cent (compound annual growth rate (CAGR)) between 2015 and 2023. The rapid rise in investment pushed up Chinese FDI stock in ASEAN more than 10-fold, from just $14 billion in 2010 to $155 billion in 2022 or from 1.2 per cent of total inward FDI stock in ASEAN to 4.3 per cent.

China's share in total inward FDI flows in ASEAN rose from 6.0 per cent in 2010–2012 to 7.3 per cent in 2021–2023 (figure 1.11). In some ASEAN Member States (e.g. Cambodia, the Lao PDR and Myanmar), Chinese companies are the largest investor group. For perspective, annual average FDI from China in 2021–2023 was about equal to that of France, Germany and the Netherlands combined.

Most Chinese FDI in both new and expansion projects is financed by equity capital. The equity component of Chinese FDI rose from $5.1 billion in 2020 to double that in 2021 and to nearly $12 billion in 2022. Reinvestment earnings, although increasing, are not at the scale of other major investors, reflecting the relatively recent engagement of many Chinese investors in the region.

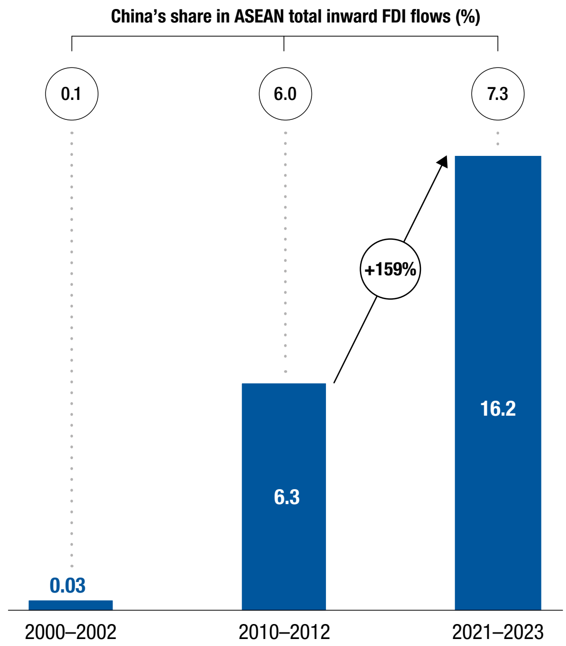
Six key industries accounted for 80 per cent of Chinese FDI flows (figure 1.12), with finance and manufacturing switching place in the two reference periods. Except for finance and insurance, investment in the other five industries rose. FDI in manufacturing grew the most by 339 per cent, from an annual average of $1,190 million in 2015-2017 to an annual average $5,221 million in 2021-2023. Active Chinese investment in data centres and digital and telecommunication activities pushed up FDI in information and communication, while e-commerce for wholesale and retail trade.

Figure 1.10. ASEAN share of China worldwide OFDI flows, 2016–2022 (Per cent)



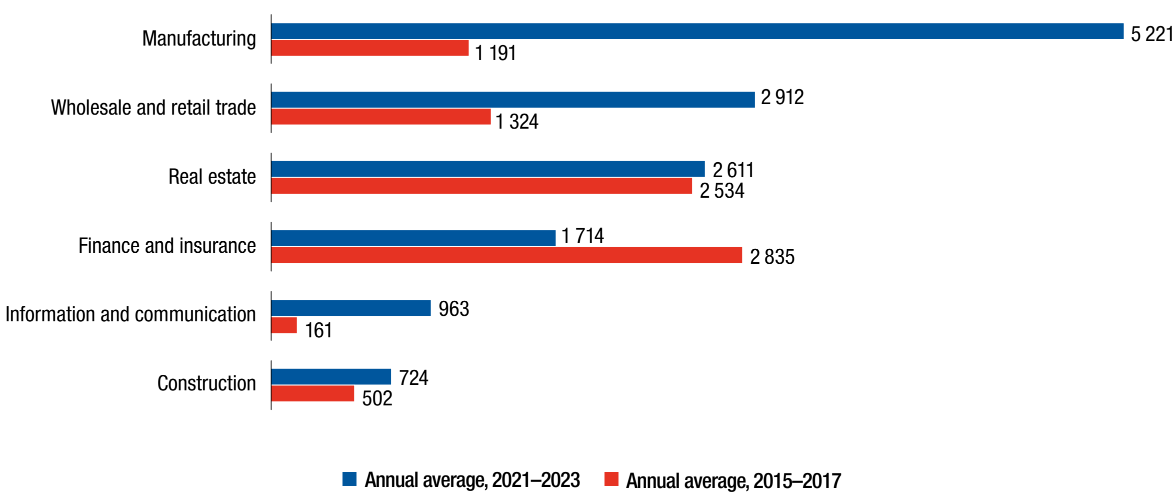
Source: Statistical Bulletin of China's Outward Foreign Direct Investment, 2022.

Figure 1.11. FDI from China, annual average, 2000–2002, 2010–2012 and 2021–2023
(Billions of dollars and per cent)



Source: ASEAN Secretariat.

Figure 1.12. ASEAN: Major industries invested by Chinese companies, annual average, 2015–2017 and 2021–2023 (Millions of dollars)



Source: ASEAN Secretariat.

(b) Changing pattern of Chinese investment

Salient features of recent Chinese investment in ASEAN include changes in industrial investment pattern and an increasing manufacturing investment trend.

(i) Changing industrial investment pattern

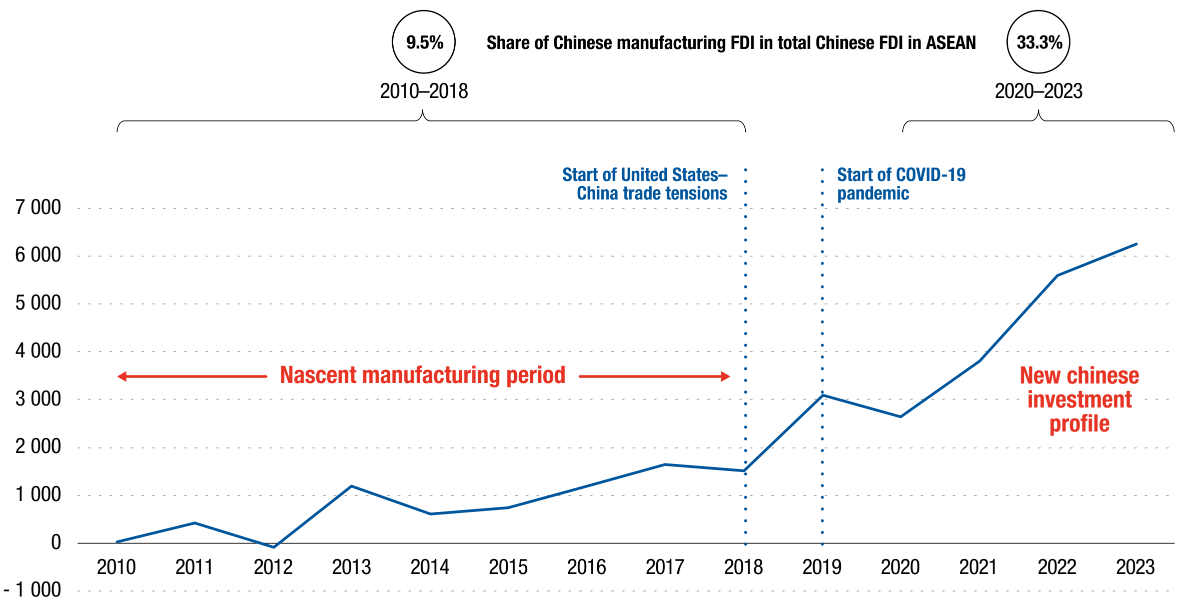
The early group of Chinese companies that invested in ASEAN were State-owned enterprises. They were involved in mining and oil exploration (e.g. in Indonesia, Malaysia and Myanmar), in metals and minerals (e.g. Indonesia and the Lao PDR), in construction and hydropower (e.g. Cambodia and the Lao PDR), in infrastructure (in many ASEAN Member States), and in development of special economic zones (SEZs) and industrial parks (e.g. various Member States, such as Indonesia, the Philippines and Viet Nam).

Since the 2010s, the Chinese private sector has gradually internationalized to ASEAN, for example in textiles and garments (e.g. Cambodia, Myanmar, Viet Nam), in electronics (e.g. Malaysia, Viet Nam), in technology (e.g. Malaysia, Singapore, Thailand) and in the digital economy in various Member States. This move has been driven by cost and market considerations.

Manufacturing: a key driver

Chinese investment in ASEAN before the start of the United States–China trade tensions in 2018 was mostly in real estate and finance (*AIR 2019*, *AIR 2023*). These two industries accounted for nearly 50 per cent of Chinese FDI in the region in 2010–2018. Since 2018, Chinese investment in manufacturing has taken off (figure 1.13), with 33 per cent CAGR in

Figure 1.13. Chinese manufacturing FDI in ASEAN, 2010–2023 (Millions of dollars and per cent)



Source: ASEAN Investment Report 2024 research.

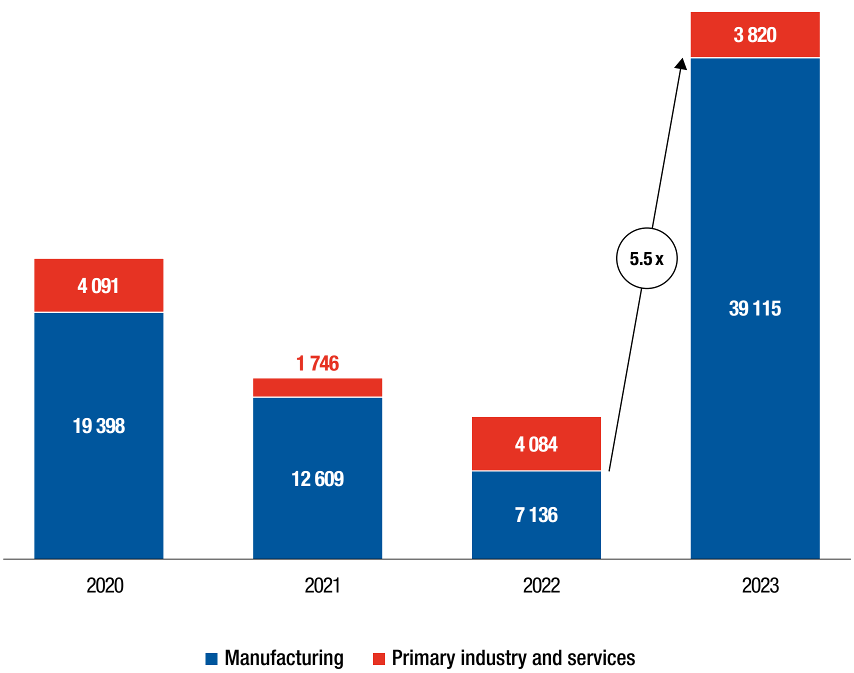
2020–2023 compared with less than 10 per cent in 2010–2018. This growth is also much faster than the average growth of Chinese FDI in ASEAN (6.2 per cent) in the same period – marking a significant pattern and trend of Chinese FDI in the region.

Concern over the ongoing United States–China trade tensions, compounded by the supply chain disruption of the pandemic, has led many Chinese manufacturing companies to diversify abroad. ASEAN has been a primary beneficiary, with Chinese manufacturing FDI in the region tripling in 2022–2023, as compared with before the start of the trade tensions. Manufacturing is overwhelmingly the largest recipient of Chinese greenfield investment (figure 1.14). Unlike in the 2010s, recent years have witnessed rapid growth in Chinese investment in electronics and EVs (box 1.2), including mining and processing of critical minerals (*AIR 2023*).

Services remain important but with a greater focus on the digital economy and digital infrastructure

While finance continued to receive attention, Chinese MNEs are increasing their investment in retail and wholesale trade, information and communication, and transport and storage. Investment in these industries underlines the growing competitiveness of Chinese firms in e-commerce, telecommunication and the digital economy. Many Chinese MNEs in these industries operate in multiple locations in ASEAN. Some, such as Alibaba, Tencent and Baidu have a significant presence in the region.

Figure 1.14. ASEAN: Announced Chinese greenfield investment, by industry, 2020–2023 (Millions of dollars)



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

Box 1.2. ASEAN: investment in the EV supply chain by Chinese companies

Chinese companies are investing to strengthen their regional foothold and are building supply chain networks. Access to the ASEAN market is an important driver. Many greenfield investment projects announced by Chinese companies in ASEAN in 2021–2023, were in the manufacturing of EVs and batteries.

EV assembly and production

In 2022–2023, BYD started construction of a $491 million EV factory in Thailand and announced plans to build a $250 million EV component factory in Viet Nam and a second EV production facility in another Member State. It is installing 200 EV charging stations in Cambodia. In early 2024, it announced a $1.3 billion investment in an EV factory in Indonesia.[a] GM (United States) and Wuling (China) are investing in a battery-based EV project and battery production in Indonesia. In 2023 in Thailand, Dongfeng Motor started production of electric sports utility vehicles, Hozon Auto initiated its first overseas plant with Bangchan General Assembly (Thailand) and Great Wall Motor finalized a $30 million investment for a battery-pack assembly plant. In 2020, Great Wall Motor acquired GM's EV plant in Thailand, with plans to transform it into a regional production centre for EVs and hybrid cars. Nio, listed on the Singapore Exchange in 2022, announced plans for an R&D centre in that country for artificial intelligence and autonomous driving technology. In 2023, GAC launched a completely knocked-down EV project in Malaysia and plans to produce EVs in Thailand. SAIC Motor initiated a $15 million industrial park in Thailand to expand its EV production capacity in ASEAN. Other Chinese EV manufacturers investing in the region are Chery in Indonesia, Changan in Thailand and Geely in Malaysia.

EV components and batteries

Of the top 10 global EV battery manufacturers that have a presence in ASEAN Member States, more than half are from China (*AIR 2023*). Some operate in multiple countries in the region (box table 1.2.1). Their investments are mostly made to secure raw materials, to strengthen their regional foothold and to be near markets. Some have invested in nickel mining and smelting to secure critical supplies. Eve Energy (China) invested in a battery plant in Malaysia to cater to local manufacturers of electric bikes and power tools, while also supplying batteries for BMW EVs.

Box table 1.2.1. Chinese companies in the top 10 global EV battery manufacturers, 2022–2024

Company	Global market share (%)	Ranking in top 10	Facilities in ASEAN	Recent battery investments in ASEAN (Selected cases)	Year	Location
CATL	37	1	Indonesia, Thailand	A $6 billion battery plant, which includes recycling and partnership in mining critical materials	2022	Indonesia
				A special green fund for the development of the EV battery industry	2023	
				Subsidiary (Ningbo Contemporary Brunp Lygend) invested in an EV battery manufacturing project	2024	
				A $104 million factory for EV assembly in a joint venture with Arun Plus (a subsidiary of PTT (Thailand))	2023	Thailand

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Box 1.2. ASEAN: investment in the EV supply chain by Chinese companies (Concluded)

Box table 1.2.1. Chinese companies in the top 10 global EV battery manufacturers, 2022–2024 (Concluded)

Company	Global market share (%)	Ranking in top 10	Facilities in ASEAN	Recent battery investments in ASEAN (Selected cases)	Year	Location
BYD	16	2	Thailand (EV plant) Viet Nam (electronics plant)	Construction of an EV manufacturing plant in 2023, with production to start in 2024	2024	Thailand
				A $1.3 billion EV manufacturing factory	2024	Indonesia
CALB	5	6	..	..	..	..
Guoxuan (Gotion High-Tech)	2.4	8	Indonesia Viet Nam	A battery pack plant	2022	Indonesia
				Production of EV battery packs in a joint venture with Nuovo Plus (subsidiary of PTT Group) (Thailand)	2023	Thailand
				A battery plant in partnership with VinES (Viet Nam)	2023	Viet Nam
				Investment of $150 million in VinFast	2023	Viet Nam
Eve Energy	2.3	9	Malaysia	Groundbreaking for a $422 million manufacturing facility	2023	Malaysia
				Establishment of an energy storage plant in partnership with Invest Kedah (Malaysia)	2024	Malaysia
				Establishment of a subsidiary	2024	Singapore
Sunwoda	1.5	10	..	Establishment of a subsidiary to produce lithium batteries for electronic and electrical equipment for use in EVs	2023	Viet Nam

Source: *ASEAN Investment Report 2024* research, based on CNEVPost, company websites, press and media releases.
Note: Ranking by market share based on CNEVPost, "Global EV battery market share in 2023."

Source: Adapted from *ASEAN Investment Report 2023*, company websites and media.
[a] Techwire Asia, "BYD has big EV plans for Indonesia", 18 January 2024.

Some Chinese MNEs have established multiple data centres across the region to cater to growing demand from within their corporate groups, from cloud computing clients and from data centre tenants. Major Chinese telecommunication MNEs such as Huawei, China Telecom, China Mobile and ZTE are involved in developing digital infrastructure such as 5G networks across the region. More than 25 data centres in ASEAN are ultimately owned by Chinese companies.

Rising investment in mining and processing of critical minerals

In 2020–2023, Chinese investment in mining and processing of critical minerals surged, albeit concentrated in a few Member States, most in Indonesia (*AIR 2022* and *AIR 2023*). With strong global demand for critical minerals and EV batteries, the region (a major producer of nickel and cobalt) continued to attract growing numbers of Chinese extractive and EV-related companies.

(ii) The new Chinese investment profile in ASEAN

In addition to a larger share of manufacturing FDI, the new normal is characterized by larger amounts of annual average FDI, more investment projects, expanded industry coverage, further expansion of private sector investment, evolving investment motives and a different international investment environment than Chinese enterprises faced more than a decade ago (figure 1.15).

(iii) Other strategic investments

An important aspect of the new FDI pattern is investment in regional headquarters in some ASEAN Member States by Chinese companies. Some companies have used regional headquarters to channel investment to other Member States in the same way as some have channeled investment through operations based in Hong Kong, China. For example,

Figure 1.15. Factors characterizing the new normal

	Before	Now	
Different annual average investment magnitude	$8 billion annual average, 2010–2018	>$16 billion annual average, 2021–2023	• Larger investment scale • More greenfield investment projects
Additional industry focus	Services (Finance, real estate)	Manufacturing + technology	• EV + renewable energy related industries • Digital economy + electronics • Digital infrastructure • Garments
Growth of private players	Traditional players (SOEs)	Traditional + new players	• More first-timers (private sector) • Supply chain players • MNEs making multiple investments • Contract manufacturers + SMEs
Evolving motives	Traditional motives (Resource + market opportunity)	Traditional + new motives	• Market growth • Supply chain development • Follow clients • Circumvent trade tensions
Different international business environment	Traditional business landscape	Changing international business landscape (nationalism, trade tensions)	• Diversification of risks, market driven • Home policy influence, technology and energy security • Different investment perception • ASEAN regional integration • BRI, ASEAN–China FTA, RCEP

Source: ASEAN Investment Report 2024 research.
Note: BRI = Belt and Road Initiative. FTA = Free trade area. RCEP = Regional Comprehensive Economic Partnership.

Acclivis Technologies and Solutions and China Telecom (Asia Pacific) domiciled in Singapore, but ultimate parents headquartered in China. Shein, a fashion online retailer, moved its headquarters from Nanjing to Singapore.[3] Alibaba set up a regional office, OneConnect (the fintech subsidiary) of Ping An Insurance and Bytedance, owner of TikTok, established regional headquarters in the same host country.

ASEAN–China FTA and RCEP

The ASEAN–China FTA and the RCEP offer opportunities for Chinese companies to invest in ASEAN and to benefit from the advantages of these economic groupings. Many Chinese companies have acknowledged the influence of both the economic arrangements in their decisions to invest in ASEAN and their plans to expand in the region (box 1.3).

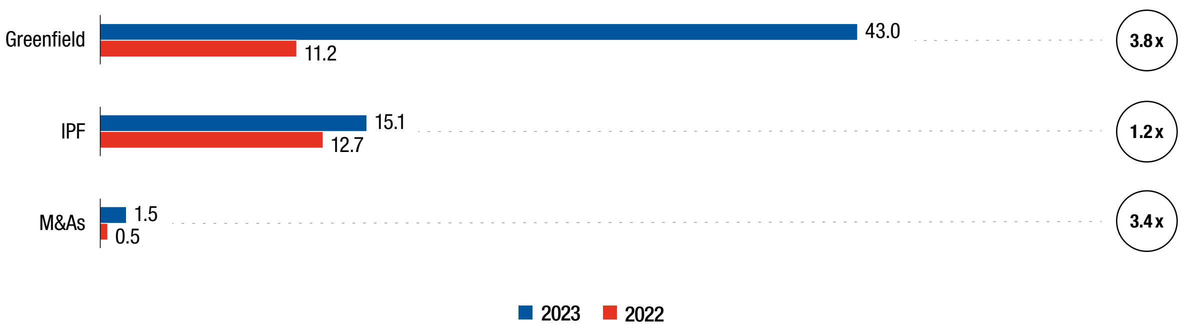
(c) Other modes of international investment

International investment by Chinese enterprises rose in all three modes of international investment (greenfield investment, international project finance and cross-border M&As) in 2023 (figure 1.16), further supporting future expansion of Chinese investment in the region.

(d) International contracts and non-equity investment

In addition to FDI, non-equity forms of involvement by Chinese companies in ASEAN through international contracts are also significant. Many Chinese companies are actively involved in the construction and development of infrastructure across the region such as in electricity generation, transportation and telecommunication, and industrial parks. During 2010–2023, $290 billion worth of overseas investment and construction activities by Chinese companies were in ASEAN.[4] In the same period, about 15 per cent of Chinese construction value worldwide, or $143 billion in cumulative construction activities, were located in the region (figure 1.17). Three ASEAN Member States hosted more than half of these activities.

Figure 1.16. ASEAN: Announced greenfield investment, international project finance and cross-border M&As from Chinese companies, 2022–2023 (Billions of dollars)



Source: UNCTAD.

Box 1.3. ASEAN: Business and investment perception of Chinese companies

Many Chinese companies regard the ASEAN–China FTA and the RCEP as having an important influence in improving the FDI environment. ASEAN is central to these partnerships. The development in these blocs facilitates market access for goods and services, regional sourcing, reduction of tariffs and access to locational advantages. The investment sentiments of Chinese companies about ASEAN have continued to improve, with many firms planning to further invest in the region because of ASEAN's integration and the influence of the two partnership arrangements. This is corroborated by findings from various major surveys:

2023 China Council for the Promotion of International Trade (CCPIT) survey:[a]

- Most Chinese companies in ASEAN had a generally positive operating performance in 2023.
- 71 per cent plan to expand their business in ASEAN.

2023 United Overseas Bank (Singapore) Poll (n = 588):[b]

- Propelled by the RCEP, Chinese companies and ASEAN counterparts are keen to explore business opportunities in each other's markets.
- Over 40 per cent of Chinese companies planned to expand operations in ASEAN over the next three years.
- Singapore, Thailand and Malaysia were the top three investment destinations for Chinese companies.

2021 China–ASEAN Economic and Trade Cooperation Survey Report (n = 220):[c]

- About 40 per cent have invested in ASEAN.
- 66 per cent expressed their intention to invest in ASEAN. Key reasons were access to the ASEAN market and strategic diversification.
- 46 per cent plan to increase investment in ASEAN in the next three years.
- 62 per cent believed the RCEP will have a favourable or optimistic impact on enterprises.

2021 Pulse survey, conducted by Standard Chartered Bank, of 43 companies based in China and focusing on the China–ASEAN corridor:[d]

- Chinese companies are attracted to ASEAN's large market and its potential as a regional production base.
- More than 60 per cent have plans to expand sales or production in the region.
- About 56 per cent focus on ASEAN to gain access to its large and growing consumer market.
- 44 per cent are expanding to diversify their production footprint.
- External factors such as the RCEP could also funnel greater Chinese investment into the region in areas such as high-value manufacturing, energy and digital services.
- Maturing and sophisticated Chinese companies looking to internationalize find ASEAN an increasingly attractive destination.
- Further growth is expected throughout the China–ASEAN corridor. The BRI and the RCEP are expected to support this growth.

Source: Respective surveys and media.

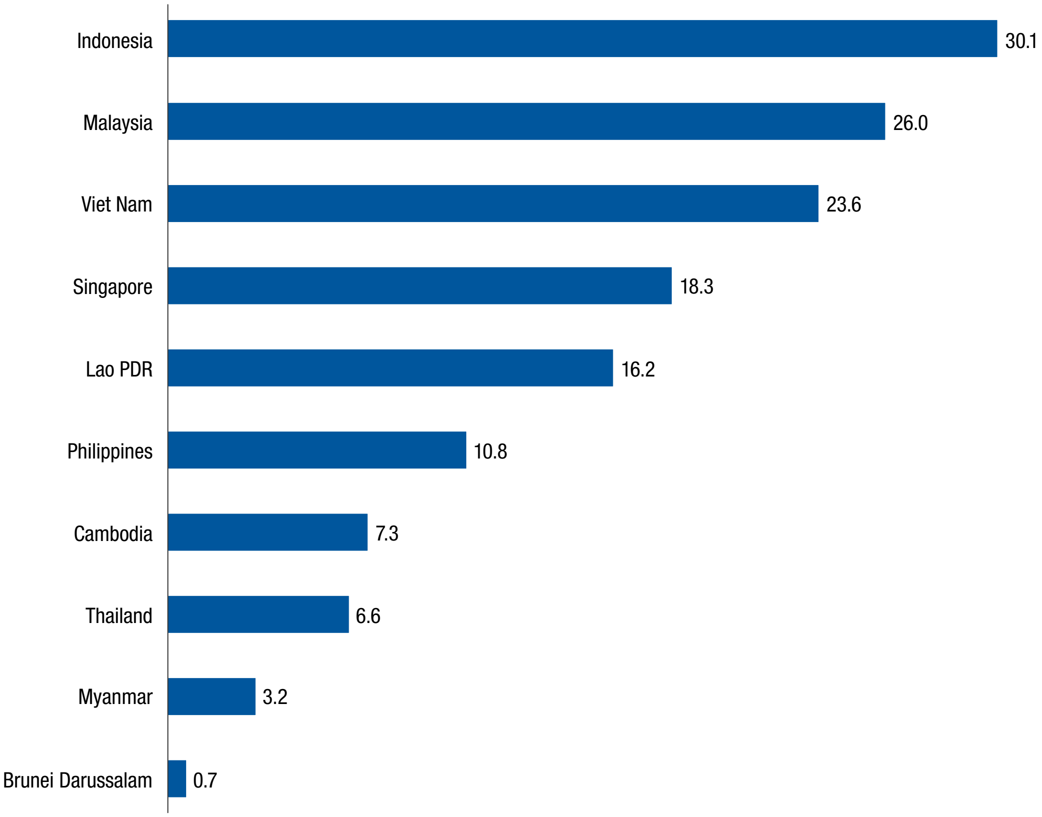
[a] CGTN, "Survey: Over 70% of Chinese companies in ASEAN plan expansion", 27 December 2023.

[b] *The Star*, "China, Asean companies eye each other's markets", 25 May 2023.

[c] PWC, "China-ASEAN Economic and Trade Survey Report: Investor Confidence Outlook November 2021".

[d] Think ASEAN, "Chinese companies see ASEAN as a bright spot for investment", 22 June 2023.

Figure 1.17. ASEAN: Chinese international construction activities, cumulative 2010–2023
(Billions of dollars)



Source: AEI.

Many of these projects were related to the Belt and Road Initiative (BRI) (box 1.4). These investment and construction projects were in specific industries, depending on the resource endowment and industrial development of Member States. For instance, most of the projects in the Lao PDR were in power generation, in particular hydropower. In Indonesia, many BRI projects were in nickel production[5], power generation, and transportation. In Malaysia, most BRI projects focused on transportation (including railways) and industrial park developments.[6]

Box 1.4. ASEAN: Belt and Road Initiative projects

The BRI has led to greater participation by Chinese MNEs in the development of transportation, telecommunication and energy infrastructure in ASEAN. The 20 largest construction projects during 2020–2023 related to the BRI were mostly in the infrastructure and energy sectors, involving different Member States (box table 1.4.1). Chinese investment, exceeding $500 million, was in a wide range of industries (box table 1.4.2).

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Box 1.4. ASEAN: Belt and Road Initiative projects (Continued)

Box table 1.4.1. ASEAN: Construction deals by Chinese companies, 2020–2023 (selected cases) (Millions of dollars)

Contractor	Value	Year	Transaction party	Industry/ activity	Country	BRI
China Rail way Engineering	1 770	2020		Rail	Indonesia	1
China Energy Engineering	1 400	2020	ACWA and Taekwang	Coal	Viet Nam	1
Power Construction Corp. (PowerChina)	1 360	2022		Hydro	Indonesia	1
China Communications Construction	1 260	2022		Rail	Malaysia	1
State Construction Engineering	1 130	2020		Rail	Philippines	1
China Energy Engineering, China Minmetals	930	2020		Aluminun	Indonesia	1
Minmetals	790	2021		Rail	Singapore	1
China Communications Construction	760	2023		Automotive	Malaysia	1
China Energy Engineering	750	2020		Coal	Viet Nam	1
China Communications Construction	700	2023		Rail	Singapore	1
State Construction Engineering	600	2020		Aviation	Cambodia	1
State Construction Engineering	540	2021		Real estate	Singapore	1
Aluminium Corporation of China (Chinalco)	520	2020	Aneka Tambang and Asahan	Aluminum	Indonesia	1
China Energy Engineering	500	2020		Energy	Thailand	1

Source: AEI.
Note: Construction deals exceeding $500 million.

Box table 1.4.2. Largest Chinese investment in ASEAN, 2020–2023 (Millions of dollars)

Investor	Value	Year	Equity share	Transaction party	Industry/ activity	Country	BRI	Greenfield
State Administration of Foreign Exchange (SAFE)	2 950	2022		Indonesian Investment Authority	Finance	Indonesia	1	
Southern Power Grid	2 400	2020			Energy	Lao PDR	1	
Zhejiang Huayou Cobalt	2 040	2023	53	Vale, Ford	Automotive	Indonesia	1	Yes
China Communications Construction	1 310	2023			Automotive	Cambodia	1	Yes
Boyu Capital, Hillhouse Capital	1 300	2021		J&T Express	Logistic	Indonesia	1	
Shandong Xinhai, BaoWu Stell (Baosteel)	1 260	2023	51	Vale	Steel	Indonesia	1	Yes
Huadian	1 190	2020			Coal	Cambodia	1	Yes
Xiamen Xiangyu	1 040	2020			Steel	Indonesia	1	Yes
Nine Dragon	940	2022			Timber	Malaysia	1	Yes
China International Trust and Investment (CITIC)-led consortium	910	2020	70		Shipping	Myanmar	1	Yes
Hailiang	860	2023			Copper	Indonesia	1	Yes
Alibaba	850	2023		Lazada	Consumer goods	Singapore	1	
Bytedance	840	2023	75	Goto	Consumer goods	Indonesia	1	

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Box 1.4. ASEAN: Belt and Road Initiative projects (Concluded)

Box table 1.4.2. Largest Chinese investment in ASEAN, 2020–2023 (Millions of dollars) (Concluded)

Investor	Value	Year	Equity share	Transaction party	Industry/ activity	Country	BRI	Greenfield
Global Logistic Properties	750	2020	50	SEA Logistics Partner	Logistics	Viet Nam	1	Yes
Power Construction Corp. (PowerChina)	750	2022	50	Bangchak	Energy	Lao PDR	1	Yes
China Railway Construction	740	2020	10		Rail	Thailand	1	Yes
Shandong Bright Ruby	720	2022			Property	Singapore	1	
Shenzhen Xingyan	690	2023	100		Technology	Malaysia	1	Yes
Sinosteel	670	2020		Cambidian Royal	Coal	Cambodia	1	Yes
Alibaba	630	2023		Lazada	Consumer goods	Singapore	1	
Alibaba	610	2022		Lazada	Consumer goods	Singapore	1	
China Communications Construction, Guangxi Beibu	610	2023	51, 20		Logistics	Malaysia	1	Yes
Alibaba	600	2020	50		Property	Singapore	1	
Zhejiang Lygend	530	2020			Metals	Indonesia	1	Yes
Jinko Solar	500	2021			Alternatice	Viet Nam	1	Yes

Source: AEI.
Note: Investment deals exceeding $500 million.

Source: ASEAN Investment Report 2024 research.

***

The prospects for Chinese investment in the region are promising, based on the fourfold increase in announced Chinese greenfield investment in ASEAN in 2023 and favourable surveys of Chinese business sentiment. More companies from China are expected to invest in ASEAN in the next few years, and many Chinese MNEs will continue to expand to further strengthen their regional foothold. More than 70 per cent of Chinese-funded enterprises in ASEAN surveyed in 2023 by the China Council for the Promotion of International Trade plan to expand operations in the region.[7]

A combination of "push" and "pull" factors associating with trade tensions, supply chain restructuring, rising costs at home, customer reach and ASEAN's locational attraction will continue to drive further growth of Chinese FDI. The ASEAN–China FTA, the RCEP and the BRI will continue to provide strategic influences and additional impetus for Chinese companies to invest in the region. The new normal pattern of FDI with robust manufacturing investment will help sustain high levels of FDI by Chinese enterprises. Expanding market and investment opportunities in ASEAN, including its geographical proximity, will continue to attract more Chinese investment to the region, particularly from small and medium-size enterprises.

Another important source of growth is expected to come from rising investment in technology-related areas where Chinese companies are gaining proprietary ownership advantages and are keen to internationalize. These areas include industries related to the EV supply chain, electronics, renewables manufacturing, data centres and the digital economy.

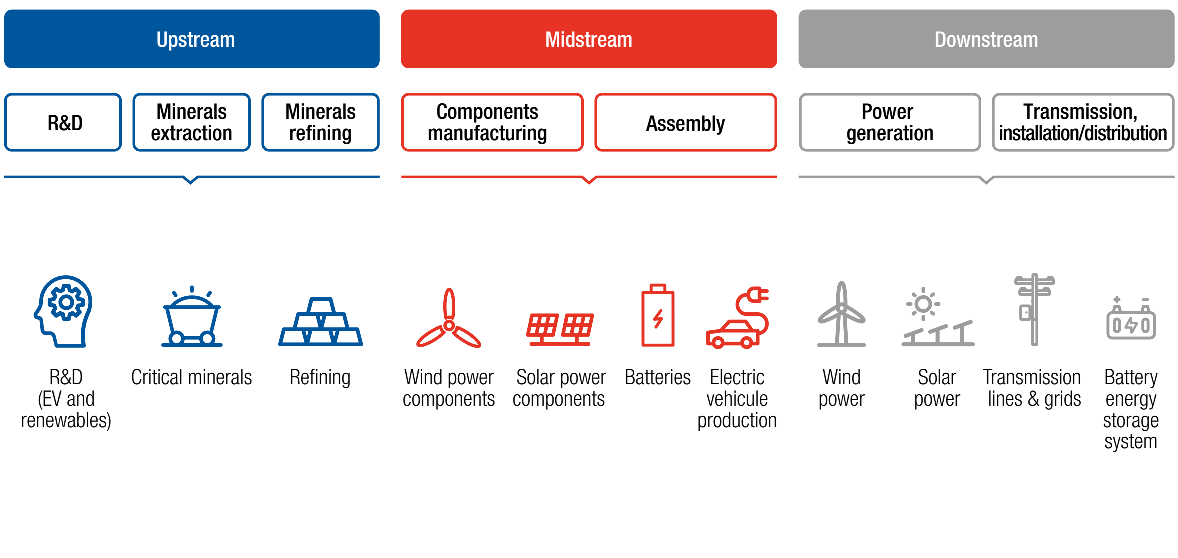
1.6.2. Renewable energy supply chain: a major recipient of international investment

The renewable energy supply chain, from upstream, to midstream (renewable manufacturing), to downstream (renewable energy generation) (*WIR 2023*), is a major recipient of FDI in ASEAN (figure 1.18). Key drivers are energy transition policies, rapid economic and industrial growth, the growing population, emerging investment opportunities and MNEs' energy transition commitments.

Investment across the renewable energy supply chain in the region is growing rapidly. Although such investment is concentrated in a few Member States, the region is an important location for upstream activities, particularly in mining and processing of critical minerals (e.g. nickel and cobalt). With the right policies, the region can also be a major global manufacturing hub for renewables – strengthening the connection with upstream and downstream segments of the renewable energy supply chain.

This section analyses the reasons underpinning the increase in international investment in renewable energy generation – a significant segment of the supply chain with rising FDI flows. It also explains the evolution of players from non-energy MNEs and emerging energy technology entities, and the investment gaps.

Figure 1.18. Renewable energy value chain: a stylized illustration



Source: Adapted from World Investment Report 2023.

(a) Investment trends in the renewable energy supply chain

Announced greenfield investment in industries related to the renewable energy supply chain in ASEAN is increasing (table 1.4). During 2020–2023, renewable energy-related industries attracted an average of more than $27 billion annually in such investment, about 25 per cent of all announced greenfield investment activities. These industries include critical minerals extraction and processing, renewables manufacturing (e.g. production of batteries, EVs and solar modules) and renewable power generation.

Twelve of the 20 largest international project finance deals during 2020–2023 were in renewable supply chain activities, mostly in electricity generation (solar and wind power) and EV-related industries (battery production) (table 1.5). These 12 projects accounted for more than 75 per cent of the top 20 deals by value, underlining the capital-intensive nature of renewable projects and the requirement for huge capital outlays. It also suggests a favourable perception by investors of business and industry growth, a growing investment appetite and expanding investment opportunities in renewables. The five largest deals during this period were in solar and wind power generation. Most of the top 20 projects were in Viet Nam, Indonesia and the Philippines, in that order. Together, these five projects accounted for 42 per cent of the total value of international project finance in these years.

Table 1.4. ASEAN: Announced greenfield investment in renewable energy supply chain, 2020–2023
(Millions of dollars and number)

	Value				Number			
Renewable segments	**2020**	**2021**	**2022**	**2023**	**2020**	**2021**	**2022**	**2023**
Critical minerals	5 100	1 736	10 636	18 575	1	4	7	18
Clean technology	237	10 950	81	2 723	4	9	13	25
Photovoltaic technologies	237	10 827	5	2 206	4	5	2	16
Other clean technology		123	76	517	..	4	10	9
Electric vehicles	506	1 526	9 199	6 491	4	11	12	43
Battery supply chain		1 100	8 377	1 200		1	5	10
Other EV	506	426	822	5 291	4	10	7	33
Renewable energy generation	2 185	5 244	16 558	16 669	22	9	20	35
Biomass			20	447			1	4
Hydroelectric			390				1	
Other electric power generation	2 520	392	1 100	172.7		3	2	9
Solar electric	1 578	2 500	2 105	1.176	18	4	10	7
Wind electric	607	224	13 651	13 946	4	2	6	15
Total	**8 028**	**19 456**	**36 474**	**44 458**	**31**	**33**	**52**	**121**

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

Table 1.5. ASEAN: Top 20 largest international project finance, 2020–2023 (Billions of dollars)

Project name	Project nation	Estimated cost	Ultimate sponsor	Ultimate sponsor headquarters	Industry	Year
BlueFloat Energy Philippines Offshore Wind Portfolio	Philippines	38.0	BlueFloat Energy	Spain	Renewables	2021
20.76 MW Kulim Large Scale Solar Photovoltaic	Malaysia	20.7	Thai Beverage I Savelite Engeneering I Modemtent Development	Thailand I Malaysia I Malaysia	Renewables	2021
AES Binh Thuan Offshore Wind Farm	Viet Nam	13.0	AES	United States	Renewables	2022
3900 MW Hai Phong Offshore Wind Power Plant	Viet Nam	11.9	T&T Group I Danish Government	Viet Nam I Denmark	Renewables	2021
3.5GW La Gan Offshore Wind	Viet Nam	10.0	Copenhagen Infrastructure I Asiapetro I Novasia Energy	Denmark I Viet Nam I Viet Nam	Renewables	2020
Gia Loc & Binh Giang & Thanh Mien Pharmaceutical Park	Viet Nam	10.0	Sms Pharmaceutical I Dian An Group I Sri Avantika Contractors (I) I Leaps & Bounds	India I Viet Nam I India I Viet Nam	Industrial park	2021
Tongkun / Xinfengming North Kalimantan Refinery & Petrochemical Complex	Indonesia	8.6	Tongkun Holding Group I Shanghai Qinghong Industrial	China I China	Petrochemicals	2023
Batang Integrated Industrial Area Indonesia Electric Vehicles Industry	Indonesia	8.4	Republic Of Indonesia I Hon Hai Precision Industry	Indonesia I Taiwan Province of China	Industrial park/ renewables	2022
Buhawind Energy Northem Luzon Wind Offshore	Philippines	7.5	Philippine Dealing System Holding I Copenhagen Energy	Philippines I Denmark	Renewables	2021
Bayan Lepas Intel Semiconductor Packaging Facility	Malaysia	7.1	Intel	United States	Manufacturing	2021
Thailand Green Hydrogen and Ammonia Plant	Thailand	7.0	PTT I Saudi Arabia I Electric Generating Authority of Thailand	Thailand I Saudi Arabia I Thailand	Power/Renewables	2022
Indonesia Deepwater Development	Indonesia	7.0	Chevron	United States	Oil and Gas	2021
Dito Telecommunity Corp Telecom Towers	Philippines	6.1	China Telecommunications	China	Telecommunications	2021
Exxon Mobil Corp Gas-to-power	Viet Nam	5.1	Exxon Mobil	United States	Power	2020
Haiphong Liquefied Natural Gas Power & Terminal	Viet Nam	5.1	Exxon Mobil I Tokyo Electric Power	United States I Japan	Oil and Gas	2020
Anantara Energy Riau Island Solar and Battery Storage	Indonesia	5.0	DIF Management	Netherlands	Renewables	2022
Indonesia CATL Lithium Battery Plant	Indonesia	5.0	Contemporary Amperex Technology	China	Manufacturing/ renewables	2020
1.46 GW Mekong Mainstream Hydropower Plant	Lao PDR	4.8	CH Karnchang	Thailand	Renewables	2020
PNE Phu Cat and Phu My Offshore Wind Farm Project	Viet Nam	4.6	PNE	Germany	Renewables	2021
Bontang Ammonia Production Facility Project	Indonesia	4.0	Haldor Topsoe Holding I Copenhagen Atomics I Aalborg CSP I Alfa Laval Nordic	All Denmark	Petrochemical	2023

Source: UNCTAD, based on data from Refinitiv.

(b) Renewable energy generation

Investment spending in renewable energy generation in ASEAN has risen from an annual average of $11 billion in 2015–2019 to $14 billion in 2020–2023.[8] ASEAN accounts for about 3 per cent of the global investment spending in renewable energy generation in the two periods, and a slower compound annual growth rate of about 7 per cent between 2015 and 2023 as compared with the world (10 per cent). This suggests that ASEAN has the potential to attract more investment in renewable energy generation as compared with the region's 11 per cent share of world FDI during 2015–2023. During 2020–2023, the number of international investment projects in renewable energy generation in ASEAN grew at a compound annual average growth of 12.2 per cent, compared to the global growth rate of 12.8 per cent, reflecting the strength of the global upward trend.

Despite the rise, investment fell short of both the $16 billion needed in the planned energy scenario of IRENA and the $23 billion needed in the 1.5 degree scenario of the Paris Agreement[9] for annual investment in renewable energy generation through 2030 (IRENA, 2022). During the recent period, more than 65 per cent of the investment spending was in solar and wind power.

Active investment in renewable energy generation over the years has increased the region's installed capacity. Achieving the 2025 target of 35 per cent for installed capacity is within reach, as 33.6 per cent was achieved by 2021[10] and 37.6 per cent is expected by 2025 (IRENA, 2022). Robust private investment, including from international companies, has played a significant role in the development of the region's renewable energy generation capacity. Private investment accounted for almost 60 per cent of investment in renewable energy in ASEAN during 2016–2020.[11] Projecting this trend to 2030, the private sector is expected to remain a major player and FDI to be an important catalyst.

(i) Renewable energy generation: investment opportunities

The region has significant untapped potential for renewable energy generation of about 17,230 GW, a majority of which is estimated to come from solar energy.[12] Tapped solar energy capacity barely reaches 1 per cent of the potential, despite solar photovoltaic capacity having more than doubled in the region since 2012.[13] ASEAN's wind power generation is projected to increase from 9.1 GW in 2023 to 17 GW by 2030, with 80 per cent of the increase coming from onshore projects and the remainder from offshore activities.[14] ASEAN's solar energy market alone is estimated to be worth $125 billion over the next decade.[15]

These numbers highlight significant investment opportunities. Tapping the solar and wind power potentials would require a huge investment of $54 billion per year through 2050.[16] Stakeholders, including international investors and financiers, multilateral development banks, commercial banks and green funds, can play a pivotal role.

Solar power

Investment in solar energy generation has risen from $2.7 billion in 2015 to $6.9 billion in 2023 (IEA, 2023). The growth, although uneven across the region, has occurred in key segments of the solar energy value chain (energy generation and panel manufacturing and storage), connecting downstream and midstream development.

Wind power

Total investment in wind energy generation (onshore and offshore wind farms) between 2015 and 2023 amounted to $2.3 billion annually.[17] To reach the 2050 net zero target, the region needs to install 65 GW of wind-generated energy by 2030 (IEA, 2023).[18] Total wind capacity for electricity reached only 9.1 GW in 2023, although this was a sizeable increase from the 7.9 GW capacity in 2022.[19] The under-capacity suggests that there are investment opportunities to scale up wind energy generation.

Hydropower

The region has long been generating electricity from hydropower, with different endowments and degrees of development among the Member States. For instance, in 2022 hydropower in Cambodia accounted for more than 40 per cent of energy consumption and in the Lao PDR for 80 per cent, while 12 per cent of Indonesia's energy mix was from renewable energy sources, with hydropower accounting for more than 50 per cent.[20] These varying mixes are also influenced by energy policies, investment promotion, the availability of project finance and the industrial development of Member States. Given the region's hydropower endowment, ASEAN could further tap the potential for renewable energy generation.

(ii) Drivers

A combination of factors drives international investment in renewable energy generation (*WIR 2023*). They include demand growth, declining technology costs, host countries' commitment to the energy transition, investment opportunities, and users or factories adopting and investing in renewable technologies. Corporate investment strategies to capture more value from the renewable energy supply chain (linking upstream, midstream and downstream) and the growing regional electricity trade are also important determinants. Green industrial parks and the proliferation of data centres in the region are adding to the growing demand for more electricity generated from renewable energy.

Government policies are another key aspect. ASEAN Member States have adopted policies favourable to investment in renewable energy generation. They include improvements in the investment environment, generous investment incentives, feed-in tariffs, net metering and encouragement of the use of renewable energy (table 1.6).

(iii) Players

Renewable energy generation is attracting growing attention from a wide range of international investors, including technology and non-energy-related companies (table 1.7). These companies include utility MNEs, technology solution corporations, new entrants (specialized renewable energy companies, regional developers and green industrial parks), financial institutions (specialized funds, multilateral development banks and commercial banks) and conglomerates that establish dedicated business units and subsidiaries to invest in renewable energy. Traditional energy companies (e.g. Total Energies (France) and Shell (United Kingdom)) and coal companies (e.g. Adaro (Indonesia), Genting Group (Malaysia), Banpu and Ratch Group

Table 1.6. ASEAN: national policies for renewable energy development

	Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
Renewable energy target	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Foreign equity allowed	✓	✓	✓	✓	✓	✓	✓ (100%)	✓	✓	✓
Feed-in tariff		✓	✓	N/A	✓	N/A	✓	N/A	✓	✓ c
Standard PPA (IPP)		✓	✓	N/A	✓	N/A	✓	✓	✓	✓
Direct PPA		✓	a	N/A	✓	N/A	✓	✓	✓	d
Off-grid connection allowed		✓	✓	✓	✓	N/A	✓	✓	✓	e
Net Metering allowed		✓	f	N/A	✓	N/A	✓	✓	✓	✓
Incentives for utility scale		✓	✓	✓	✓	✓	✓	b	✓	✓
Incentives for rooftop installation		✓	✓	✓	✓	✓	✓	b	✓	✓

Source: *ASEAN Investment Report 2024* research, based on websites of ASEAN Member State investment agencies, industry news and media.
Note: IPP = independent power producer, PPA = power purchase agreement.
a. Negotiated on a case-by-case basis or operating lease agreement scheme.
b. Incentives cover modified net metering, renewable credits and grants. Although Singapore does not offer a complete net metering scheme, consumers can choose to sell surplus solar electricity back to the grid by registering either with SP Services or the Energy Market Company.
c. Feed-in tariffs for all renewable energy projects.
d. Pilot implementation status.
e. The residential off-grid photovoltaic system is commonly known as the solar home system.
f. In Indonesia, the Ministry of Energy and Mineral Resources has enacted Regulation No. 2/2024, which abolishes net-metering systems for rooftop photovoltaic installations. However, the new regulation also abolished the installed capacity limit of such installations. (Indonesia Business Post, “Jokowi approves solar panel regulation revision”, 7 February 2024).

(both Thailand)) (see *AIR 2023*) are also expanding into clean energy-related businesses. Other international companies (e.g. Chinese, European and Japanese MNEs) are involved in engineering-procurement-construction and installation of renewable energy infrastructure in the region.

MNEs play significant roles as users, project owners and developers, technology suppliers and funders of renewable energy generation in the region. In addition, increasingly more MNEs and local companies are adopting and transforming industrial facilities by installing solar energy systems in their factories. They include MNEs in industries such as automotive, electronics, semiconductors, textiles, food and beverages, fast-moving consumer goods and data centres. These companies increase renewable energy generation capacity and stimulate demand for and investment in renewables manufacturing.

Regional players are also stepping up efforts in investing in renewable energy generation. In addition to traditional energy companies, ASEAN conglomerates are investing in renewable energy generation businesses. Energy-related companies (public utilities and government-linked companies) in electric generation and distribution from Malaysia, Thailand and Viet Nam are involved in hydropower plant development in the Lao PDR. ASEAN conglomerates are also investing in solar and wind power projects through their energy-related subsidiaries.

Hydropower

While Viet Nam, the Lao PDR and Indonesia are leading the development of hydropower plants, there are differences in the extent to which international investment is involved. These three Member States accounted for 62 per cent of the total hydropower capacity in ASEAN. In the Lao PDR, more than 80 per cent of the power plants are either wholly foreign owned or involved foreign equity participation. China and Thailand own the most hydropower plants in that Member State.

Viet Nam has more than 370 hydropower plants, accounting for 17.3 GW of installed capacity in 2022. The 12 largest hydropower plants (with 300 MW or more of installed capacity), which accounted for more than 50 per cent of the 17.3 GW installed capacity, are owned by EVN – a State-owned electricity company.[21] Foreign investors are also actively involved in the supply of equipment, technology solutions and project finance.

Indonesia has 17 large hydropower plants (defined as 100 MW and above), which constitute 71 per cent of the country's total hydropower installed capacity at 6.6 GW in 2021.[22] About 70 per cent of these are State-owned, and the rest are classified as independent power producers, mostly with foreign equity ownership. The mining and smelting companies are usually the producers, with smaller plants to support their energy requirements and to supply to towns or provinces around their operations.

Wind

Given their topographical advantage, Viet Nam, Thailand, the Philippines and Indonesia (in that order) are home to the top wind power producers but with different degrees of international investor participation. These Member States and others are gaining more attention from offshore wind developers and investors.

Table 1.7. ASEAN: Different categories of players in renewable energy generation

Category	Energy activities	Example of players
National electric/ utility corporations	Owns resources or manages grid connection, buys electricity generated by the private sector, including renewable energy	EDL (Lao PDR), EGAT (Thailand), EVN (Viet Nam), Tenaga (Malaysia)
Coal power plant companies	Own coal mines and generate electricity using coal Manage early retirement of coal plants and reinvestment in renewable energy power plants	**Foreign:** China Energy Engineering, China Huadian, Datang Overseas Energy Investment (all China), Engie Energy International (France), Siemens (Germany), Sumitomo (Japan), and Korea Midland Power, Samtan (both Republic of Korea) **Regional:** Genting Group (Malaysia); Banpu and Ratch Group (both Thailand)
Oil and gas MNEs	Supply oil and gas for electricity generation Capture and store carbon, and reinvest in renewables and liquefied natural gas	**Foreign:** Total (France), BP, Shell (both United Kingdom), Chevron, ExxonMobil (both United States) **Regional:** Pertamina (Indonesia), Petronas (Malaysia), PTT (Thailand)
Renewable energy project owners	Technology solution companies investing and generating renewable electricity (e.g. from wind, solar, hydropower)	• Foreign (hydro): China International Water & Electric, China Water and Energy, Power China Resources, (all China), Scatec (Norway), GE Renewable Energy (United States) • Foreign (solar/wind): Xing Hai Group, Powerway Group (both China); ib vogt (Germany); Shapoorji Pallonji Infrastructure Capital (India); ACWA Power Renewable Energy Holding (Saudi Arabia) • Regional (hydro): BCPG, EGCO Group, GSM, Southeast Asia Energy (all Thailand), Viet Lao Power (Viet Nam) • Regional (solar/wind): AC Energy (part of Ayala Group) (Philippines), Blue Circle, InfraCo Asia, Sembcorp, Sunseap and Quantum Power Asia (all Singapore), B. Grimm and Super Energy (both Thailand)
Other actors		
Equipment manufacturers	Manufacture renewables (e.g. solar and wind equipment and components)	JA Solar and Jinko Solar (both China), Hanhwa Q CELLS (Republic of Korea), Maxeon Solar and Sunpower (both United States)
Transmission grid project owners	Invest in transmission grids	China Southern Power Grid Company (China), Union Power (Singapore), B. Grimm (Thailand)
Technology companies and digital/green start-ups	Provide technology solutions to improve efficiency in energy consumption in buildings, transportation and industrial operation	GoTo and Sicepat (both Indonesia) (e.g. for development and use of electric motorbikes), Envision Digital, Grab (both Singapore), Microsoft (United States)
Mining, battery and EV companies	Produce EV batteries and EVs, extract and process critical minerals	Tsingshan (China), Hyundai and LG (both Republic of Korea)
Project contractors and developers	Contract and develop power projects engineering-procurement-construction companies	Total Energies (France), SK Ecoplant (Republic of Korea), Athena Energy Holdings and Sunseap (both Singapore) New actors enabled by technologies (e.g. manufacturing MNEs installing solar panels at factory sites)
Funders	Provide international project finance and investment	Multilateral development banks, regional banks, export-import banks, and other infrastructure and green funds (e.g. Asian Development Bank, World Bank; Mitsubishi Green Fund, Japan Bank for International Cooperation, Mizuho Bank, Joyo Bank and Shiga Bank (all Japan), OCBC (Singapore))

Source: Adapted from *ASEAN Investment Report 2023*.

Onshore wind farms

FDI and MNEs played a significant role in the development of wind energy generation. More than 55 per cent of all installed wind power capacity (7.7 GW) in the region in 2023 had foreign equity participation, either wholly owned or in partnership. About 90 per cent of the foreign-related onshore wind farms are owned by ASEAN firms or other Asian companies.

Offshore wind farms

Offshore wind farm development in ASEAN is at a nascent stage but is attracting increasing international investment attention, particularly in the Philippines and Viet Nam. In these countries, investment opportunities, natural advantage and national policies promoting investment in offshore wind farms play roles in that attraction. Major foreign-owned offshore wind farm projects in ASEAN are mostly owned by European MNEs; for example, Copenhagen Infrastructure Partners Novasia and Ørsted (both Denmark).[23]

ASEAN energy companies are not active in cross-border investment in offshore wind farms. Instead, they mostly operate as domestic partners in projects led by foreign MNEs. This choice is primarily because they have limited experience in offshore wind projects relative to major players such as the European counterparts.[24]

More than half of all planned, in-development and commissioned offshore wind farms in Viet Nam[25] and about a third of the awarded wind projects in the Philippines are owned by joint ventures between domestic and foreign companies. MNEs involved include Macquarie Group (Australia), Copenhagen Infrastructure Partners and Ørsted (both Denmark), Mainstream Renewable Power (Ireland), Gulf Energy (Thailand) and AES (United States). Corio (Australia) signed a memorandum of understanding with Power Generation Joint Stock Corporation 3 (EVNGENCO3), a subsidiary of Vietnam Electricity, to collaborate on offshore wind project development. Mainstream Renewable Power (Ireland) formed a joint venture with the Phu Cuong Group (Viet Nam) for the development of the 1.4 GW Phu Cuong Soc Trang offshore wind farm project. Triconti Windkraft Group (Philippines), a company under Fil-Swiss-German Windkraft Group, has partnered with Iberdrola (Spain) on the development of five offshore wind projects in the Philippines.

Technology suppliers

In addition to investment, international companies are also involved in renewable energy development through non-equity forms of participation, acting as engineering-procurement-construction firms, concessionaires, and technology or equipment suppliers. Many European companies supply technology to onshore wind farms in ASEAN. They include Vestas (Denmark), GE Renewables (France) and Siemens Gamesa (Spain). For offshore wind technology, European Union companies supply technology to and invest equity stakes in generation projects.

(iv) Intraregional renewable energy electricity trade

A key feature of energy development in ASEAN is the growing intraregional trade in electricity, which involves transmission of renewable energy from one Member State to others. The region generated 1,053 TWh of electricity in 2022. About 36 TWh, or 3.4 per cent of the total, is traded within the region.[26] Inter-ASEAN electricity trade is still at an early stage of development, as only 25 per cent of the potential interconnections between grids have been realized. By 2030, when interconnections are fully developed, the value of such trade is estimated to be $7.1 billion.[27]

Subregional trading arrangements are important aspects of the ASEAN power grid. The LTMS Power Integration Project, comprising the Lao PDR, Thailand, Malaysia, and Singapore, is an example. Under this project, the Lao PDR supplies up to 100 MW to Malaysia and 100 MW to Singapore. It also supplies electricity, mainly from hydropower, to other Member States such as Cambodia, Myanmar, Thailand and Viet Nam. Electricity trade also occurs between Indonesia and Singapore, and between Indonesia and Malaysia. The Brunei Darussalam–Indonesia–Malaysia–Philippines Power Integration Project involves multilateral power trading.

Significant barriers to intraregional power trading is the underinvestment in transmission and grids and the lack of transmission capacity to match the rapid growth in renewable energy generation. The region requires an additional 25.8 GW of interconnection capacity to realize the ASEAN renewable energy target by 2040, but only 7.7 GW had been achieved by 2022. Significant investment in interconnection infrastructure and transmission is needed.

Intraregional trade in renewable energy helps strengthen energy security and facilitate efficient resource sharing between Member States, supporting industrial development, green transformation and energy for all in the region. Two thirds of the growing energy demand could be met by renewable energies sourced from ASEAN countries that have strong renewable energy potential.[28]

(v) Transmission and Grids

Achieving renewable energy transmission goals will require significant investment to modernize, expand and interconnect power grids and related infrastructure. To reach 31 GW of capacity in interconnected grids by 2030, the region requires $9.3 billion in investment annually (for both transmission grids and cross-border linkages). Yet on average only $4.2 billion was invested annually in 2018–2020.[29]

In most Member States, State-owned enterprises are actively involved in investing in power transmission. Private sector involvement is in the early stage and is limited; however, some regional MNEs – such as B.Grimm, Ratchaburi Electricity Generating (both Thailand), Keppel Infrastructure and Union Power (both Singapore) – are emerging as players in transmission.

***

Industries related to the renewable energy supply chain are major recipients of international investment, with the generation segment attracting significant and increasing FDI inflows. This trend is expected to continue through 2030, with the Member States committed to decarbonization and actively promoting the utilization of clean energy. The prospects for international investment in the renewable energy supply chain, in particular in power generation, are favourable. Growing demand for renewable energy power supply, as well as energy transition policies, the commitments of MNE subsidiaries and affiliates to use renewable energy power, and a proliferation of categories of energy and non-energy players are driving the growth of investment in renewable energy generation. Also playing important roles are the significant untapped renewable potential for generation, the rapidly growing industrial and household demand, and the expanding ecosystem, facilitating the development of the renewable energy industry.

The rising investment nevertheless falls short of requirements for the development of renewable energy generation to meet both demand and energy transition targets. A greater effort is needed to mobilize and channel investment to exploit the region's renewable energy potential and to fill the gap in renewable energy generation investment. Such an effort includes attracting domestic and international investment and facilitating the participation of multilateral development banks and green funds.

1.7. INVESTMENT OUTLOOK AND CONCLUSION

FDI flows in ASEAN rose by less than 1 per cent in 2023, to $230 billion, against the backdrop of the global FDI downturn. The region remained the largest recipient of FDI among developing-economy regions, underlining its resilience and rising investment attractiveness. The record investment was underpinned by robust FDI in finance, an all-time high investment in a few Member States and sustained high inflows in the manufacturing sector.

The FDI outlook for the region is promising, with robust growth in announced greenfield investment in 2023, ongoing regional integration and growing favourable investment sentiment (table 1.8, box 1.3). In addition, the stabilization of interest rates could lead to a recovery of global international project finance, which could potentially boost investment in ASEAN. Many MNEs operating in the region continued to report increasing profitability and positive prospects for further growth. Many reported plans to further invest in the region over the next few years because of the improving investment environment and expanding investment opportunities.

The region's investment environment is expected to further evolve with significant influences emanating from various developments. They included robust investment interest by international companies to expand and develop supply chain networks, the continued rise in FDI from Chinese enterprises in the new normal context and continued growth of investment in renewable energy-related industries, particularly in renewable manufacturing and energy generation. These forces will continue to play major roles, contributing to the changing investment landscape and an upward FDI trend.

Despite the positive outlook, there are headwinds that could hamper regional efforts to attract high levels of FDI. They include greater competition for declining global FDI inflows, concern over global economic growth and fracturing, financial tightening, inflationary pressures and geopolitical tensions. In addition, the internal challenges reported in *AIR 2023* will continue to pose concerns. They included limitations on absorptive capacity, skills development needed to support future industries and industrial upgrading, and ecosystems development for emerging industries and particularly in areas related to the renewable energy supply chain and the digital economy. Although these are longer-term structural challenges, actions to address them need to begin now to facilitate deeper integration and a post-AEC 2025 era more conducive to investment.

Table 1.8. Business and investment sentiment about ASEAN in recent surveys

Survey	Business and investment sentiments in ASEAN: key findings
American Chamber of Commerce Singapore – "ASEAN Business Outlook Survey 2022: ASEAN: The Future of the 21st Century Economy" N = 149	• 45 per cent estimated the timeline for their company's profit in ASEAN to recover from the impact of the pandemic to be between one and three years. • 48 per cent believed in the importance of the ASEAN market for revenue in the next two years. • 89 per cent expected their company's level of trade and investment in the region to increase in the next five years. • 69 per cent had a positive overall experience with the current business climate. • 62 per cent planned to expand in the region.
Australia-ASEAN Chamber of Commerce – "Australian Business in ASEAN Survey 2023–2024" N = not reported	• 29 per cent stated that their operations in ASEAN were much more profitable than in 2022. • >80 per cent anticipated increases in revenue over the next five years. • >50 per cent planned to expand in the region. • >70 per cent prioritize ASEAN as a region for their operations and highly value their experience in ASEAN. • 65 per cent of businesses' head offices had a deep level of understanding of doing business in the region.
Canada–ASEAN Business Council – "2023 Canada-ASEAN Business Outlook Survey Report" N = >100	• 82 per cent were optimistic about the future profitability in ASEAN, even against the backdrop of a global economic slowdown. • 84 per cent believed that ASEAN will increase in importance in the next five years. • 70 per cent had benefitted from opportunities in the region. • 99 per cent planned to maintain or increase investments in ASEAN.
EU–ASEAN Business Council – "2023 EU–ASEAN Business Sentiment Survey" N = 599	• 63 per cent saw ASEAN as the region with the best economic opportunity over the next five years. • 65 per cent expected an increase in profits in ASEAN. • 80 per cent expected ASEAN markets to become more important in terms of worldwide revenues over the next two years. • 84 per cent expected to increase levels of trade and investment . • 45 per cent were positive about expansion prospects in ASEAN (with 47 per cent undecided).
HSBC – "Global Connections: Connecting Southeast Asia and UK, Survey September 2023" N = 3.509	International businesses from nine major economies were increasingly optimistic and confident about the region; they expected sales in the region to grow by 23.2 per cent over the 12 months from September 2023. • 43 per cent expected their organic growth in the region to increase by at least 30 per cent in 2023. • 46 per cent of British firms planned to significantly increase inorganic growth within ASEAN by 2024 (ahead of 44 per cent of French firms and 45 per cent of German firms). • Over 2024 and 2025, United Kingdom companies planned to prioritize growth in a number of ASEAN Member States.
Singapore–German Chamber of Industry and Commerce – "Business Sentiment Survey 2024" N = 73	Outlook for companies: • 42.7 per cent: balanced positive • 41.1 per cent: neutral ASEAN was perceived as a location with the highest growth potential and a higher potential rating than in 2023

Source: Respective business and investment surveys.

NOTES

[1] *Nikkei Asia*, "Philippines risks losing foreign investment over delayed tax rebates", 6 October 2023.

[2] East Asia Forum. "China's continuing influence over Cambodia's economy", 1 May 2024; *Textile Insights*, "90% of Cambodian Garment Units Owned By Chinese Investors", 31 January 2024.

[3] *Reuters*, "How China's Shein became a fast-fashion gaint", 28 November 2023.

[4] American Enterprise Institute database.

[5] *STDaily*, "BRI project promotes industrial upgrade in Indonesia', 9 September 2022.

[6] Chatham House. "Debunking the Myth of 'Debt-trap Diplomacy': How recipient countries shape China's Belt and Road Initiative", 2020 and United Overseas Bank, "The Belt and Road Initiative in ASEAN: Malaysia", 2020.

[7] CGTN, "Survey: Over 70% of Chinese companies in ASEAN plan expansion", 27 December 2023.

[8] Based on International Energy Agency data provided for the preparation of this report. The data exclude investment in transmission, distribution, storage, carbon capture and storage, and EV charging infrastructure. They include public and private investment and are based on the stated policies scenario.

[9] The Planned Energy Scenario considers current and planned and is the primary reference case for the development of the energy transition scenarios. The 1.5 degree scenario is an ambitious energy pathway to further reduce carbon dioxide emissions in the energy system. It largely follows the World Energy Transition Outlook scenario, aiming to reach net-zero emissions globally by 2050.

[10] Based on International Energy Agency data and on *ASEAN Magazine*, "Energy matters: Just and inclusive transition to low carbon development", 1 February 2024.

[11] IEA, "ASEAN Renewables: Opportunities and Challenges", March 2023.

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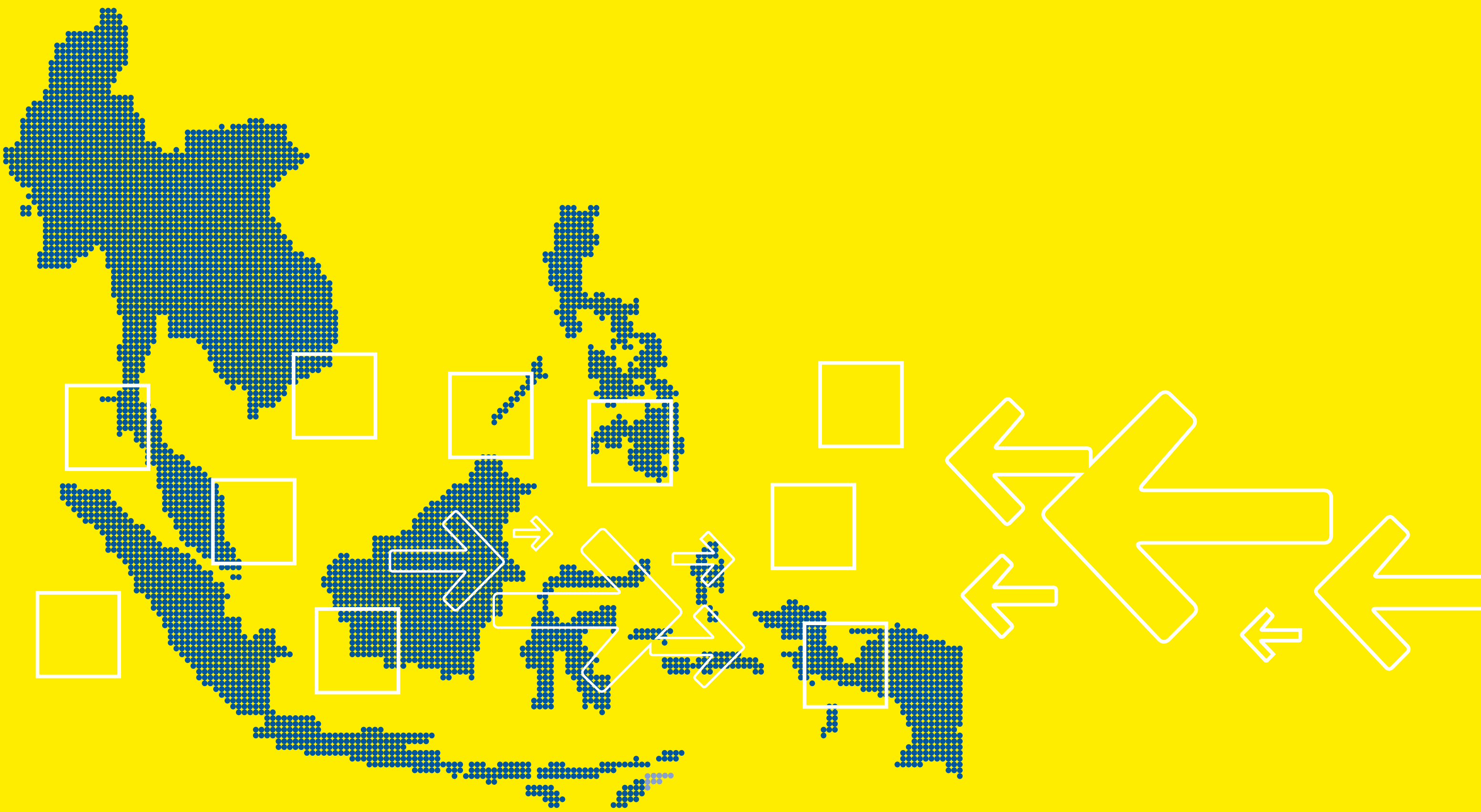
PART TWO

AEC 2025 AND FDI



Chapter 2

AEC 2025 and investment policy developments in ASEAN

2.1. INTRODUCTION

The investment environment in ASEAN has continued to improve during the implementation of the ASEAN Economic Community (AEC) programme called AEC Blueprint 2025 (for purposes of this chapter, covering 2016–2024). This improvement has played an important role in attracting foreign direct investment (FDI) to the region (see chapters 1 and 3). Beyond economic factors, the enhancement of the investment environment is closely related to policy developments. They have included implementation of (i) AEC Blueprint 2025; (ii) the ASEAN Comprehensive Investment Agreement (ACIA); (iii) other regional agreements, especially in trade facilitation, services integration and other sectoral developments; (iv) national investment measures and initiatives on liberalization and facilitation; and (v) improvement of investor sentiment.

Efforts to develop a "global ASEAN" by negotiating new free trade agreements (FTAs) with Dialogue Partners and upgrading existing instruments, including the conclusion and implementation of the agreement on the Regional Comprehensive Economic Partnership (RCEP), also help improve the investment environment. These extra-ASEAN developments expand investment opportunities in the region.

Taken altogether (i.e. regional actions, national measures and extra-ASEAN FTAs), these developments increase the attractiveness of ASEAN for FDI. This chapter analyses (i) the implementation to date of AEC Blueprint 2025, with emphasis on provisions related to investment; (ii) the implications of regional and national policy development during AEC 2025 on the region's investment environment and (iii) the policy impact of AEC Blueprint 2025 on FDI decisions.

2.2. IMPLEMENTATION OF AEC BLUEPRINT 2025: INVESTMENT POLICY IMPLICATIONS

AEC Blueprint 2025, a multifaceted set of regional agreements covering a broad range of economic cooperation areas, spearheads ASEAN's economic integration. It integrates all economic work programmes to be implemented between 2016 and 2025 under one guiding instrument. It involves ambitious liberalization, facilitation, promotion and cooperation programmes encompassing interconnected workstreams (i.e. on trade, investment, services, capital movement and people mobility) with sectoral development (e.g. in agriculture, minerals, transport and tourism). Prior to initiating AEC Blueprint 2025, ASEAN had implemented AEC Blueprint 2015 (2006–2015) and adopted an extensive web of major regional policy initiatives (figure 2.1).

Supporting the AEC objectives is the ongoing implementation of other major regional agreements, which have significant implications for FDI and for improving the region's investment environment. Among the most important are the following:

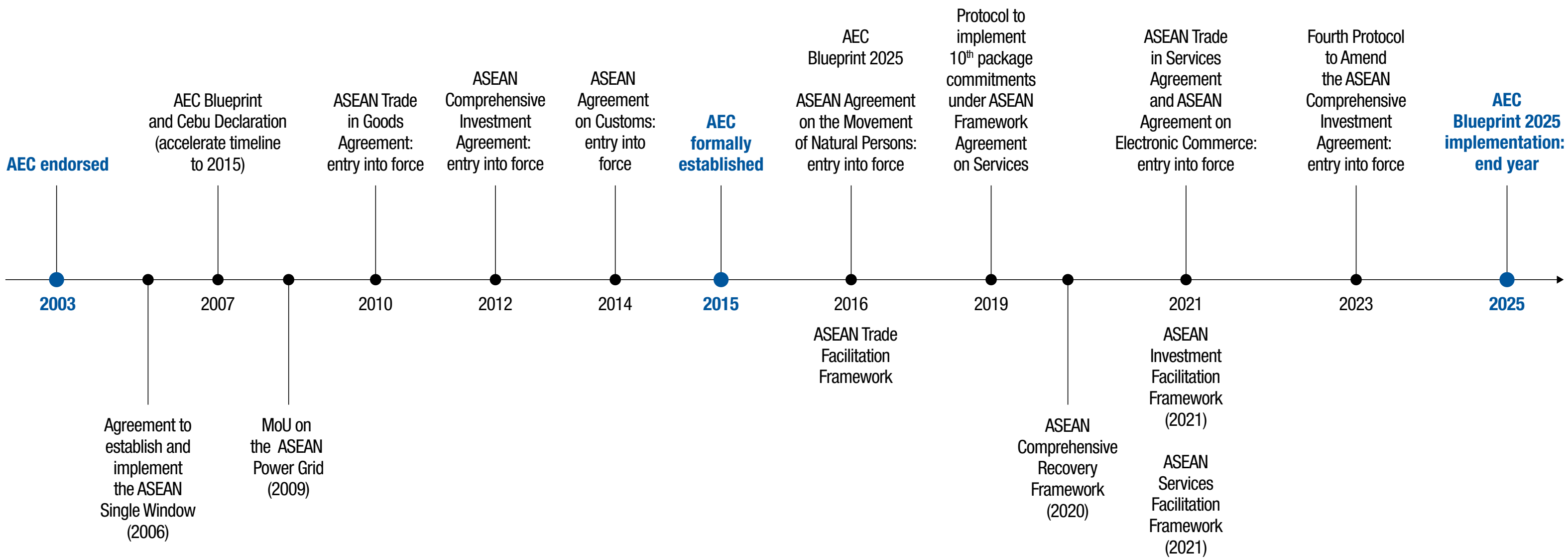
(i) The ASEAN Comprehensive Investment Agreement (ACIA), which governs liberalization, facilitation, promotion and cooperation on investment
(ii) The ASEAN Trade in Goods Agreement (ATIGA), which aims to achieve competitive, efficient and seamless movement of goods within the region
(iii) The ASEAN Trade in Services Agreement (ATISA), which broadens and deepens services integration, enhances ASEAN's services competitiveness, enlarges the contribution of services in global supply chains and economic development, and enables a more efficient business and investment environment
(iv) Various sectoral cooperation for integrating and developing industries such as transport, information and communication, e-commerce, agriculture, tourism, health care and minerals, which can further strengthen regional connectivity
(v) Declarations on strategic areas to strengthen supply chain development, industrial connectivity and the use of technology, such as those related to the development of the digital economy, the electric vehicle (EV) ecosystem, decarbonization, Industry 4.0 and sustainability challenges (see table 2.6)
(vi) The ASEAN Comprehensive Recovery Framework, which aims to strengthen regional resilience and support efforts to attract and facilitate FDI for sustainable post-pandemic recovery

AEC Blueprint 2025

During AEC 2025, measures relating to investment or having implications for the investment environment (e.g. trade and services agreements) were largely implemented and also in relation to the 23 sectoral work plans under the five pillars. The AEC Blueprint 2025 aims to achieve (i) a highly integrated and cohesive ASEAN economy; (ii) a competitive, innovative, dynamic ASEAN; (iii) enhanced connectivity and sectoral cooperation; (iv) a resilient, inclusive ASEAN; and (v) a global ASEAN (ASEAN Secretariat, 2015). As of December 2023, some 70 per cent of the 2,527 action lines under the committed AEC work plan had been completed, 26 per cent were in progress and 4 per cent were expected to be implemented between 2024 and 2025.

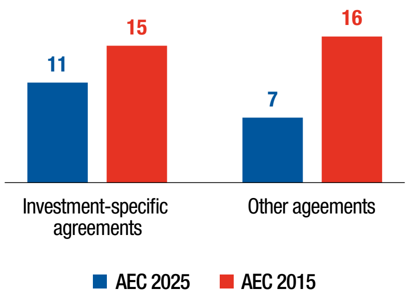
The investment policy environment in ASEAN has continued to improve through adoption of regional agreements and frameworks related to FDI and instruments that are not FDI specific but have significant implications for FDI. Eleven regional agreements specific to investment and seven other agreements with implications for FDI were adopted. This brought the cumulative total to 49 regional agreements, frameworks and instruments that favourably affect the region's investment environment (figure 2.2, box 2.1).

Figure 2.1. AEC and major AEC-related development and timelines



Source: ASEAN Secretariat.
Note: AEC = ASEAN Economic Community, MoU = memorandum of understanding.

Figure 2.2. Regional agreements specific to investment and with implications for FDI, AEC 2015 and AEC 2025 (Number)



Source: ASEAN Secretariat.

Box 2.1. Methodology for selection of agreements and instruments for analysis

Relevant regional instruments analyzed in this chapter fall in three categories: agreements, frameworks, and declarations or strategic documents. Agreements and frameworks cover instruments related to FDI that (a) address investment in their entirety, (b) comprise major investment provisions and (c) contain enforceability elements. Strategic documents included AEC Blueprint 2025, the ASEAN Comprehensive Recovery Framework and declarations that contain substantial references to investment and institutional framework implications for implementation.

Agreements and frameworks with FDI provisions (e.g. liberalization, facilitation, promotion) are included as “investment-specific agreements”, while those without FDI provisions but with significant implications for the investment environment or the improvement of efficiency (e.g. movement of goods, trade facilitation, customs single windows) are included as “other agreements”.

External ASEAN agreements with Dialogue Partners, such as investment agreements, FTAs and the RCEP, are not included in the count. Adding these agreements would increase the number of investment-related regional agreements adopted during AEC 2025 to 16. They were not included because they require separate and exclusive attention, given their significant potential impact on bilateral and investment ties, and because the chapter focuses specifically on analyzing the main instruments and elements of the AEC that facilitate regional integration, which is an important FDI determinant.

Many major documents are referred to in abbreviation in this report. They are:
ACIA = ASEAN Comprehensive Investment Agreement
AEC = ASEAN Economic Community
AIFF = ASEAN Investment Facilitation Framework
ASFF = ASEAN Services Facilitation Framework
ATIGA = ASEAN Trade in Goods Agreement
ATISA = ASEAN Trade in Services Agreement
ATFF = ASEAN Trade Facilitation Framework
DEFA = Digital Economy Framework Agreement

Source: ASEAN Investment Report 2024 research.

Recent business sentiment surveys by various business councils in ASEAN underscore that the AEC is increasingly influencing FDI decisions and destinations in favour of the region. Many investors have continued to express intentions to further expand in the region because of promising prospects and the improving investment environment (chapter 3). Extra-ASEAN FTAs, including the RCEP, strengthen these positive sentiments.

There are also declarations covering a wide range of strategic issues. They include initiatives such as building a more efficient environment for the development of the digital economy, the EV ecosystem, the energy transition, the blue economy (sustainable use of ocean resources), Industry 4.0 transformation and regionalization of small and medium-sized enterprises (SMEs). These strategic declarations further facilitate and support regional integration, including the development of supply chains and the industrial ecosystem.

AEC Blueprint 2025 covers many multifaceted economic aspects that support regional integration. They include investment-related provisions for different economic sectors and major development workplans encompassing trade, investment and services (table 2.1). Regional instruments such as the ACIA (for investment), the ATISA (for services integration) and the ATIGA (addressing trade facilitation and movement of goods), in addition to the 0–5 per cent tariff regime established under the predecessor Common Effective Preferential Tariff for ASEAN FTA programme, are major pillars of regional economic agreements.

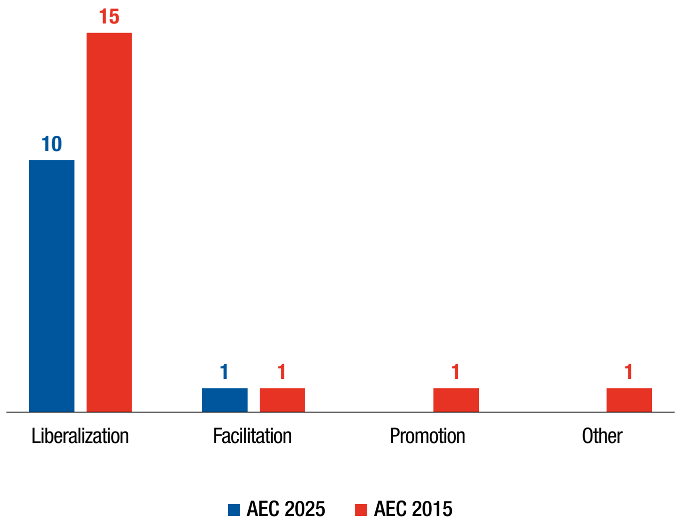
Table 2.1. Main agreements with implications for FDI and the investment environment

Investment	Services	Goods	People movement
• **ASEAN Comprehensive Investment Agreement (ACIA)** • **ASEAN Trade in Services Agreement (ATISA) – mode 3 (commercial presence)** • **ASEAN Framework Agreement on Services (AFAS) – mode 3 (commercial presence)** • **ASEAN Investment Facilitation Framework (AIFF)**	• ATISA – modes 1, 2, 4 • AFAS – modes 1, 2, 4 • ASEAN Services Facilitation Framework • ASEAN Multilateral Agreement on the Full Liberalization of Air Freight Services	• ATIGA • ASEAN Agreement on National Single Window • ASEAN Customs Agreement • ASEAN Trade Facilitation Framework • ASEAN Agreement on Electronic Commerce[a] • ASEAN Framework Agreement on the Facilitation of Inter-State Transport • Memorandum of Understanding on the Implementation of Non-Tariff Measures on Essential Goods under the Hanoi Plan of Action Strengthening ASEAN Economic Cooperation and Supply Chain Connectivity in Response to the COVID-19 Pandemic	• ASEAN Movement of Natural Persons – Business Visitors (Investors and Staffs)

Source: ASEAN Investment Report 2024 research.
[a] Crosscutting agreement about more than trade in goods.

During the implementation of AEC Blueprint 2025, more than 90 per cent of the additional investment-specific agreements and frameworks adopted were related to liberalization and one on investment facilitation (figure 2.3). These agreements included the ACIA (e.g. second, third and fourth protocols amending it), the AFAS (e.g. protocols implementing the tenth package of commitments and the seventh package of commitments on financial services), the ATISA (mandating Member States to submit schedules of non-conforming measures within specific periods of time) and the ASEAN Investment Facilitation Framework (AIFF) (annex table 2.1).

Figure 2.3. ASEAN: Regional investment agreement measures, by type, AEC 2015 and AEC 2025



Source: ASEAN Secretariat.

Investment policy implications

On average, the implementation of AEC Blueprint 2025 has had a positive effect on the region's investment environment and integration, albeit not as much or as quickly as investors would like. The implementation of the major agreements and frameworks related to FDI are at varying stages of development (figure 2.4).

On the eve of concluding AEC Blueprint 2025, considering the long list of multifaceted workplans, a significant degree of implementation of related policies (92 per cent) has been completed or is in progress. These policies have had a favourable impact on (i) the investment environment or FDI decisions (table 2.2) and (ii) the contribution of FDI to AEC objectives (table 2.3).

The complete implementation of AEC Blueprint 2025 is expected to significantly enhance the region's attractiveness for investment. Key implications for FDI decisions include the influence of the following factors:

Figure 2.4. Expected impact of major ASEAN agreements and actions on FDI environment

Key AEC Blueprint 2025 elements affecting FDI	Implementation status	FDI impact from…
ATIGA (trade)	Mostly significant	• 0-5 per cent tariff regime, lower cost • Market size effect (market-seeking FDI) • Efficiency, movement of goods, regional production networks, customs
ACIA (investment)	Moderately significant	• Eliminating restrictions and impediments • Facilitation • Promotion
ATISA and AFAS (services)	Mostly significant	• AFAS: liberalization and services integration effects with more sectors listed and opened • ATISA: investment liberalization through negative listing format • Impact on domestic regulatory discipline, including for finance and telecommunication
Sectoral development	Moderately significant	• Promotes sectoral regulatory discipline and cooperation • Facilitation: sector specific (e.g. agriculture, transport, tourism) • Promotion and awareness activities • Promotion of strategic sectors and emerging industries

Full effect **Mostly significant** **Moderately significant**

Source: ASEAN Investment Report 2024 research.
Note: ACIA = ASEAN Comprehensive Investment Agreement, AFAS = ASEAN Framework Agreement on Services, AIFF = ASEAN Investment Facilitation Framework, ATIGA = ASEAN Trade in Goods Agreement, ATISA = ASEAN Trade in Services Agreement, EV = electric vehicle.

(i) A regional market of more than 650 million people, the fifth largest economy in the world, with increasing opportunities for investment and for businesses to scale

(ii) Increasing business and investment efficiency through (i) a 0–5 per cent tariff regime, and lower administrative and sourcing costs; (ii) an environment with easier movement of goods and opportunities for regional production networks; (iii) actions that facilitate trade, investment and services; and (iv) enhanced sectoral development and coordination

(iii) Improving transparency and certainty, with an investment protection and guarantee agenda, including provisions on information and streamlined requirements and procedures in compliance with the ACIA and the AIFF

(iv) A more connected ASEAN that supports supply chain development and regional division of labour based on complementary locational advantages

(v) A more "global ASEAN" with the extension and upgrading of bilateral FTAs, the implementation of the RCEP agreement and an increasing number of IIAs

(vi) Growing investment opportunities, through liberalization actions and national measures supporting or aligning with AEC objectives

Table 2.2. Expected impact from implementation of AEC Blueprint 2025 and major ASEAN agreements on FDI decisions (selected cases)

Major agreements/ instruments	Aspects influencing FDI decisions	Remarks
AEC	• Single market, single production base • Benefit from efficiency environment • Easier sourcing and intraregional trade • Opportunity for supply chain development and regional production networks • Increase investment opportunities • Access to natural resources and critical minerals	Increases opportunities for investment, efficiency, scalability and productivity through market integration and production networks
ACIA	• Liberalization • Reduce investment restrictions and impediments (limited at the moment) • Investment guarantees and protections	Increases investment opportunities through liberalization, and continued work on reducing the reservation list and investment restrictions, including investment impediments
ATIGA	• Single market • Easier movement of goods • Trade facilitation (customs, ASEAN Single Window) • Support regional production networks and supply chain development • Favourable investment-export-trade nexus	• 0–5 per cent tariff regime • Improves the investment environment and efficiency for movement of goods and for sourcing • Supports supply chain development • Greater use of the ASEAN Single Window in recent years • Efficiency improvements (e.g. ATIGA e-Form D instead of a hard copy can save up to six days of customs clearance or about $150 in cost)
ATISA	• Single market • Services integration and support for industrial development and growth • Liberalization and services facilitation • Increase investment opportunities • Improve business and investment environment • Investment-services nexus	• Increases investment opportunities • Increases business efficiency and enhances link between investment and services • Liberalizes more services subsectors and includes them for investment in the latest round of liberalization negotiations
AIFF	• Transparency • Efficiency, increase ease of investment • Benefit from streamlined procedures and requirements • Use of technology • Benefit from single digital windows	• Increases investment information provision • Reduces administrative bottlenecks and improves support before and after investment • Enhances ease of investing • Improves transparency and investment facilitation services
ATFF	• Improve efficiency • Facilitate intraregional trade and movement of goods • Support regional production networks and supply chains development	Improve efficiency and enhances the investment environment through easier movement of goods and trade facilitation measures
E-commerce	• Improve business efficiency • Affect upstream and downstream development in the digital economy • Strengthen symbiotic relationship between services-investment and services supporting investment	Improves efficiency, enhances the investment environment and increases investment opportunities in the digital economy and e-commerce industry. Encourages start-ups and facilitates inclusive growth and digital ecosystems development.

Source: *ASEAN Investment Report 2024* research.
Note: AEC = ASEAN Economic Community; ACIA = ASEAN Comprehensive Investment Agreement; ATIGA = ASEAN Trade in Goods Agreement; ATISA = ASEAN Trade in Services Agreement; AIFF = ASEAN Investment Facilitation Framework; ATFF = ASEAN Trade Facilitation Framework.

Table 2.3. AEC Blueprint 2025: FDI development and contribution to AEC objectives (selected cases)

AEC Blueprint pillar	Description/characteristic	FDI contribution
(1) A highly integrated and cohesive ASEAN economy	• Seamless movement of goods, services, investment, capital, skilled labour • Regional actions covering liberalization, facilitation and promotion • National measures and actions • A unified market	• Symbiotic relationship between regional integration and FDI, supporting the growth of each (chapter 4) • Increasing and record FDI inflows, strengthening production, goods and services integration and regional connectivity (chapters 1 and 3) • Expanding production networks and supply chain development (chapter 4, *AIR 2023*) • Increasing intraregional investment linking firms and connectivity through regionalization (chapter 1, *AIR 2023*) • Existence of different categories of players and robust intra- and interfirm linkages, which strengthen integration (chapter 4, *AIR 2023*) • Robust rebound in FDI post-pandemic, underscoring resilience of the region
(2) A competitive, innovative, dynamic ASEAN	• Increase regional competitiveness and productivity growth • Facilitate creation and protection of knowledge (IPRs) • Moving up the value chains • Strengthen regulatory frameworks and practices	• Increased investment in knowledge-based and R&D activities (chapter 1) • An important role in the growth of exports and industries in the region (e.g. electronics, garments, automotive) • FDI development influenced a stronger intellectual property rights regime • Robust FDI inflows in recent years in supply chain networks, strengthening the region's industrial dynamism and ecosystems (chapter 4, *AIR 2023*) • Increasing FDI to renewable energy supply chain and the digital economy, providing opportunities to develop a competitive renewable energy industry and the digital economy (chapter 1) • FDI attraction efforts strengthening regulatory frameworks and practices to support seamless movement of goods, investment and services
(3) Enhanced connectivity and sectoral cooperation	• Economic connectivity (e.g. infrastructure, digital, e-commerce) • Sectoral development and coordination (e.g. transport, tourism, agriculture, health care, minerals)	• Increasing FDI in infrastructure and key economic sectors, including in non-equity forms • Increasing FDI in the digital economy, including in data centres and downstream business activities • Rapid growth of e-commerce, with the potential to generate $X billion in gross merchandise volume by 2030 • Regional EV ecosystem development, providing investment opportunities from upstream (mining and processing of critical minerals) to midstream (battery and EV production) and downstream (storage and charging stations) • Private investment playing an important role in health care, complementing public efforts (e.g. private hospitals, pharmaceuticals, medtech, telemedicine, medical tourism industry) (see *AIR 2019*)
(4) A resilient, inclusive ASEAN	• Equitable and inclusive growth involving e.g. SME development, narrowing development gap, strengthening the role of the private sector and public private partnership	• Rapid growth in FDI to Cambodia, the Lao PDR, Myanmar and Viet Nam, and at significant levels compared with during AEC 2015 • Growth of start-ups and unicorns in ASEAN (fourth largest number worldwide) with increasing regionalization activities • Private sector playing an active role in policy development and feedback (ASEAN Business and Investment Summit, public-private sector consultation, business councils' inputs) • Supporting industry development and business linkages between MNEs and SMEs
(5) A global ASEAN	• Integrating ASEAN into the global economy • FTAs: RCEP, bilateral FTAs	• Increasing global value chain participation and linkages • Increasing and record FDI flows, with ASEAN as a major global destination for FDI • Increasing outward FDI flows from ASEAN • Inward FDI from non-ASEAN sources increasing faster than intra-ASEAN investment • Growing international investment and policy development for investment from non-ASEAN countries • Growing bilateral investment ties • Increasing investment opportunities through FTA liberalization, investment facilitation initiatives and ASEAN partnership development with Dialogue Partners and other economies

Source: ASEAN Investment Report 2024 research.

Despite the achievements made, more work is needed in some areas or sectors (e.g. further reduction or elimination of the ACIA reservation list) to further strengthen the region's investment environment. Addressing the AEC policy implementation gaps, including giving immediate attention to implementing the unfinished agenda of AEC Blueprint 2025, is important in moving forward.

2.2.1. ASEAN Comprehensive Investment Agreement

The ACIA includes investment liberalization, facilitation, promotion and cooperation. It covers five main industries (manufacturing, agriculture, fishery, forestry, mining and quarrying, and services incidental to these industries). Key components of the current work include reducing or reviewing the reservation list and reducing investment restrictions or eliminating investment impediments.

During AEC 2025, significant improvements encompass additional investment aspects beyond those included in the original agreement (2009) were made. The original ACIA contains liberalization measures that benefit investors through provisions on national treatment, most-favoured nation treatment, prohibition of performance requirements, and senior management and board of directors, as well as measures protecting investment through provisions on treatment of investment, transfers, expropriation and compensation, and subrogation.

The fourth protocol of the ACIA is favourable to investment as it enhances the commitment of the Member States to prohibition of performance requirements that are more stringent than the Trade-Related Investment Measures (TRIMs) of the World Trade Organization (WTO) (e.g. not to impose or enforce conditions for admission, establishment, acquisition, expansion, management, conduct, operation and sale). The Fifth Protocol, which is expected to be signed in 2024, will further enhance the ACIA by (i) expanding the scope of the (ACIA) agreement, (ii) transitioning the ACIA reservation list to a two-annex negative list and (iii) scheduling of the TRIMs-plus commitment prohibiting performance requirements. The Fifth Protocol is expected to add certainty and transparency in the FDI policy environment.

Although major achievements have been made in the implementation of the ACIA during AEC 2025, more work is needed to further strengthen the region's investment environment (figure 2.5). The sectoral coverage of the ACIA is narrow, and the current work programme under the agreement focuses on five strategic areas, among them eliminating or reducing investment restrictions and/or impediments and reducing the ACIA reservation list.

Efforts to reduce the ACIA reservation list have been ongoing since 2012, with room for improvement. Updates and modernization efforts began soon after the signing of the 5th Protocol to Amend ACIA. As of 2024, the average number of reservation lists per country remains at 16.3, unchanged from 2015. These reservation lists fall into two broad categories: the granting of national treatment and regulations concerning senior management and board of directors for all sectors covered under ACIA. More than 50 per cent of the reservations pertain to exemptions from national treatment and are not industry-specific (e.g. requirements such as business registration or permits for establishing public or private companies, land use and ownership regulations, key personnel or employment policies, environmental protection, the use of natural resources, and national security considerations). The remainder of the reservations involves exemptions related to foreign nationals in business operations, including regulations on senior positions or shareholders (e.g. requiring certain senior positions or shareholders to be nationals/residents/certain passport holders), regulations on stay permits and wages for expatriates, regulations on portfolio investment transactions, eligibility for government incentives, and sector-specific regulations, such as prohibiting foreign nationals from participating in exploration mining.

In terms of market liberalization and opening, the agreement to date covers only investment related to (i) manufacturing, agriculture, fisheries, forestry, mining and quarrying and (ii) services incidental to these sectors. This limitation is expected to be removed soon through the upcoming Fifth Protocol to Amend the ACIA.

Figure 2.5. ACIA implementation during AEC 2025 Blueprint period: a preliminary assessment

Objective: Increase ASEAN's attractiveness for FDI

Approach	Status	Remarks
(1) Complete the built-in agenda	◕	CCI meets two to three times and AIA Council once each year to implement and review work on the ACIA and broader investment cooperation matters
(2) Eliminate or improve investment restrictions and impediments	◔	Work started, more work needed given the intricate, complex and cross-sectoral nature
(3) Phase out and/or reduce reservations	◔	Work started, more efforts needed to effectively address reduction of the reservation list
(4) Enhance CCI peer review mechanism	◕	Peer review process undertaken annually and improving
(5) Promote theACIA and ASEAN as investment destination	◑	ASEAN Business and Investment Summit, ASEAN Investment Forum, ASEANInvest website and regional investment promotion effort: can still be improved and more thoroughly coordinated

● Fully achieved ◕ Mostly achieved ◑ Significant progress ◔ Some progress

Source: ASEAN Investment Report 2024 research.
Note: ACIA = ASEAN Comprehensive Investment Agreement, AIA = ASEAN Investment Area, CCI = Chambers of Commerce and Industry.

Investment spans different sectors and issues, necessitating a holistic approach to attract FDI. Achieving synergy requires coordinating or aligning investment efforts across all sectors. It is paramount to achieve effective cross-sectoral coordination (e.g. services, tourism, health care, clean energy, and agriculture and food), conduct regular cross-sectoral consultation and adopt a holistic assessment of work programmes that could have implications for investment. Close coordination and consultation between ASEAN bodies covering investment and services integration is also important.

ASEAN is developing a regional investment promotion plan to promote investment opportunities and ASEAN as an integrated investment region. The plan aims to establish contact with decision-makers of potential investors and promote ASEAN as an attractive location for investment in targeted industries. It includes common prioritized sectors such as medical devices, biofuels, and carbon capture and storage.

The InvestASEAN website has been developed to promote both transparency and awareness of investment development in the region. Although the website provides a certain level of information, it could benefit from enhancement of more practical and effective information for the business and investor communities. The enhanced content could include laws and regulations for investing in ASEAN, regular updates about investment policy announcements, industrial development, the state of the region's investment environment, and up-to-date facts and figures for investing in ASEAN and in industry ecosystem development.

2.2.2. ASEAN Investment Facilitation Framework

The AIFF, adopted in 2021, marked a significant regional achievement in investment cooperation. It was developed as a regional response for sustainable post-pandemic recovery through attracting and facilitating FDI flows. Significant achievements have been made, with all the 10 broad measures implemented by nearly all Member States as of July 2024 (figure 2.6). The AIFF encouraged Member States to streamline and simplify investment procedures, introduce greater use of online or e-application systems, strengthen one-stop centres, accelerate business license approval processes and offer other support to investors. However, despite the progress in implementing investment facilitation measures, there remains more work to do, particularly in strengthening the quality of investment facilitation services (*AIR 2022*). The AIFF assessment is an ongoing review exercise, which covers assessment on investment facilitation tools and investment facilitation services that have been put in place.

The specifics and the level of investment facilitation services provided differ across Member States (figure 2.7). Work is especially needed on implementing the 23 subcategory measures. Many Member States have put in place most of them, but some still need to make greater efforts on the use of digital technology, online facilities and establishment of single digital windows. Moving forward, further work could be considered, such as regular review of implementation status, including identification and inclusion of new investment facilitation measures for the AIFF (figure 2.8).

Figure 2.6. ASEAN Member States have put in place most of the 10 broad investment facilitation measures adopted in relation to the AIFF

Action line/measure	Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
1. Transparency of measures and information	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2. Streamlining and speeding up administrative procedures and requirements	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3. Use of digital and Internet technologies	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4. Single digital platform		✓	✓		✓	○	✓	✓	✓	✓
5. Assitance and advisory services to investors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6. Independence of competent authorities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7. Temporary entry and stay of business persons for investment purposes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8. Facilitation of investment supporting factors		✓	✓		✓	✓	✓	✓	✓	✓
9. Consultative mechanisms for investment policies	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
10. Cooperation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Source: Adapted from *ASEAN Investment Report 2022*, AIFF assessment.
Note: ✓ = related measures in place or action taken, ○ = related measures in progress or for future action.

Box 2.2. ASEAN Member States continued to adopt more investment facilitation measures

In 2023–2024, some Member States adopted additional investment facilitation measures to support and speed up the realization of strategic projects, including FDI related to the environment and to technology.

Malaysia established a high-level investment facilitation body, chaired by the Prime Minister, to assist implementation of potential and approved strategic investment projects. It also established an Investment and Trade Action Coordination Committee as the action-based working group that ensures roll-out and resolution of issues related to strategic investment.

The *Philippines* launched in March 2023 a "green lane" initiative for approving specific investment projects. It includes significant investment projects that have a positive effect on the environment. A key feature of the green lane system is simultaneous processing of applications from national government agencies and local government units. This special feature aims to address barriers arising across multiple regulatory agencies that hamper the entry and delay the realization of strategic FDI. It expedites, streamlines and automates government processes.

Indonesia in 2024 established industrial zoning, which aims to increase the use of industrial resources, e.g. in industrial products that have high value added. Fiscal and non-fiscal incentives are provided for businesses that intend to invest in designated new industrial areas. The Government also facilitates and provides institutional support for companies that aim to conduct industrial and technology R&D. The Government is supporting the development of export-oriented industrial companies, green industries and investment projects that prioritize the use of parts and components in local production process.

Singapore and *Malaysia* signed a memorandum of understanding on 11 January 2024 to establish the Johor–Singapore Special Economic Zone (SEZ). The two countries are to work towards boosting the cross-border flow of goods and people and developing a framework that leads to a full-fledged agreement on the zone. They are also exploring other initiatives leading up to the establishment of the SEZ, such as a passport-free clearance system on both sides of the border and a one-stop business or investment service centre.

Source: ASEAN Member States.

Figure 2.7. AIFF implementation by Member States: Investment facilitation measures in place or being addressed, interim assessment

	Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
1. Transparency of measures and information	1	1	2	1	2	1	1	2	2	1
2. Streamlining and speeding up administrative procedures and requirements	1	2	2	1	2	1	1	2	2	1
3. Use of digital and Internet technologies	2	1	2	1	2	1	2	2	2	2
4. Single digital platform	0	1	2	0	2	0	1	2	2	2
5. Assitance and advisory services to investors	1	2	2	1	2	1	1	2	1	1
6. Independence of competent authorities	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
8. Facilitation of investment supporting factors	0	2	1	0	2	1	1	2	2	1
9. Consultative mechanisms for investment policies	1	2	2	1	2	1	1	2	2	1
10. Cooperation	2	1	2	1	1	1	2	2	2	1

Source: Adapted from *ASEAN Investment Report 2022*, AIFF assessment.
Note: Ranking: 0 = not in place, 1 = basic, 2 = advanced.

Figure 2.8. Strengthening the AIFF

Going forward with AIFF implementation process and beyond

Action programme	• Adopt a clear time frame to encourage, support and implement all investment facilitation measures at the subcategory level • Conduct regular monitoring of progress in implementation and an annual assessment of AIFF status, and suggest policy options to address bottlenecks and ways forward
Review process	• Conduct a periodic review of substantive provisions of the AIFF and their effectiveness, to identify and add other investment facilitation measures (*AIFF plus*) • Consider other regional sectoral developments relevant to improving the region's investment and business environment (the regional investment facilitation environment includes developments by other sectoral bodies)
Institutional arrangements	• Strengthen the CCI with the capacity to involve inward and outward investment officials to identify and enhance cooperation on investment faciltation measures • Conduct joint meetings between the CCI, CCS, customs and trade facilitation bodies on the sectoral impacts of doing business and investing in ASEAN
Capacity building and experience sharing	• Organize periodic forums involving regional and international industry clubs and chambers of commerce to assess investor sentiment on investment facilitation services • Organize periodic events among relevant implementing institutions to share experiences and best practices on investment facilitation measures, processes and operations

Source: Adapted *from ASEAN Investment Report 2022.*
Note: CCI = Coordinating Committee on Investment, CCS = Coordinating Committee on Services.

2.2.3. Trade and services integration (ATIGA and ATISA)

With tariffs for more than 95 per cent of all tariff lines reduced to 0–5 per cent, much of the work under the ATIGA covers trade facilitation to improve the efficiency of movement of goods within ASEAN. The ASEAN Trade Facilitation Framework, signed in 2020, smooths the movement of goods within the region, including minimizing the impact of or eliminating non-tariff measures. This is done through provisions that support transparency and predictability, harmonization and mutual recognition of standards, improved simplification and efficiency, use of technology and private sector orientation.

In the services sector, through AFAS packages, the region has been reducing various trade constraints restrictions on equity participation, license or regulatory-based limitations, timebound restrictions, sectoral restrictions, locational restrictions, maximum numbers of branches and other impediments. During AEC 2025, Member States improved the openness of the services sectors scheduled under the AFAS, thanks to the higher threshold for minimum liberalization level set and negotiated at the regional level. The number of measures that met the threshold requirement rose from an average of 66 during AFAS 8 to an average of 101 in AFAS 10 (table 2.4).

Table 2.4. ASEAN: Services liberalization, AFAS 8 to AFAS 10

Country	AFAS 8 (2010)		AFAS 9 (2015)		AFAS 10 (2018)	
	Total scheduled[a]	Meeting threshold[b]	Total schedules	Meeting threshold	Total schedules	Meeting threshold
Brunei Darussalam	79	64	92	81	119	106
Cambodia	87	78	94	89	111	105
Indonesia	86	58	97	71	112	103
Lao PDR	89	63	92	89	114	99
Malaysia	96	59	101	85	114	99
Myanmar	79	68	90	87	114	100
Philippines	98	58	106	71	122	92
Singapore	84	81	101	94	115	100
Thailand	104	82	108	100	113	106
Viet Nam	88	49	99	71	116	102
Average	**89**	**66**	**98**	**84**	**115**	**101**
Total scheduled as a share of the meeting threshold (%)	**74**		**86**		**88**	

Source: ASEAN Secretariat analyses.
Note: Year refers to year of adoption.
[a] Number of subsectors.
[b] The threshold is internally agreed among Member States. It relates to an overall minimum level ranging from 70 to 100 per cent open, which differs across services mode of supplies as laid out in the AFAS and AEC Blueprint 2025.

Seven additional agreements that promote goods and services integration and with implications favourable for the region's business environment were adopted during AEC 2025 (table 2.5).

Table 2.5. Other regional agreements adopted during AEC 2025

Agreement	Objective	Year
Trade in Goods		
First Protocol to Amend the ASEAN Trade in Goods Agreement	Provide a legal basis for a regional self-certification scheme, to allow for the operationalization of the ASEAN-wide Self Certification initiative	2019
Second Protocol to Amend the ASEAN Framework Agreement on the Facilitation of Goods in Transit	Formalize the initial frontier posts designated by Member States to encourage and facilitate interstate and transit transport operations among the parties to the agreement	2018

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Table 2.5. Other regional agreements adopted during AEC 2025 (Concluded)

Agreement	Objective	Year
ASEAN Trade Facilitation Framework	Achieve a competitive, efficient and seamless environment for movement of goods within the region.	2020
MOU on the Implementation of Non-Tariff Measures on Essential Goods under the Hanoi Plan of Action Strengthening ASEAN Economic Cooperation and Supply Chain Connectivity in Response to the COVID-19 Pandemic	Ensure the smooth flow of essential goods, including food, medicines, and medical and other essential supplies associated with combating the COVID-19 pandemic, and facilitate timely information sharing among Member States regarding trade-related measures on these essential goods and supplies	2020
Trade in Services		
ASEAN Services Facilitation Framework	Support mobility and a connected ASEAN services economy, including advancing the digital economy	2024
Movement of Natural Persons		
Protocol to Amend the ASEAN Agreement on the Movement of Natural Persons	Adopt a common format of schedules of commitments under the agreement	2024
Digital Economy		
ASEAN Agreement on Electronic Commerce	Facilitate the growth of e-commerce in ASEAN	2019

Source: ASEAN Secretariat.

(a) Trade in Services

During AEC 2025, six additional agreements to enhance trade in services have been concluded. Significant developments included the adoption of the ASEAN Services Facilitation Framework (ASFF) and the conclusion of the 10th Package of Commitments under the AFAS, both in 2024. The 10th Protocol has a more significant favourable impact for FDI,[1] with an average of 115 new services subsectors (101 meeting the threshold) per Member State, compared with 98 (83 meeting the threshold) under the 9th Protocol, which was based on positive list commitments. Through each protocol, more services industries have been opened for trade and investment (see table 2.4).

The ASFF aims to strengthen ASEAN's competitiveness in services through (i) facilitating the growth of the services economy (e.g. development and administration of measures affecting trade in services, assessment of qualifications, transparency of measures and information, independence of competent authorities), (ii) supporting mobility (e.g. temporary entry and stay of service suppliers, enhancing utilization of mutual recognition arrangements), (iii) advancing a digital services economy in ASEAN (e.g. use of digital and internet technologies, single digital platform), (iv) creating a sustainable and innovative services economy in ASEAN (e.g. circular economy) and (v) partnering with business through stakeholder engagement.

(b) Trade in Goods

An upgrade of the ATIGA is being negotiated. Significant achievements have been made in relation to the ASEAN Agreement on Customs and the ASEAN National Single Window.

These advancements are improving the efficiency of movement of goods and supporting intraregional trade and sourcing activities. Several trade facilitation initiatives have also been put in place. They include (i) guidelines for the implementation of ASEAN commitments on non-tariff measures on goods, (ii) live operation of ATIGA e-Form D through the ASEAN Single Window (ASW) (box 2.3), (iii) implementation of the ASEAN-wide Self-Certification Scheme and (iii) implementation of the ASEAN Solutions for Investments, Services and Trade (ASSIST) scheme.

Box 2.3. ASEAN Single Window: Impact on movement of goods in ASEAN

The ASEAN Single Window (ASW) supports efficient movement of goods across the region. It serves as a platform to facilitate trade by expediting exchanges of trade-related documents and the verification process for cross-border trade transactions and in speeding up cargo and container clearance of commercial goods. Three digital documents can be used in the ASW. They are an electronic certificate of origin (e-CO), the ATIGA e-Form D (used to obtain lower trade tariffs) and the ASEAN Customs Declaration Document. Implementation of the ASW is overseen by the ASW Steering Committee and is connected to the National Single Window in each Member State.

The ASW was agreed by ASEAN Leaders at the Ninth ASEAN Summit in October 2003. It has been in operation since 2019, involving participating agencies, which comprise customs and non-customs institutions, for all Member States. As of July 2024, all Member States except the Lao PDR have started exchanges of e-CO, ATIGA e-form D and the ASEAN Customs Declaration Document. Other form exchanges (e.g. e-phytosanitary) and authorizations by relevant non-custom agencies involving Indonesia, the Philippines and Thailand have also started. Consideration of exchanging more trade administrative documents such as electronic sanitary and phytosanitary (e-SPS) certificates through the ASW network is ongoing.

The ASW facility has been further enhanced during AEC 2025 with (i) full roll-out of all National Single Windows by all Member States to the ASW Network, (ii) widening the scope of the ASW facility to include more documents and (iii) ongoing work to extend ASW to cover exchanges with Dialogue Partners such as China, Japan, the Republic of Korea and the United States.

The cost-saving impact of the ASW has been significant. An assessment by the ASEAN Secretariat estimated that the use of one ATIGA e-Form D could save up to six days of customs clearance or about $150 in cost as compared with use of the hard-copy Form D. The implementation of the ASW has improved intra-ASEAN trade efficiency and facilitated expansion of trade volumes as measured by the increasing trend in the number of e-documents exchanged through the ASW network (box figure 2.2.1). From 2019 to 2022, documents exchanged through e-CO alone rose by more than 140 per cent, from 489,400 to 1.2 million.

Despite the significant achievements and favourable implications for movement of goods, there is room for improvement. This includes in procedural areas, such as by using e-form D to fully replace the hard-copy form D, expediting implementation and extension of ASW with major trade partners, and expanding to cover other electronic documents.

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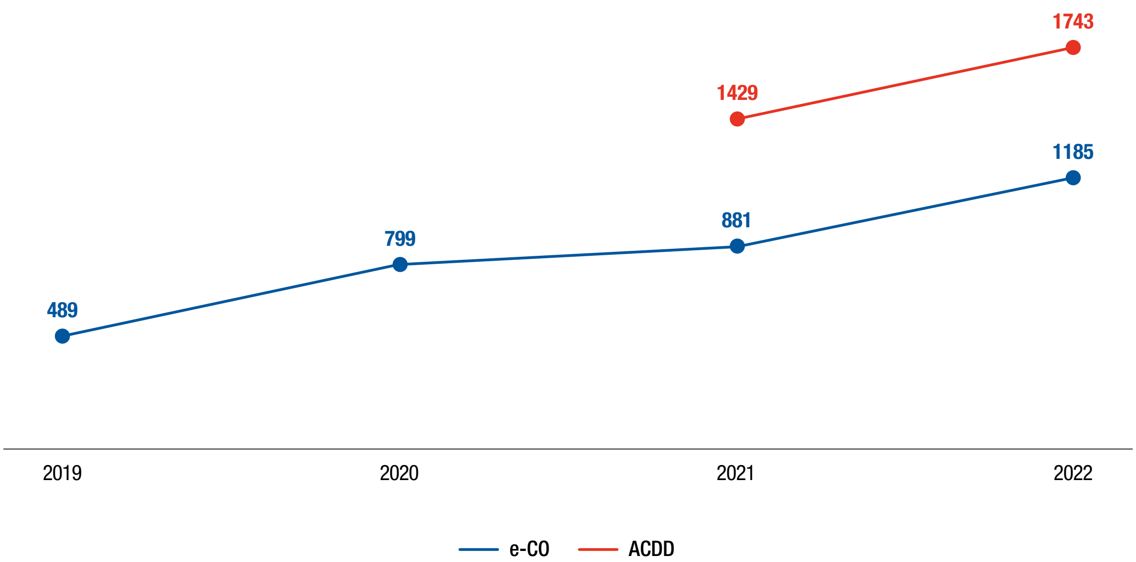
Box 2.3. ASEAN Single Window: Impact on movement of goods in ASEAN (Concluded)

Box figure 2.3.1. ASEAN Single Window: e-documents exchanged, 2019–2022 (Thousands)



Source: ASEAN Secretariat.
Note: e-CO = electronic certificate of origin, ACDD = ASEAN Customs Declaration Document.

Source: ASEAN Investment Report 2024 research.

(c) Digital Economy

The ASEAN e-commerce agreement promotes e-commerce trade and downstream supply chain activities (e.g. fulfilment and delivery, courier services, packaging and other auxiliary services), including start-ups. The rapid growth of the e-commerce industry in the region has attracted significant investment interests. The market potential, rising number of digital consumers and the improving e-commerce policy environment are major drivers. The growing demand for other related e-commerce or digital services is expected to attract further investment, compelled by the improving policy environment. These downstream activities include online consumer protection, cross-border transfer of information by electronic means, online personal information protection, and computing facilities and actions to create an environment of trust and confidence in the use of e-commerce (e.g. cybersecurity, electronic payment, logistics, stakeholder engagement). Putting in place these measures will significantly improve the investment environment in e-commerce and the digital economy.

ASEAN is also negotiating the Digital Economy Framework Agreement (DEFA). According to an assessment by the ASEAN Secretariat, DEFA is projected to double the region's digital economy – from $1 trillion to $2 trillion – by 2030 through attracting new investment; stimulating innovation; boosting productivity; empowering micro and SMEs (MSMEs), including through expanding their business at the regional level; and generating quality employment for women, youth and rural communities.

2.2.4. Regional instruments on strategic sectors

In 2022–2023, ASEAN adopted many agreements and promulgated declarations covering more strategic areas for cooperation and regional development. These strategic areas have important implications for investment related to sustainability, the digital economy, the energy transition and opportunities associated with emerging industries in relation to technological advancement and global environmental concerns (table 2.6). The region has also adopted agreements and frameworks with investment implications that affirm the region's commitments to green growth, inclusivity and SME coverage.

Table 2.6. Declarations with FDI Implications during AEC 2025

Items	Objectives	Year
Sustainability		
Declaration on Promoting ASEAN as an Investment Destination for Sustainable Minerals Development	Transform ASEAN into a sustainable minerals investment hub through accountability and transparency, regional policy alignment and standardization, and joint exploration endeavours Provides a strategic direction aligning with the AEC vision in promoting responsible mining, investment in minerals and development of the mining industry in ASEAN	2023
Framework for Circular Economy for the AEC	Establish an eco-friendly system for circular production and consumption by implementing standardized practices, facilitating innovation, supporting sustainable finance and ensuring efficient energy use towards a low-carbon economy	2023
ASEAN Strategy for Carbon Neutrality	Guide ASEAN towards a greener economy by setting forth initiatives that complement regional goals with global green commitments and foster sustainable economic growth	2023
ASEAN Blue Economy Framework	Encourage the ASEAN region to harness its marine resources sustainably while integrating regional cooperation and maximizing the economic potential of aquatic spaces	2023
Declaration on Developing Regional Electric Vehicle Ecosystem	Develop a regional EV ecosystem to support EV adoption and a global production hub for EVs. Key elements: • Create an environment to attract investment in EVs. • Promote investment opportunities. • Develop EV infrastructure, including charging stations. • Encourage public-private partnership. • Enhance participation of MSMEs. • Collaborate on R&D activities and human capital development	2023
Finance, MSME and Digital Economy		
Declaration on Advancing Regional Payment Connectivity and Promoting Local Currency Transaction	Deepen regional financial integration and develop currency markets in local currency to strengthen financial stability in the region, including through the following efforts: • Advance regional payment connectivity. • Promote the use of local currencies for cross-border transactions in the region • Establish a task force for developing an ASEAN Local Currency Transaction Framework	2023

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Table 2.6. Declarations with FDI Implications during AEC 2025 (Concluded)

Items	Objectives	Year
Leaders Statement on the Development of Digital Economy Framework Agreement (DEFA)	• Develop a modern, comprehensive and coherent digital transformation strategy towards an ASEAN digital economy • Facilitate seamless and secured flow of goods, services and data, supported by enabling rules, regulation, infrastructure and talent • Help leverage the potential of the digital economy in attracting investment and empowering and connecting MSMEs to regional and global markets	2023

Source: ASEAN Secretariat.

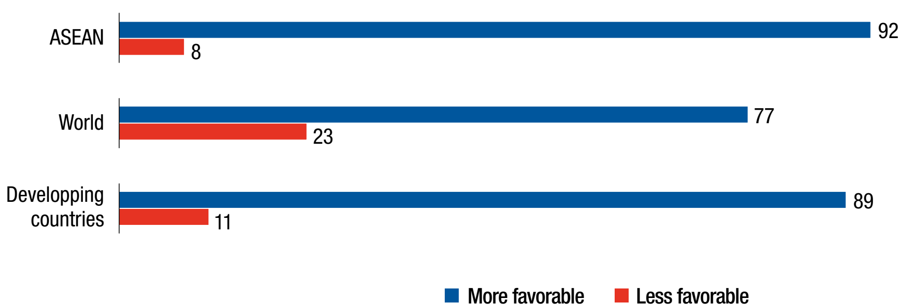
***

As of December 2023, ASEAN Member States have made significant progress in implementing the AEC 2025 commitments, with approximately 92 per cent of the measures either implemented or in progress. Many of these measures, particularly in the area of trade, investment, services integration and sectoral cooperation have important implications for FDI. However, 8 per cent of the AEC-related measures are pending and are scheduled for implementation between 2024 and 2025. While there has been substantial progress in the implementation of ACIA (investment), further efforts are needed to address key areas such as reducing the reservation list and investment impediments.

2.3. NATIONAL INVESTMENT MEASURES

ASEAN Member States have continued to put in place national investment measures to improve the investment environment. During AEC 2025 (specifically 2016–2023), they collectively adopted a total of 133 new investment measures with implications for FDI. More than 90 per cent of these measures are favourable to investors (figure 2.9, annex table 2.2), surpassing both the global average of 77 per cent and the developing-country average of 89 per cent.

Figure 2.9. Policy measures favourable to investors during AEC 2025 (Per cent of all measures)



Source: UNCTAD, Investment Policy Monitor database.

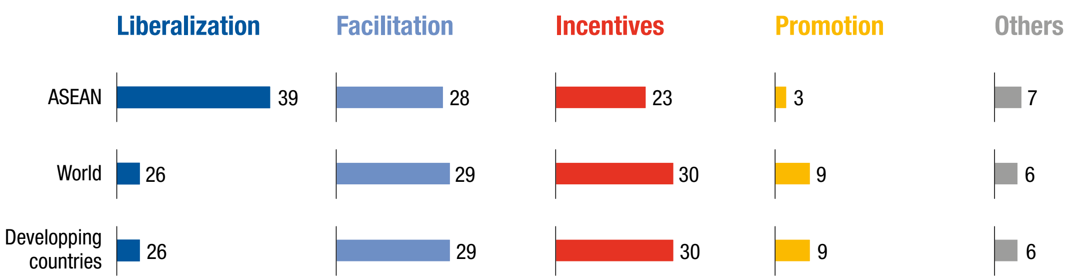
In 2021, at the peak of the pandemic, there was a temporary decrease as the proportion of investment-friendly policies dropped to 70 per cent, mirroring global patterns. This shift primarily involved the tightening of investment regulations, particularly in sectors deemed strategically significant, as well as in areas related to public health and national security. In recent years, some Member States have increased screening of investment such as for national security and environment protection. The Philippines screens investment projects in military-related industries, cyberinfrastructure, pipeline transportation and critical public service sectors. In January 2024, Singapore enacted the Significant Investments Review Act, which introduces an investment management regime to regulate entities critical to national security interests. Under this regime, designated entities must comply with various ownership and control requirements.

Most of the measures adopted by Member States have focused on liberalizing and further opening industries and reducing investment restrictions (figure 2.10). Some Member States have also taken actions to align national measures to AEC objectives. For example, the automotive development plan of the Philippines was aligned with the objectives of AEC Blueprint 2025;[2] Myanmar has also taken steps to develop investment laws aligned with it. The Myanmar Investment Law is aligned with the ACIA (especially chapters 11 (treatment of investors), 13 (employment of staff and workers) and 19 (settlement of dispute)). Other policies initiated by Myanmar that align with the ACIA include the Environmental Conservation Law (2012), the Farm Land Law (2012), the Myanmar Special Economic Zone Law (2014) and the Industrial Zone Law (2020).

Of measures favourable to investors, ASEAN leads the world, with more measures focused on opening industries for investment or reducing investment restrictions (i.e. increasing foreign participation). During AEC 2025, 39 per cent of the adopted new national investment measures in ASEAN related to liberalization as compared with 26 per cent in the world and in developing countries. Efforts to facilitate investment are comparable to the world and developing-country averages.

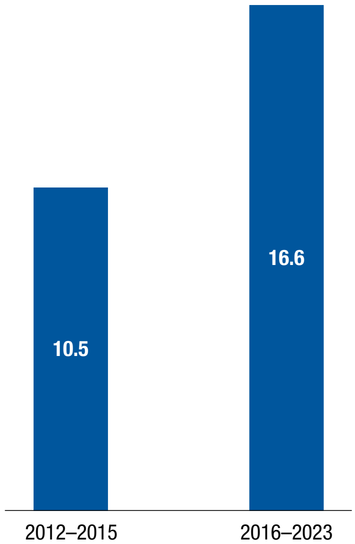
Member States put in place more national investment measures during AEC 2025 than during AEC 2015 (figure 2.11), with most measures favourable to investors (figure 2.12). Most of the measures related to liberalization, facilitation and provision of investment incentives (figure 2.13).

Figure 2.10. Measures favourable to investors during AEC 2025, by type (Per cent)



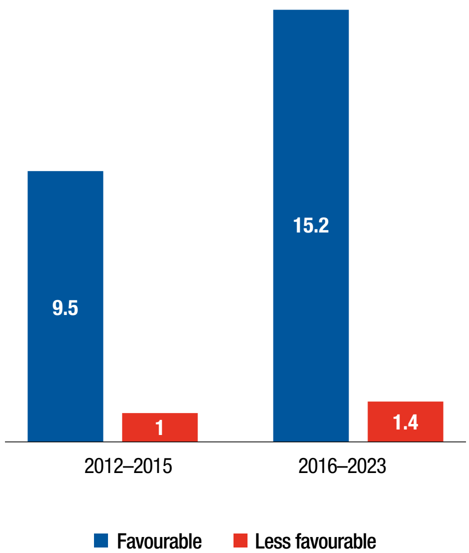
Source: UNCTAD, Investment Policy Monitor database.

Figure 2.11. Investment policy measures, annual average, AEC 2015 and AEC 2025 (Number, annual average)



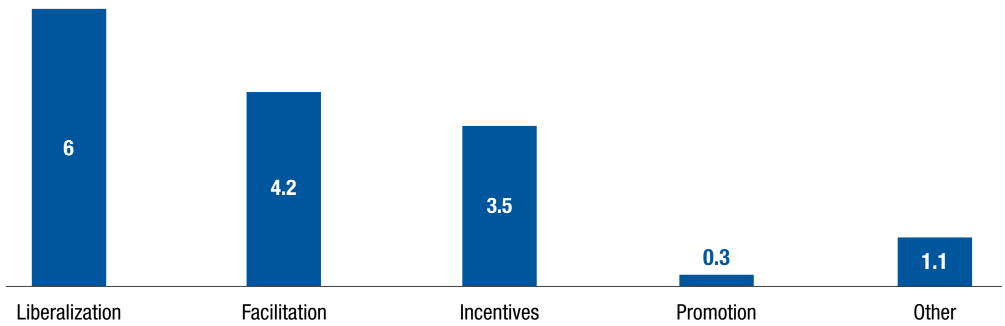
Source: UNCTAD, Investment Policy Monitor database.
Note: AEC 2015 measures cover annual average of 2012–2015.

Figure 2.12. Investment policy measures favourable and less favourable to investors, AEC 2015 and AEC 2025 (Number, annual average)



Source: UNCTAD, Investment Policy Monitor database.
Note: AEC 2015 measures cover annual average of 2012–2015.

Figure 2.13. Investment policy measures favourable to investors during AEC 2025, by type
(Number, annual average)



Source: UNCTAD, Investment Policy Monitor database.

GDIG Analysis in ASEAN Economic Development

Gender Development and Inclusion Gap (GDIG) analysis plays a crucial role in understanding how various norms and practices affect different community members based on their identities, including gender, age, disability, education and income. GDIG analysis can be applied to assess whether economic developments under the ASEAN Economic Community 2025 is promoting equal opportunities for all.

In ASEAN, several key documents offer frameworks for conducting GDIG analyses. Major documents include the ASEAN Socio-Cultural Community Blueprint 2025 (2021), ASEAN Guideline on Gender Mainstreaming into Labour and Employment Policies towards Decent Work for All (2021), the ASEAN Gender Mainstreaming Strategic Framework 2021-2025 (2021), and the ASEAN Enabling Masterplan: Mainstreaming the Rights of Persons with Disabilities 2025 (2018). Gender equality has been given a strong focus in the ASEAN Complementarities Roadmap with the UN Sustainable Development Goals (United Nations, 2017). These documents offer strategies for designing transformative changes that promote gender equality, assessing the impact of activities on gender development, and provide granular checklists for identifying GDIG best practices.

In the context of investments, GDIG analysis is important for ASEAN for two main reasons:

(i) Optimizing FDI impact: GDIG-informed FDI policies are essential for optimizing the impact of FDI on the development of host countries, especially in addressing the development gap concerning gender equality. Such FDI policies are vital for ensuring that development outcomes, including gender equality, are optimized. Evidence suggests that targeted FDI promotion policies can increase job creation by almost 70 per cent, benefiting people across different income and education levels (Saurav et. al., 2020). FDI entities have a higher proportion of female workers, compared to domestic firms, as seen in Myanmar (60 per cent female labor proportion), Indonesia (55 per cent), and Lao PDR (54 per cent) (OECD, 2023a). FDI inflows in developing countries are positively associated with gender development, thereby improving women's welfare (IMF, 2017). The trend of FDI flows in ASEAN is moving towards more knowledge and skill-intensive manufacturing and services. To boost FDI competitiveness, it is vital for ASEAN to develop policies that foster a supportive work environment and ensure low turnover rates for women, as they increasingly take on strategic roles.

(ii) Tapping international GDIG-informed FDI opportunities: ASEAN has the opportunity to attract FDI from countries with a strong commitment to the UN Sustainable Development Agenda 2030, including gender equality and inclusivity to foster economic growth for all. Dialogue partners such as the United Kingdom and the United States require GDIG analysis in their international development investments (OECD, 2023b). In 2023, an increasing number of international financial investors such as Sovereign Wealth Funds (SWFs) are reporting gender, age, and cultural background diversity as part of their sustainability metrics (UNCTAD, 2024). As a significant FDI host in the developing world, ASEAN could ensure that its regional FDI policies are informed by GDIG to capitalize on this trend and accelerate future growth.

This AEC-FDI assessment has not identified any AEC policies affecting FDI in ASEAN that incorporates a gender development and inclusion gap perspective. Incorporating GDIG into FDI policy is important for ASEAN Member States and at the regional level. Some Member States such as the Philippines, Malaysia, Singapore and Viet Nam have integrated gender equality into their FDI promotion strategies. However, the World Economic Forum's Gender Gap Index[3] highlights the persistent challenge, recording a gender gap of 0.71 in ASEAN in 2024, compared to 0.73 at the end of AEC 2015 (WEF, 2015; WEF, 2024).[4] This underscores the ongoing need for targeted efforts to close the gap and promote inclusive development across the region (see box 4.4).

FDI-regional integration nexus can play a role. GDIG could further enhance and build upon the region's existing efforts related to sustainable FDI measures and the Sustainable Development Goals. Integrating GDIG into regional FDI policies could involve developing an ASEAN guideline for sustainable investment.

2.4. INTERNATIONAL INVESTMENT AGREEMENTS

During AEC 2025, the region continued to engage with the world through upgrading bilateral FT A agreements with improvement of investment chapters. They included the following:

(i) Second Protocol to Amend the Agreement Establishing the ASEAN–Australia–New Zealand Free Trade Area (2023)

(ii) Regional Comprehensive Economic Partnership Agreement (2020)

(iii) First Protocol to Amend the Agreement on Comprehensive Economic Partnership Among Japan and ASEAN (2019)

(iv) ASEAN–Hong Kong, China Investment Agreement (AHKIA) (2018)

(v) ASEAN–Hong Kong, China FTA (2018).

During ASEAN 2015, ASEAN also concluded the following agreements:

(i) Agreement on Trade in Services under the Framework Agreement on Comprehensive Economic Cooperation between ASEAN–India (2014)

(ii) ASEAN–India Investment Agreement (2014)

(iii) Protocol to Implement the Second Package of Specific Commitments under the Agreement on Trade in Services between ASEAN and China (2010)

(iv) ASEAN–Korea Investment Agreement (2009)

(v) ASEAN-China Investment Agreement (2009)

(vi) ASEAN–Australia New Zealand FTA (2009)

(vii) Agreement on Comprehensive Economic Partnership among Japan and Member States of ASEAN (AJCEP) (2008)

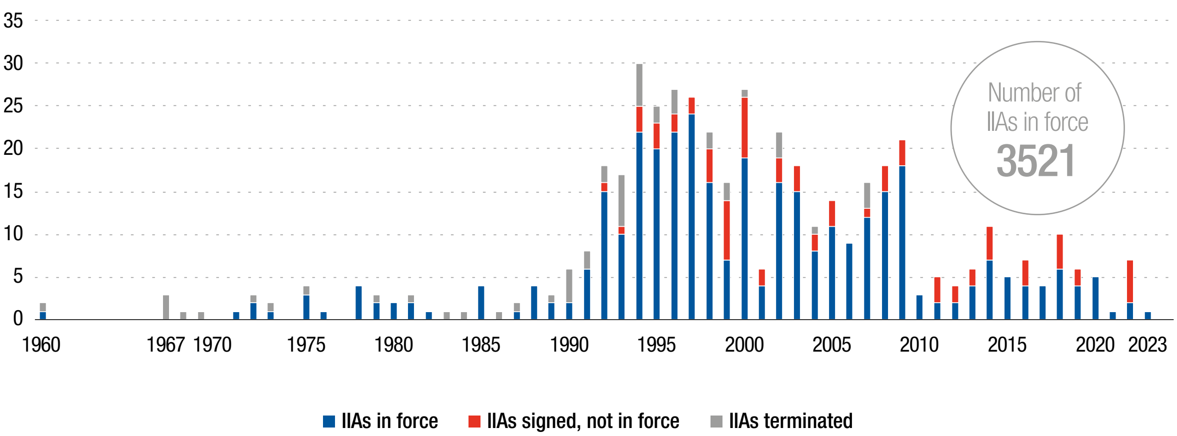
(viii) ASEAN–Korea Trade in Services Agreement (2007)

(ix) ASEAN–China Trade in Services Agreement (2007),

(x) ASEAN–Korea Agreement on TIS under the Framework Agreement on Comprehensive Economic Cooperation (2007)

The network of international investment agreements (IIAs) of ASEAN countries consists of bilateral investment treaties (BITs) and treaties with investment provisions (TIPs).[5] As of April 2024, Member States have concluded at least 337 BITs and 90 TIPs, representing 13 per cent of the IIA universe, which consisted of 3,291 agreements. More than 350 IIAs of Member States are in force, 75 have been signed but are not yet in force and 52 have been terminated (figure 2.14).[6] A total of 23 BITs have been concluded between two Member States. Additionally, 53 BITs and TIPs signed by individual Member States with non-ASEAN States overlap with

Figure 2.14. International investment agreements concluded by ASEAN Member States since 1960 (Number)



Source: UNCTAD, IIA Navigator.
Note: By year of signature. IIA = international investment agreement.

agreements signed by ASEAN with third parties. In 2023 and 2024, at least five IIAs were concluded by Member States[7] and one entered into force.[8]

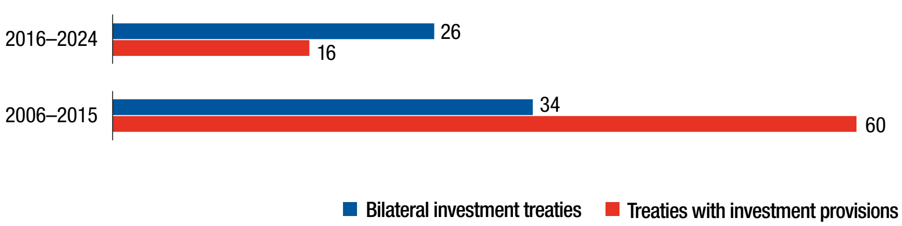
Over the past two decades, the annual number of IIAs concluded by ASEAN Member States has declined, mirroring global trends. During AEC 2015, Member States concluded 60 BITs and 34 TIPs. During AEC 2025, the number of BITs concluded by Member States thus far decreased by 73 per cent and the number of TIPs by 24 per cent (figure 2.15). IIAs concluded during this period often go beyond traditional BITs to include regional agreements with more diverse content such as on investment facilitation, liberalization and cooperation.

Recent IIAs concluded by ASEAN often cover a range of investment governance issues beyond that go beyond protection, such as investment facilitation. The AIFF is a notable example, with provisions promoting the use of digital technologies and encouraging the establishment of a single digital platform (Arts. 3 and 4). The RCEP also contains a commitment to investment facilitation (Art. 10.17) through the streamlining of administrative procedures and the creation of one-stop investment centers. Some recent IIAs concluded by the Member States include facilitation-related provisions, such as the Sri Lanka–Thailand FTA (2024, Art. 9.16) and the MERCOSUR–Singapore FTA (2023, Arts. 9.13 and 9.14).

The RCEP Agreement, signed in 2020, consolidates most of ASEAN's TIPs with countries outside ASEAN that are participants in the RCEP (box 2.4). The agreement contains reform-oriented features on investment promotion and facilitation, such as simplifying procedures for investment approvals and establishing one-stop investment centres to provide assistance and advisory services.

To date, IIAs concluded by ASEAN Member States that are in force[9] cover 88 per cent of the region's FDI stock. Some 85 per cent of the stock is covered by "old-generation"[10] investment treaties signed before 2012. This exposure to old-generation IIAs is higher than the average for both the world and developing economies as a whole (figure 2.16). Most of these IIAs feature broad definitions, include few exceptions for legitimate regulatory measures and lack proactive investment provisions for promotion and facilitation of sustainable investment.

Figure 2.15. International investment agreements concluded by ASEAN Member States, AEC 2015 and AEC 2025 (Number)



Source: UNCTAD, IIA Navigator.
Note: By year of signature. IIA = international investment agreement.

Box 2.4. RCEP: implications for FDI and for ASEAN

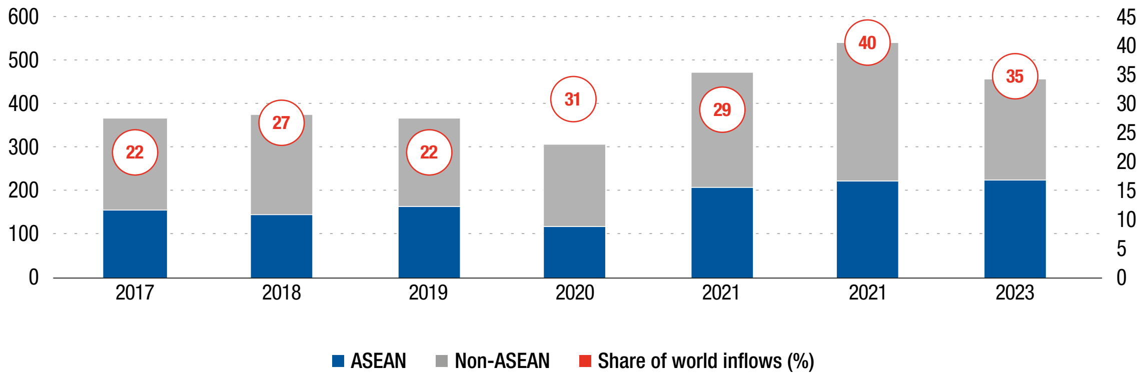
The Regional Comprehensive Economic Partnership (RCEP) agreement came into force on 1 January 2022, establishing the world's largest economic bloc. It encompasses 15 countries, comprising the 10 ASEAN Member States plus Australia, China, Japan, New Zealand and the Republic of Korea. It covers a market of 2.2 billion people, representing 29 per cent of the world's population, with a combined gross domestic product of $29 trillion or about 28 per cent of global gross domestic product, and 27 per cent of global merchandise trade in 2023. The RCEP is both a major home region and a major host region to global FDI flows. It contributes 34 per cent of global FDI outflows and attracted the same share for inflows in 2020–2023, underscoring the bloc's significance for international investment.

The objectives of the RCEP include (a) establishing a modern, comprehensive, high-quality and mutually beneficial economic partnership to expand regional trade and investment and contribute to global economic development, (b) liberalizing and facilitating trade in goods and trade in services and (c) establishing a liberal, facilitative and competitive investment environment.

Before the signing of the RCEP agreement, ASEAN signed FTAs involving investment chapters with each non-ASEAN member. The RCEP agreement consolidates all the FTAs into one document covering ASEAN and the five non-ASEAN members. The agreement includes a significant chapter on investment, which covers important aspects such as (a) treatment of investment, (b) most favoured nation (MFN) status, (c) investment promotion and facilitation, (d) protection for investors from measures that restrict FDI, (e) prohibitions on the use of performance requirements and (e) protection against expropriation.

Given the market size and potential and prospects for businesses to scale, the RCEP bloc has been attracting increasing FDI flows since the pandemic and since the signing of the agreement (box figure 2.3.1). Within the RCEP, ASEAN received more than 40 per cent of FDI inflows in 2017–2023, underlining the significance of the region in attracting FDI in the grouping. The RCEP can boost ASEAN's efforts in attracting more investment and in building a supply chain hub.

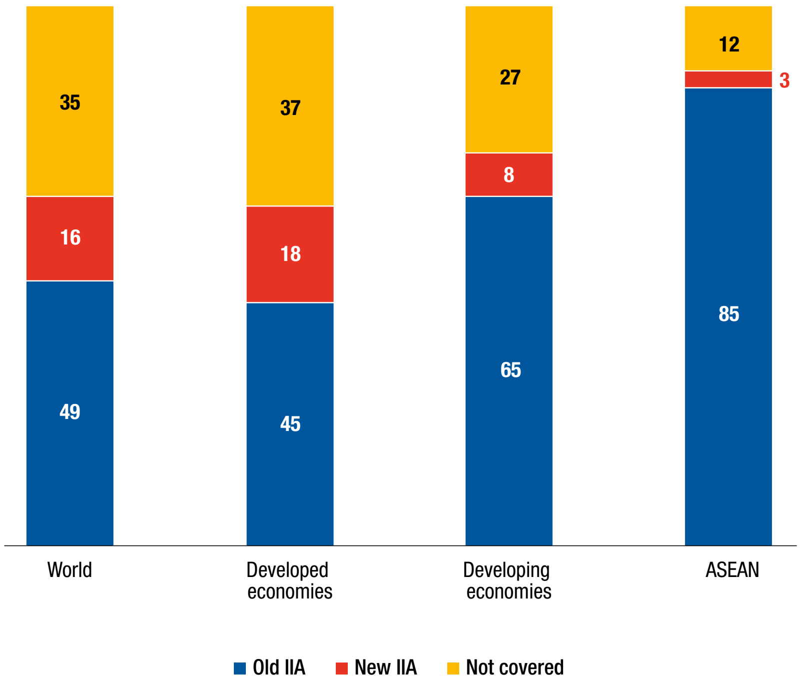
Box figure 2.4.1. FDI in the RCEP by source, 2017–2023 (Billions of dollars and per cent)



Source: UNCTAD.

Source: ASEAN Investment Report 2024 research.

Figure 2.16. Regional coverage of FDI stock by international investment agreements, by type, 2024
(Per cent)



Source: UNCTAD, IIA Navigator and IMF, CDIS database.
Note: FDI stock is estimated on the basis of information on 193 UN Member States' shares of world FDI inward stock for 2022, not including confidential and unspecified stock data. Analysis is based on 2,429 IIAs in force (2,220 BITs and 209 TIPs) with substantive investment commitments. For TIPs that include a relevant regional economic integration organization, only the FDI stock of members for which the IIA is in force was counted. The Energy Charter Treaty (1994) was excluded from the analysis in view of its sector-specific scope. Where a new-generation IIA coexists with an old-generation IIA covering the same FDI stock without suspending its effect, the relevant FDI stock is considered covered by an old-generation IIA.

In terms of investment treaty disputes, 39 known investor-State dispute settlement (ISDS) cases have been initiated against ASEAN Member States, with 97 per cent of these cases based on investment treaties concluded before 2012, falling under the category of 'old-generation' IIAs. The economic sectors most frequently involved include construction, manufacturing, extractive industries, financial services, transportation, real estate, and entertainment.

***

The analysis above indicates that ASEAN Member States possess a 'traditional' network of old-generation investment treaties covering 85 per cent of their FDI stock, which may expose them to a higher risk of ISDS cases. This risk is further compounded by overlapping commitments between ASEAN IIAs with third parties and old-generation BITs, potentially leading to inconsistencies in legal interpretation and policy implementation. This complex situation underscores the urgency of investment treaty reforms and the need for synchronization at national, bilateral, and regional levels of policymaking through enhanced coordination and cooperation. To mitigate and better respond to similar concerns, some regional organizations have developed model clauses to guide their member States in negotiating or renegotiating their BITs with third states. Examples include the model clauses developed by the European Commission as well as the model Pan African Investment Code (PAIC) developed by the African Union.

2.5. INVESTMENT POLICY GAPS

AEC Blueprint 2025 has played an important role in strengthening ASEAN's investment ecosystem and in improving the overall investment policy environment. Despite significant progress in implementation, however, some challenges and gaps remain.

The implementation gaps include the unfinished agenda, institutional and coordination challenges, and the limited sectoral focus of the ACIA. In addition, important provisions under the ACIA and implementation of the 23 subcategory investment facilitation measures under the AIFF require action. Effectively addressing these policy gaps can further improve the region's investment environment.

Specifically, work to implement the ACIA provisions on reducing reservation lists and investment restrictions, including eliminating investment barriers, requires significant attention. There is also insufficient coordination between institutions governing FDI and sectoral bodies that work on investment-related issues. Closer coordination between the ACIA, the AFAS and ATISA-related sectoral bodies can help optimize policy impact, supporting the region's efforts to attract FDI. Adopting a more coordinated approach should be considered, as investment spans industries and sectors. Such an approach could also include expanding FDI facilitation and promotion efforts into emerging industries (e.g. the digital economy, the EV ecosystem) and to the energy transition aspirations committed to by Member States.

Work continues in other areas (trade facilitation and services integration) that have significant potential impact in further improving the investment environment. Work to put in place policies and work plans to realize major Declarations on strategic sectors and emerging industries are yet to commence. Developing emerging industries is important to further improve efficiency, industrial ecosystems and the attractiveness of ASEAN for investment, as well as to support a more deeply integrated region. Incorporating the GDIG principle can strengthen FDI promotion strategies at both the regional and national levels.

2.6. CONCLUSION

Regional and national investment policy development during AEC 2025 has led to an improving investment environment, as evidenced by (i) increasing and high levels of FDI inflows as compared with AEC 2015, (ii) positive sentiment from industry associations and investors on the AEC as an important FDI determinant, (iii) increasing numbers of regional and national measures put in place supporting FDI and improving the investment environment and (iv) robust implementation of AEC Blueprint 2025 across different areas and sectors, albeit with room for improvement.

The investment policy development impacts include actions taken to further open industries for investment, improve the regulatory environment in favour of FDI and ease doing business. Implementation of these policy measures has contributed to a more efficient investment environment with features such as the 0–5 per cent tariff regime, increasingly easier movement of goods through trade facilitation initiatives (e.g. the ASEAN Trade Facilitation Framework and the ASW), services liberalization, facilitation and integration (e.g. the ATISA and the ASFF), and investment facilitation that make investing in ASEAN easier, more streamlined and transparent (e.g. the AIFF). The usage of the ASW has increased in recent years.

Regional integration efforts through the implementation of AEC Blueprint 2025 have also improved investor sentiment (see chapter 3). Investors are increasingly investing and expanding in ASEAN to benefit from economies of scale, new opportunities and the improving investment environment. In implementing AEC Blueprint 2025, some Member States have also taken actions to align national measures and laws to the principles and objectives of the AEC – underlining the precedence of regional policy. During AEC 2025, ASEAN has signed, upgraded and expanded bilateral FTAs with investment chapters with Dialogue Partners. The implementation of the RCEP agreement adds to the attractiveness of ASEAN for FDI. Together with TIPs and the expanding IIAs involving Member States, the region is advancing the principle of a global ASEAN by encouraging investment and strengthening investment ties with Dialogue Partners, FTA partners and the world.

In some cases, regional cooperation and influence through robust institutional development and sharing of experiences have also led to the implementation of regional policy agreements and frameworks, such as the AIFF and the ASW for customs – all contributing towards an improving environment for investment.

Despite significant progress in the past nine years, AEC implementation gaps and policy challenges need urgent attention and actions, as highlighted in section 2.5. Adopting a more holistic and coherent approach by integrating or linking all major regional agreements and work plans that have implications for FDI could lead to a more optimal outcome. This includes more robust cross-sectoral coordination on implementation of FDI-related provisions and joint understanding by related institutions on the impact of the services-trade-investment relationship, with a view to maximizing regional investment policy development. There is also a need to understand the implications of international developments on the region's investment environment (e.g. compliance with the WTO Trade Facilitation Agreement and international tax reforms).

NOTES

[1] The AFAS follows a positive list approach, and different threshold of commitments were adopted in between the adopted Protocols.

[2] Philippine Development Plan, 2023–2028, National Economic Development Authority, Philippines.

[3] Consists of economic, political, education, and health-based criteria.

[4] A score of 1 indicates the achievement of gender parity.

[5] TIPs include FTAs, economic partnership agreements (EPAs) and other regional economic agreements with investment provisions.

[6] See the UNCTAD IIA Navigator, https://investmentpolicy.unctad.org/international-investment-agreements.

[7] These treaties are the Sri Lanka–Thailand FTA (2024), the MERCOSUR–Singapore FTA (2023), the Israel–Viet Nam FTA (2023), the Cambodia–United Arab Emirates Comprehensive EPA (2023) and the Kazakhstan–Singapore Services and Investment Agreement (2023).

[8] The Cambodia–United Arab Emirates Comprehensive EPA (2023) entered into force on 1 January 2024.

[9] The IIAs in analysis includes BITs and TIPs concluded by ASEAN countries and in force with substantive investment commitments.

[10] Old-generation IIAs from the 1980s until the early 2010s were often concluded with little or no attention to host States' regulatory flexibility for environmental protection and climate action. New-generation IIAs signed since 2010 fare relatively better in safeguarding the States' right to regulate and in incorporating specific provisions on the protection of the environment, climate action and sustainable development. However, both old and recent IIAs lack pro-active provisions aimed at effectively supporting climate action.

Chapter 3

ASEAN Economic Community 2025: Impact on FDI

3.1. INTRODUCTION

Foreign direct investment (FDI) plays a crucial role in industrial development across ASEAN, from electricity export and power generation in the Lao People's Democratic Republic (PDR) to the garment export industry in Cambodia and Indonesia; to semiconductor and electronics manufacturing in Malaysia, the Philippines, Singapore, Thailand and Viet Nam; to automotive production networks in Indonesia, Malaysia and Thailand; to natural resources development in Brunei Darussalam and Myanmar; to life sciences, biotechnology and investment funds in Singapore; and to the growing renewable energy supply chain in all Member States. In some commodities and products, FDI and the operations of multinational enterprises (MNEs) have helped transform the region into a leading global exporter and strengthened the region's participation in global value chains.

Over the last decade, international investment by MNEs, including those participating in international contracting and as engineering-procurement-contractors (EPCs), have facilitated connectivity in ASEAN. This has led to an improving environment such as for movement of goods and services, establishment of digital infrastructure, and strengthening of the region's industrial ecosystem. In infrastructure development, the private sector, including international investors, play a pivotal role. For example, about 50 per cent of the 400 data centres in ASEAN are foreign owned or involved foreign equity participation. The rapid growth of many industries, such as in the digital economy and in the electronics, automotive and renewable energy supply chains, is closely associated with a strong FDI footprint.

A combination of internal and external factors continues to influence the region's dynamic investment and industrial landscape. Favorable policy development, regional integration and strong economic fundamentals are key determinants. Today, ASEAN is a major global manufacturing hub, hosting more than 80 per cent of the global Fortune 500 companies and many leading MNEs across a wide range of industries. It is also home to an increasing number of ASEAN MNEs, with most having operations across the region, contributing to intra-ASEAN investment and regional connectivity. The region is a hotbed for start-ups, attracting more than 130 per cent increase in ASEAN-focused private equity and venture capital assets under management between 2017 and 2023.[1] In 2023, it was home to more than 60 unicorns, the fourth highest number in the world (after the United States, China and India), with many involved in cross-border operations to scale and expand markets.

ASEAN is an engine of growth, resilient in attracting FDI despite declining global flows and a weak world economy. Although the region was not spared the impact of the coronavirus-19 (COVID-19) pandemic, FDI to the region rebounded strongly in the immediate aftermath. The region is becoming a major destination for international supply chain restructuring. Considered together, the Member States have been the largest developing-country recipient of FDI for three consecutive years since 2021. These developments underline the growing attractiveness of the region for investment and the continued efforts of the Member States to attract, facilitate and retain FDI. Experience with FDI has been mostly favourable, reflecting the region's pro-investment imperative. The establishment of the ASEAN Economic Community (AEC), a significant milestone in regional integration, has favourably influenced FDI decisions and improved the efficiency of the investment environment.

This chapter examines two key questions: (i) has AEC Blueprint 2025 led to higher FDI inflows to the region and (ii) what FDI trends and patterns evolved during AEC 2025? The chapter does not cover FDI developments in relation to the influence of extra-ASEAN partnership initiatives such as the Regional Comprehensive Economic Partnership and other bilateral free trade agreements involving ASEAN's Dialogue Partners. These significant topics deserve dedicated attention and are beyond the scope of this report, which focuses on the region's FDI performance during the AEC 2025 period to date (i.e. 2016 to 2023).

3.2. FDI DEVELOPMENT AND THE CHANGING INVESTMENT LANDSCAPE DURING AEC 2025

FDI flows to ASEAN grew robustly over the past decades. Annual average FDI inflows during the AEC 2025 period were nearly double the level seen during the AEC 2015 period (i.e. 2006–2015). Regional integration, driven by the aspiration of developing a single market and production base, played a significant role in this growth. Major advantages of this integration are opportunities to benefit from economies of scale, to build international supply chains or regional production networks, to access resources and complementary locational advantages, and to access a market of more than 650 million people and a rapidly growing industrial base. Robust economic fundamentals, steady economic growth and industrial vibrancy have continued to increase the attractiveness of the region for FDI.

Strong policy development favourable to FDI plays a critical role in enhancing the region's investment environment. Although the direct implications of some regional programmes or agreements on investment (e.g. the ASEAN Comprehensive Investment Agreement, the ASEAN Trade in Services Agreement and the ASEAN Trade in Goods Agreement) are difficult to quantify, they have increasingly led investors to regard ASEAN as an attractive investment region, characterized by an improving investment environment and increasing investment opportunities.

In addition, ASEAN's regional integration and policy development are enhancing the economic landscape and improving industrial efficiency. They have brought about easier sourcing of inputs and a more efficient environment for movement of goods and services, to access agglomeration advantages and to benefit from the improving industrial ecosystem and supply chain dynamics. This assessment, as corroborated by opinions of major business councils and chambers of commerce in ASEAN and by numerous survey findings, underscores the importance of regional integration as a significant determinant for FDI.

Regression analysis

ASEAN economic integration has played an important role in improving the region's investment environment. Studies have highlighted a strong relationship between regional integration and FDI decisions. Some research suggests that enhanced competitiveness and the facilitation of investment, fostering strong and stable trade conditions that benefit both investment and trade activities (Prajanto, 2022). Additionally, FDI inflows have been positively influenced by factors such as economic growth, trade openness, and interest rates (Shara and Khoirudin, 2024). Empirical analyses show that financial integration within ASEAN has positively impacted economic growth, with consistent results highlighting the effectiveness of the region's integration strategies (Kurihara, 2021). These findings underscore ASEAN's strategic advantage in enhancing its global competitiveness and economic stability through economic integration and financial policy harmonization.

Other empirical studies have consistently demonstrated that regional integration in ASEAN has had a significant impact on FDI inflows, with evidence indicating that it generally enhances the region's attractiveness to both intra-regional and extra-regional investors (Bende-Nabende et al., 2001; Ismail et al., 2009). In a broader context, regional integration tends to lead to increased extra-regional FDI inflows. This suggests that, beyond the reduction of trade barriers, regional integration signals economic stability and creates a larger, more integrated market, which is appealing to foreign investors (Velde et al., 2004). Evidence from regional integration policies highlights a substantial impact on FDI flows, particularly for newly integrated countries. For instance, in the European Union, FDI flows to the newly integrated Central and Eastern European countries (CEECs) increased significantly, primarily driven by investments from established EU economies. This trend suggests a redistribution of FDI within the region, rather than merely an overall increase in total inflows (Serwicka, 2017).

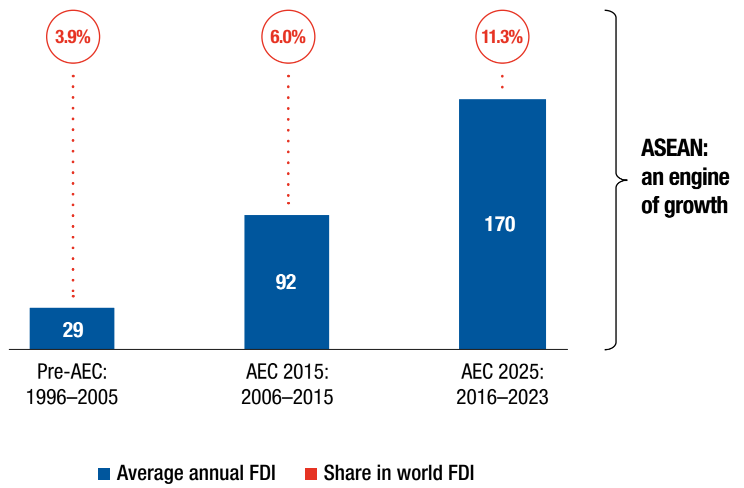
Although it is challenging to prove causality, the numbers and analysis in the following section underline that FDI in ASEAN continued to rise during both the AEC 2015 and AEC 2025 periods. Significantly higher inflows, in absolute terms and in growth terms, were recorded during AEC 2025 than during AEC 2015, as well as in comparison with the world averages. Analysis of major differences in FDI trends and patterns establishes a close connection between AEC 2025 development and higher FDI inflows since 2015. Higher inflows have also been accompanied by evolving patterns in both FDI sources and industry trends.

3.2.1. Overall FDI performance

FDI in ASEAN has been on an increasing trend since the 1990s. The region attracts 11 per cent share of global FDI inflows during AEC 2025 despite the pandemic and global crises, nearly double the 6 per cent during AEC 2015 (figure 3.1). Annual average FDI rose to $170 billion, as compared with $92 billion in the previous period.

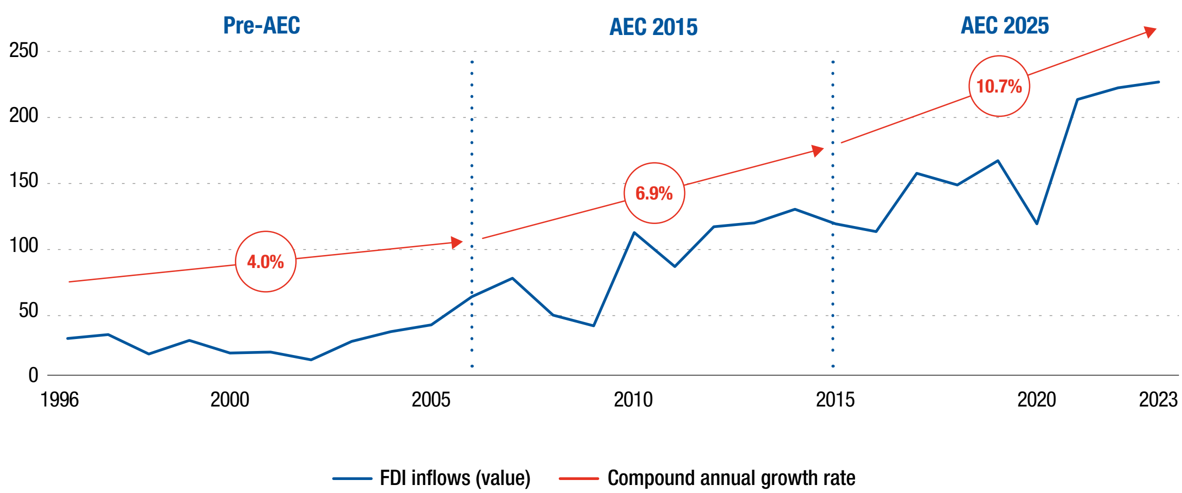
The compound annual growth rate (CAGR) of FDI during AEC 2025 more than doubled the rate when the AEC was endorsed (2003), and significantly contrasting the negative 5 per cent CAGR of global FDI inflows in the same period (figure 3.2). In addition, FDI inflows from many major Dialogue Partners doubled and in some cases tripled.

Figure 3.1. ASEAN: FDI flows and share of world FDI inflows, pre-AEC, AEC 2015 and AEC 2025 (Billions of dollars and per cent, annual average)



Source: ASEAN Secretariat.

Figure 3.2. ASEAN: FDI flows and compound annual growth rate of FDI, pre-AEC, AEC 2015 and AEC 2025 (Billions of dollars and per cent, annual average)



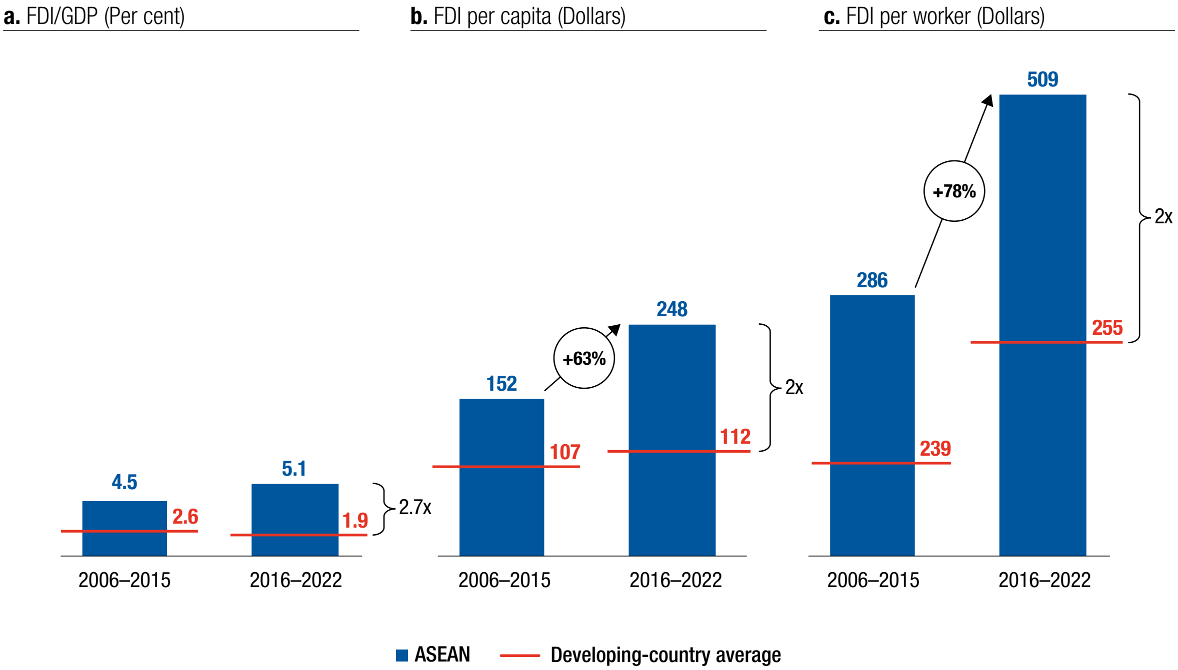
Source: ASEAN Secretariat.

Annual average FDI inflows in the past three years (2021–2023) were more conspicuous, rising to a record level of $220 billion. Among the developing regions, ASEAN was the largest FDI recipient for these three years. In perspective, annual average FDI flows in these years were 1.2 times more than annual average flows to China and to the Latin America and the Caribbean region, which comprises 33 economies.

The recent rapid rise in investment pushed up FDI stock in the region, to more than double, from $1.7 trillion in 2015 to $3.9 trillion in 2023. The 2023 figure is about the size of the ASEAN economy and $200 billion more than FDI stock in China. During this period, FDI stock in ASEAN rose by 129 per cent, while world FDI stock increased by 96 per cent and FDI stock in developing countries as a group rose by 87 per cent.

Other indicators for ASEAN are equally telling (figure 3.3). During AEC 2025, ASEAN attracted 2.7 times the developing countries' annual average FDI to GDP (figure 3.3a). The region attracted annual average FDI per capita of $248, up from $152 during AEC 2015 (figure 3.3b). During 2016–2022, annual average FDI per capita in ASEAN ($248) was more than double that in developing countries ($112). The region's FDI per worker rose by 78 per cent to an annual average of $509, double the developing-country figure during AEC 2025 (figure 3.3c). This means that for every worker, the region attracted twice as much FDI as developing countries did.

Figure 3.3. ASEAN: Other FDI performance indicators during AEC 2015 and AEC 2025
(Per cent and dollars, annual average)



Source: ASEAN Investment Report 2024 research, based on UNCTAD, UN population and International Labour Organisation.

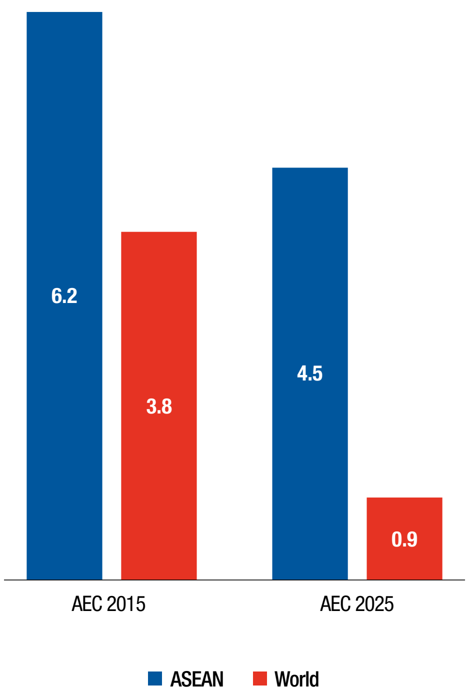
Labour productivity in the region remained high at 2 per cent CAGR during AEC 2025, exceeding the global average CAGR of 0.9 per cent. The region's manufacturing value added CAGR is 4.5 times the world annual average 0.9 per cent CAGR during AEC 2025 (figure 3.4), suggesting the growing attractiveness and productivity of the manufacturing industry – another supportive factor for attracting FDI.

Robust economic fundamentals

Robust economic fundamentals are imperative for market-seeking and efficiency-seeking investments. In 2015, ASEAN was the sixth largest economy in the world with a gross domestic product (GDP) of $2.5 trillion. By 2023, the region became the fifth largest economy (after the United States, China, Japan and Germany, in that order) with a $3.9 trillion GDP, accounting for about a 4 per cent share of the global economy.

During AEC 2025, GDP per capita (compounded annual growth rate, or CAGR) for the world was 1.3 per cent, while for ASEAN it was 2.1 per cent.[2] The region with a population of more than 650 million people witnessed rapid growth in the middle-income class consumers. In 2010, 29 per cent of the region's population was classified as middle-income, about 50 per cent in 2022 and by 2030 the share is projected to reach 65 per cent,[3] providing an important market base for corporate growth and market-seeking FDI.

Figure 3.4. Manufacturing value added in ASEAN and the world (CAGR, per cent)



Source: WDI, World Bank.

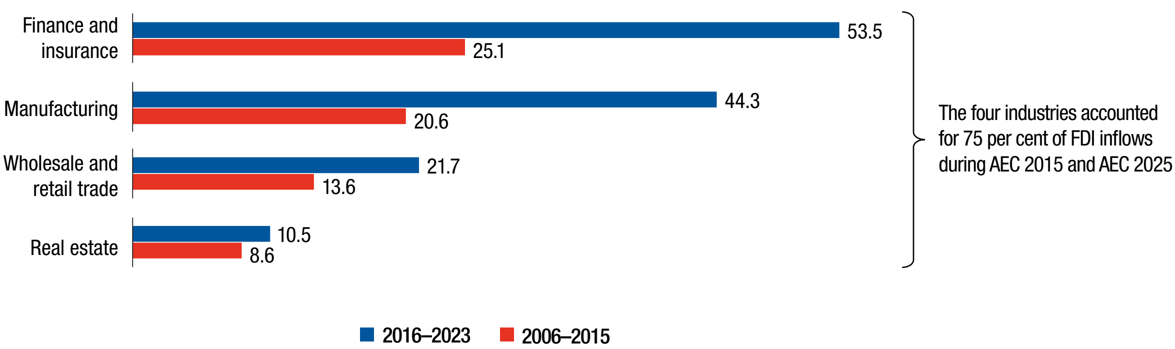
3.2.2. FDI in manufacturing and services

While world FDI in manufacturing has stagnated in recent years, reflecting the state of global economic fracturing (UNCTAD, 2024), the experience of ASEAN has bucked the trend. Four industries – finance, manufacturing, wholesale and retail trade, and real estate – were the largest recipients of FDI during the two AEC periods (figure 3.5), accounting for 75 per cent of total inflows. This suggests that in ASEAN there is a high degree of industrial concentration. The industrial investment trend also shows that ASEAN is an increasingly significant manufacturing centre and a thriving services location for financial and digital economy activities. Financial liberalization, stable economic growth and a rising affluent consumer class spurred strong investment interest in the finance and wholesale and retail trade sectors. Active FDI in real estate reflects increasing investment in industrial infrastructure and in industrial parks (*AIR 2017*), as the growing number of affluent consumers demand more homes and commercial properties. Steady economic growth is an important contributory factor to improving investment environment and attracting FDI.

FDI inflows to these four industries rose significantly during AEC 2025. Investment in manufacturing grew the fastest, double the annual average during AEC 2015. This occurred despite a 82 per cent plunge in FDI, to $9 billion, in 2020 as a result of the COVID-19 pandemic. FDI to manufacturing rebounded strongly in 2021 (more than 500 per cent) and reached an all-time high ($73 billion) in 2022, reflecting the resilience of the industry and reinforcing the importance of ASEAN as a manufacturing hub. Manufacturing FDI fell in 2023 but remained high at $50 billion, which was 22 per cent of total inflows to the region. Manufacturing's share of annual average FDI during AEC 2025 rose to 26 per cent, up from 23 per cent during AEC 2015.

The robust growth in manufacturing FDI during AEC 2025 was attributable to a confluence of external and internal factors. The trade tensions between the United States and China, the pandemic, global supply chain disruption and growing nationalism led international firms to

Figure 3.5. ASEAN: FDI in key major industry recipients during AEC 2015 and AEC 2025
(Billions of dollars, annual average)



Source: ASEAN Secretariat.

invest, relocate or expand abroad (*AIR 2023*). International firms undertook reshoring, nearshoring and offshoring to manage risks and supply chain challenges. In offshoring, these firms were drawn by the region's increasingly attractive internal factors (e.g. strong economic fundamentals, regional integration, industrial vibrancy and an improving investment policy environment).

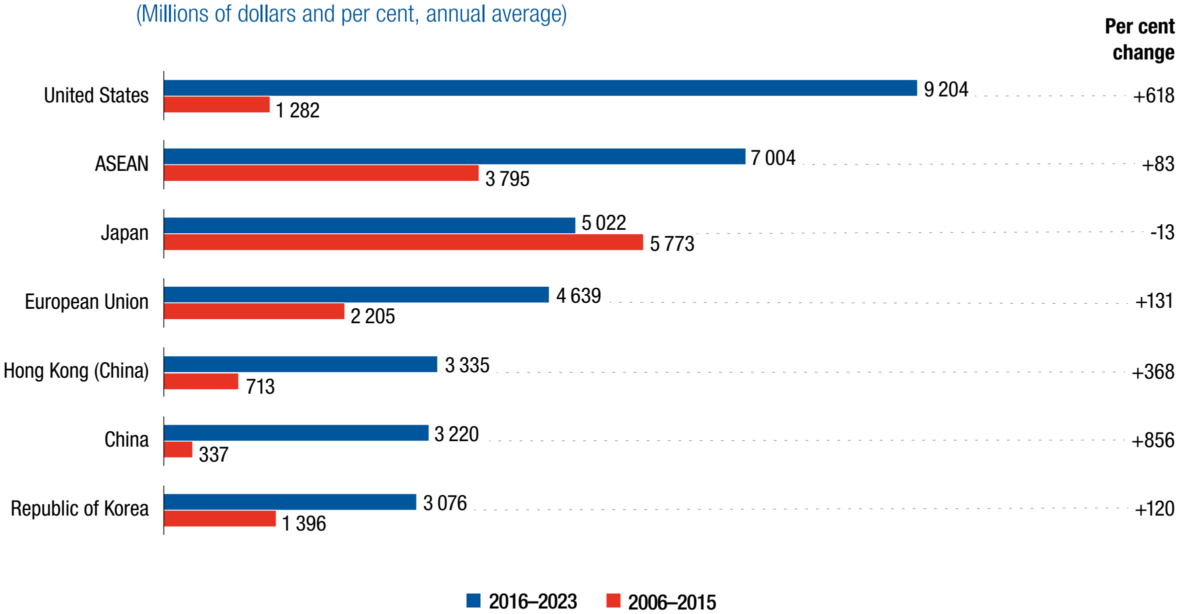
Strong investment in semiconductors and electronics (*AIR 2020–2021*, *AIR 2023*), increasing FDI in technology-oriented projects (*AIR 2020–2021*), the rise in investment in the electric vehicle (EV) supply chain (*AIR 2023*) and a step-up in manufacturing investment such as by MNEs from China, the United States and the European Union pushed manufacturing investment to levels not witnessed before. Supply chain FDI in ASEAN is not new, but the high levels seen in the latter years of AEC 2025 is a significant phenomenon (*AIR 2023*), and one that is expected to continue. A notable component of manufacturing FDI is manufacturing services, which include services incidental to manufacturing such as testing and packaging in the electronics industry.

A few other major developments also distinguished the manufacturing investment landscape between AEC 2015 and AEC 2025:

(i) Manufacturing investment from Chinese companies grew faster (+850 per cent) than that from other sources (chapter 1, figure 3.6), partly because of the low base and the growing pressure for Chinese firms to internationalize (e.g. cost challenges and market opportunities) or to diversify risks.

(ii) Manufacturing FDI increased from all other Dialogue Partners except Japan. Most witnessed an increase that more than doubled between the two periods.

Figure 3.6. ASEAN: FDI in manufacturing during AEC 2015 and AEC 2025
(Millions of dollars and per cent, annual average)



Source: ASEAN Secretariat.

(iii) Strong investment in industries such as semiconductors and electronics during AEC 2025 led to a nearly 600 per cent rise in manufacturing FDI from United States firms.

(iv) In sharp contrast, manufacturing FDI from Japanese firms – as a group, the largest manufacturing investor in the region during AEC 2015 – fell by 13 per cent. The share of manufacturing in Japanese FDI halved, from 51 per cent during AEC 2015 to 25 per cent during AEC 2025. The share of FDI in manufacturing in ASEAN from Japanese firms fell more than half during AEC 2025, to 11 per cent from 28 per cent during AEC 2015.

3.2.3. Major sources of FDI

The home countries of the top 10 largest investors continued to account for 70 per cent of FDI inflows in the two AEC periods (table 3.1). Two new entrants joined the top 10 during AEC 2025: Taiwan Province of China, with annual average FDI of $5.4 billion and Switzerland, with $3.7 billion. Geopolitical tensions, the need to be near customers and supply chain restructuring drew more investment to ASEAN from firms in Taiwan Province of China in recent times, exceeding the annual average FDI from these investors during AEC 2015 by more than 200 per cent. Significant investment in semiconductors by United Microelectronics, Taiwan Semiconductor Manufacturing Company and other electronics companies from this economy played a role.

Table 3.1. ASEAN: Top 10 investors during AEC 2015 and AEC 2025 (Millions of dollars and per cent, annual average)

Economy	2006–2015	Share of total FDI (%)	Economy	2016–2023	Share of total FDI (%)
ASEAN	14 771	16.3	United States	27 222	15.9
United States	11 826	13.0	ASEAN	24 565	14.4
Japan	11 258	12.4	Japan	19 876	11.6
Netherlands	5 337	5.9	China	12 756	7.5
China	4 477	4.9	Hong Kong (China)	10 284	6.0
Hong Kong (China)	4 007	4.4	Republic of Korea	8 698	5.1
United Kingdom	3 365	3.7	Taiwan Province of China	5 445	3.2
Luxembourg	3 224	3.6	Netherlands	4 496	2.6
Republic of Korea	3 054	3.4	Switzerland	3 729	2.2
Australia	1 869	2.1	United Kingdom	3 566	2.1
Total top 10	63 185	69.6	Total top 10	120 634	70.7
Total FDI in ASEAN	90 794		Total FDI in ASEAN	170 685	

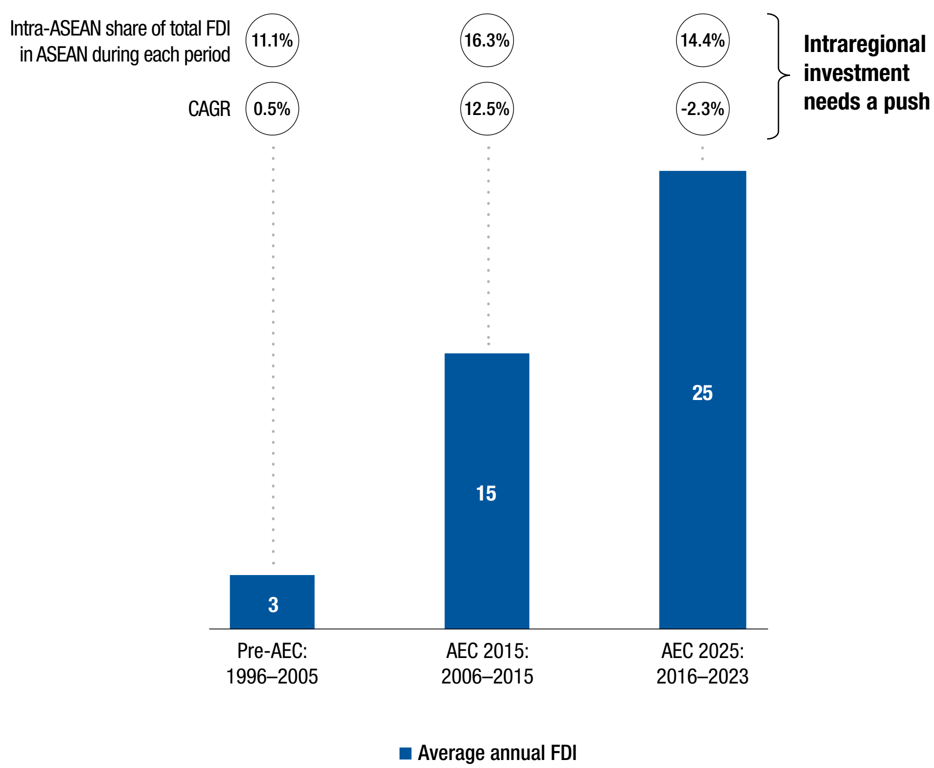
Source: ASEAN Secretariat.

Nine years into the AEC 2025 implementation, FDI from some Dialogue Partners and intraregional investment have evolved. The share of intra-ASEAN investment in total FDI inflows is declining. The share of FDI from two of the three traditional home economies of major investors (European Union and Japan) also fell during AEC 2025. By contrast, significant FDI from firms in the United States in recent years pushed its share to 16 per cent, up from 13 per cent during AEC 2015. FDI from investors in China, Hong Kong (China) and the Republic of Korea emerged as a more prominent feature of the investment landscape during AEC 2025. In some Member States, companies from these three home countries were the top three investors.

(i) Intra-ASEAN investment

Intraregional investment remained a major source of FDI in the two AEC periods. Although intra-ASEAN investment is growing in absolute terms, the pace of growth has slowed significantly (figure 3.7, *AIR 2023*). The success in attracting FDI from major global economies and companies has put a brake on the growth of intra-ASEAN investment. Intra-ASEAN investment needs a strong push (box 3.1).

Figure 3.7. Intra-ASEAN investment, pre-AEC, AEC 2015 and AEC 2025
(Billions of dollars and per cent, annual average)



Source: ASEAN Secretariat.

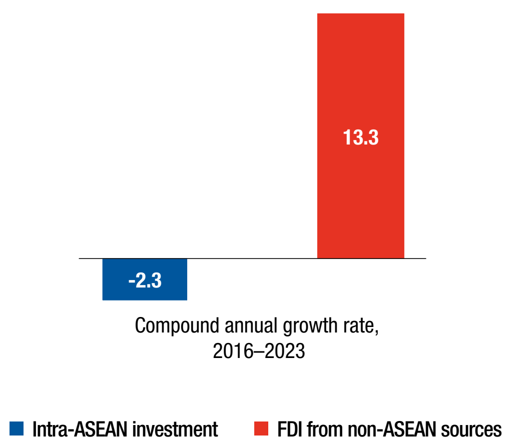
Another challenging aspect of intra-ASEAN investment is its unevenness. During AEC 2025, more than 70 per cent of intra-ASEAN investment went to just three Member States (Indonesia, Singapore and Viet Nam, in that order). Similarly, investment from three Member States (Singapore, Thailand and Malaysia) accounted for more than three quarters of intraregional investment. This underlines a high concentration in the sources of intraregional investment and the limited capacity of firms from other Member States – particularly small and medium-sized enterprises (SMEs) to regionalize. Key challenges to their internationalization include limited access to finance; gaps in knowledge, information and know-how; difficulties in identifying investment opportunities; and fear of venturing abroad, among other hurdles. Facilitating the regionalization of SMEs can help increase connectivity through business and investment linkages, and can contribute to the AEC 2025 objective of "a resilient and inclusive ASEAN".

Box 3.1. Intra-ASEAN investment needs a push

In terms of compound annual growth rate, intra-ASEAN investment contracted (-2.3 per cent) during AEC 2025 while FDI from non-ASEAN sources rose, to 13 per cent (box figure 3.1.1). This marked a stark difference in the growth and development of intraregional investment and investment from non-ASEAN sources. However, the rapid growth of FDI from non-ASEAN sources presents an opportunity to further increase of the contribution of FDI to regional integration, alongside intraregional investment activities.

The share of intraregional investment in total FDI inflows in ASEAN has consistently remained below 20 per cent. By contrast, intraregional investment within the European Union constitutes approximately 60 per cent of FDI in that economy, reflecting the differing developmental stages of the two regions.

Box figure 3.1.1. Growth of intra-ASEAN investment and FDI from non-ASEAN sources during AEC 2025
(Per cent)



Source: ASEAN Secretariat.

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Box 3.1. Intra-ASEAN investment needs a push (Concluded)

Several other key aspects of intra-ASEAN investment should be considered:

(i) Measuring intra-ASEAN investment by value can be misleading. A better indicator might be by number of firms. SMEs can provide a potential source of intraregional investment, as these enterprises tend to internationalize to neighbouring countries to grow rather than to venture farther afield. The scale of their cross-border investment is usually small. The success of regional integration also depends on the number of firms involved in intraregional investment.

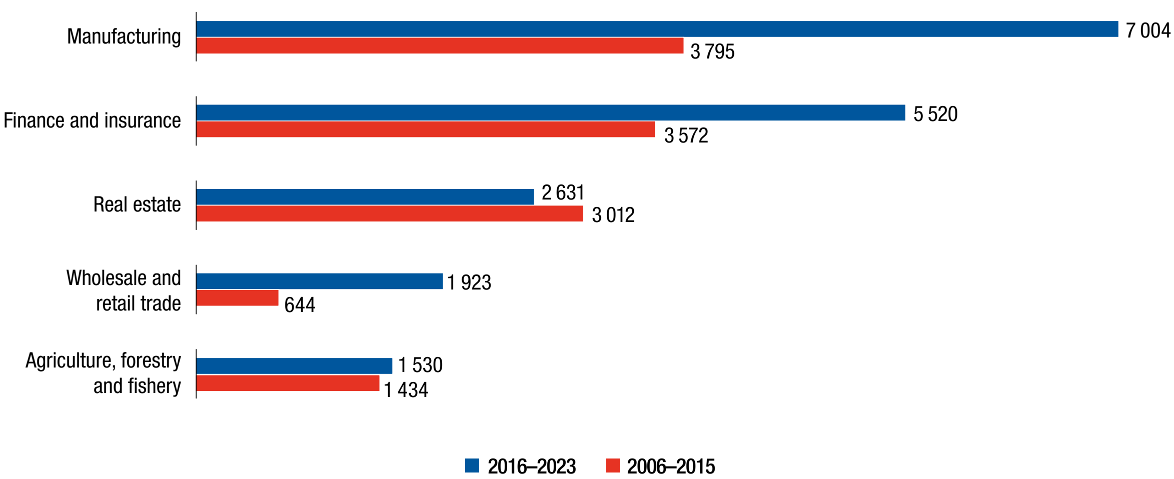
(ii) It is important to distinguish between sources of intraregional investment; i.e. ASEAN companies or MNE subsidiaries based in ASEAN. In some cases, investment conducted by MNEs in the region flows through holding companies or special purpose vehicles, which in turn invest across the region – thus inflating intraregional investment numbers.

(iii) While it is important to address the challenge of growth in intraregional investment, it should be done by not affecting the continuous growth of FDI from non-ASEAN sources.

Source: Adapted from *ASEAN Investment Report 2023.*

Five major industries – finance, manufacturing, wholesale and retail trade, real estate, and agriculture, forestry and fishery – accounted for 76 per cent of intraregional investment during AEC 2025, down from 84 per cent during AEC 2015. The value of FDI rose in all but real estate (figure 3.8). Manufacturing was the largest recipient in both AEC periods, with the amount of investment nearly doubling during AEC 2025. Costs and market opportunities were major factors.

Figure 3.8. Intra-ASEAN investment by industry, during AEC 2015 and AEC 2025
(Millions of dollars, annual average)



Source: ASEAN Secretariat.

(ii) Major Dialogue Partners

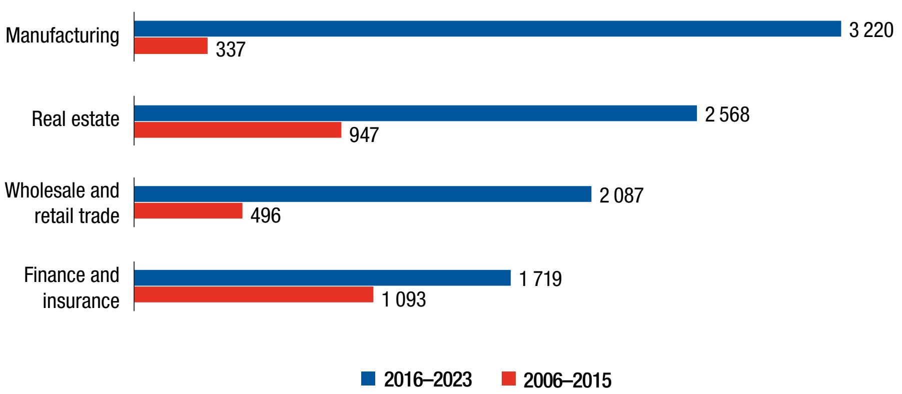
The robust growth in FDI and evolving investment patterns from major Dialogue Partners were significant drivers pushing up inflows during AEC 2025.

(a) China

Annual average FDI from China nearly tripled during AEC 2025, reaching $12.8 billion. More Chinese companies are investing in ASEAN, particularly in manufacturing. Some have continued to expand their regional footprints. The abnormally high levels of manufacturing FDI by Chinese companies in consecutive recent years marked the beginning of a new wave of Chinese manufacturing FDI and a "new normal" for Chinese FDI trends in ASEAN (chapter 1).

Four major industries accounted for more than 75 per cent of FDI from China during AEC 2025, up from 64 per cent during AEC 2015 (figure 3.9). Manufacturing was the largest recipient by industry during AEC 2025, significantly contrasting with AEC 2015, during which manufacturing received the least FDI. Manufacturing investment rose 856 per cent to an annual average of $3.2 billion during AEC 2025. Investment in real estate also increased rapidly. Active investment by e-commerce and social media companies such as Alibaba, Tencent and Tiktok and by other Chinese technology companies is contributing to the changing pattern of Chinese investment in the region.

Figure 3.9. FDI by companies from China, by industry, during AEC 2015 and AEC 2025
(Millions of dollars, annual average)

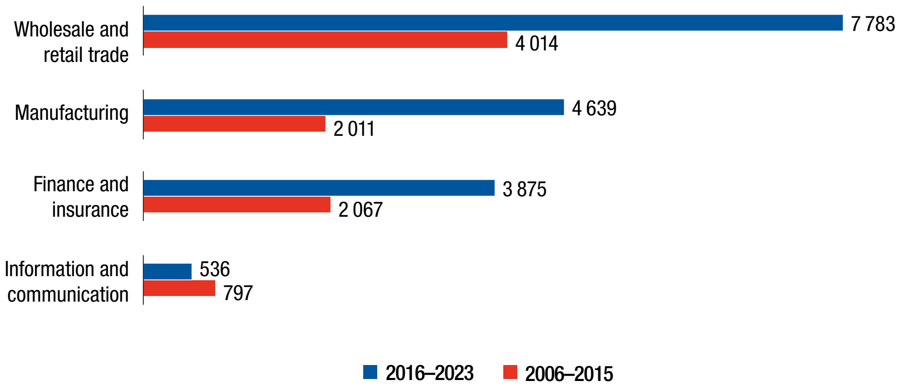


Source: ASEAN Secretariat.

European Union

Annual average FDI from firms in the European Union rose by about 20 per cent, to $22 billion during AEC 2025. Four top industries accounted for 81 per cent of FDI from the European Union (figure 3.10). Annual average FDI in these industries rose, with the largest growth seen in manufacturing, which doubled during AEC 2025. A key reason was the increase in European

Figure 3.10. FDI by companies from the European Union, by industry, during AEC 2015 and AEC 2025
(Millions of dollars, annual average)



Source: ASEAN Secretariat.

investment in electronics and semiconductors such as by ASML (Netherlands), AT&S (Austria), Infineon (Germany), Melexis (Belgium), Nexperia (Netherlands), NXP Semiconductors (Netherlands) and Siltronic (Germany). Wholesale and retail trade remained the largest industry target for European FDI during AEC 2025.

(b) Japan

Annual average FDI in manufacturing fell from $5.8 billion during AEC 2015 to $5.0 billion during AEC 2025. Firms from Japan are major investors in ASEAN, with an annual average investment that nearly doubled during AEC 2025, to $20 billion. Four of the top industries (manufacturing, finance, transportation and storage, and wholesale and retail trade, in that order) accounted for 81 per cent of FDI from Japan, down from 85 per cent during AEC 2015. This was partly because of the decline in investment in manufacturing, the traditional largest target industry. Investment in the other three top industries (the exception being manufacturing) rose in this period. A major change is the significant rise in investment in transportation and storage, from a low base of an annual average of $119 million during AEC 2015 to $3.7 billion during AEC 2025 – a 30-fold increase.

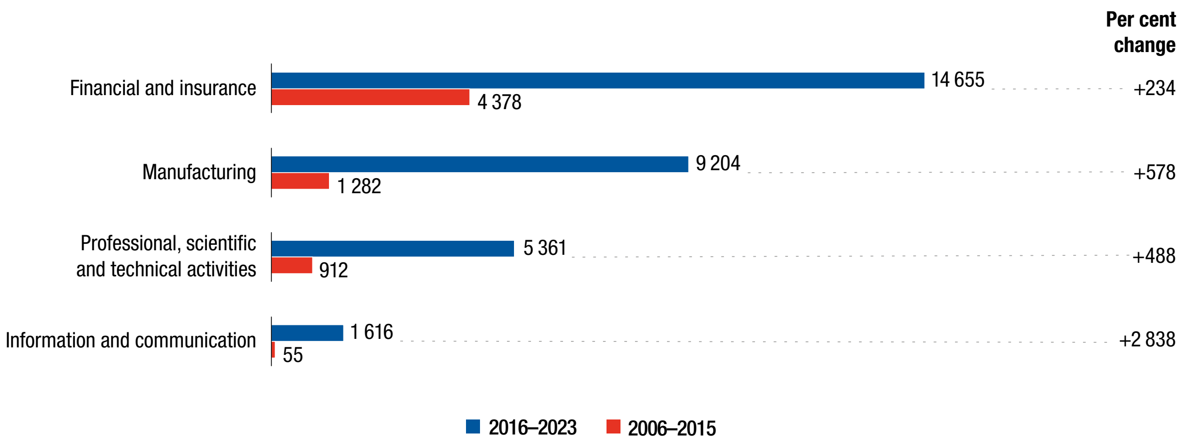
(c) Republic of Korea

FDI from firms in the Republic of Korea nearly tripled over the two periods, from an annual average of $3.0 billion during AEC 2015 to $8.7 billion during AEC 2025. Investment from the Republic of Korea was relatively more concentrated, compared with that from the other Dialogue Partners. Three industries (manufacturing, finance, and wholesale and retail trade) accounted for more than 80 per cent of Korean FDI in ASEAN during AEC 2025, up from 71 per cent during AEC 2015. Manufacturing is the overwhelmingly largest recipient (with an annual average of $3.1 billion), accounting for 35 per cent of Korean investment during AEC 2025. Korean FDI in manufacturing more than doubled, with most of it concentrated in a few Member States (e.g. Indonesia and Viet Nam). Korean FDI in finance and in wholesale and retail trade rose by more than 250 per cent between the two AEC periods. Unlike manufacturing FDI, investment in finance is more geographically dispersed, to five Member States.

(d) United States

Annual average FDI from United States firms more than doubled to $27 billion during AEC 2025, with most of it going to services and manufacturing (figure 3.11). Finance was the largest target industry, followed by manufacturing, in which investment grew by more than 600 per cent. The increase was underpinned by a significant rise in FDI in semiconductors to expand production capacity, upgrading and strengthening supply chains (*AIR 2023*). Rising investment in data centres and cloud computing also contributed to the upward FDI trend. Investment related to professional, scientific and technical activities rose conspicuously, by nearly 500 per cent, to an annual average of $5.4 billion – equivalent to about a fifth of United States investment during AEC 2025. This development suggests that subsidiaries of United States companies are upgrading facilities and increasing their technological and knowledge-based business activities. A significant share of this professional, scientific and research and development (R&D)-related FDI is in one Member State (Singapore) because of the significant number of subsidiaries established in that host country and because of its policy support, including the attractive R&D, business and financial ecosystems.

Figure 3.11. FDI by companies from the United States, by industry, during AEC 2015 and AEC 2025
(Millions of dollars and per cent, annual average)



Source: ASEAN Secretariat.

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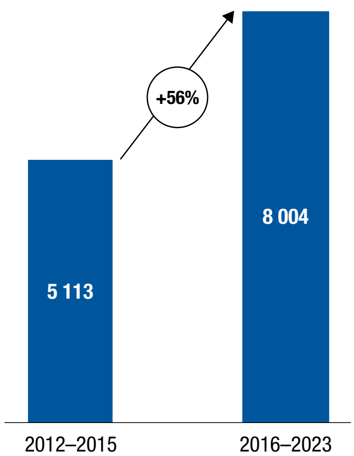
In addition to internal factors (ASEAN's regional integration), AEC 2025 witnessed a set of significant external factors that further influenced the region's FDI landscape. In addition to the pandemic, these included a weak global economic situation, international supply chain restructuring, growing nationalism, global economic fracturing and global crises (e.g. in health, food, fuel and finance), all of which have important implications for the region. These factors were not present during AEC 2015. Yet despite these global challenges and external shocks, the region has remained resilient and FDI has rebounded strongly.

FDI decisions are determined by a combination of factors driving firms' internationalization and ultimate choice of locations. Regional factors have become more important as more firms have become aware of and understand the AEC (section 3.3). Notable differences appear in the motivations and drivers of FDI during AEC 2025 and during AEC 2015. Increasing investment opportunities in emerging industries aligned with policy objectives (e.g. renewable energy, digital economy) (*AIR 2018*), technological advancement (e.g. advanced manufacturing, Industry 4.0, renewable energy generation technology), changing investment patterns, larger-ticket investment projects and the emergence of new actors (e.g. in electronics, EVs and the renewable energy supply chain) are influencing the landscape and investment patterns.

FDI projects in ASEAN have also become more strategic in focus, for example through increasing R&D and scientific investment, more regional headquarters, upgraded factory capabilities, installation of Industry 4.0 technologies (*AIR 2020–2021*), and more emphasis on supply chain development (*AIR 2023*) and on moving up in the value chain (e.g. in electronics and EVs). FDI in professional, scientific and technical investment in ASEAN rose 57 per cent, from an annual average of $5.1 billion in 2012–2015 to $8.0 billion in AEC 2025, exceeding the annual average growth of all FDI in ASEAN (43 per cent) in the same period (figure 3.12).

Figure 3.12. ASEAN: FDI inflows in professional, scientific and technical activities during AEC 2015 and AEC 2025 (Millions of dollars, annual average)



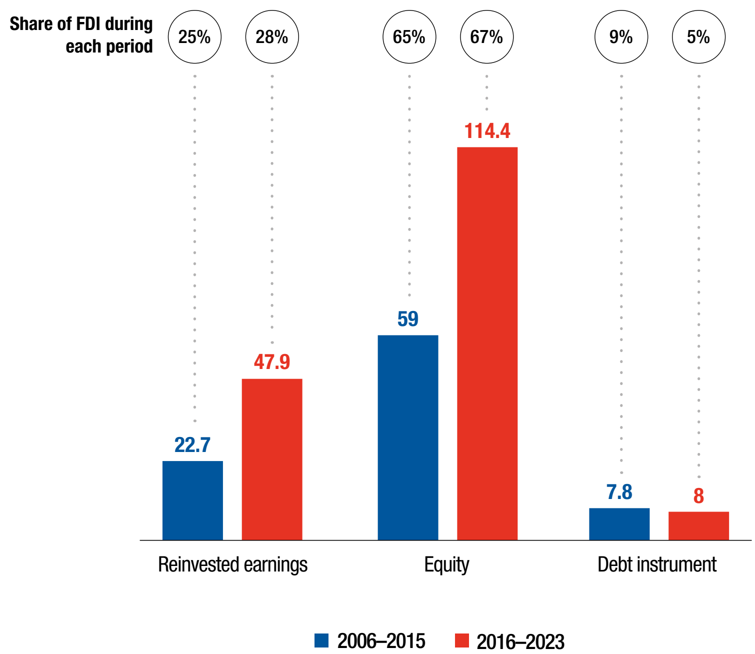
Source: ASEAN Secretariat.

3.2.4. FDI financing

Of the three main components of FDI financing, equity investment was the largest source (more than 65 per cent) during the two AEC periods (figure 3.13). Annual average equity investment during AEC 2025 nearly doubled from that seen during AEC 2015 ($59 billion), indicating both new investment and expansion of projects with the injection of fresh equity capital. Such expansion took the form of new or added production capacity (e.g. new production lines, additional factories, upgraded plants and investment in Industry 4.0 technologies). The dominance of equity investment in ASEAN contrasted with the global trend, where reinvested earnings accounted for more than a 60 per cent share of the FDI components (*WIR 2024*).

The share of reinvested earnings in all FDI components doubled, from an annual average of $23 billion during AEC 2015 to $48 billion during AEC 2025. This implies increasing profitability and earnings by subsidiaries. This trend underscores the significance of reinvestment. It suggests that companies have favourable experience or positive sentiments regarding operating in ASEAN. In addition, investors foresee a positive outlook for their business and investment in the region, and hence undertake expansion through reinvestment of earnings. Expansions include horizontal and vertical investment in host countries and in multiple Member States. Growing investor interest in supply chain development by MNEs, such as in electronics and semiconductors, has also led to greater use of reinvested earnings.

Figure 3.13. ASEAN: FDI by component during AEC 2015 and AEC 2025 (Billions of dollars and per cent, annual average)



Source: ASEAN Secretariat.

3.2.5. Attraction of international companies

ASEAN continued to attract an increasing number of international companies. The region hosts more than 80 per cent of the Global Fortune 500 companies and many leading MNEs across different industries. In addition, more than 5,000 multinationals operate regional headquarters in the region. Given its competitive infrastructure and investment environment, most of these (4,200) are in Singapore, as compared with the smaller number (about 1,340) in Hong Kong (China), which is another major destination for the establishment of regional headquarters in Asia.[4] Some MNEs based in Singapore are relocating part of their regional headquarters functions to other Member States to avoid rising costs and to take advantage of growth opportunities.[5]

Some other Member States, such as Malaysia and Thailand, are attracting regional headquarters investment, albeit in smaller numbers (box 3.2, *WIR 2024*). The growing attractiveness of these Member States (i.e. their lower costs, conducive living conditions for expatriates, improving business environments and proximity to rapidly growing industries) is expected to drive up the numbers of regional headquarters in these locations other than Singapore.

Investment in regional headquarters has implications for measuring intraregional investment. Given their regional activities and their position as financial holding entities, many of these headquarters or special purpose vehicles invest directly in other Member States. Often their investments are captured as being from the host country – although these investors are ultimately owned by parent companies based outside ASEAN – which inflates the figures for intra-ASEAN investment. This statistical anomaly requires attention so that intraregional investment is more accurately measured to identify intra-ASEAN business, and intraregional industry and corporate connectivity.

Box 3.2. Multinationals and regional headquarters in Malaysia and Thailand

In 2015, the Malaysian Investment Development Authority (MIDA) launched the Principal Hub Incentive Scheme to attract MNEs planning to operate regional and global businesses from Malaysia. Among the incentives provided was a 10-year income tax holiday at either 0 or 5 per cent, depending on the scale of the investment and activities. The Thai Board of Investment (BOI) in 2010 provided a new set of incentives to promote its Regional Operating Headquarters programme, including a 10-year corporate income tax rate of 0 per cent on the portion of income derived from overseas operations. Multinationals in a wide range of industries from automotive to electronics, food, medical services and technology have established regional headquarters in Thailand (box table 3.2.1).

Since 2015, about 330 multinationals have benefitted from the Thai BOI privileges.[a] From May 2015 to 2022, the MIDA approved 46 “principal hub-related companies”[b] in industries such as electrical and electronics, aerospace, oil and gas, food and beverages, chemistry and information technology.

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Box 3.2. Multinationals and regional headquarters in Malaysia and Thailand (Concluded)

Box table 3.2.1. Malaysia and Thailand: Regional headquarters of multinationals (selected cases)

Multinationals	Nationality	Industry	ASEAN location	Selected activities
Ajinomoto	Japan	Food	Thailand	Support affiliates in the region
Clariant	Switzerland	Chemicals	Malaysia	Asia-Pacific headquarters for oil services business
Epson	Japan	Electronics	Malaysia	Regional distribution centre providing centralized management for plants in China, Malaysia and Thailand
ExxonMobil	United States	Energy	Thailand	Support affiliates in Thailand and in Asia-Pacific
Hitachi	Japan	Electronics	Malaysia	Regional headquarters for information and telecommunication
Honda	Japan	Automotive	Thailand	Asian Parts Centre, organizing logistics and parts procurement for the Asia-Pacific region
Huawei Technologies	China	Telecommunication/ technology	Thailand	Oversee operations in ASEAN
Honeywell	United States	Automation and digitalization	Malaysia	Strengthen presence in the region
Infopib	Croatia	Global cloud communications	Malaysia	Strengthen presence; regional operations hub for the Asia-Pacific region
McDermott International	United States	Engineering services (energy)	Malaysia	Expand and support presence in the region
Michelin	France	Tires	Thailand	..
Nestle	Switzerland	Food	Malaysia	Global procurement hub
			Thailand	Oversee operations in Cambodia, the Lao PDR, Myanmar and Thailand
Nippon Steel	Japan	Steel manufacturing	Thailand	Transfer from Singapore and operations reorganization
Nissan	Japan	Automotive manufacturing	Thailand	Reorganization of its Asia-Pacific regional operations
				Nissan's first R&D vehicle test facility in ASEAN
Nissin Foods	Japan	Food	Thailand	..
OCI Holdings	Republic of Korea	Energy and chemicals	Malaysia	Deepen regional foothold and strengthen partnerships with stakeholders and clients
PSA Group	French	Automotive manufacturing	Malaysia	An ASEAN hub and expansion through acquisition of 57 per cent stake in Naza Automotive Manufacturing (Malaysia)
Royal Philips Electronics	Netherlands	Electronics	Thailand	Provide multiple services in 15 countries, including reporting, accounts payable, receivable processing, planning and purchasing
Sakata Inx	Japan	Manufacturing of printing ink	Malaysia	Oversee business in South Asia and Southeast Asia
SK Group	Republic of Korea	Manufacturing and services conglomerate	Malaysia	A springboard for markets in Southeast Asia, India and the Middle East
Swimlane	United States	Technology (AI-enhanced cybersecurity)	Malaysia	Expand in Asia-Pacific
Toyota Motor	Japan	Automotive	Thailand	Oversee exports, engineering, manufacturing and R&D in the region

Source: MIDA, BOI Thailand, and media reports.

Source: MIDA, BOI Thailand, and media reports.

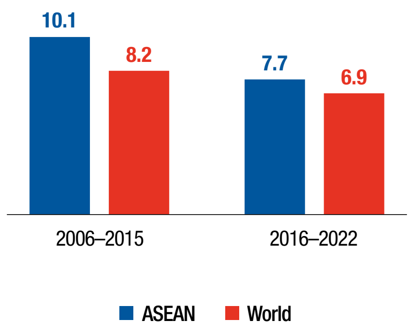
[a] *Wall Street Journal*, "Thailand eyed as top pick for regional and international HQs", 29 March 2024.

[b] MIDA, "Predictive analysis the game-changer to maximizing potentials of global services hubs", 2023

3.2.6. FDI profitability

ASEAN is a profitable destination for FDI. The rate of return for FDI in the region continued to exceed the world average during AEC 2015 and AEC 2025 (figure 3.14). This profitability adds to the attractiveness of the region for investment. However, the rate of return is getting closer to the world average because of the gradual decline in perceived investment risk in the region.

Figure 3.14. World and ASEAN: FDI rate of return during AEC 2015 and AEC 2025 (Per cent, annual average)



Source: UNCTAD.
Note: Data on rate of return for FDI exclude data on Singapore and Viet Nam. These two Member States do not report data on FDI income. Including data for Singapore and Viet Nam would lead to higher profitability in the two AEC periods.

3.2.7. Other international investment

Greenfield investments

The number of announced greenfield investment projects during AEC 2025 grew by 0.4 per cent compound annual growth rate. Greenfield investment continued to be the largest among the three types of international investments in the region (table 3.2). The peak for announced greenfield investments occurred in 2023, with 1,521 projects, which was 7 per cent below the all-time high of 1,643 projects recorded in 2018. The most significant decline took place in 2020 due to the impact of the COVID-19 pandemic, causing investments to plummet to 762 projects. In 2016–2023, the largest recipients of greenfield investment projects were the ICT and electronics sector, followed by financial services, and professional services. These industries together accounted for 35 per cent of the project announcements during AEC 2025.

International project finance

The compound annual growth rate of international project finance (IPF) projects during AEC 2025 increased by 19 per cent. IPF was on a rising trend, with the exception of 2023, when the number of projects fell by 43 per cent compared to 2022. IPF activity in the region has been concentrated in three key industries — renewables, manufacturing, and non-renewable energy generation — which together accounted for 66 per cent of the total IPF projects from 2016 to 2023. Renewable energy remained the largest recipient, representing 35 per cent of total IPF projects during AEC 2025, reflecting strong investor interest in infrastructure-related activities, particularly in renewables and energy generation. The other two key industries are manufacturing and non-renewable energy generation.

Mergers and acquisitions

Merger and acquisition (M&A) activities in the region have been declining, with a compound annual growth rate of negative 7 per cent during AEC 2025. The number of M&A deals dropped to 156 in 2023, the lowest level during this period. This decline reflects the global situation and the scarcity of mature assets available for M&As in the region. Three key industries—finance, information and communications, and trade services—accounted for 38 per cent of all M&A activities during this period.

Table 3.2. Other international innvestment in ASEAN, 2016-2023 (Number of deals, selected industries)

Year	2016	2017	2018	2019	2020	2021	2022	2023	Total during AEC 2025	Share (%)
Greenfield Projects	**1521**	**1286**	**1643**	**1375**	**762**	**862**	**1103**	**1568**	**10120**	
ICT and electronics	194	161	189	214	143	208	229	295	1633	16.1
Financial services	148	151	195	140	96	85	135	119	1069	10.6
Professional services	102	98	161	118	74	92	170	168	983	9.7
International Project Finance	**39**	**52**	**93**	**105**	**115**	**156**	**237**	**135**	**932**	
Renewables	14	18	44	28	46	65	58	55	328	35.2
Industry	3	4	8	16	21	41	67	30	190	20.4
Power	10	7	11	14	16	7	19	13	97	10.4
Mergers and Acquisitions	**264**	**248**	**217**	**280**	**204**	**170**	**199**	**156**	**1738**	
Financial and insurance activities	42	40	37	47	22	28	31	21	268	15.4
Information and communications	31	30	30	33	17	36	40	22	239	13.8
Trade services	20	11	19	28	24	15	13	20	150	8.6

Source: UNCTAD.

3.3. BUSINESS AND INVESTMENT PERCEPTIONS OF THE AEC

The business and investor community is receptive to the AEC. More stakeholders are aware of and understand the AEC now than during AEC 2015. In general, they agree that the AEC has had a positive impact on the investment environment and on their FDI decisions. But more needs to be done to promote the AEC and to articulate its positive impact on investment to the wider community of regional and international investors and businesses.

3.3.1. Business councils in ASEAN

In preparation for this report, a consultative forum was conducted in Bangkok on 3–4 July 2024 to solicit information and confirmation from experts and business councils familiar with investing and doing business in the region. The forum concluded that the AEC programme is helping improve the investment environment. Through its tracks on investment, trade, services and other economic cooperation aspects, it has expanded opportunities for investment, for scalability and for synergy, and for supply chain development and has improved efficiency in sourcing.

3.3.2. Business and investment surveys

Many enterprises in and outside ASEAN have participated in various recent surveys on business sentiment conducted by business councils and chambers of commerce such as by the American Chamber of Commerce, the Australian–ASEAN Business Council and the EU-ASEAN Business Council. A key finding of all these surveys is that firms plan to invest more or expand in the region. Respondents cited favourable investment experiences, increasing revenues, expanding markets and other agglomeration benefits associated with an integrating ASEAN as key reasons (table 3.3). Many survey respondents regard ASEAN as a profitable destination for investment and for doing business, and they expect revenues and profits to rise.

Many also agreed that the AEC has a favourable impact on the region's investment environment and on their firm's operations. They viewed regional integration as important for doing business in the region. They also considered ASEAN important for supply chain integration and processing (PwC, 2021). In general, MNEs' perception of and confidence in investing in ASEAN have improved. Understanding ASEAN's integration is increasingly better appreciated and businesses' interest to know more about the AEC is also on the rise.

The surveys also underlined the importance of challenges such as regulatory complexities and talent shortages. Other challenges cited were weak law enforcement, unfair business practices and government bureaucracy, all deemed barriers to unlocking the full potential of ASEAN's markets.

Over half of European Union businesses reported benefits accrued to their businesses as a result of the AEC, but they do not have a clear strategy aligned with the AEC. The most common reasons cited are lack of progress on AEC Blueprint 2025, lack of communication about the benefits of the AEC and lack of understanding of what AEC Blueprint 2025 is about.

Almost half of Australian businesses see ASEAN integration as crucial for their business operations. In addition, many United States firms recognize the need for better alignment with the AEC's objectives to fully harness the region's potential. Enhancing understanding and communication about AEC benefits is seen as critical for fostering further investment and operational success in the region. For European businesses, particularly German companies, ASEAN's Industry 4.0 framework and commitments to green and zero emissions are big incentives to continue investing. However, challenges persist in the form of decreases in consumer demand, disruption in supply chains and unstable economic policy frameworks.

In intraregional business, a huge majority reflects strong optimism and positive outcomes from ASEAN economic integration policies, particularly from reduced trade barriers. However, even among ASEAN firms, there is recognition of a lack of detailed understanding of the AEC. This underscores the need for better awareness and understanding of the AEC initiative to maximize impacts on FDI decisions.

These business surveys underlined that AEC 2025 has played an important role in facilitating investment and improving the perception of investors regarding investing and doing business in ASEAN. The AEC is leading to a growing perception of ASEAN as an improving investment environment, and businesses are optimistic about the region's growth prospects. Improved communication and understanding of the AEC objectives, along with addressing regulatory and talent challenges, are critical for unlocking the potential of ASEAN for both local and foreign investors.

Table 3.3. ASEAN: Findings of selected business and investment sentiment surveys

Survey	Key findings
Australian Business in ASEAN Survey 2023–2024 Australian–ASEAN Chamber of Commerce	• 80 per cent of respondents in the survey anticipate increases in derived revenue over the next five years, with more than 50 per cent anticipating significant increases. The outlook of Australian businesses in the region is overwhelmingly positive. • ASEAN's position as a regional hub and improving economic conditions are key drivers of profitability growth. • Market-oriented government policies were the most cited factor for improving trade and investment, followed by ASEAN market integration and the growing consumer class. • 43 per cent viewed ASEAN integration as important for helping their company to do business in the region. • 40 per cent considered reduced tariffs a benefit. • Businesses' understanding of ASEAN integration is increasing, as is the interest of businesses in improving that understanding. • Improved governance, labour mobility, regulation and infrastructure were priority areas for accelerating ASEAN integration (and thereby easing the cost of operating in ASEAN).
The State of Southeast Asia 2024 (n = 1.994)	• 58 per cent of respondents in the survey consider economic recession as the region's most pressing concern, followed by the impact of climate change (53 per cent) and the intensifying economic tensions between major powers (47 per cent). • China tops the chart in terms of strategic relevance to ASEAN, followed by the United States and Japan. • 77 per cent are concerned about a "slow and ineffective" ASEAN that is unable to cope with fluid political and economic developments. • 30 per cent are confident in ASEAN's leadership as an advocate for global free trade.
China Council for the Promotion of International Trade Survey 2023	• Most Chinese companies in ASEAN had a generally positive operating performance in 2023.

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Table 3.3. ASEAN: Findings of selected business and investment sentiment surveys (Continued)

Survey	Key findings
European Union–ASEAN Business Sentiment Survey 2023 European chambers of commerce in ASEAN	• 14 per cent of respondents believed ASEAN economic integration is progressing fast enough. • 49 per cent felt that the objectives of an integrated single market and production base have not been achieved and 42 per cent felt that they had been only partially met. • 80 per cent viewed ASEAN economic integration as important for the success of their business in the region. • 55 per cent felt that the AEC has made a positive impact on their business activities in ASEAN. • Economic recovery, growth opportunities and diversification of the customer base were ranked the factors of the highest importance for business expansion. • Over 70 per cent did not have a business strategy that aligns with the AEC. Common reasons included insufficient progress on AEC Blueprint 2025 and lack of understanding what AEC Blueprint 2025 is about.
ASEAN Snapshot 2023 German Chambers ASEAN Business Council	• ASEAN was expected to remain attractive for FDI and provide investors with exposure to one of the fastest-growing regions worldwide. • Potential sectors for investment included digital technology, green energy, advanced manufacturing, construction, health care, education and training, and social work activities. • Main challenges for German businesses: negative exchange rate movements, a decrease in consumer demand, disruption in the supply chain, unstable economic policy frameworks and the high price of raw materials.
European Union–ASEAN Business Sentiment Survey 2022	• 69 per cent believed that ASEAN would become more important in terms of worldwide revenues in the next two years. • 63 per cent perceived ASEAN as the region with the best economic opportunities in the next five years. • 78 per cent expected their level of trade and investment with Southeast Asia to increase over the next five years. • 62 per cent had intentions to expand in ASEAN. • Economic recovery and improvement in infrastructure were cited as the main reasons for the positive outlook for ASEAN. • 76 per cent saw ASEAN regional economic integration as important for the success of European businesses in the region. • Less than 33 per cent had a business strategy based on the AEC. • Key areas for advancement: harmonization of standards and regulations, removal of nontariff barriers to trade and simplification of customs procedures for intra-ASEAN movement of goods.
JETRO Survey on Business Conditions of Japanese Companies in Asia and Oceania 2023 (n = 4,982) Japanese External Trade Organization	• Business confidence had slumped in ASEAN, especially among export-oriented companies. • 37 per cent of export-oriented companies had experienced a “decrease” in operating profits compared with 29 per cent of domestic sales-oriented companies. The average ratio of exports to total sales had decreased and was believed to be affected by a decline in external demand, which was particularly large in ASEAN.
HSBC Global Connections Survey 2023 (n = 3,509) HSBC (United Kingdom)	• Key decision-makers from companies doing business in Southeast Asia or considering doing so identified the region’s skilled workforce and its competitive wages as two of the three most attractive attributes for international businesses; issues in deploying talent ranked among the biggest barriers to digitalization and sustainability efforts. • 23 per cent expected annual organic growth in ASEAN markets in 2023, up from 20 per cent in last year’s survey. • 18 per cent of United Kingdom, French and German companies had plans for inorganic growth in ASEAN in 2023. • 20 per cent cited the benefits of free trade agreements as a factor attracting them to ASEAN. • 31 per cent believed that ASEAN is leading the way in e-commerce and digital platforms, followed by artificial intelligence and machine learning, and cybersecurity (both at 29 per cent). • 28 per cent cited ASEAN markets as leading in digital payment technology. • 87 per cent believe ASEAN governments can help companies overcome the challenges of conducting business in their respective countries. • 32 per cent reported financial stability, including currency volatility, inflation and interest rates, as the leading business challenge.

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Table 3.3. ASEAN: Findings of selected business and investment sentiment surveys (Concluded)

Survey	Key findings
ASEAN Business Outlook Survey 2022 (n = 149) American Chamber of Singapore and United States Chamber of Commerce	• 78 per cent viewed ASEAN markets as being moderately important or very important for their company's global revenue in the next two years. • 53 per cent considered the rising middle-income consumer population as a reason for increasing trade and investment in ASEAN over the next five years. • 41 per cent considered the rising middle-income consumer population as the top reason why the ASEAN market will be more important to revenues in the next two years. • 29 per cent considered competitive production costs as the second most common reason why the market will be more important.
JETRO Survey on Business Conditions of Japanese Companies in Asia and Oceania 2022 (n = 4,392)	Some key findings regarding ASEAN: • Business confidence in ASEAN increased by six points from the 2021 survey. • Over 60 per cent of companies in ASEAN expected to generate operating profits in 2022. • 50 per cent planned to expand operations in the region in the next one to two years.
China–ASEAN Economic and Trade Cooperation Survey Report 2021 (n = 220) PwC China	• More than 57 per cent of Chinese enterprises had business plans for the ASEAN market. • 56 per cent regarded ASEAN as an export market for their products, 26 per cent regarded ASEAN as a sector in the supply chain of goods and services, and 18 per cent regard ASEAN as a processing re-export centre (among respondents with business plans). • More than 72 per cent believed that opening up trade with ASEAN has certain significance for their future business strategies. • 36 per cent and 31 per cent invested in ASEAN in the form of new construction or joint ventures, respectively. • 24 per cent regarded limited market access and lack of international talent as the primary factors restricting their investment in ASEAN. • 46 per cent had already invested in ASEAN and planned to continue to increase investment in the region. • 35 per cent have considered joint operations with local ASEAN firms. • 45 per cent wished to obtain tax incentives, 30 per cent talent (including local and foreign nationals) support and 28 per cent a more open market to improve Chinese investment in the region.
ASEAN Business Sentiment Survey 2020–2021 (n = 1,115) ASEAN Secretariat	• 90 per cent of respondents with indigenous businesses expressed optimism about AEC initiatives. Reduced trade barriers were expected to have the greatest potential impact on ASEAN companies in general, because t would reduce the cost of imported goods. • Larger indigenous enterprises were expected to be the top gainers, leveraging regional supply chains, in comparison to SMEs. • 85 per cent had heard about the AEC; only 27 per cent indicated "detailed" understanding of the AEC while another 42 per cent indicated having "moderate" understanding. • Approximately 31 per cent had "basic" or "almost no knowledge" of the AEC. • 90 per cent experienced positive results from the ASEAN economic integration policies and programmes. • Major recommended improvements: harmonize standards, simplify customs procedures and improve the regulatory environment. Enterprises within the distribution sector benefitted from the National Single Window, despite low awareness of the programme.

Source: Surveys listed in the table.

3.3.3. ASEAN investors' perspectives

Given the resources at their disposal, most of the top 100 ASEAN companies (*AIR 2018*) have at least a presence in Member States other than their home country. Many expanded to more Member States during AEC 2025 (box 3.3). Key reasons were primarily costs, market factors and investment opportunities.

Box 3.3. Regionalization of ASEAN MNEs

Of the 100 largest non-financial ASEAN companies based in and with subsidiaries in ASEAN, 77 have operations in Member States other than their home country. The other 23 are purely domestically focused owing to the nature of their business (e.g. public utilities or large domestic-market services firms), corporate policy to serve the home market only or the significant influence of a large home-country domestic market, all factors that have contributed to reluctance to internationalize or regionalize.

Many of these 77 MNEs have expanded significantly in the region during the past decade. The number of subsidiaries of these MNEs in the region rose from 198 in 2010 (about 2 each, on average) to 308 in 2017 (about 3 each). In addition, in 2010, 30 of the current 100 largest MNEs did not have a presence in other ASEAN Member States but by 2017, all of them had established at least one subsidiary in the region outside their home country. Some 40 per cent had established operations in four or more Member States in 2017, compared with only 18 per cent in 2010.

Four member countries – Malaysia, Singapore, Thailand and the Philippines – are home to more than 90 per cent of these 100. All Member States witnessed an increase in the expansion of regional operations by these MNEs but Indonesia, Singapore, and Viet Nam saw bigger increases in the number of operations during 2010–2017. Cost advantages, local market factors, natural resources, investment opportunities and business ecosystems (in Singapore) played a role in the geographical distribution of the subsidiaries of these MNEs.

Source: AIR 2018.

In contrast, fewer ASEAN SMEs regionalized (box 3.4). They faced more challenges to go abroad, mostly owing to lack of knowledge about internationalization and fear of undertaking cross-border investment involving different laws, requirements, compliance obligations and risks. Lack of access to finance was also an important consideration. Other challenges include the absence of an international mindset among SME managers or owners, and insufficient government policy support and mentoring (*AIR 2016*).

Box 3.4. Regionalization of ASEAN SMEs

Fewer ASEAN SMEs regionalize as compared with larger entities. In a survey of 1,555 SMEs in the region, only 8 per cent internationalized through FDI, mostly in another Member State (ASEAN Secretariat 2021a, p. 24). Key reasons for the low number of SMEs regionalizing were higher-capacity requirements, related to capital, legal expertise and human resources; lack of internationalization knowledge; and challenges related to operating in an unfamiliar business environment as compared with operating domestically.

Source: ASEAN Secretariat, 2021a.

3.4. CHALLENGES AND GAPS

During AEC 2025, the region has witnessed rapid growth in FDI, despite significant global challenges such as the pandemic and recent crises involving food, fuel and finance. This growth has outperformed growth during the AEC 2015 period as well as global averages; however, ASEAN needs to address several challenges:

1. Stimulate intraregional investment growth.
2. Address the huge investment gaps in infrastructure development.
3. Attract investment that supports future industrial development and upgrading, including in skills and talent development and in technology-based activities.
4. Reduce investment concentration.
5. Facilitate regionalization of SMEs.

These interrelated challenges and gaps span industries. Strengthening the development of the AEC is vital, including for further deepening the region's single market and the transformation to a single production base. The cases in chapter 2 established how FDI development has supported the objectives of the five key pillars of AEC Blueprint 2025. Addressing these challenges and gaps can further enhance the investment climate, improve efficiency and support the objectives of the five pillars and future integration. This section analyses these challenges. Chapter 5 covers specific policy recommendations to address these gaps.

Intra-ASEAN investment growth

Intraregional investment growth is slowing and lags behind the overall growth in FDI (*AIR 2023*). The compound annual growth rate decreased from 7 per cent during AEC 2015 to -2.3 per cent during AEC 2025. This trend requires urgent attention to boost regionalization by ASEAN firms, including SMEs and start-ups. Efforts to address this challenge should not hinder the continuous growth of FDI from non-ASEAN sources.

Huge investment gaps

Investment in critical economic areas such as physical infrastructure and renewable energy lags significantly behind what is needed (*AIR 2015*). This leaves a substantial investment gap. The Asian Development Bank estimates that ASEAN requires $210 billion annually in infrastructure investment, but current investment is far below this requirement. For investment in renewable energy generation, the region needs approximately $27 billion annually, yet actual investment is much lower. The public sector alone, with limited capacity, cannot meet this investment challenge. The private sector needs to play a greater role in financing infrastructure projects, including through public-private partnership arrangements.

Attracting FDI that supports future industrial development

Industrial upgrading and adoption of technology, including Industry 4.0 technology, is vital to transform ASEAN into an advanced manufacturing hub and a competitive services hub. Attracting this type of investment and facilitating the growth of future industries (more technology based and more knowledge content based) can further strengthen ASEAN's integration and deepen the region's participation in global value chains. FDI in professional, scientific and technical investment during AEC 2025 accounted for about 5 per cent of total FDI in the region. Greater efforts are needed to facilitate and support more of this investment across the region. It is imperative to address gaps in technology absorptive capacity and talent and skills development.

Investment concentration

FDI in the region is concentrated in a few industries and Member States. Four industries – finance, manufacturing, wholesale and retail trade, and real estate – account for 75 per cent of FDI inflows, and three Member States receive more than 75 per cent of the region's FDI. The unevenness of FDI flows became more profound during AEC 2025, with Singapore alone attracting an annual average share of 60 per cent (as compared with 50 per cent during AEC 2015), because of the significant surge in investment in finance and manufacturing after the pandemic.

However, the share of FDI in the CLMV countries (Cambodia, the Lao PDR, Myanmar and Viet Nam) edged up, albeit marginally, from 12 per cent during AEC 2015 to 14 per cent during AEC 2025. This growth is contributing to the objective of an "inclusive ASEAN" (chapter 2). With steady economic growth, industrial development and locational complementarities, the prospects for a higher share of FDI in these Member States are promising, hence strengthening regional connectivity and reducing the unevenness to an extent.

Regionalization of SMEs

The internationalization of ASEAN SMEs can support the realization of the AEC goals of a single market and single production base and the objectives of the ASEAN MSMEs Blueprint, which includes strengthening SMEs' capacity and regionalization (*AIR 2016*). However, ASEAN SMEs are not regionalizing at a desirable pace and they face more challenges than larger firms in regionalizing. According to an ASEAN survey, only 8 per cent of SMEs in the region engage in cross-border investment (ASEAN Secretariat, 2021a). This low share hampers regional connectivity, business linkages and progress towards an inclusive ASEAN. SMEs have a critical role in developing the supporting industries that are essential for building an efficient industrial ecosystem. They can contribute to the development of regional supply chains as contract manufacturers, direct investors and suppliers. Regionalized SMEs help develop supply chains and inspire their peers to internationalize or regionalize to grow.

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The assessment of the region's FDI performance under AEC 2025 – captured in the AEC FDI scorecard (table 3.4) – provides a perspective on progress across each of the five pillars of the AEC.

- *Regional integration* – FDI and the presence of global MNEs have made a major contribution to the growth and development of regional production networks and supply chains, especially in export-oriented manufacturing industries.

Table 3.4. AEC 2025 FDI scorecard

Pillars	FDI indicators	AEC 2025 trends
Pillar 1: A Highly integrated and Cohesive Economy	Intra-regional investment	Growth of intra-ASEAN FDI slowed from 7 per cent on average during AEC 2015 to 0.1 per cent during AEC 2025. The share of intraregional investment stagnated at 14 per cent (period average), down from 16 per cent.
	Regional value chain intensity	Regional value chain intensity increased, especially in strategic sectors such as semiconductors. ASEAN has an above average backward participation in global value chains and has increased its forward participation.
Pillar 2: A Competitive, innovative and Dynamic ASEAN	Overall FDI growth	The rate of growth of FDI inflows increased to 9.3 per cent per year on average, from 6.3 per cent during AEC 2015. Total FDI inflows more than doubled to $220 billion. Global FDI in the same period declined.
	FDI in high value-added services	FDI in professional, technical, and scientific services, including R&D, grew by 56 per cent during AEC 2025.
	FDI in industry/manufacturing	The share of FDI in manufacturing increased from 23 per cent to 26 per cent during AEC 2025.
	FDI in strategic sectors	Annual average FDI grew by 80 per cent in electronics, 156 per cent in semiconductors, 59 per cent in the automotive sector, and 92 per cent in the renewable energy supply chain.
Pillar 3: Enhanced Connectivity and Sectoral Cooperation	FDI in physical infrastructure	The number of internationally financed projects in infrastructure increased by 34 per cent from 2015 to 2023. However, growth has been slower than the average for developing countries (40 per cent).
	FDI in digital infrastructure	International investment projects in digital infrastructure and services (communications networks, datacenters, hosting and services) grew nearly six-fold during AEC 2025.
Pillar 4: A Resilient, Inclusive, People-Oriented and People-Centered ASEAN	Geographic distribution of FDI	The concentration of FDI in the region has remained high. The average share of the top 3 recipients (Singapore, Indonesia, and Malaysia) increased from 75 per cent to 81 per cent during AEC 2025.
	SDG investment	Investment project numbers in SDG-related sectors grew by 29 per cent during AEC 2025. The average for developing countries remained stagnant. Projects in human capital sectors (health, education, water and sanitation) increased only slightly faster in ASEAN than elsewhere.
Pillar 5: A Global ASEAN	Share of global inflows	ASEAN's share of global FDI increased from 6 per cent during AEC 2015 to 11 per cent during AEC 2025.
	FDI from Dialogue Partners	The share of FDI inflows originating from major Dialogue Partners remained stable at just over 60 per cent during AEC 2025.

Source: ASEAN Investment Report 2024 research.

- *Competitiveness* – The high share of FDI in manufacturing and the rapid growth of investment in strategic industries have provided a major boost to the region's competitiveness and firmly established ASEAN as a global manufacturing hub. This includes the robust of investment in industries such as electronics, automotive, semiconductors and renewable energy.
- *Connectivity* – The interconnectedness of regional supply chains and the growth of investment in the digital economy have significantly enhanced regional connectivity.
- *Inclusiveness* – FDI flows within ASEAN remain concentrated in few economies; although this is driven in part by the hub function of Singapore, more distributed flows could benefit smaller economies and communities in the region.
- *Global ASEAN* – The overall growth of FDI from outside the region and the share of ASEAN in global FDI point to rapid integration of the region in the global economy.

The post-AEC 2025 agenda should continue to leverage the symbiotic relationship between FDI, industrial development and regional integration. To maintain the FDI momentum achieved during AEC 2025, ASEAN needs to further deepen regional cooperation, develop human resources and skills for emerging industries, attract technology- and knowledge-oriented investment, advance industrial upgrading and strengthen public-private partnerships in industrial ecosystem development.

3.5. OUTLOOK AND CONCLUSION

During AEC 2025, ASEAN experienced rapid growth in FDI relative to that seen during AEC 2015 as well as to world averages. Annual average FDI inflows during AEC 2025 reached $170 billion, with a 10 per cent CAGR, whereas AEC 2015 recorded an annual average of $92 billion, with a 6 per cent CAGR. ASEAN's share of global FDI inflows during AEC 2025 doubled to 11 per cent, more than doubling inward FDI stock, to $3.9 trillion – about the size of the region's economy.

The influence of AEC 2025 on FDI was assessed for this report through three approaches:

1. Review of selected indicators, which underscored the significant FDI growth in AEC 2025 compared with the world average and other comparators
2. Surveys of business and investment sentiment, which indicated an improving perception of the region, with MNEs citing favourable experiences and plans for further investment
3. Review of the investment policy environment at national and regional levels (chapter 2).

Establishing causality between the AEC and FDI is challenging, but the analysis in this chapter underlines that AEC 2025 help improved the investment environment, making ASEAN more attractive for FDI. External and internal factors supported the upward FDI trend. External factors included the drive to restructure international supply supply chains, the implications of rising nationalism and protectionism, and the need to access critical resources and to scale operations. Internal factors included emerging investment opportunities, the need to expand regional footprints in a rapidly integrating and vibrant region, and the need to access markets and production factors, including to improve efficiency. Together with national actions, AEC 2025 is an important factor influencing FDI decisions in favour of ASEAN.

A number of significant developments took place in investment during AEC 2025, a period of robust FDI growth which underscored ASEAN's role as an engine of growth and contributed significantly to achieving the objectives of the AEC's five key pillars:

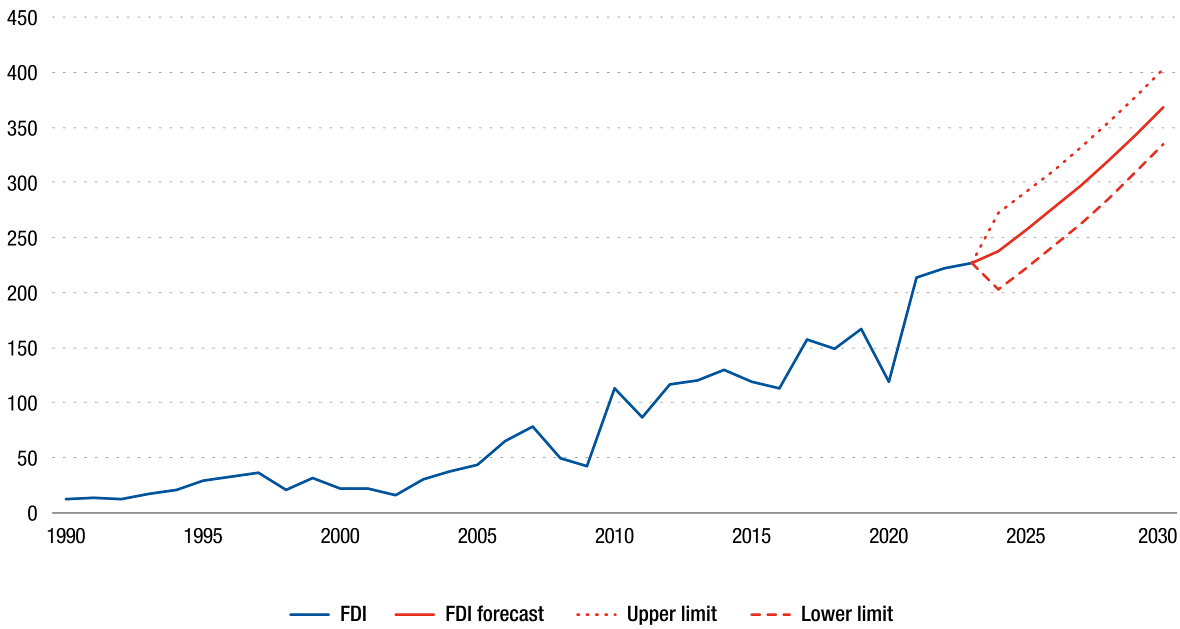
(i) FDI in manufacturing (with a services component) doubled, growing the fastest among the top industry recipients of FDI.
(ii) FDI from major Dialogue Partners or investing economies doubled in most cases, and in some cases it tripled.
(iii) Improving economic fundamentals and the rapidly growing population of middle-income consumers have helped attract market-seeking FDI and related investment.
(iv) Increasing investment in expansion of production capacity and in development of supply chains have helped improve the efficiency of the investment environment.
(v) The growing number of international companies in the region strengthens the industrial ecosystem and enhances agglomeration benefits because of the proximity and interaction of different categories of players.
(vi) The profitability of FDI has been increasing and has exceeded world averages.
(vii) Improving investor sentiment continues to attract new investors and encourage existing investors to expand.

In more recent years, the increasing investment opportunities in emerging industries with untapped potentials have been attracting attention from international investors. Emerging industries that offer these investment opportunities include the renewable energy supply chain, international supply chain restructuring, industrial and EV ecosystem development, and the digital economy. In addition to existing strengths in attracting FDI, these emerging industries provide further impetus for growth in investment.

The investment outlook for the next decade is promising, in light of the region's significant FDI performance, its endeavours to enhance regional integration, its rapid development and the potential of emerging industries. Aligning with the projection of stable GDP growth (IMF, 2024), FDI inflows to the region could reach $370 billion by 2030 (figure 3.15) or an annual average inflow of $300 billion in 2024–2030, about 1.8 times the annual average of $170 billion during AEC 2025.

As noted, challenges remain, both regional and global. They include geopolitical tensions, a weak global economy and gaps in both AEC 2025 implementation and FDI performance. Implementing the AEC 2025 work programmes fully is of utmost importance to further improve the region's investment environment and FDI attractiveness. Addressing the FDI performance gaps can strengthen inclusivity, develop a more efficient investment ecosystem and support a more connected ASEAN through linkages of FDI, production, trade, services and supply chains.

Figure 3.15. ASEAN: FDI inflows and projections, 1990–2030 (Billions of dollars)



Source: ASEAN Investment Report 2024 research, based on data from UNCTAD and the ASEAN Secretariat.
Note: GDP forecast based on IMF.

Other challenges that need action are facilitating SME regionalization, strengthening the region's development of supporting industries and attracting investment to specific sustainability-related sectors. Facilitation of stronger growth in intra-ASEAN investment is urgently needed, without affecting the robust growth in FDI from non-ASEAN sources.

NOTES

[1] Preqin, “Private equity and venture capital in ASEAN 2023”, Preqin Territory Guide.

[2] Calculated based on GDP in millions of constant United States dollars in 2015.

[3] Statista, “Share of middle-income class in overall population in the ASEAN region in 2010, with a forecast for 2030”, 28 September 2022.

[4] *Bloomberg*, “Multinationals pick Singapore over Hong Kong for Asian headquarters” 22 February 2024.

[5] *Nikkei Asia*, “Singapore loses shine as Southeast Asia base for multinationals”, 10 April 2024.

Chapter 4

AEC 2025: FDI, industrial development and regional integration

4.1. INTRODUCTION

Regional integration under the ASEAN Economic Community (AEC) initiative is a major determinant of foreign direct investment (FDI) in ASEAN. It enhances the region's investment environment, improves efficiency and expands opportunities for businesses to scale and to benefit from complementary locational advantages.

FDI has significantly contributed to the growth of export industries in ASEAN, from the garments, textiles, electronics and automotive industries to the digital economy. The region has evolved to be a significant global hub for manufacturing, exports and supply chains. International investment has also helped develop supporting industries and improve industrial ecosystems. Industrial development and the operations of multinational enterprises (MNEs) and their networks of suppliers in turn are major catalysts that facilitate regional connectivity and integration.

This chapter examines the intricate dynamics of FDI and industrial development. It explores the role of FDI in the development of key industries that enhance the region's investment landscape. In addition, it evaluates the synergy between regional integration and FDI, examining how FDI acts as a catalyst in facilitating a more connected ASEAN and emphasizing the role of firms and their interconnected networks.

4.2. AEC 2025: FDI OPPORTUNITIES AND INDUSTRIAL DEVELOPMENT

The influence of a single market and production base, along with the benefits of agglomeration and the opportunities to operate near thriving industries and expand supply chain networks, has a significant impact on FDI decisions. How regional integration affects FDI depends on the type of investment and the depth of the integration. Regional integration has a stronger effect on market-seeking and efficiency-seeking FDI because of the large market effect, opportunities to increase efficiency and build production networks. Regional cooperation on energy development, regional resource pooling and the region's commitment to the energy transition generate investment opportunities for the development of the regional electric vehicle (EV) ecosystem and the renewable energy supply chain at all points (chapter 1). Regional trade facilitation, customs cooperation, the 0–5 per cent internal tariff regime and programmes for liberalization and facilitation of services improve the efficiency of services industries and the overall investment environment.

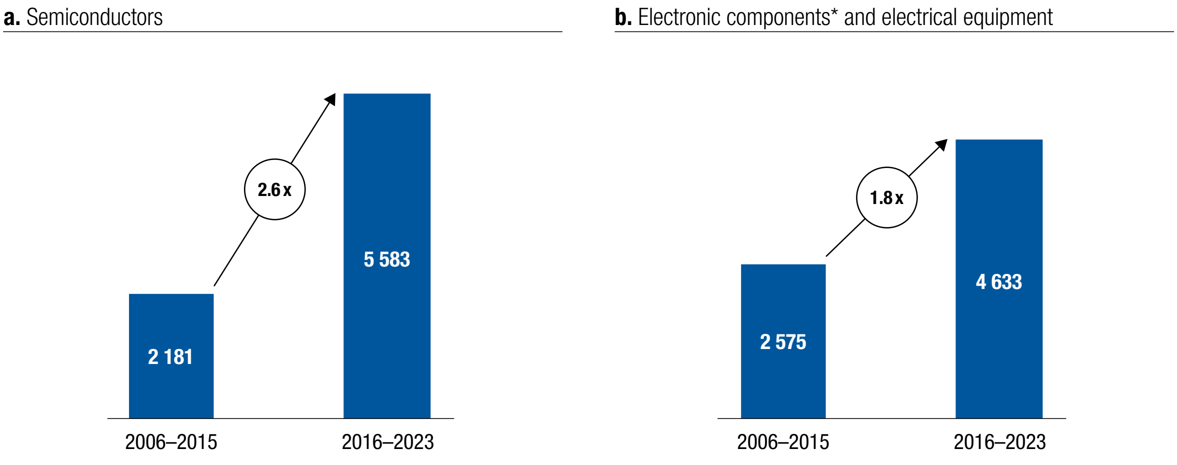
Significant patterns of FDI appeared during the implementation of AEC 2015 (2006–2015) and AEC 2025 (2016–2023). They are (i) rapid growth of FDI in key manufacturing industries (e.g. electronics and semiconductors); (ii) involvement of more Member States in a broader range of industries; (iii) investment opportunities in emerging industries (e.g. EVs and renewable energy) resulting from technological advancements and policy alignment, such as to international climate commitments; (iv) international supply chain restructuring; and (v) the rise of the digital economy.

In sum, regional integration increases FDI opportunities and FDI strengthens industrial development, which in turn improves the investment environment and enhances regional connectivity. This section examines the relationship between FDI and industrial development with examples from the electronics industry, the automotive industry and the digital economy – the three significant FDI recipients in the region, in addition to services. It emphasizes the role in developing efficient industrial ecosystems and the interaction of firms in attracting FDI.

4.2.1. Semiconductors and electronics

The electronics and electrical equipment industry, including semiconductors, is traditionally the major manufacturing recipient of FDI in the region. Annual average announced greenfield investment in semiconductors rose to $5.6 billion during AEC 2025 (2016–2023), 2.6 times the level during AEC 2015 (2006–2015) (figure 4.1a). In electronic components and electrical equipment, it almost doubled under AEC 2025 to $4.6 billion (figure 4.1b). Taken together, the two industries accounted for 9.7 per cent of total announced greenfield investment during AEC 2025, up from 5.0 per cent during AEC 2015.

Figure 4.1. ASEAN: Announced Greenfield investment in electronic components and electrical equipment and semiconductors, annual average 2006–2015 and 2016–2023 (Millions of dollars)



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

Over the years, more Member States have been attracting increasing levels of investment in electronics. Some, such as Cambodia and the Lao People's Democratic Republic (PDR), are attracting investment to produce intermediate electronic components, with such production feeding into regional production networks often associated with lead MNEs. Nikon (Japan) sends lens parts from its plant in Lao PDR to its Thai plant for camera assembly. Sumitronics (Japan) procures materials from Thailand to manufacture parts in Cambodia for Japanese automotive companies and appliance manufacturers in Techno Park Poipet, Cambodia. The parts are then transported back to its Thai plant for inspection.[1] Sanko Electric (Japan) manufactures wire harnesses for automobiles at its facilities in Prachinburi (Thailand). The semi-manufactured goods are then transported to Poipet (Cambodia) for final processing.[2]

(a) Semiconductors

ASEAN has been a significant semiconductor hub since the late 1960s (*AIR 2017*). Since then, many major semiconductor MNEs have established production facilities for back-end operations (i.e. testing, assembly and packaging) and expanded to operate in more Member States (*AIR 2022*). Some of the recent expansion encompasses front-end and higher-value processes, including research and development (R&D), design and engineering. This trend is changing the industry landscape in the region.

In recent years, the region has again been attracting significant FDI in semiconductors, involving many big-ticket projects and major MNEs from Asia, Europe and from the United States. Many of these investments were focused on expanding production capacity, upgrading facilities and moving into other segments of the supply chain. Decades of experience in attracting semiconductor FDI have helped Member States such as Malaysia and Singapore secure additional investment (*AIR 2022*, *AIR 2023*). Other Member States, such as the Philippines, Thailand and Viet Nam, have also received significant FDI in semiconductors, particularly in back-end operations.

The world's largest semiconductor MNEs are in ASEAN. All of the top 25 operate in the region, many of them in multiple Member States (table 4.1). In recent years (2020–2024), 21 of the top 25 have continued to invest in ASEAN, to increase their production capacity, develop new business functions or expand their regional footprint. Reasons for these investments relate mostly to rising demand, the established semiconductor ecosystem, the presence of many categories of players and international supply-chain restructuring motives. More than half of the MNEs that expanded in the period were from the United States. Other significant semiconductor investments came from firms in the European Union, as well as from Japan, the Republic of Korea and Taiwan Province of China. The presence of these top global semiconductor MNEs and the increasingly competitive semiconductor industry have helped the region attract more investment.

Other major semiconductor MNEs not in the top 25 but with a significant presence in ASEAN have also continued to expand in recent years. In 2022, Global Foundries (United States) increased its production capacity in Singapore with investment projects of $4 billion.

Renesas Electronics (Japan) collaborated with Vinfast (Viet Nam) to supply semiconductors for Vinfast's automotive production in Viet Nam. ASE (Taiwan Province of China) inaugurated its fourth plant in Malaysia (an assembly and testing facility) and started construction of the fifth. In 2024, ASE acquired the back-end manufacturing operation of Infineon (Germany) in the Philippines.

Suppliers, contract manufacturers and MNEs supporting the semiconductor supply chain have also continued to invest in the region, to be close to customers (annex table 4.1). They operate in different segments of the supply chain and help make the industry more efficient. Toppan (Japan) expanded to Singapore to meet the surge in demand for package substrates – the component in which integrated circuit chips are connected to printed circuit boards (PCBs) – and to be close to Broadcom (United States), its major customer.[3] Neways (Netherlands), a key supplier to computer-chip equipment maker ASML (Netherlands), is building a plant in Malaysia to be close to ASML locations in the region. Hana Micron (Republic of Korea), a manufacturer of chip packaging and memory products, expanded in Viet Nam, which hosts mobile phone production by Samsung (Republic of Korea), a major customer, as well as many Apple suppliers.[4] Spea (Italy), a manufacturer of automatic test equipment for semiconductor, microelectronic and electronic devices, opened a subsidiary in Thailand. Marvell (United States) is building an integrated circuits design center in Viet Nam, while Sony (Japan) expanded in Thailand in 2024 with an additional $66 million semiconductor production facility.

Table 4.1. Top 25 semiconductor MNEs and their recent investments in ASEAN, 2020–2024 (selected cases)

MNE	Headquarters	Market capitalization ($ billion)	Presence in ASEAN	Investment in ASEAN	Investment ($ million)	Date
Nvidia	United States	2 147	Malaysia Singapore Viet Nam	Indonesia: partnership with Indosat	200	2024
				Singapore: partnership with Singtel	..	2024
				Viet Nam: building a plant	250	2023
				Malaysia: partnership with YTL (Malaysia)*	4 000	2023
TSMC	Taiwan Province of China	724	Singapore	Singapore: joint venture with NXP (Netherlands)	..	2023
Broadcom	United States	611	Malaysia Singapore	Singapore: partnership with Singtel	..	2024
Samsung	Republic of Korea	416	Singapore Viet Nam	Viet Nam	1 200	2023
				Viet Nam	3 300	2022
				Viet Nam	850	2021
				Singapore: partnership with IBM (United States) and M1 (Singapore)	..	2021
ASML	Netherlands	385	Malaysia Singapore	Singapore	..	2022

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Table 4.1. Top 25 semiconductor MNEs and their recent investments in ASEAN, 2020–2024 (selected cases) (Continued)

MNE	Headquarters	Market capitalization ($ billion)	Presence in ASEAN	Investment in ASEAN	Investment ($ million)	Date
Advanced Micro Devices	United States	268	Malaysia Singapore	Malaysia	..	2023
				Malaysia	454.5	2022
				Singapore	50 (for 3 years)	2022
Qualcomm	United States	189	Indonesia Singapore Viet Nam	Singapore: partnership with Singtel	..	2024
				Viet Nam	..	2020
Applied Materials	United States	169	Malaysia Philippines Singapore	Singapore	600	2022
				Singapore	213	2021
Intel	United States	168	Malaysia Singapore Viet Nam	Malaysia	6 770	2023
				Malaysia	..	2023
				Malaysia	7 000 (for 10 years)	2021
				Viet Nam	475	2021
Texas Instruments	United States	153	Malaysia Philippines	Malaysia	3 200	2023
Micron Technology	United States	137	Singapore Malaysia	Malaysia	1 000	2023
				Malaysia	1 000	2023[a]
				Malaysia	0.3	2022
Arm Holdings	United Kingdom	125	Viet Nam	Viet Nam	..	2024
Lam Research	United States	125	Malaysia Singapore	Malaysia	242	2021
Tokyo Electron	Japan	114	Singapore Malaysia Philippines	..	..	
Analog Devices	United States	95	Malaysia Philippines Singapore Thailand	Singapore	..	2023
SK Hynix	Republic of Korea	95	Singapore Malaysia Viet Nam	Singapore	77	2023
KLA	United States	91	Malaysia Singapore	..	..	
Synopsys	United States	86	Malaysia Singapore Viet Nam	Viet Nam	..	2023
Marvell Technology Group	United States	61	Singapore Viet Nam	Viet Nam	..	2023

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Table 4.1. Top 25 semiconductor MNEs and their recent investments in ASEAN, 2020–2024 (selected cases) (Concluded)

MNE	Headquarters	Market capitalization ($ billion)	Presence in ASEAN	Investment in ASEAN	Investment ($ million)	Date
NXP Semiconductors	Netherlands	61	Malaysia Thailand Singapore	Viet Nam	..	2023
MediaTek	Taiwan Province of China	58	Singapore	Singapore	181	2020
Microchip Technology	United Kingdom	47	Malaysia Philippines Singapore Thailand Viet Nam	..	..	..
Infineon	Germany	45	Indonesia Malaysia Philippines Singapore Thailand Viet Nam	Viet Nam	..	2023
				Malaysia	2 100	2022
				Indonesia	2 820	2022
				Singapore	20 (for 3 years)	2020
				Malaysia	5 400	2023
Disco	Japan	39	Singapore Philippines	..	..	..
ST Microelectronics	Switzerland	38	Indonesia Malaysia Philippines Singapore Thailand Viet Nam	Singapore	..	2020

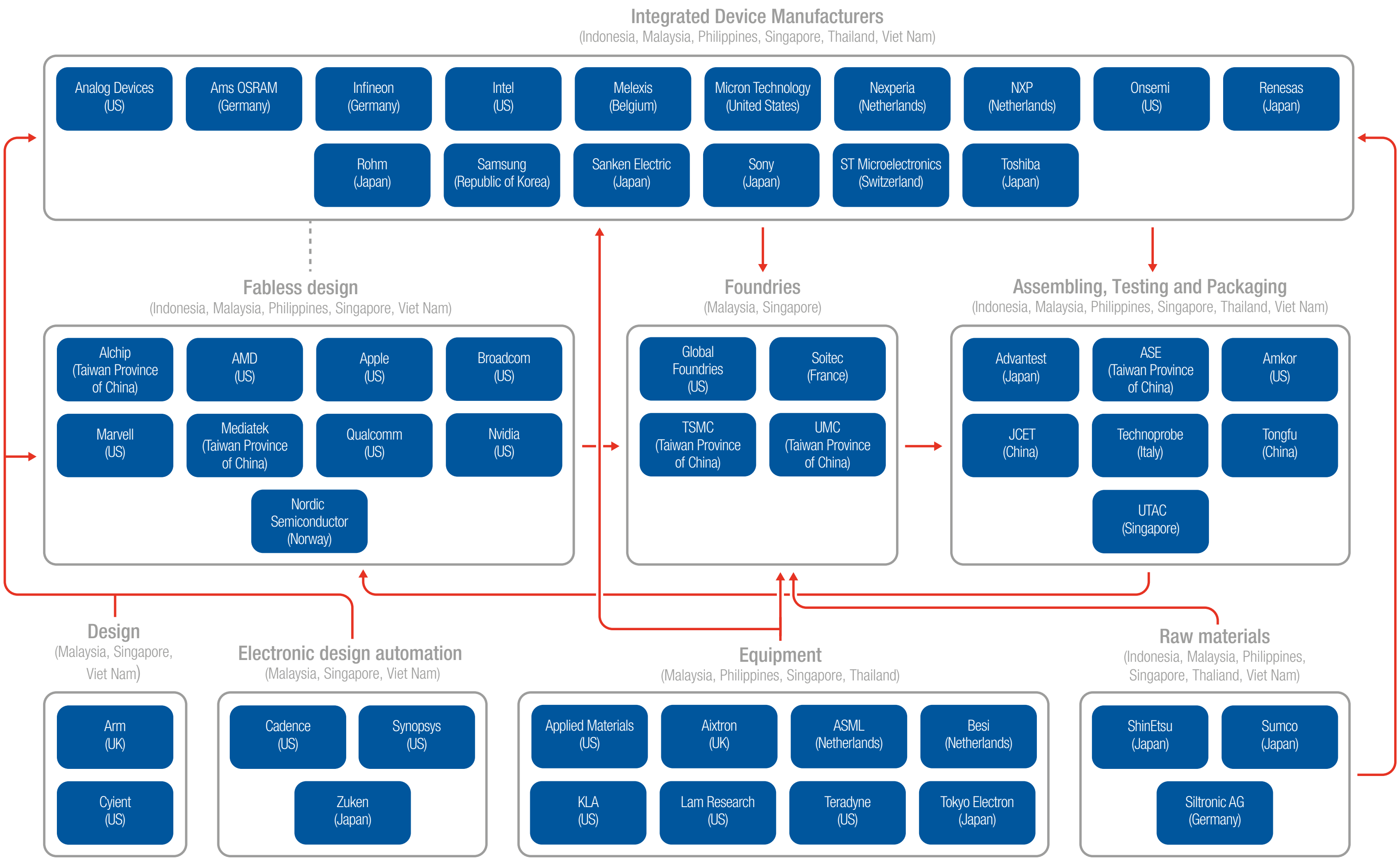
Source: *ASEAN Investment Report 2024* research, based on company press releases and websites, and media.
Note: Top 25 based on market capitalization ranking by Companies Market Cap.
[a] Announced project.

Implications for industrial development and ecosystems

The semiconductor industry in ASEAN is characterized by (i) the close-knit relationship between the diverse players in different segments of the supply chain and the use of a regional production network strategy, and (ii) the strong interconnection between Member States through the various players and supply chain dynamics (figure 4.2). Another key aspect, particularly in 2020–2024, is that many semiconductor-related MNEs have continued to expand and upgrade operations in ASEAN as part of a strategy to restructure international supply chains.

The regional universe of semiconductor MNEs includes integrated-chip design service providers, raw material suppliers, tool and production equipment manufacturers, fabless investors (designers without fabrication facilities), contract manufacturers (foundries), electronics manufacturing services (assembly, testing, packaging) and facilities that conduct front-end and back-end activities (i.e. integrated device manufacturers). Their interaction brings about an efficient semiconductor supply chain industry and has helped connect Member States (box 4.1).

Figure 4.2. Semiconductor supply chain in ASEAN: players and countries connectivity



Source: ASEAN Investment Report 2024 research, based on company websites, table 4.1 and media.

Note: Companies listed in the figure are not exhaustive. They have manufacturing and R&D operations in different ASEAN countries. All of them have sales and marketing operations but are not presented in this figure. The names of countries refer to key locations, with many MNEs having facilities in 2 or more ASEAN Member States. Some MNEs have multiple facilities or plants in the same host country.

An example of the connection between FDI and regional integration is Infineon, an integrated device manufacturer that has front-end and back-end facilities in Malaysia and back-end operation in Indonesia (box 4.2). Micron Technology has wafer fabrication facilities in Singapore and an assembly and testing operation in Malaysia. Lam Research (United States), an equipment and wafer manufacturer supplying advanced technology equipment for both front-end and back-end processes, has a production facility in Malaysia. In the design process, specialized semiconductor software providers or electronic design automation companies (e.g. Cadence, Synopsys (both United States) and Zuken (Japan)) support MNEs specializing in integrated-chip designs such as ARM (United Kingdom) and Cyient (United Stated). Both types of semiconductor design companies operate in the region.

The presence and the interaction of these various stakeholders in the supply chain enrich and improve the efficiency of the region's semiconductor industry, which in turn encourages other related MNEs to establish operations in the region to be near markets and customers, to be part of the expanding ecosystem.

Box 4.1. Interconnection of semiconductor MNEs strengthens regional supply chain

Many global semiconductor MNEs have recently expanded operations in ASEAN to meet global demand and to build resilient supply chain networks. Their actions have led many suppliers, contract manufacturers, equipment providers and other related semiconductor service entities (e.g. testing and packaging) to follow suit, investing or expanding in the region. The interaction of these companies, which involves the interconnection of production facilities and processes in different Member States strengthens the industry in the region. A select set of examples highlights some of these interconnections:

Amkor Technology (United States) provides assembly, testing and packaging services to clients based in ASEAN. It takes silicon wafers and dies from suppliers and turned them into different types of chips, using advanced production technology.[a] It has facilities in Malaysia, the Philippines and Viet Nam, home to a $1.6 billion facility inaugurated in 2023. Among its customers in the region are Broadcom, Intel and Qualcomm (all United States).[b] Its facility in the Philippines previously supported the operations of Altera (United States) in Malaysia. Altera was acquired by Intel in 2015.

The operations of *Intel* (United States) in Malaysia play a pivotal role in the group's global production networks.[c] From its wafer fabrication facilities around the globe it sends all the wafers produced to Malaysia for preparation and sorting, after which the intermediate products are then transported to another Intel plant in Malaysia for assembly and testing. Once the final processing steps are completed, the chips go through a testing process in yet another facility in Malaysia. Intel's facility in Malaysia is not only its largest assembly and test manufacturing operation, but also one of its two shared services hubs supporting its global operations.

NXP Semiconductor (Netherlands), which manufactures chips for automotive, IoT and other industrial solutions, has a facility in Thailand, a major automotive hub. Some of its suppliers, such as Linxens (China), Murata Manufacturing, Nitto Denko and Showa Denko (all Japan) also operate in Thailand.[d]

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Box 4.1. Interconnection of semiconductor MNEs strengthens regional supply chain (Concluded)

Other semiconductor companies producing chips for the automotive industry have operations in Thailand and other ASEAN Member States. Operating close to automotive customers in major markets is important.

Renesas (Japan), an integrated device manufacturer, established its largest overseas design facility in Viet Nam. The facility designs system-on-chip products for a wide range of applications including home appliances and automobiles. It uses Synopsys (United States), a major semiconductor design software MNE, with a presence in Malaysia and Viet Nam, as its electronic design automation provider for this design work.[e] The facility supports Renesas operations with mobile application processors used in phones and consumer electronics.

Siltronic (Germany), a wafer manufacturer, has a facility in Singapore. It is a supplier to Infineon (Germany), ST Microelectronics (Switzerland), Micron Technology (United States), Nexperia and NXP (both Netherlands).[f] These MNEs have wafer fabrication facilities in Malaysia and Singapore.

Applied Materials (United States) expanded its production capacity in Singapore to meet growing demand from major customers such as Intel and AMD (both United States), and from Taiwan Semiconductor Manufacturing that also operates in the region.[g]

The concentration of chip producers is attracting other players and related customers and suppliers such as Bosch, DHL Express, Siltronic (all Germany), Jabil, Lam Research (both United States) and United Microelectronics (Taiwan Province of China) to expand activities in the region. These different categories of players help strengthen the region's semiconductor ecosystem, further transforming ASEAN into a more significant global semiconductor hub.

Source: Company websites, media and industry news.
[a] Business Focus, "Amkor Technology", 29 March 2023.
[b] Amkor, "Broadcom awards Amkor with best supplier award", press release, 1 March 2024 and Digitimes Asia, "Amkor, SPIL share orders for new Qualcomm smartphone SoC", 17 November 2022.
[c] Techwire Asia, "How Intel pioneered the semiconductor industry in Malaysia", 27 October 2023.
[d] NXP, "Suppliers list", 2020.
[e] Synopsys, "Renesas Design Viet Nam selects Synopsys as its EDA provider for SoC design", (https://news.synopsys.com/home?item=122712).
[f] Siltronic, *Siltronic – Factbook, Investor Relations*, 2020.
[g] EDB Singapore, "Chip industry doubles down on Singapore as production hub", 2023.

Box 4.2. Infineon: FDI and semiconductor linkage

Infineon (Germany) has an extensive production network in ASEAN. In recent years, it has expanded further to increase capacity, upgrade facilities and strengthen its semiconductor supply chain. It has at least seven production plants, eight R&D facilities and six sales offices spread across the region (box table 4.2.1). These facilities support Infineon's operations based in the region as well as the group's global operation networks, with its ASEAN subsidiaries playing an important connecting role.

In 2022, Infineon invested $2 billion in a wafer fabrication module in Malaysia to expand capacity for power semiconductors (used for EVs, charging and storage infrastructure, and renewable energy). It is also building a 200-millimeter silicon carbide power fabrication plant in Malaysia, which will be

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Box 4.2. Infineon: FDI and semiconductor linkage (Concluded)

its largest facility for chips used in products such as EVs, wind turbines and consumer electronics.[a] Customers of this plant will include automotive MNEs such as Ford (United States), SAIC and Chery (both China) and renewable energy MNEs such as SolarEdge (Israel) and three leading Chinese photovoltaic and energy storage systems companies. Schneider Electric (France) will also be a customer through Infineon's operation in Malaysia. In addition, in 2022, Infineon committed to investing about $2.8 billion to expand its back-end operations in Indonesia to focus on assembly and testing.

Box table 4.2.1. Infineon supply chain in ASEAN (selected examples)

Country	Production facility	R&D	Sales office
Indonesia	1 (back-end)		1
Malaysia	2 (front and back-end)	4	
Philippines	2* (back-end)	1	
Singapore	1 (back-end)	2	2
Thailand	1 (back-end)		1
Viet Nam		1	2
Total	7	8	6

Source: Infineon.
*The General Trias plant, which is under Infineon's wholly-owned subsidiary Cypress, was sold to ASE (Taiwan Province of China) in early 2024.

Infineon established a multi-sourcing strategy for all its facilities with its global suppliers. Of those with a presence in ASEAN, in 2023, it secured agreement from wafer fabricator United Microelectronics (Taiwan Province of China) to produce Infineon's automotive microcontroller at its plant in Singapore.[c] Siltronic (Germany), a wafer supplier for Infineon, invested $3 billion in a manufacturing facility in Singapore in 2021.[d]

Infineon is also stepping up its R&D facilities in ASEAN. In 2020, it invested $20 million to establish an AI hub in Singapore.[e] It is also pursuing partnerships with start-ups, research institutes and universities to develop AI applications to build up the hub. In 2023, Infineon partnered with Tack One (Singapore) to develop an autonomous flood-monitoring device. It also opened the Infineon Innovation Launchpad at Burapha University to nurture the IoT start-up ecosystem in Thailand's Eastern Economic Corridor.

Source: ASEAN Investment Report 2024 research.

[a] Infineon, "Infineon to build the world's largest 200-millimeter SiC Power Fab in Kulim, Malaysia leading to total revenue potential of about seven billion euros by the end of the decade", press release, 3 August 2023.

[b] Infineon, "Infineon to expand existing backend operations in Indonesia", press release, April 2022.

[c] *Digitimes*, "Infineon and UMC extend automotive partnership with long-term agreement for 40nm eNVM microcontroller production", 7 March 2023.

[d] *The Straits Times*, "Wafer manufacturer Siltronic's new $3b facility in Singapore to create 600 jobs", October 2021; *Silicon Semiconductor*, "Siltronic AG produces first wafers in its new Singapore fab", November 2023.

[e] *Asia Nikkei*, "Infineon pumps $20m into establishing Singapore as AI hub", 2 December 2020.

Malaysia and Singapore host many front-end manufacturing facilities, involving foundry MNEs that focus on wafer fabrication, including GlobalFoundries (United States), Soitec (France) and Taiwan Silicon Manufacturing (through its subsidiary Vanguard International Semiconductor) and United Microelectronics (both Taiwan Province of China). Front-end manufacturing is also supported by companies that manufacture equipment and tools, as well as raw material suppliers (e.g. ShinEtsu (Japan), Siltronic (Germany) and Sumco (Japan)). These supporting companies are also expanding in ASEAN.

Back-end manufacturing or assembly, packaging and testing involves many ASEAN Member States. In addition to integrated device manufacturers, some third-party MNEs have also set up back-end operations, providing outsourcing facilities or electronic manufacturing services to global clients (i.e. other semiconductor companies). Such MNEs include Advantest (Japan), Amkor (United States), ASE (Taiwan Province of China), JCET (China), Technoprobe (Italy), Tongfu (China) and UTAC (Singapore).

Homegrown companies that serve semiconductor MNEs as contract service providers are another important player. They include EMS (Philippines), Inari Amertron, Malaysian Pacific Industries, Unisem, Globetronics Technology and KESM Industries (all Malaysia). They help strengthen the semiconductor manufacturing services industry.

(b) Electronics

In 2022, about 38 per cent of ASEAN's total exports were from electronics. Exports of printed circuit boards (PCBs), a key electronics component, from the region grew at CAGR 7.5 per cent in 2016–2022. In 2022, the region was the fourth largest world exporter of PCBs in 2022, accounting for a 10 per cent global share.

Electronic part and component MNEs have continued to relocate or expand in the region. Lead MNEs continued to diversify or establish supply chain facilities, bringing along their anchor suppliers (many of which are also major MNEs), who in turn influence lower-tier suppliers to invest in the region (*AIR 2023*). Together they facilitate the development of the expanding electronics supply chain network in ASEAN.

In addition to larger electronics manufacturers and assemblers (including electronics manufacturing services), smaller entities are also actively expanding in the region. Since the coronavirus-19 (COVID-19) pandemic, these smaller companies and other manufacturers of electronic parts and components have invested in ASEAN to strengthen supply chain networks. Many are Asian companies, mainly from China, Japan, the Republic of Korea and Taiwan Province of China. Some have invested for the first time or have expanded in ASEAN to be near customers and to be part of a growing electronics supply chain. Expansion cover in the same host country or to other ASEAN Member States. First-time investors include Aohong Electronics and Eagle Electronic Technology (both China) in Thailand; Compal Electronics and Jia Wei (both Taiwan Province of China), Fujix Electronics (Japan), and Goertek (China) in Viet Nam; and Simmtech, SK Nexilis (both Republic of Korea) and Wiwynn (Taiwan Province of China) in Malaysia.

Nearly all of the top 15 PCB manufacturers were involved with investments in supply chain networks in ASEAN in 2022–2023 (annex table 4.2). These companies are also mostly from Asia (Taiwan Province of China, Japan, the Republic of Korea and China in that order). Six are first-time investors in the region (i.e. AT&S (Austria), Compeq, Unimicron (both Taiwan Province of China), Shengyi Technology, Victor Giant Technology (both China), and TTM Technologies (United States). Seven expanded production capacity either in the same host economy or in other Member States (i.e. Chin Poon Industrial, Dynamic Electronics, Tripod Technology, YoungPoong Electronics, Zhen Ding Technology (all Taiwan Province of China), Ibiden (Japan) and Samsung Electro-Mechanics (Republic of Korea).

Electronic component manufacturers not in the top 15 have also established a presence in the region for the first time in recent years. For instance, in Viet Nam AT&S (Austria) invested $1.1 billion in 2024 to open a facility producing integrated circuit substrates, and Ju Teng international (Taiwan Province of China) broke ground in 2022 for a $200 million electronic and automotive component factory. In Thailand Jove Enterprise (China) constructed its first overseas manufacturing facility in 2023. Sunshine Global Circuits (China) acquired Vision Industries (Malaysia) in 2023, expanding its manufacturing capacities in Southeast Asia for the first time. In Malaysia in 2022, TTM Technologies (United States) built a $130 million plant.

Implications for industrial development and ecosystems

FDI in the electronics industry is connecting ASEAN through investment and production networks involving different Member States. The increase in supply-chain-related investment witnessed in recent years is not only facilitating the development of various industries' ecosystems and supply-chain resiliency, but also strengthening regional connectivity. Various dimensions of intra- and interfirm production activities involving FDI strengthen cross-industry linkages, such as within the electronics industry (figure 4.3a and b, box 4.3), between the semiconductor and electronics industries, and between the electronics and automotive industries.

In figure 4.3a, quadrant 1 comprises supply chain and production networks between subsidiaries and affiliates of MNEs within a host country. Quadrant 2 is associated with intrafirm activities between and among affiliates and subsidiaries of the same MNE group across two or more Member States in the production and supply of parts and components and assembly of final products. In many cases, these intrafirm activities also include R&D support and regional coordination. In figure 4.3b, quadrant 1 consists of interfirm supply chain activities, including between subsidiaries and affiliates of MNEs with third-party suppliers in a host country. Quadrant 2 relates to interfirm arrangements across two or more Member States. Supply chains in this category involve MNEs that use lead MNE contract manufacturers that in turn are supplied by other foreign companies, based in other Member States, that produce parts and components or provide manufacturing services.

Figure 4.3. Supply chain and production networks in ASEAN's connectivity (selected illustration)

a. Supply chain and production networks in ASEAN's connectivity (selected illustration) (Intrafirm)

Intrafirm in one ASEAN host country

Samsung Electronics (Republic of Korea) manufactures smartphones and tablets in Viet Nam	• Samsung Electro Mechanics in Viet Nam produces and supplies PCBs and other parts • Samsung Display in Viet Nam produces and supplies display devices with OLED and QD-OLED technology
LG Electronics (Republic of Korea) manufactures televisions and washing machines in Viet Nam	• LG Display in Viet Nam supplies OLED and LCD panels • LG Innotek Hai Phong (Viet Nam) supplies electronic components
Canadian Solar (Canada) manufactures advanced solar cells in Thailand (facility 1)	• Canadian Solar facility 2 in Thailand manufactures and supplies wafer cells

Intrafirm across more than one ASEAN country

Yokogawa (Japan) has facilities in Singapore for a regional logistics hub, innovation centre, and final assembly and testing	• Yokogawa in Indonesia manufactures components and subassemblies • Yokogawa in Malaysia produces analyzer systems and works with Yokogawa in Singapore on innovation
Tatung's (Taiwan Province of China) affiliate in Malaysia produces electronics	• Tatung has an affiliate in Thailand that manufactures materials for televisions
Sanko Electric Asia (Thailand) supplies to Japanese companies in Thailand (e.g. Tokai Rika, Hitachi Astemo Lamphuen, Shinsei Koki , Thai Toyo Denso, Ashimori)	• Sanko Electric Cambodia produces wire harness

b. Supply chain and production networks in ASEAN's connectivity (selected illustration) (Interfirm)

Interfirm in one ASEAN host country

Compal Electronics (Taiwan Province of China) assembles iPads for Apple (United States) in facilities in Thailand and Viet Nam	• Murata (Japan) in Thailand and Viet Nam supplies ceramic capacitors • Biel Technology (China) in Viet Nam supplies casings
Great Wall Motors (China) produces EVs in Thailand	• Mind Electronics (China) in Thailand produces and supplies automotive parts • Nobu Electronics (China) in Thailand supplies automotive systems
Infineon Technologies (Germany) operates a front-end facility in Singapore	• UMC (Taiwan Province of China) in Singapore manufactures and supplies 40 nm eNVM • Siltronics (Germany) in Singapore manufactures and supplies wafers

Interfirm across more than one ASEAN country

Foxconn (Taiwan Province of China) manufactures and assembles Macbooks for Apple (United States) in Viet Nam	• Zhen Ding Tech (Taiwan Province of China) in Thailand supplies PCBs to Foxconn • Intel (United States) in Malaysia produces chips for Macbooks
• Trina Solar (China) manufactures solar modules in Viet Nam • Longi Solar (China) manufactures solar cells and modules in Malaysia and Viet Nam	OCI Holdings (Republic of Korea) in Malaysia manufactures and supplies polysilicon
• Hyundai Thanh Cong Vietnam • Toyota Motor Vietnam • Yamaha Motor Philippines • Toyota Astra Motor Indonesia	NHK Spring (Japan) in Thailand manufactures automotive parts

Source: ASEAN Investment Report 2024 research.

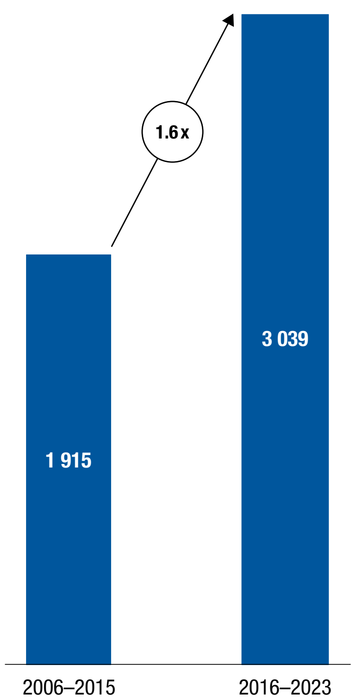
4.2.2. Automotive

The automotive industry is witnessing important industrial transformation, mostly because of increasing investment (new and expansion) in activities related to the electric vehicle (EV) supply chain and the commitment of the region as well as automotive-related companies to the energy transition (*AIR 2022*, *AIR 2023*). Though the automotive industry is a major traditional recipient of FDI, investment remains concentrated in a few Member States. However, some others such as Cambodia and Myanmar are beginning to attract automotive FDI, particularly for parts and components manufacturing during AEC 2025.

Annual average announced greenfield investment in automotive production during AEC 2025 rose to $3 billion, from $1.9 billion during AEC 2015 (figure 4.4). Most of the increment was related to investment in EV activities, such as in batteries and EV production.

Major developments shaping FDI in automotive include (i) increasing numbers of categories of new players that are not traditional automotive manufacturers, (ii) rising numbers of Chinese EV manufacturers, (iii) growing investment interest in the EV supply chain and expanding regional production networks, and (iv) strong policy support for EV adoption and for FDI in EV production.

Figure 4.4. ASEAN: Announced greenfield investment in automotive production, annual average 2006–2015 and 2016–2023 (Millions of dollars)



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

FDI in the EV supply chain

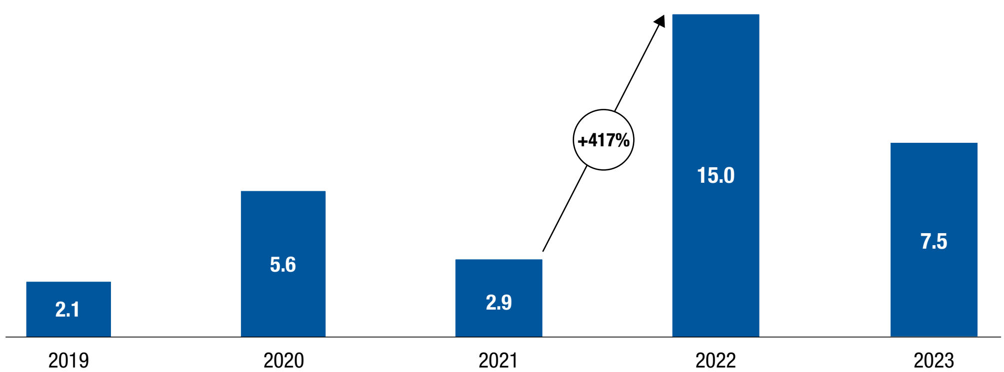
AIR 2022 and *AIR 2023* provided an in-depth analysis of FDI in the EV supply chain in ASEAN, ranging from mining of critical minerals to battery production to EV manufacturing and infrastructure, involving various Member States and different categories of companies across the region. International investment[5] in the region's EV supply chain is on the rise, reaching a record level in 2022. However, in 2023, investment in the supply chain fell to $7.5 billion, still significantly higher than in 2019–2012. The increase spans across supply chain segments (upstream, midstream, downstream), underlining the growing investor interest in the industry (figure 4.5).

MNEs from different industry backgrounds are investing in various segments of the supply chain. Some are investing in R&D in several Member States. Investment from MNEs is oriented towards deepening their regional foothold and building an integrated supply chain network (box 4.3). International companies, including new entrants and start-ups, play vital roles in the development of the EV supply chain.

(a) Players

The region's EV landscape features diverse players: traditional automotive OEMs (original equipment manufacturers), specialized EV OEMs, technology companies, mining and energy MNEs, specialized battery manufacturers and other newcomers. Traditional automotive and EV OEMs are integrating both vertically and horizontally, engaging in EV assembly and in battery and EV parts production across different Member States. Some of these OEMs are also investing in the mining and smelting of critical minerals and establishing EV charging networks. Hyundai (Republic of Korea), Mercedes Benz (Germany) and Nissan (Japan) are actively participating in these activities. Major automotive OEMs in Thailand, such as Honda Automobile, Toyota Motor and Nissan Motor (all from Japan), are producing hybrid

Figure 4.5. ASEAN: International investments in EV supply chain, 2019–2023 (Billions of dollars)



Source: UNCTAD.
Note: Covers mostly mining of critical minerals (nickel and cobalt), battery production and EV manufacturing.

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Box 4.3. Hyundai: an integrated EV production hub in Southeast Asia

In March 2022, Hyundai Motor (Republic of Korea) inaugurated Indonesia's first locally assembled EV plant. It plans to invest up to $1.5 billion by 2030, to steadily increase production capacity. The new plant is linked with HLI Green Power, a Hyundai–LG (both Republic of Korea) joint venture to build a battery cell plant, scheduled to open in 2024. LG Energy Solution and Hyundai started construction of the $1.1 billion EV battery cell plant in 2022.[a]

In 2023, Hyundai Energy Indonesia (HEI), another subsidiary of the Hyundai Motor Group, started construction of the first Hyundai battery module system factory in Cikarang, Indonesia. HEI is a joint venture between Hyundai Motor Manufacturing Indonesia and Hyundai Mobis (a member of the Hyundai group that focused on automotive parts production). Production is to start in 2024. The plant will secure battery cells from HLI Green Power, and the completed battery module will be supplied to Hyundai Motor Group.

Within the value chain for HLI Green Power's battery cell production, LG formed a $9 billion consortium with LG Chem, LX International, POSCO (all Republic of Korea) and Huayou (China). The consortium is involved with activities from mineral extraction and refining to production of precursor and cathode materials and battery cells. The consortium is also working in Indonesia with nickel mining company Antam and battery company Indonesia Battery as part of the EV battery value chain.[b]

Hyundai Transys, a wholly owned subsidiary of the Hyundai Group that produces automobile powertrains and seats, established a joint venture with APM Automotive Holdings (Malaysia) to manufacture seats and related components in Indonesia. The joint venture is to support Hyundai's automotive manufacturing plant in the host country.[c]

Hyundai also opened in 2023 a facility in Singapore to research new manufacturing techniques and to develop a range of EVs. The facility is expected to produce up to 30,000 units per year.

Source: Hyundai press and media releases.
[a] *Reuters*, "Hyundai launches plant to produce Indonesia's first electric car", 17 March 2022.
[b] *Business Korea*, "LG Energy Solution launches nickel procurement project in Indonesia", 19 April 2022.
[c] Orissa International, "APM partners with Hyundai for car seats manufacturing in Indonesia", July 2020.

EVs and are involved in battery production (e.g. battery packing). Some OEMs have partnered with battery suppliers or their subsidiaries in Malaysia and Thailand to secure batteries for their EV production.

Several OEMs are expanding or upgrading facilities across multiple locations. Mitsubishi (Japan) and Volvo (Sweden) exemplify this trend. Hyundai (Republic of Korea) is investing in nickel processing and establishing an EV battery and assembly plant in Indonesia. BYD (China), which already has a production facility in Thailand, is setting up a second facility in another Member State and has invested $114 million in a showroom network in Malaysia. Ford (United States) invested $82 million in Viet Nam in 2020, $900 million to upgrade manufacturing facilities in Thailand in 2021, and invested in critical minerals processing in Indonesia in 2023. Volkswagen (Germany) established a regional parts distribution centre in Malaysia in 2021 and plans to be involved in the EV supply chain in Indonesia. Specialized EV OEMs, such as Tesla and various Chinese manufacturers, are also continuing to expand in the region. Industrial MNEs including ABB (Switzerland) and Bosch (Germany) are focusing on production of battery components and development of charging infrastructure.

New entrants, including electronics contract manufacturers and start-ups, are investing in specific supply chain segments. Some, such as Delta Electronics (Taiwan Province of China), Keppel (Singapore) and StoreDot (Israel), are involved in building charging infrastructure, which is still at a nascent stage in the region (*AIR 2023*). Investment in charging infrastructure is attracting various players, from EV OEMs to newcomers such as energy and technology companies, real estate developers and start-ups. More investment in this segment is crucial to support the growth of the EV industry.

Top 10 EV manufacturers

The presence of the top 10 global EV manufacturers in ASEAN is a significant indicator of the swift increase in EV investment in the region (annex table 4.3). The actions of these manufacturers highlight some notable investment trends:

1. Ongoing investment from traditional automotive OEMs that have established production hubs in the region (mostly MNEs from Japan and the United States, and from Europe).
2. Recent investments from Chinese and Korean MNEs, which are relatively new entrants in the automotive environment in the region in recent years. They rapidly scaled up.
3. Traditional automotive OEMs predominantly invest in EVs in locations where they already have substantial production facilities. This strategy leverages synergies, clusters and experience. These OEMs have invested in upgrading or expanding existing facilities to produce hybrid EVs ahead of MNEs from China and the Republic of Korea.

Emergence of EV OEMs from China

Since 2019, major Chinese EV OEMs have actively invested in ASEAN, focusing on production of EVs and batteries. Great Wall Motor acquired GM's Thailand plant in 2020 and invested $647 million in 2023 to transform it into a regional production centre for EVs and hybrids. It is also building a battery pack assembly plant and has brought subsidiaries such as MIND Electronics, HYCET and Nobo Auto to manufacture electronic components, powertrains and automotive seats in Thailand. *BYD* has extensive investments in the region, covering EV production, components and charging stations. In 2023, it invested $511 million in a facility in Thailand, with production for regional and European markets, and is also investing $1.3 billion in a manufacturing plant in Indonesia. Dongfeng Motor began producing EV SUVs in Thailand in 2023. Hozon Auto constructed its first overseas factory in Thailand in early 2023, in partnership with BGAC Group (Thailand), with production starting in 2024. Changan is investing in Thailand to establish an EV production base. Chery established a factory in Thailand to produce battery EVs and hybrids, has facilities for production of EVs and batteries in Indonesia, and is building an EV plant with local partners in Viet Nam. GAC launched a $14 million project in Malaysia with WTC Automotif (Malaysia) and is building a plant in Thailand to produce EVs. Nio plans to establish an R&D centre for artificial intelligence (AI) and autonomous driving in Singapore, and SAIC initiated a $15 million industrial park in Thailand in 2023 to expand EV capacity. Many Chinese EV companies continued to expand and invest in the region in 2024.

EV battery production

Prominent battery production MNEs include automotive manufacturers, battery specialists and technology companies such as:

1. Global automotive MNEs: Nissan, Toyota (both Japan), BMW, Mercedes-Benz (both Germany), SAIC (China) and Hyundai (Republic of Korea)
2. Specialized battery manufacturers: CATL, Chengxin Lithium Group (both China), LG Energy Solution, Samsung SDI, SK Nexilis (all Republic of Korea)
3. New entrants with specific expertise: TÜV SÜD (Germany), Foxconn and Delta Electronics (both Taiwan Province of China)

Top 10 global EV battery manufacturers

The top 10 global EV battery manufacturers, representing over 90 per cent of global EV battery sales, have a significant presence in the region, operating mainly in Indonesia, Malaysia, Thailand and Viet Nam (table 4.2). These manufacturers, predominantly from China and the Republic of Korea, are investing to secure raw materials, strengthen regional footholds and ensure market proximity. Other notable EV battery manufacturers in ASEAN include Eramet (France) and BASF (Germany), which began developing a $2.6 billion complex for EV batteries and manufacturing in Indonesia in 2023; Eve Energy (China), with a battery plant in Malaysia, supplying batteries for local electric bikes, power tools and BMW EVs; Foxconn (Taiwan Province of China), which entered into a joint venture with Indika Energy (Indonesia) in 2022 to develop a $2 billion facility for EV and EV battery manufacturing in Indonesia; and Gem (China) and Posco (Republic of Korea) have been involved in nickel mining joint ventures and a $400 million nickel smelting plant in Indonesia since 2023.

Other new players

Since 2021, PTT (Thailand) has collaborated with Foxconn (Taiwan Province of China) in a $1 billion project to produce EVs in Thailand. Start-ups are also entering the EV supply chain. Oyika (Singapore) offers electric scooters with battery swap services and is expanding to Indonesia. Tada (Republic of Korea), a ride-hailing app company, has set up an electric tuk-tuk factory in Cambodia. TVS Motor (India) has invested in the Singapore-based EV start-up ION Mobility. Zapp (United Kingdom) established design studios and prototyping and engineering workshops in Thailand for development of high-performance EVs. City Energy (Singapore) and EV Connection (Malaysia) launched a cross-border app in 2022 for EV charging stations. Autel Energy (United States) installed charging stations in Singapore in 2023 and is expanding across the region. Charge+ (Singapore) plans to install 5,000 km of EV charging facilities across five Member States (Cambodia, Malaysia, Singapore, Thailand and Viet Nam). Venture capital funds are also participating in the EV supply chain (*AIR 2023*).

Table 4.2. Top 10 global EV battery manufacturers expanding in ASEAN, various years

Company	**Headquarters**	**Global market share by sales volume, 2022** (%)	**Facilities in ASEAN**	**Recent battery investments in ASEAN** (selected cases)	**Year**	**ASEAN Location**
CATL	China	34	Indonesia (first major investment in ASEAN)	A $6 billion battery project, which include battery recycling and mining critical materials with Aneka Tambang (Indonesia) and Indonesia Battery	2022	Indonesia
				A $104 million factory for EV battery assembly in a joint venture with Arun Plus (a subsidiary of PTT (Thailand))	2023	Thailand
				A special green fund with the Indonesia Investment Authority and CMB International Capital (subsidiary of China Merchant Bank) for development of the EV battery industry	2023	Indonesia
LG Energy Solution	Republic of Korea	14	Viet Nam (manufacturing of lithium-ion battery packs)	A $1.1 billion EV battery cell plant with Hyundai Motor (Republic of Korea), part of a $9.8 billion deal to develop an integrated EV battery facilities in Indonesia	2021	Indonesia
				A $3.5 billion smelter to produce nickel sulfate, and plans to build a $2.4 billion factory to produce precursor materials and cathodes	2023	Indonesia
BYD	China	12	Thailand Viet Nam	Building an EV plant in Thailand and planning a second one in Viet Nam		
Panasonic	Japan	10	Thailand (alkaline and manganese dry batteries) Indonesia (manganese and lithium batteries)	..		
SK	Republic of Korea	7	Malaysia (EV charging stations) Viet Nam (rooftop solar energy installation and investment in VinFast)	A $547 million copper foil manufacturing facility set up by subsidiary SK Nexilis as part of SK Group's EV supply chain	2022	Malaysia
Samsung SDI	Republic of Korea	5	Viet Nam (battery manufacturing)	A $1.3 billion EV battery cell manufacturing facility	2022	Malaysia
CALB	China	4	..	..	..	..
Guoxuan	China	3	Indonesia Viet Nam (battery manufacturing)	A battery pack plant	2022	Indonesia
				Collaborating with PT VKTR Teknologi Mobilitas (Indonesia) to develop EV battery packs	2022	Indonesia
				Invested in a battery plant in partnership with VinES (Viet Nam)	2022	Viet Nam
				Partnered with Nuovo Plus (subsidiary of PTT Group (Thailand)) to establish a battery pack plant	2022	Thailand
Sunwoda	China	2	..	Established a subsidiary to produce lithium batteries for electronic and electrical equipment for use in EVs	2023	Viet Nam
SVOLT	China	1	..	Established a subsidiary to build a $30 million plant for battery modules and packs	2023	Thailand

Source: ASEAN Investment Report 2024 research, based on Visual Capitalist, "The top 10 EV battery manufacturers in 2022", company websites and media.

Investors in EV infrastructure

Development of charging infrastructure in the region is at a nascent stage and has significant growth potential. Investment in charging infrastructure is attracting various players, from EV OEMs to newcomers such as energy and technology companies, and real estate developers, as well as various kinds of start-ups. Many international investments in EV charging infrastructure occur through joint ventures and partnerships, often involving automotive OEMs, energy conglomerates, technology solution providers and local companies.

(b) Policy development

Across most ASEAN Member States, policies endorsing the development of the EV industry are evident. Though specifics vary, these policies generally encourage EV adoption and incentives promoting FDI in EV supply chains and investment in EV infrastructure (annex table 4.4). Policies and measures favourable to investment and programmes supporting EV adoption are important drivers of EV investment in the region.

Member States are cooperating in developing a regional EV ecosystem. In May 2023, the ASEAN leaders adopted a Declaration on Developing Regional Electric Vehicle Ecosystem, emphasizing EVs in the region's energy transition aspiration. This Declaration and its implementation are poised to significantly influence the investment landscape, especially for investment in the EV supply chain within ASEAN (*AIR 2023*).

Implications for industrial development and ecosystems

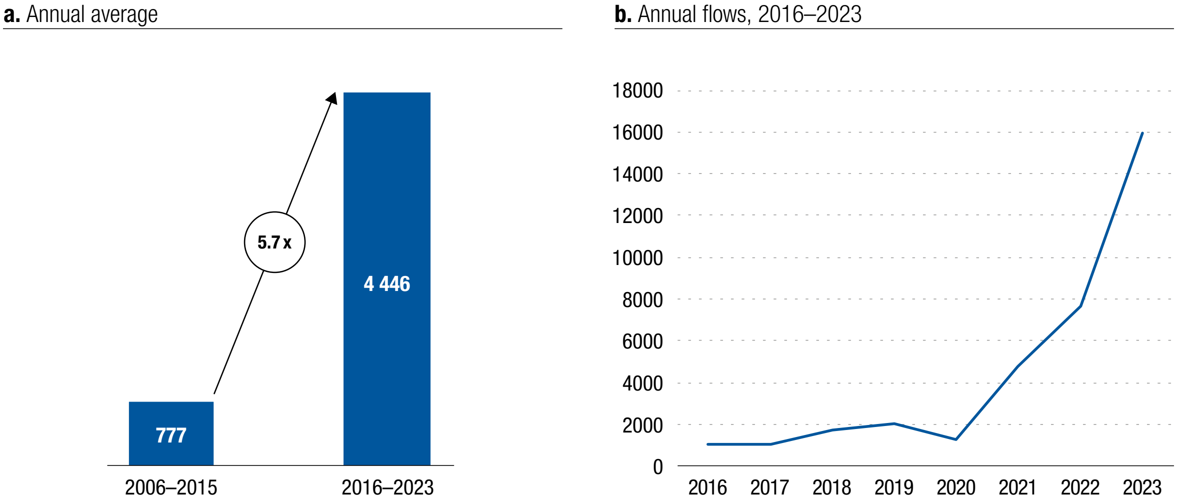
FDI in the EV supply chain plays a crucial role in developing the region's EV ecosystem. This includes expanding intra- and interfirm linkages across the supply chain, from upstream to midstream and to downstream. Robust investment and increasing participation from various categories of firms, including start-ups, are key drivers. ASEAN Member States' commitment to energy transition, along with potential demand growth export opportunities, will continue to attract EV-related investment, further supporting the development of the industry. Translating ASEAN's Declaration on Developing Regional Electric Vehicle Ecosystem into an actionable agenda will also be another major factor underpinning future industry growth and in attracting FDI in EVs.

4.2.3. Digital economy

International investment in the digital economy – in e-commerce, fintech, data centres and other digital infrastructure – has continued to rise, underscoring its market attraction and rapid growth (*AIR 2018*, *AIR 2020–2021*). Annual average announced greenfield investment in communication, data processing and hosting rose 470 per cent, from $777 million during AEC 2015 to $4.4 billion during AEC 2025, with particularly rapid growth since 2020 (figure 4.6a and b).

Key drivers of this growth are the increase in investment opportunities, the market potential, the rise of the mobile phone and Internet consumer culture, Member State policy support and the improving enabling environment (e.g. greater investment in digital infrastructure). The digital economy is attracting investment from mature entities, new players (technology companies)

Figure 4.6. ASEAN: Announced greenfield investment in communications, data processing and hosting services, annual average 2006–2015 and 2016–2023 (Millions of dollars)



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

and start-ups from upstream to downstream, which together are strengthening the ecosystem that supports the rapid growth of downstream businesses in the region such as e-commerce, fintech and ride-hailing industries.

Players

The supply chain of the industry is long, involving diverse groups of investors and operators from digital infrastructure developers (5G networks and data centres) to digital solution providers (e.g. electronic and digital payment, cloud computing, data analytics), from Internet platform companies (digitally born businesses providing search engines, social networks and sharing platforms) to e-commerce (online platforms that enable commercial transactions, including Internet retailers and online travel agencies), to digital content producers and distributors of information and entertainment services, including digital media (e.g. video and TV, music, e-books) and games.

Digital infrastructure such as 5G networks and data centres provides the backbone for Industry 4.0 development and the growth of the digital economy. It improves the efficiency of the digital environment, enables faster connectivity, meets the huge data requirements, facilitates rapid data processing and offers large storage capacities. Such an environment is imperative for the application of Industry 4.0 technologies such as advanced automation, AI, data analytics, the Internet of Things (IoT), and smart factories and smart cities. Attracting investment in digital infrastructure, including cloud computing facilities, is essential for a thriving digital economy and will accelerate digital transformation in the region (*AIR 2020–2021*). FDI in the digital economy is actively promoted by governments in ASEAN.

Industry growth

The region's digital economy delivered more than $100 billion in revenue in 2023, a 27 per cent CAGR since 2021 – 1.7 times the rate of growth of gross merchandise value – and is expected to reach $330 billion in 2025 (Google, Temasek and Bain, 2023; Little, 2023). E-commerce, travel, transport and media contributed $70 billion in revenue. Favourable demographics – increasingly more affluent and more urbanized populations – and consumerism are major factors expected to support future digital economic growth in ASEAN (Google, Temasek and Bain, 2023).

Digital enablers

The rate of adoption of mobile devices and digital services is an important driver for investment in the digital economy. Data consumption in the region is growing rapidly, with mobile data traffic expected to increase at 32 per cent CAGR in 2022–2028, as compared with 20–25 per cent in Western Europe (Little, 2023). In addition, 5G networks are being rolled out rapidly: the technology is expected to reach 52 per cent penetration in ASEAN by 2030, from only 2 per cent in 2021.

The region's mobile penetration rate of 136 per cent is one of the highest in the world. The region will need more towers and other digital infrastructure to support future growth and requirements, including upgrading of digital infrastructure, extension of telecommunication networks and development of data centres. Fibre penetration is also increasing, with extensive build-out expected over the next five years, which will cost between $15 billion and $18 billion.[6]

Investment in data centres is expanding rapidly. The region had nearly 400 data centres as of the first half of 2024, a 33 per cent increase from 2021. Nearly two thirds of them are in Singapore, Indonesia and Malaysia, in that order. About half of the data centres in ASEAN are owned or operated by foreign companies. The growth trajectory is influenced by the growing adoption by businesses of multi-cloud solutions and network enhancements to enhance operational efficiency and flexibility and to accommodate evolving demand in the digital economy. The proliferation of IoT applications also fuels market expansion, as organizations harness IoT's transformative potential to optimize processes and drive innovation.[7] Many foreign investors in data centres in ASEAN are from companies based in Singapore (85 data centres), the United States (59), Japan (33) and China (25). Of the 85 data centres with Singaporean equity, 33 are ultimately owned or backed by foreign companies based in the United States and China.

Start-ups

In addition to the expansion of the venture capital industry, the region is witnessing rapid growth in the number of technology and digital 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 had raised more than $1 million in funding almost tripled between 2015 and 2021, from 652 to 1,920 (*AIR 2022*) and by the first half of 2024 had grown by almost 150 per cent to more than 4,710. Singapore, Indonesia and Malaysia (in that order) accounted for more than 70 per cent of these start-ups. Other Member States (e.g. the Philippines, Thailand and Viet Nam) are also witnessing fast growth in start-ups, as entities successfully raise funding to scale up and to regionalize.

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During the AEC 2025 period, national and regional programmes that aligned with regional integration have generated more FDI opportunities. The significant increase in FDI over the years in turn has facilitated robust industrial development and the growth of the electronics industry, the automotive industry and, increasingly, the digital economy. The participation of diverse categories of players and their interconnection in these industries was an important aspect of this growth. Upgrading of production facilities and business functions by MNEs also facilitated industrial progression. FDI has helped shape the development of these industries and the ecosystem, which in turn strengthen the region's investment environment.

With an improving ecosystem and supply chain networks, FDI in the electronics industry is expected to continue to grow. This is a key industry for the region because of the depth of interconnection of firms and production, and the potential to support further industrial development involving many Member States. In the digital economy, business and investment is expected to grow rapidly in the next decade, building on the momentum of digital growth witnessed even before the pandemic. To support digital growth, the region will require significant investment across different segments of the digital economy, from digital infrastructure, e-commerce activities, digital solutions and cloud computing to data and analytics, including Industry 4.0, AI applications, data security and smart cities. FDI and MNEs play an important role in the region's digital transformation.

4.3. ROLE OF FDI IN REGIONAL DEVELOPMENT AND INTEGRATION

Many stakeholders are involved in regional integration and connectivity. Among them, international companies play a critical role, connecting the region through investment, production, exports, intrafirm and interfirm activities, and supply chains. There is a symbiotic relationship between FDI and regional integration and connectivity under the AEC framework. They are mutually reinforcing, each underpinning the development of the other.

4.3.1. Global manufacturing hub

Across ASEAN, industrial development has a strong FDI imprint associated with activities of MNEs. FDI and the operations of international companies have helped the region become a major global exporter of many products and commodities and have helped strengthen intraregional trade, production connections and gender development (box 4.4). Goods produced in Member States become intermediate inputs in the next stage of the supply chain in other Member States, bolstering regional connectivity.

Box 4.4. FDI and gender development in ASEAN

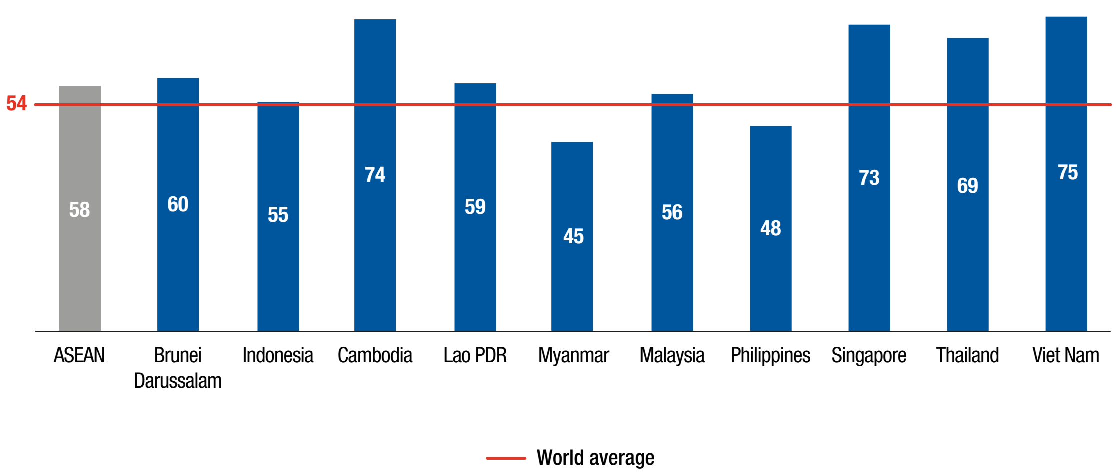
Women's economic empowerment is a cornerstone of achieving inclusive and sustainable development. MNEs affect gender equality in host countries directly, through employment practices in foreign affiliates, and indirectly, through supply chain links with local firms, competition and demonstration effects, technology effects and labour mobility (UNCTAD, 2021).

In ASEAN, female workers play an important role in the development of major industries such as garments, footwear and electronics. In this regard, female workers are significant catalysts in generating export revenues, developing supply chains and helping the region attract significant levels of FDI.

Eight of the 10 ASEAN Member States have higher rates of female labor force participation than the global average (box figure 4.4.1), reflecting the region's relatively strong integration of women into the workforce. Viet Nam leads at 75 per cent, with women constituting 80 per cent of the workforce in the FDI-intensive electronics industry. In Cambodia, the female labor force participation rate was 74 per cent, driven largely by the garment industry, where 90 per cent of workers are women and more than 90 per cent of the factories are foreign owned. Similarly, in Malaysia the electronics and semiconductor industries employ a high percentage of women in the workforce. For example, at the Intel (United States) plant in Penang, women constitute 90 per cent of the assembly workforce. These examples underscore the strong link between FDI and gender development in specific industries, and the role of female workers in enhancing the investment environment, which helps attract FDI.

Despite significant progress in leveraging FDI for gender development in ASEAN, much work remains to be done. A key challenge is that female workers are often concentrated in low-skill, low-paying, and precarious jobs (ASEAN Secretariat, 2021b). These inequalities are estimated to cause

Box figure 4.4.1. Female labour force participation, ASEAN and world, 2022 (Per cent)



Source: ILOSTAT.

/...

Box 4.4. FDI and gender development in ASEAN (Concluded)

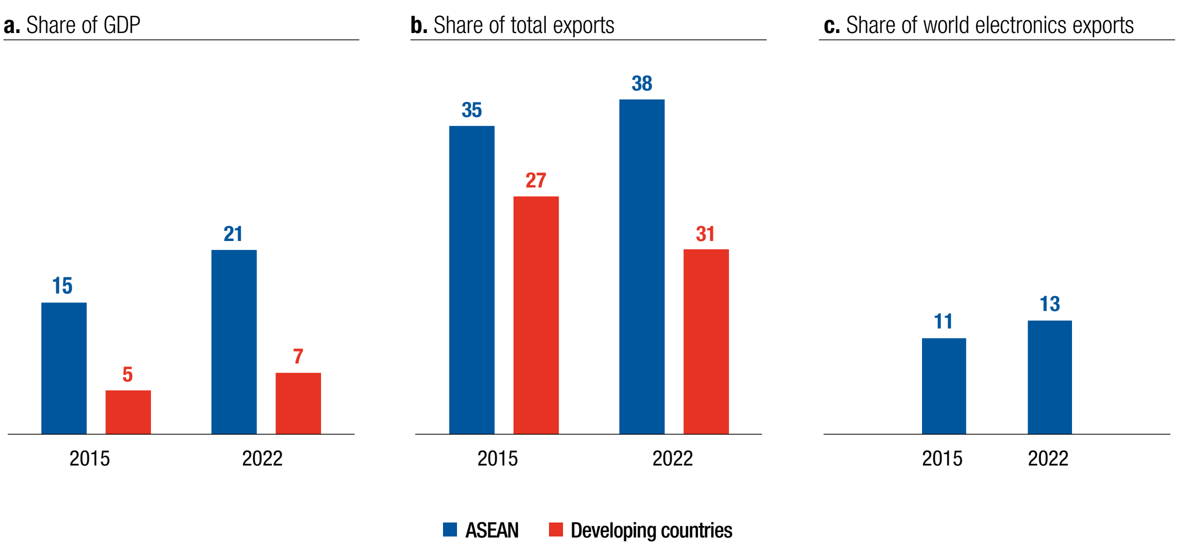
a 17.5 per cent income loss in developing countries (ASEAN Secretariat, 2016), and eliminating it could boost ASEAN's collective GDP by $370 billion annually (McKinsey Global Institute, 2018). FDI policies in ASEAN could be strengthened to support women to move into high-skilled jobs. This could include capacity-building and training programmes focused on technological advancements, such as Industry 4.0 transformation and the digital economy.

Through the ASEAN Gender Mainstreaming Strategic Framework, which promotes gender equality across policies and sectors, ASEAN can enhance the link between FDI and gender development. By embedding gender perspectives in economic activities, the framework ensures that FDI contributes to a more inclusive and sustainable growth in the region (ASEAN Secretariat, 2022). ASEAN could also consider extending ACIA to promote GDIG principles, gender development and increase women's workforce participation across a broader range of non-electronic industries, further enhancing the region's investment environment.

Source: ASEAN Investment Report 2024 research.

FDI also plays an important role in linking ASEAN to global value chains and transforming the region into a global manufacturing hub and a major export platform. The region's shares of electronics exports as percentages of both GDP and total exports are increasing and as relative to the developing-country average (figure 4.7). In 2022, ASEAN accounted for 13 per cent of world electronics exports, up from 11 per cent in 2015. Annual average electronics

Figure 4.7. ASEAN and developing countries: electronics exports, various indicators, 2015 and 2022 (Per cent)



Source: Based on UN Comtrade (United Nations) and World Development Indicators (World Bank).
Note: "Developing countries" excludes ASEAN Member States.

exports as a share of GDP rose to 21 per cent in 2022, much higher than the developing-country average of 7 per cent. The share of electronics exports in total exports rose from 35 per cent in 2015 to 38 per cent in 2022, underlining the significance of the electronics industry in terms of export revenues and industrial activities. These trends show the pivotal role of the electronics industry in driving economic growth and highlight ASEAN's production competitiveness.

ASEAN today is a major exporter of electrical equipment and electronics – both commercial products, such as integrated circuits, and consumer products, such as air conditioners, water heaters, cameras, mobile phones, televisions and solar panels (table 4.3). The region is the world's largest exporter of some of these products such as electronic integrated circuits, camera and air conditioners. Significant export growth in these products occurred between 2015 and 2022, highlighting ASEAN's position as a major global electronics manufacturing hub and the region's trade dynamics. In these two major export industries, the regional footprint of international companies is significant.

In renewable energy, MNEs are active in mining and processing minerals critical for EV production and other downstream activities in the supply chain. These minerals include nickel, rare earth elements, copper and manganese. ASEAN's exports of critical minerals have experienced substantial growth, underscoring the region's role in global supply chains and renewable energy development.

With increasing investment in services such as finance, wholesale and retail trade, the digital economy and communication, ASEAN is transforming into a significant services hub. FDI in these industries plays a role in improving financial services and digital infrastructure (e.g. 5G networks and data centres), which provide the critical backbone for the development of downstream services industries, such as cloud computing and fintech. A vibrant services sector further strengthens the region's investment and business environment.

4.3.2. Supply chain connectivity

The industry case studies in section 4.2 highlight the active interaction of different categories of players specializing in production and assembly of intermediate and final products in each industry supply chain and in providing manufacturing services (e.g. electronics manufacturing services) in different locations. The effects of the interconnection between firms extend beyond strengthening an industry ecosystem (e.g. semiconductors) to supporting the development across the region of interindustry supply chains (e.g. semiconductor supply chain supporting advances in other industries such as automotive, automation machinery, consumer electronics and cloud computing).

Notable effects include the extension of regional production networks, the development of supply chain dynamics and the enhancement of regional connectivity. Other effects include strengthening of the ecosystem, the establishment of industrial linkages, the building of supporting industries, and the improvement of industrial efficiency and connectivity. Many MNEs in the region continue to expand their supply chains (box 4.5).

Table 4.3. ASEAN: Major exports, 2015 and 2022 (selected products) (Millions of dollars and per cent)

	2015				2022			
Total ASEAN exports ($ trillion)	1.11				1.94			
Product description	**Exports 2015** ($ million)	**Share of world trade** (%)	**Rank in world**	**Share of intra-ASEAN trade** (%)	**Exports 2022** ($ million)	**Share of world trade** (%)	**Rank in world**	**Share of intra-ASEAN trade** (%)
Selected major exports								
Electronic integrated circuits	115 182	29.2	1	18.4	252 611	24.1	1	25.0
Telephones for cellular networks	32 517	16.2	2	17.4	40 868	12.2	2	15.9
Palm oil	17 577	87.5	1	12.1	37 207	90.0	1	13.9
Storage units	17 736	32.4	1	10.6	16 589	30.5	1	7.7
Communication equipment[a]	6 804	7.5	5	10.7	37 543	20.3	2	6.9
Automotive vehicles (including parts and accessories)	40 162	3.2	11	30.6	55 645	3.6	7	33.6
Consumer electronics								
Air conditioning machines	6 186	16.3	2	28.63	9 193	15.5	2	40.7
Refrigerators and freezers	3 201	8.2	3	28.1	3 945	6.7	4	30.2
Heating devices/appliances[b]	2 022	5.0	4	26.2	4 487	6.9	3	10.2
Cameras	3 884	12.3	2	16.9	8 829	21.2	2	5.2
Television	3 721	7.3	5	34.9	5 273	11.1	4	23.3
PV solar panels	7 216	14.1	2	16.4	18 851	20.1	2	11.5
EV batteries	759	5.5	4	23.3	3 197	3.2	7	17.0
Monitors and projectors	6 665	7.6	3	30.6	11 684	12.0	3	50.7
Critical minerals								
Copper	9 426	6.2	2	27.8	22 157	8.6	2	25.5
Manganese	155	4.1	6	24.0	192	3.4	3	2.8
Nickel	3 699	15.0	2	4.1	8 653	22.5	1	1.7
Rare Earth Elements	285	25.1	2	10.4	812	26.5	2	45.9
Graphite	1	0.2	22	78.1	1	0.1	25	90.2
Lithium	0	0.1	19	74.3	2	0.0	22	34.6

Source: UNCTAD calculations based on UN-Comtrade, accessed June 2024.
[a] Includes machines for the reception, conversion and transmission or regeneration of voice, images and data.
[b] Includes storage water heaters and immersion heaters; electrothermic hair-dressing apparatus and hair dryers.

The connection between firms and their effects on regional integration operate in various directions:

(i) Intrafirm activities between subsidiaries and affiliates of MNEs located in different Member States, specializing in different business functions (e.g. R&D, centres of excellence, regional headquarters) and production processes

(ii) Interfirm activities between subsidiaries of MNEs and foreign contract manufacturers and regional suppliers of components, parts, raw materials and services

(iii) Interfirm activities involving local suppliers and companies, thereby generating local business linkages

(iv) Interconnection of supply chains (one ecosystem supporting another; e.g. the semiconductor supply chain supporting the automotive industry and production of consumer electronics)

Box 4.5. ASEAN: Supply chain expansion by MNEs (selected cases)

While new players invest to build supply chain networks in ASEAN, MNEs with significant operations in the region continued to expand such networks through vertical and horizontal linkages. This includes expanding facilities within the same host country and across other Member States.

Apple has been encouraging many of its suppliers to diversify supply chains to mitigate future supply chain disruptions. Many have been actively doing so (*AIR 2023*). The company is also allocating its product development resources for iPad to Viet Nam, a major step towards strengthening ASEAN as its manufacturing and sourcing hub.[a] Apple encouraged BYD (China), its key iPad assembler, to move product development resources and functions to Viet Nam, which it did in 2022, shifting iPad assembly to its first facility in that host country.

Rolls Royce (United Kingdom) has a presence in several Member States. It provides equipment and services to airlines in the region. In Indonesia, it has an office and airline support team; in Thailand, it has an airline support team and a network of manufacturing suppliers; and in Viet Nam, it provides services to Viet Nam Airlines and Vietjet. In Malaysia and Singapore, it has significant manufacturing operations. It has a fan-blade manufacturing, assembly and testing plant at Seletar Aerospace Park, Singapore, that receives fan cases for airplane engines from UMW Aerospace (Malaysia), a first-tier supplier that manufactures and assembles the fan cases.

Muramoto (Japan) has production facilities in Indonesia, Philippines and Thailand and a regional office in Singapore. It supplies parts and components to automotive and electronic companies in the region. For example, Muramoto Electron Thailand produces blu-ray audio mecha navigation system for Panasonic's (Japan) operation in Thailand. The system is also used by automotive companies such as BMW (Germany), Volvo (Sweden) and Toyota, Nissan, Honda, Mazda and Isuzu (all Japan). In addition, it produces the electronic keyless entry for Mitsubishi Automotive (Thailand) and ink jet printer for Sumitomo Electronics Thailand.

Source: Company websites and media.
[a] *Asia Nikkei*, "Apple to move key iPad engineering resources to Vietnam", 8 December 2023.

4.3.3. Connectivity in the renewable energy supply chain

The renewable energy supply chain also involves many categories of players such as traditional utilities companies, oil and gas MNEs, critical minerals extractors, technology providers, and battery and EV producers, as well as diverse types of new actors (*AIR 2023*). New actors include renewable technology start-ups, non-traditional EV manufacturers, renewable power producers (e.g. solar, wind and hydropower) and related equipment manufacturers.

International companies are active players throughout the renewable energy supply chain in ASEAN. While these companies operate in different segments of the supply chain (upstream, midstream, downstream), they are connected. For instance, processed critical minerals and batteries are exported to EV manufacturing hubs in the region and farther afield. Electricity generated from renewable energy is transmitted to energy-deficient Member States to help meet rapidly growing industrial demand (e.g. hydropower is exported from the Lao PDR to Thailand and Singapore) and thus supports industrial development in the region. Renewable energy materials manufactured in the region, such as solar panels, are installed on rooftops of factories and in solar farms in ASEAN.

More firms in the automotive, electronics and semiconductor industries are generating solar-based electricity at their factories. GlobalFoundries (United States) expanded its advanced semiconductor fabrication facility in Singapore in 2021 to include rooftop solar panels, to help with the building's energy needs. Intel (United States) invested $1.1 million in a solar panel system in its Viet Nam facilities in 2012 and installed rooftop solar panels in its Malaysia facilities in 2020. By 2021, Intel's solar panel system in Malaysia generated 4.1 MW of installed capacity that powered six buildings across the company's Kulim and Penang campuses. Other MNEs that have installed solar panel systems at their factory sites in ASEAN included Keysight Technologies (United States) at facilities in Malaysia, MinebeaMitsumi (Japan) at facilities in Thailand and Nike (United States) at facilities in Viet Nam. The rooftop solar panel systems installed by Smiths Detection (Australia) at its facilities in Malaysia are estimated to save more than $92,000 a year in electricity costs. Those installed by Sumitomo Rubber Industries (Japan) at its facilities in Thailand could power more than 2,700 homes starting in 2025 (*AIR 2023*). Some MNEs, such as Facebook and Microsoft (both United States), have signed power purchase agreements in Singapore involving offsite solar panel installation on the rooftops of public housing blocks and government buildings. Many automotive related manufacturers are also installing solar rooftop panels at their production facilities in the region. Aisin Thai Automotive Casting (Japan) installed a 1 MW solar rooftop project in Thailand in 2021 and Auto Alliance (United States and Japan) installed a 6.13-megawatt solar PV rooftop project at its manufacturing facility in the same host country in 2024.

Intraregional electricity trade and inter-supply chain connections are important features of renewable energy development in ASEAN. Semiconductor companies have become an important part of the renewable energy supply chain. High-powered semiconductors, key components for controlling the connection between networks and renewable power generated from wind turbines and photovoltaic cells, are being produced by semiconductor companies in ASEAN. For instance, Infineon (Germany) is producing bandgap semiconductors used in high-tech industrial applications such as photovoltaics, energy storage and electric vehicles. TF-AMD (United States) produces 5- and 7-nanometre technology node packaging and other high-performance computing solutions that are also supplied to clients in ASEAN.

4.4. FDI-INDUSTRIAL DEVELOPMENT AND CONNECTIVITY CHALLENGES

Evidence suggests that FDI has contributed to industrial development and the growth of key industries in ASEAN. Active interaction among various players is crucial for advancing industrial ecosystems, improving the investment environment and enhancing regional connectivity. The challenge lies in further interconnecting firms, production and processes across more ASEAN Member States, and expanding industry and supply chain coverage. Key areas for improvement include: (i) leveraging FDI to further strengthen regional connectivity in line with AEC objectives for a single market and production base, (ii) developing a regional EV ecosystem and renewable energy supply chain involving multiple ASEAN Member States, (iii) fostering a connected digital economy to drive services growth, investment and digital trade, and (iv) creating a more integrated intrafirm and interfirm network to strengthen industry supply chains across the region.

4.5. CONCLUSION

This chapter has provided evidence underscoring the increasing interconnectivity associated with FDI activities in ASEAN. These interconnectivities stem from (i) the growing supply chain networks, involving different categories of suppliers and lead firms; (ii) intra- and interfirm linkages, including cross-border arrangements; (iii) expanding regional production networks, sourcing activities and intraregional trade; (iv) specialization of investment and business functions by MNEs and their networks of suppliers; and (v) the interconnection of supply chains of different industries (e.g. production of semiconductors and other electronics supporting the automotive industry, the digital economy and other technology industries). FDI increases regional connectivity and facilitates industrial development and ecosystem advancement – which in turn helps improve the investment environment in ASEAN.

Regional integration increases FDI opportunities. The stronger the integration, the more attractive the region's investment environment, with opportunities to scale, to improve efficiency, to build regional supply chains and networks, and to benefit from complementary locational advantages.

The symbiotic relationship between regional integration and FDI in ASEAN suggests the need to design policy to harness and optimize the interconnection effect for a narrowed development divide and for an "inclusive ASEAN" and a more "global ASEAN". The AEC integration programme for the next 10 years should continue to leverage this mutually reinforcing development dimension, including to attract sustainable investment in emerging areas such as the renewable energy and EV industries, and the digital economy.

NOTES

[1] Sumitomo Corporation, “Expanding the electronics manufacturing service business in Cambodia”, December 2017.

[2] Nikkei Asia. “The Cambodian city that went from war zone to manufacturing hub”, 14 December 2017.

[3] Evertiq, “Toppan to build package substrate plant in Singapore”, 15 March 2024.

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Chapter 5

The road ahead: policy options

5.1. INTRODUCTION

AEC 2025 marked a significant period of FDI growth in ASEAN (chapter 3), driven by reasons such as evolving investment patterns, improving sentiments, a more favourable policy environment and regional integration. During AEC 2025, the region achieved strong FDI performance, surpassing past records, world averages and other key indicators. A stronger link between FDI and industrial development emerged, which corresponded with GDIG frameworks. Additionnaly, international investments is playing a crucial role in regional connectivity, industrial growth, and supply chain development.

Despite global crises (food, fuel and finance) and the COVID pandemic's impact, the region remained resilience, continuing as a major manufacturing hub and a key destination for FDI and international supply chains. The outlook for attracting higher levels of FDI in the next decade is promising, supported by strong economic fundamentals, growth potentials in emerging industries, a rapidly expanding middle-income class and sustained industrial activity. Economic diversity, which is one of the region's strengths, and the complementary locational advantages will continue to drive FDI growth.

However, challenges remain. The global investment landscape is dynamic, necessitating ongoing efforts to deepen regional integration and enhance connectivity. Investment, production, trade and services are critical to this integration, requiring a coherent and holistic approach to increase efficiency. Prioritising FDI for industrial upgrading, further supply chain development, technology adoption and capacity building will be essential to optimise the investment environment and maximise benefits from emerging industries.

This chapter provides key FDI policy actions to address gaps in policy (chapter 2), FDI performance (chapter 3), and FDI, industrial development and regional connectivity (chapter 4), and specific recommendations to advance ASEAN as an efficient FDI destination.

5.2. POLICY RECOMMENDATIONS

Previous editions of the *ASEAN Investment Report* (box 5.1) and chapters 2, 3 and 4 of this edition have identified key challenges and gaps related to various aspects of FDI in ASEAN. In moving forward, these issues need to be effectively addressed and new initiatives to enhance regional connectivity and efficiency over the next decade require attention.

In addition to the policy recommendations in this chapter, policy options proposed in previous ASEAN Investment Reports on specific FDI issues such as Industry 4.0, regional value chains and

Box 5.1. ASEAN Investment Report coverage

Past AIRs contain analyses on a range of FDI topics in relation to ASEAN. They include infrastructure development, small and medium-sized enterprises (SMEs), health care, Industry 4.0, industrial parks and special economic zones, investment facilitation, international supply chain restructuring and renewable energy.

AIR 2023: International Investment Trends: Key Issues and Policy Options
AIR 2022: Pandemic recovery and Investment Facilitation
AIR 2020–2021: Investing in Industry 4.0
AIR 2019: FDI in Services: Focus on Health Care
AIR 2018: Foreign Direct Investment and the Digital Economy in ASEAN
AIR 2017: Foreign Direct Investment and Economic Zones in ASEAN
AIR 2016: Foreign Direct Investment and MSME Linkages
AIR 2015: Infrastructure Investment and Connectivity
AIR 2013–2014: FDI Development and Regional Value Chains
AIR 2012: The Changing FDI Landscape

Source: ASEAN Investment Report series.

special economic zones (SEZs) should be considered (box 5.1). Additional recommendations and actions resulting from future consultative forums on FDI and the upcoming series of FDI policy workshops starting in October 2024 should also form part of the policy options considered for supporing the region's efforts to attract, facilitate and retain FDI.

This report has benefitted from the recommendations and outcomes of two AEC consultative forums on FDI, held on 3-4 July 2024 in Bangkok. Some of the key recommendations are highlighted in box 5.2.

Box 5.2. Outcome of the Consultative Forum on Post-AEC 2025: Priorities and Policy Imperatives, 3–4 July 2024, Bangkok, Thailand

In July 2024, private sector representatives, business council members and investment officials in ASEAN discussed several key issues and proposed recommendations for post AEC 2025.

The investment priorities for policymakers cover green economy, the digital economy, infrastructure and supply chain development, while priorities for investors relate mostly to standards harmonization, non-tariff barriers and administrative streamlining. The main recommendations of the consultative forum included the following:

(i) Implement what has already been agreed before embarking on new goals (address AEC 2025 implementation gaps on matters such as liberalization, non-tariff barriers and trade facilitation).

(ii) Address concerns affecting investment beyond the investment pillar of AEC (trade, services, digital, public-private partnerships, skills and technology).

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Box 5.2. Outcome of the Consultative Forum on Post-AEC 2025: Priorities and Policy Imperatives, 3–4 July 2024, Bangkok, Thailand (Concluded)

(iii) Prioritize measures that most affect the ability of firms to operate across borders within ASEAN (e.g. non-trade barriers, customs procedures, harmonization of standards).

(iv) Consider implementing practical tools to facilitate cross-border payments, trade financing and blended finance arrangements (e.g. regional digital platforms).

Several suggestions were made regarding the process of developing the next AEC priorities:

(i) Involve industry associations for detailed work on technical issues (e.g. harmonization of standards) related to priority industries such as pharmaceuticals, logistics, automotive, fast-moving consumer goods and infrastructure.

(ii) Promote knowledge-sharing events and platforms.

(iii) Continue to work closely with the private sector.

Other areas to explore for the "Beyond 2025" priorities:

- Coordination between the ASEAN Committee on Investment and other sectoral bodies, and between the investment environment pillar and other pillars
- SEZs contribution to regional integration, complementary versus competitive aspects, and possibly an ASEAN-wide SEZ strategy
- Promotion of outward FDI
- Joint assessment of the impact of the global minimum tax
- Strengthening of joint investment promotion
- Further sectoral priorities, such as attracting FDI for processing of raw materials and critical minerals, tourism, the blue economy and logistics
- Developing skills and talent such as investing in health, improving MNP, and promoting mode 3 service delivery
- Promoting and enhancing public-private partnerships in infrastructure
- Improving the geographical distribution of FDI, including to second and third tier cities

Source: Consultative Forum, "Post-AEC 2025: Investment Priorities and Policy Imperatives", 3–4 July 2024, Bangkok, Thailand.

Three key clusters of policy recommendations and actions are proposed (figure 5.1). Detailed explanations of the proposed measures are provided in the following sections.

5.2.1. Address present challenges and gaps

Completing the AEC 2025 agenda

Completing the AEC Blueprint 2025 agenda is crucial. Any unfinished work by 2025 should be prioritized in the next phase of ASEAN's economic integration programme for immediate implementation. Additionally, policy gaps and FDI performance gaps require attention. The policy gaps were outlined in chapter 2 and FDI performance gaps in chapter 3. Each chapters provides specific policy options.

Figure 5.1. The Road Ahead: policy options - an overview

Recommendation	Description	Example
Address investment policy gaps	Enhance the investment policy environment	• Reduce ACIA reservation list and investment impediments • Strengthen AIFF • Implement ASFF and ATFF; increase coordination with other sectoral areas
Address FDI performance gaps	Improve the efficiency of the investment environment	• Expand sources of FDI • Give intraregional investment a push • Attract infrastructure investment
Promote FDI in emerging industries	Attract FDI in emerging and future industries	• EV ecosystem • Renewable energy supply chain • Digital economy

Source: Chapters 2, 3 and 4.
Note: ACIA = ASEAN Comprehensive Investment Agreement, AIFF = ASEAN Investment Facilitation Framework, ASFF = ASEAN Services Facilitation Framework, ATFF = ASEAN Trade Facilitation Framework.

Policy gaps

Key policy gaps requiring attention include: (i) completing ACIA's workplan on reducing the reservation list and eliminating investment impediments; (ii) expanding industries covered by ACIA; (iii) completing AIFF implementation and the 23 subcategory investment facilitation measures; and (iv) adopting coherent investment policy development and promotion with other regional integration and sectoral bodies.

Continue implementing measures aimed at enhancing the efficiency of the investment environment. This includes actions to facilitate FDI:

- Strengthen the ASEAN Single Window to facilitate easier and more efficient movement of goods
- Expedite implementation of the ATFF and ASFF, which have important positive impact in further improving the investment environment
- Take a more coordinated approach to FDI attraction as investment spans industries, sectoral bodies and jurisdictions. This includes better coordination between ASEAN bodies that cover work relating to FDI promotion and attraction (e.g. CCI with ASEAN sectoral bodies) and with subregional growth areas on investment-related matters.

Strengthening the AIFF

Step up efforts to implement the AIFF and other investment facilitation measures. Consider the specific recommendations made in the *ASEAN Investment Report 2022* for advancing the AIFF, such as establishing a clear time frame and milestones and conducting regular assessments of the implementation. In addition:

- Adopt a holistic approach to investment facilitation, extending beyond administrative tasks to include the overall business environment, such as business setup, registration and licensing. Seek synergies between investment facilitation efforts and the activities and tools of authorities other than investment promotion agencies.
- Enhance the scope and quality of investment facilitation measures within the AIFF.
- Broaden the investment facilitation framework by coordinating or collaborating with business and tax authorities, and involving stakeholders such as economic zone authorities, business registries and state and provincial government agencies.
- Consider expanding beyond the 10 main categories in the AIFF and ensure full implementation of the 23 subcategory measures.
- Enhance the InvestASEAN website with additional content and relevant information.
- Develop an enterprise registration portal similar to UNCTAD's Ger.co to provide information at the regional level about online information portals and online single windows.

FDI performance gaps

The FDI performance gaps include: (i) addressing the declining intraregional investment growth; (ii) addressing substantial infrastructure investment needs; (iii) FDI concentration and uneven industrial distribution; (iv) enhancing private sector engagement; (v) attracting investment in sustainable sectors; and (vi) the challenge of SMEs regionalization and participation.

Other recommendations could be considered to further improve the investment environment. These include the following specific actions:

(a) Infrastructure development and investment gaps

Develop bankable projects and make infrastructure investment attractive to private investors. Participation of multilateral and regional development banks in these projects can help lower the risk profile and encourage private investment.

(b) Intraregional investment push

Give urgent attention to the significant slowdown in the growth of intraregional investment during AEC 2025, given its potential to facilitate regional connectivity and support the objectives of AEC. Actions to boost intraregional investment should not hamper the robust growth of FDI from non-ASEAN sources witnessed during AEC 2025.

Consider several measures to increase the pace of intra-ASEAN investment (*AIR 2023*):

- Strengthen institutional connectivity through collaboration between inward-outward FDI agencies, and institutions related to the development of subregional growth zones such as the Indonesia–Malaysia–Thailand Growth Triangle and the Brunei Darussalam–Indonesia–Malaysia–Philippines East ASEAN Growth Area.
- Enhance cooperation to support regionalization of SMEs, encompassing investment facilitation for SME regionalization and for startups to scale across borders.

- Establish a task force composed of "alliances of stakeholders" to identify challenges and provide specific recommendations focusing on policies and measures that bolster regionalization of SMEs. Active private sector engagement in the process, from consultation to policy development and partnership, is essential.
- Enlist ASEAN statistical bodies to compile detailed statistics on intraregional investment on an ultimate ownership basis.

(c) Unevenness of flows

Promote new industries as FDI recipients such as in renewable energy, other sectors related to the energy transition and the digital economy supply chain (*AIR 2018*), where ASEAN has the potential to attract significant investment. This will help expand investment beyond the four industries that account for more than 75 per cent of FDI in ASEAN.

(d) Regionalization and linkages of SMEs

Nurture a large pool of competitive SMEs and facilitate a subset of them to regionalize and establish linkages with MNEs or FDI (*AIR 2020–2021*). This is key for regional connectivity, building supporting industries and supply chain networks, and improving the investment environment. Address barriers to regionalization, which include the mindset of owners, lack of information on and understanding of regionalization, lack of know-how, fear of cross-border activities, lack of access to finance, gaps in information on foreign markets, and government policies and regulations (*AIR 2016*). Strengthen institutional support as many SMEs are not aware of regional developments and opportunities or government facilities available to help them grow.

Start-ups

Take action to build a strong start-up ecosystem, expand the pool of start-ups and facilitate their linkage in technology development and the digital economy. Specific capacity-building activities could cover mentorship, coaching and hiring skills, and skills development for regionalization. Consider establishing a network of universities, funds and accelerators to support innovation, the commercialization of ideas and internationalization. Support start-ups in their growth plans to adapt to foreign markets and in finding reliable partners in host countries.

(e) International supply-chain restructuring

Capture more FDI driven by international supply chain restructuring. Such investment will remain a major feature as more firms strengthen their international supply chain networks. Consider the recommendations proposed in *AIR 2023*, including understanding the significance and the role of

(i) lead firms and their anchor suppliers, which could complement Member States efforts to attract FDI.

(ii) lead firms and anchor firms in building supporting industries and in developing supply chain ecosystems, thereby strengthening regional production networks.

(iii) AEC and the Regional Comprehensive Economic Partnership platform to build competitive supporting industries and enable easy sourcing of parts and components.

(f) SEZs development and upgrading

Efficient SEZs and industrial parks are important investment facilitation tools (*AIR 2017*, *AIR 2022*, *AIR 2023*). They ease the process and help lower the cost of investing, and they support quick set-up operations (e.g. overcoming the complications of land ownership, tenancy and provision of utilities). Across ASEAN, economic zones are evolving from simple industrial estates to more complex generation of zones, encompassing an integrated concept of sustainability, residential-industrial-commercial townships and mega-SEZs. Aligning with global development, technology advancement and climate change, there is a growing need to upgrade existing SEZs to attract targeted industries, facilitate investment, support economic development and enhance regional industrial connectivity.

Member States could explore the following actions:

(iv) Develop joint SEZs involving complementary locational advantages and collaboration in attracting FDI. For instance, Malaysia and Singapore are developing a joint SEZ in Johor with facilitation measures related to the movement of goods and people. This could also cover an ASEAN-wide SEZ.

(v) Strengthen industrial linkages and cooperation between SEZs located in border zones. For instance, in border zones in Thailand and the Lao PDR, MNEs in Lao SEZs are engaging in production networks, transporting parts and components for factories in Thailand.

(vi) Enhance subregional growth through industrial parks or SEZ linkages, facilitating efficient movement of inputs and components between factories in contiguous SEZs.

(vii) Support the development of future industries in next-generation SEZs powered by renewable energy. This includes establishing "green" SEZs to support energy transition commitments by supplying renewable energy and developing sustainable buildings and infrastructure.

(viii) Upgrade SEZs to be equipped for Industry 4.0, AI application and technology advancements.

International tax reform

Conduct a joint assessment of the implications of the global minimum tax, as called for in the AEC-FDI consultative forum in Bangkok in July 2024. Many of the key issues were addressed in *AIR 2023*, including implications for investment policies, FDI promotion and development of SEZs, which are often tied to profit-based incentives such as tax holidays and reductions. Consider two specific suggestions made in *AIR 2023*: (i) review all investment treaties and FDI promotion policies that rely on tax-based incentives, and (ii) review SEZ programmes that offers tax incentives to attract FDI, with a view to linking SEZ development to non-tax measures.

(g) Expanding the manufacturing value chain

Continue to build a competitive industrial ecosystem to support efficient production, provide easier sourcing of intermediate inputs and facilitate regional production networks, leveraging complementary locational advantages. Attract FDI to new industries and production processes with greater technology utilization.

(h) Easier flow or sourcing of production and raw material inputs

Facilitate easy sourcing of raw material and inputs intraregionally, including by expediting customs clearance requirements, procedures and coordination. Promote the ASEAN Single Window (ASW) initiative more broadly to the investor community and firms based in the region. Eliminate non-tariff barriers and investment impediments that could hinder regional sourcing or impede supply chains, except in areas critical to protecting national security and consumer safety.

(i) Stronger private sector engagement

Make a greater effort to significantly engage the private sector for policy inputs, feedback and partnership. Promote regular public-private sector consultations spanning ASEAN sectoral bodies that cover investment cooperation.

5.2.2. Promote investment in emerging and future industries

Attract FDI in emerging industries to support future industrial growth (figure 5.2). Increase production and services efficiency as technological development, digital evolution and climate concerns shape the investment landscape and change how businesses produce and deliver goods and services to markets. Align with global development by fostering competitive industrial and investment ecosystems. Translate the Leaders' Declaration on emerging industries such as the EV ecosystem and the digital economy into actionable plans to attract FDI and advance future industries.

Specific actions could include the following:

(a) Attract FDI that supports future industrial development

Attract FDI to build efficient industrial and business ecosystems, drive industrial upgrading, and advance value chain positioning. Develop skills and talent needed for future industries. Focus on securing investment in technology-driven sectors, R&D, front-end operations in electronics and semiconductors, and key supply chains for future industries.

Industrial clustering

Implement policies and develop industrial parks or SEZs to promote industrial clusters, driving agglomeration benefits and attracting investment. SEZs can reinforce supply chains and networks by encouraging collaboration among diverse companies. In some Member States, lead firms and anchor MNEs have been pivitol in establishing industrial clusters, integrating a network of other firms, suppliers and contract manufacturers, and enhancing the investment enviroment.

The region could further benefit from enhancing FDI-industrial connectivity by: (i) leveraging FDI to improve regional connectivity; (ii) increasing the participation of more ASEAN Member States in industry supply chains and ecosystem development; (iii) expanding industry coverage where ASEAN has significant investment potential; (iv) developing a regional EV ecosystem involving multiple ASEAN Member States; and (v) fostering more developed intrafirm and interfirm networks to strengthen industry supply chains and attract FDI.

Figure 5.2. The road ahead: selected specific policy options for the next AEC programme

Future initiatives	Selected aspects	Selected actions
Emerging & future industries	• Digital economy • Energy transition supply chain • EV supply chain ecosystems • Technology and knowledge-based industries	• Implement DEFA, strengthen digital infrastructure and facilitate investment in downstream activities (e-commerce, delivery, warehousing) • Promote regional renewable energy supply chain development • Develop and implement a regional EV ecosystem and supply chain action plan based on complementary locational advantages
Industrial upgrading	• Adopt technology & Industry 4.0 • Industrial ecosystems development • International supply chain restructuring FDI • Upstream development in electronics, semiconductors and other major industries	• Attract FDI that support future industrial development, including technology-based FDI • Adopt measures supporting and attracting Industry 4.0 investment • Value chain upgrade, moving upstream (to front-end in electronics, moving downstream (to critical minerals)
Efficient investment environment	• Facilitate services industries (e.g. logistics) • Pre-, during and post-investment efficiencies • Energy networks, cross-border SEZ partnership • Synergistic benefits from a strengthened AIFF and linking with benefits from ATFF and ASFF • Services and financial integration	• Development of green SEZs, green data centers • Linking of SEZs or partnership SEZs (Malaysia-Singapore, Lao PDR-Thailand model) • Strengthen and optimise synergistic benefits of AIFF, ATFF and ASFF to increase efficiency for investment and production
Develop skills, talents and technology	• Increase technology and knowledge absorptive capacity • Strengthen public and private institutional connectivity and cooperation	• Engage all stakeholders to facilitate investment and development of Industry 4.0 environment • Promote investment in technology, R&D and skills development entities and centers • Foster public-private partnership and MNE engagement, including establishment of centers of excellence and capacity building programmes

Source: ASEAN Investment Report 2024 research.

Technology-based FDI

Actively attract and facilitate technology and knowledge-based investment in the region. Develop an efficient technology ecosystem in partnership with MNEs, attract investment in centers of excellence, establish an alliance of technology R&D laboratories and centres, support the technology start-up environment and put in place capacity-building programmes to develop skills and talent.

(b) Renewable energy supply chain (energy transition)

Attract FDI across the renewable energy supply chain by leveraging the region's critical minerals, renewable manufacturing potential, and untapped renewable resources (e.g., solar and wind). Optimize opportunities for regional power trade, green industrial development and greening of SEZs. The private sector, including international investors, can play an important role in the energy transition through investment, adaptation and adoption of renewable technologies, supply of renewable technology solutions, manufacturing of renewable equipment and components, and innovation and R&D.

Specific measures to consider include the following:

Renewable investment policy and bankable projects

Make investment policy more conducive to supporting the energy transition and developing the renewable energy supply chain by (i) making greater use of investment facilitation to provide investors with information on investment opportunities, (ii) developing bankable renewable energy projects, (iii) tapping the significant potential of the region for solar, wind, hydropower and other renewable sources to generate electricity by leveraging international investment to bring technologies and capital to the industry.

Regional energy pool and green energy trade

Strengthen cross-border cooperation to support regional energy pool development and trade of green energy, to help meet growing demand. This will support scalability, lower project risks and reduce cost of capital requirements, which can make the region more attractive for investment in the energy transition.

Renewable manufacturing hub

Leverage the region's manufacturing prowess and experience to attract FDI for manufacturing renewable equipment and parts such as solar panels, wind turbines and batteries.

Cost of capital

Reduce the capital cost of projects by involving and partnering with multilateral development banks and international investors. The *World Investment Report 2023* found that projects that have participation from these investors tend to have lower borrowing costs.

International agreements and energy transition objectives, and an action compact

Make international investment agreements and treaties more conducive to the energy transition. Most old-generation IIAs are not aligned with energy transition objectives, as they lack clauses that proactively support low-carbon energy investment. Consider adopting an action compact for investment in sustainable energy, which could include establishing guiding principles and design criteria for investment strategies, policies and treaties supporting energy transition (*AIR 2023*).

(c) EV supply chain

Review policy options for attracting foreign technologies and FDI across different segments of the EV supply chain, from mining and processing of critical minerals to manufacturing of EVs and investment in EV infrastructure. Work towards developing a competitive EV ecosystem and charging infrastructure. Specific actions to consider:

(i) Encourage greater EV adoption by consumers to build a vibrant industry with positive production spillover effects.
(ii) Establish and incentivize strong links between SMEs and MNEs to support developing the ecosystem.
(iii) Strengthen regional cooperation and collaboration in developing the regional EV supply chain, linking upstream (critical minerals) to midstream (production) and midstream to downstream (EV infrastructure).
(iv) Develop a robust EV support industry (parts and components) and facilitate efficient flows of parts and components within the region.
(v) Facilitate and incentivize investment in developing midstream (production) of the supply chain and EV infrastructure networks.
(vi) Attract investment in battery recycling, aligning with efforts to develop a green economy and advance the energy transition in the region.
(vii) Translate the ASEAN Declaration on Developing Regional Electric Vehicle Ecosystem into robust actionable plans, milestone indicators and regular assessments.
(viii) Create strategic alliances, such as an SME-EV linkage involving stakeholders such as policymakers, OEMs, MNEs, SME part and component associations, and EV experts, to identify specific measures to build a robust EV support industry with active participation by SMEs.

(d) Digital economy

AIR 2018 provided a detailed analysis of the major challenges and recommendations for developing the digital economy, highlighting the need to address standards harmonization, trust, cybersecurity, technical issues and institutional development. Additionally, nurturing capable national digital players and attracting FDI can help bridge digital gaps, address challenges and build a competitive, connected regional digital economy.

Key priorities include attracting FDI and foreign technology to develop networks (submarine cables, national fibre-optic backbones, and mobile and wired broadband access), upgrading technology and expanding capacity to meet growing data demands. Expanding and upgrading ICT infrastructure through investment is crucial for strengthening the regional e-commerce environment and narrowing the digital divide.

Investment-specific policy recommendations include the following:

(i) Push towards a single regional digital market, which in turn will help attract investment because of scalability opportunities.
(ii) Implement the ASEAN Digital Economy Framework Agreement with clear timelines, milestones and actionable workplans, alongside other regional agreements and master plans that advance digital connectivity in the region.
(iii) Develop a competitive region for data centre investment to support the growth of data storage and downstream industries such as data security, cloud computing and e-commerce trade.

(iv) Actively engage and empower businesses and investors in developing the digital economy value chain. Public-private partnership arrangements with investment incentives could be considered as a modality to entice private sector participation in developing and upgrading digital infrastructure.

(v) Adopt targeted policies to attract investment in downstream activities, logistical services and digital solutions, to tackle related digital bottlenecks.

(vi) Engage SMEs and start-ups in building the digital economy ecosystem, including addressing their concerns on access to finance, technical capacity and digital know-how.

(vii) Share experiences and best practices on digital development at the regional level. Such cooperation can be useful in moving the region forward in digital development and in bridging the digital divide.

(viii) Enhance cooperation and facilitate investment for the development of cross-border e-commerce, online payment systems and cybersecurity.

(e) Industry 4.0 and advanced manufacturing

Foreign investors play an important role in the Industry 4.0 transformation process as users, technology providers, manufacturers, trainers, influencers of SMEs and ecosystem enhancers. Understanding the role of MNEs and their contribution to Industry 4.0 transformation in ASEAN is essential.

Consider establishing a regular public-private sector forum on Industry 4.0 technologies and strategies to attract related FDI to support development of a conducive ecosystem. Such a forum could serve as a valuable channel for regional policy development. Also consider creating an ASEAN Industry 4.0 transformation advisory council to provide input on advancing the transformation and to organise an annual Industry 4.0 “state of play” forum.

Recommendations on policies to attract FDI in Industry 4.0 that were examined in *AIR 2020–2021* can be grouped in three categories:

i. At the contextual level, cyberlaws, cybersecurity, data protection and privacy, and data residency are important factors determining the attractiveness of the investment environment in Industry 4.0-relevant sectors.

ii. Setting strategic investment policy direction to support ASEAN in attracting FDI to build enablers and improve productive capacity, which underpins Industry 4.0 transformation. These include questions such as what FDI to attract to build digital infrastructure enablers and in which Industry 4.0 equipment and solutions manufacturing sectors ASEAN and Member States have a competitive advantage to become leaders.

iii. Specific policy measures to address bottlenecks that impede Industry 4.0 transformation, which should target strengthening the capacity of Member States to attract FDI in relevant industries and activities. These measures can be categorized as strengthening the ecosystem and facilitating investment, incentivizing SMEs and attracting FDI by them, regulating and promoting innovation, developing skills and building capacity, establishing a skills development and training centre, measuring Industry 4.0 development, promoting Industry 4.0, supporting sustainable digital development and strengthening regional institutions for Industry 4.0.

(f) Investment in specific sustainable sectors

Some Member States have made significant progress in attracting private investment in sustainable sectors (e.g. infrastructure, health care, water and sanitation), while others face challenges in mobilizing and channeling investment to these sectors (e.g. ASEAN LDCs). Health care services vary widely among Member States. Many actively promote private and international investment in private health care services to complement public efforts (*AIR 2019*). Many allow 100 per cent foreign equity ownership in private health care services, includinghospitals, and in the pharmaceutical sector.

Some specific actions to attract FDI in health care could include the following:

(i) Streamline investment and administrative measures and procedures improve the investment environment.

(ii) Support and strengthen PPP model in health care investment projects

(iii) Foster deeper engagement with various private sector stakeholders, from international hospital groups to private equity investors.

(iv) Harmonize regulatory issues (e.g. ASEAN mutual recognition agreements) to facilitate cross-border health care investment.

(v) Facilitate medical tourism hubs in recognition of the potential of the region for further growth in medical tourism, the positive externality effects (i.e. prevention of "brain drain") and opportunities to scale and develop the health care industry.

(vi) Improve the capacity of countries to develop medical technology, which could include supporting medical start-ups, developing a conducive environment for venture capital to establish operations in the region, and promoting digital or e-health.

(vii) Create programmes and schemes to incentivize and motivate SMEs to get involved in health care development, thereby strengthening the ecosystem.

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Gender Development and Inclusion Gap (GDIG)

To enhance the region's FDI environment in the AEC 2035 programme, ASEAN could strengthen the integration of gender mainstreaming and inclusive development within FDI policies through regional investment-related measures. This could involve promoting sustainable investment by incorporating the GDIG principles into FDI policies, particularly under the ACIA.

Recognizing the crucial role of the female labor force in the development of key industries (chapters 2 and 4), future investment programmes could advance policies that support gender equality and inclusivity beyond the garment and electronics sectors. These policies should focus on increasing women's participation and marginalised group such as persons with disability in higher-skilled roles, particularly in technology-driven activities, through capacity-building programmes and training. Special emphasis should be placed on Industry 4.0 and the digital economy. Expanding the scope of ACIA to actively promote GDIG principles and gender development across a broader range of industries would not only boost women and marginalised group participation in the workforce but also enhance the region's attractiveness as a prime investment destination.

5.3. CONCLUSION

While ASEAN has put in place many policy frameworks to improve the investment environment, more can be done to enhance the attractiveness of the region for FDI in the next decade. In moving forward, four key areas of work require attention: (i) addressing current challenges and gaps, (ii) building on the existing agenda that has worked, (iii) addressing specific FDI areas or limitations to improve competitiveness, and (iv) attracting investment in emerging and future industries to expand the sources of investment and for future industrial development.

Delivering a single market and a single production base with significant reduction or elimination of investment and trade barriers, including ensuring seamless movement of goods and services is critical to future attraction of FDI. These AEC goals need to be the key focus, and they need to be fully realized in the next AEC work plan. Further transforming the region into a major manufacturing hub for a wider range of products and industries, and leveraging FDI to help develop emerging and future industries need to be major components of the future agenda.

Completing the existing AEC 2025 work plans is imperative. There is room to further enhance the investment environment, increase efficiency, improve investment-related policy development, and adopt additional measures to further facilitate trade, investment and services across the region. Efforts need to continue to harness the symbiotic relationship between FDI, industrial development and regional integration. Actions to facilitate and leverage intraregional investment to play a catalytic role for regional connectivity and to increase the growth of intraregional investment are required. Attracting FDI should be based on a more holistic and coordinated regional approach covering policy design and involving investment-related stakeholders. The continued implementation of national investment policy measures aligning with regional integration objectives is important.

To maintain FDI momentum fostered during AEC 2025, ASEAN needs to deepen regional integration, develop human resources and skills for emerging industries, attract technology- and knowledge-oriented investment, advance with industrial upgrading and strengthen public-private partnerships in industrial ecosystem development. An important overall focus is to adopt measures to develop a more efficient regional investment environment and a robust supply chain hub in the next decade.

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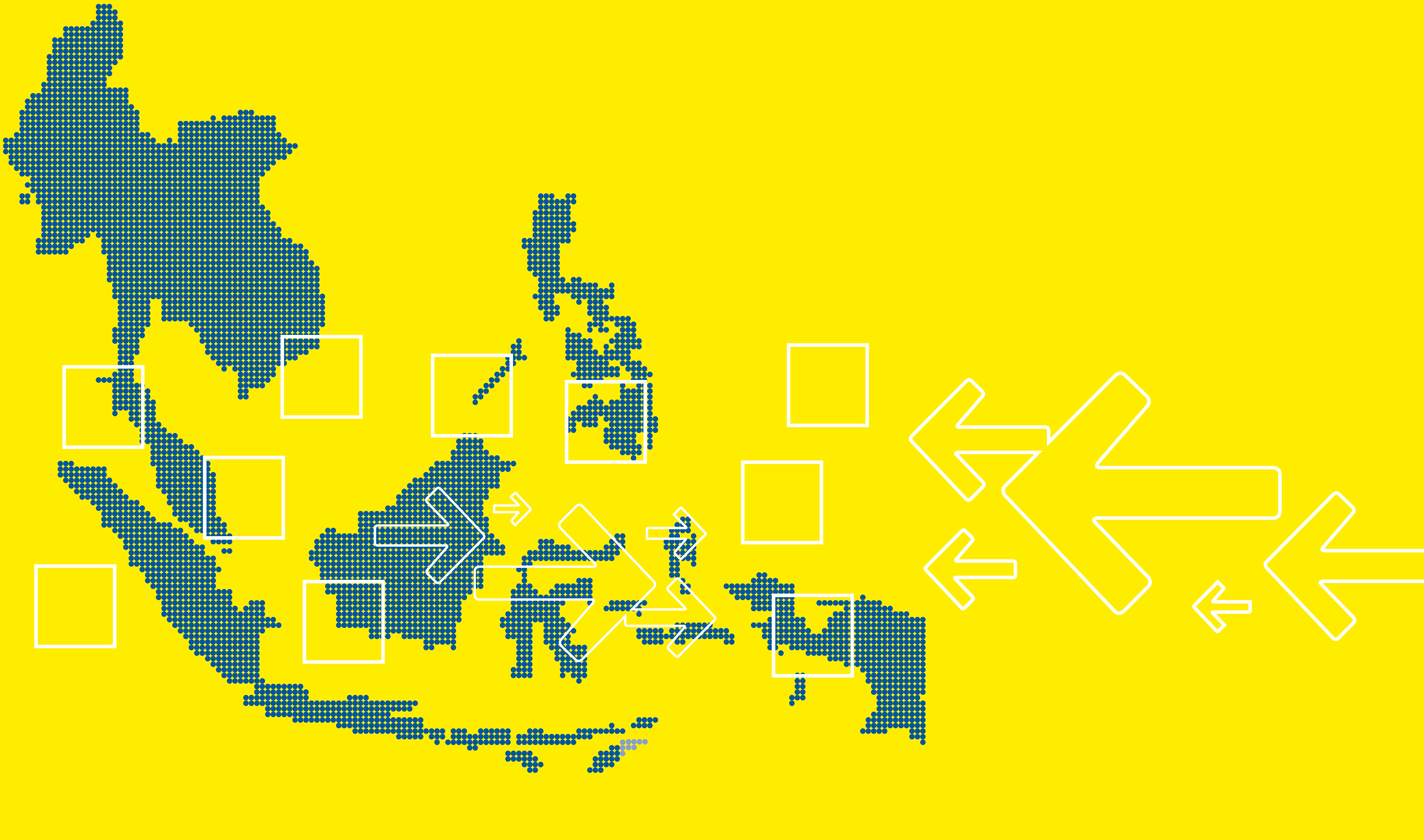

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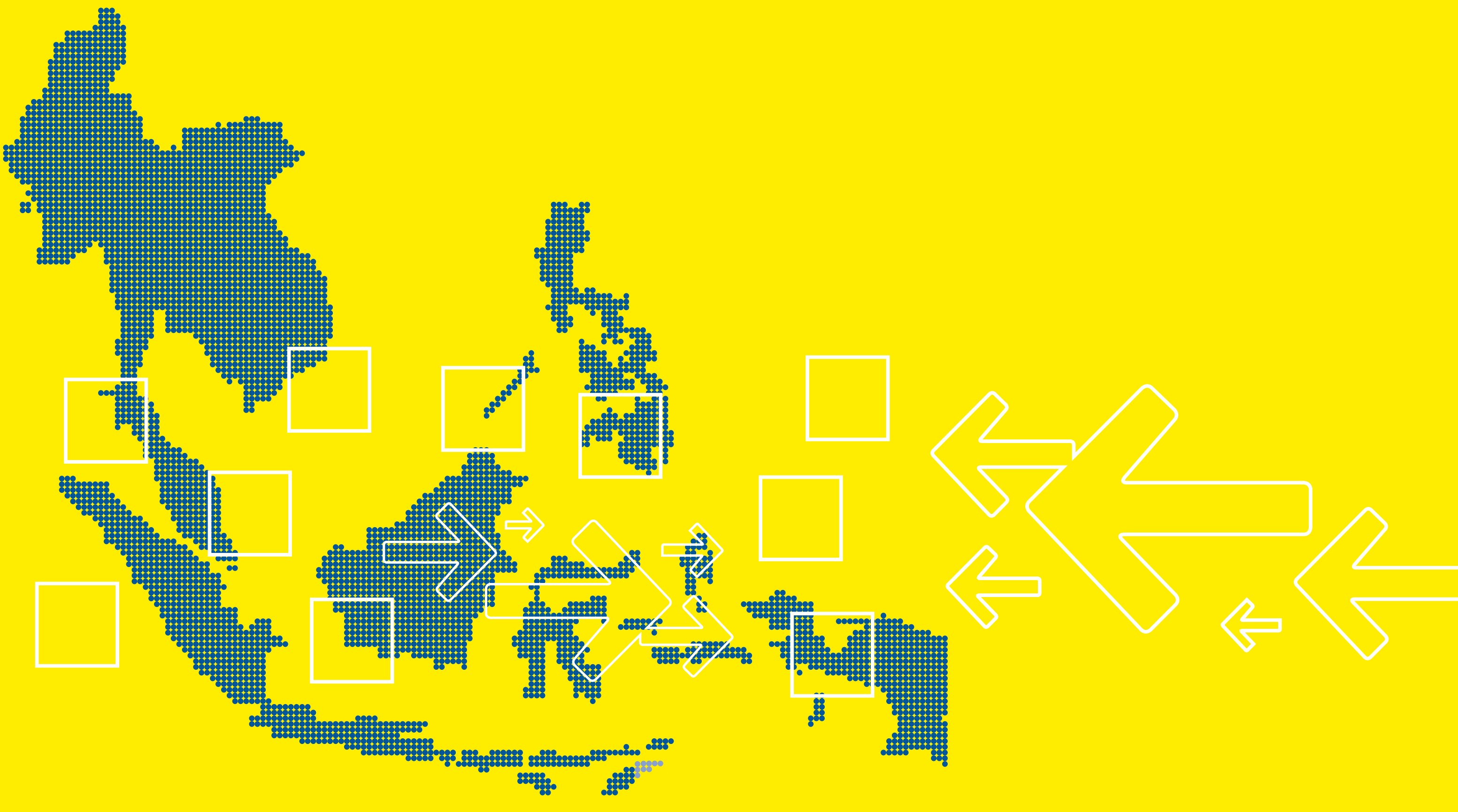
ANNEXES



Annex table 2.1. Implementation of investment-specific agreements and frameworks during AEC Blueprint 2025

Agreement	Objective	Year
ACIA (manufacturing, agriculture, fisheries, forestry, mining and quarrying)		
Fourth Protocol to Amend the ACIA	Incorporate the WTO TRIMs-plus prohibition of performance requirement commitments into the ACIA	2020
Third Protocol to Amend the ACIA	Amend the ACIA Reservation List Headnote deleting paragraph 8, by removing the exception for Thailand regarding juridical persons constituted under the laws of the AMS that are not owned or controlled by nationals of the AMS	2017
Second Protocol to Amend the ACIA	• Modify the definition of "natural persons" particularly regarding permanent residents • Clarify and make explicit that natural persons include permanent residents of a Member State where both that Member State and the receiving Member S tate recognize permanent residents and accord substantially the same treatment to their permanent residents as to their nationals	2016
AFAS and ATISA (Services)		
ASEAN Trade in Services Agreement (ATISA)	Liberalize trade and investment in services, reduce barriers to trade and investment in services and create a predictable business environment	2020
Protocol to Implement the Seventh Package of Commitments on Financial Services under the AFAS	Improve the commitments of ASEAN Member States under the AFAS by improving the quality of existing commitments and committing new services sectors and subsectors, including addressing restrictions related to equity participation, licensing or regulations, joint operation or joint venture, and maximum number of branches	2016
Protocol to Implement the Tenth Package of Commitments on Air Transport Services under the AFAS		2017
Protocol to Implement the Tenth Package of Commitments under the AFAS		2018
Protocol to Implement the Eighth Package of Commitments on Financial Services under the AFAS		2019
Protocol to Implement the Eleventh Package of Commitments on Air Transport Services Under the AFAS		2019
Protocol to Implement the Twelfth Package of Commitments on Air Transport Services under the AFAS		
Investment Facilitation		
ASEAN Investment Facilitation Framework (AIFF) (*part of ASEAN Comprehensive Recovery Framework*)	Facilitate investment through 10 broad measures such as simplifying processes and requirements, enhancing transparency, and adopting digital technologies and single digital windows	2021

Source: ASEAN Secretariat.

Annex table 2.2. ASEAN: National investment policy measures, 2012–2023 (selected examples)

Country	Year	Measures	Category
Indonesia	2012	Enacted a law encouraging the entrance of foreign universities	Liberalization
Singapore	2012	Allowed law practices more flexibility	Liberalization
Philippines	2013	Amended Rural Bank Act to allow foreign capital	Liberalization
Viet Nam	2014	Permitted wholly foreign-invested enterprises to provide almost all types of logistic services	Liberalization
Viet Nam	2014	Introduced a new decree on special economic zones	Facilitation
Indonesia	2015	Began a three-hour licence process for certain categories of investors	Facilitation
Myanmar	2015	Passed a new Mines Law	Facilitation
Myanmar	2016	Introduced a new Investment law	Including facilitation
Myanmar	2016–2017	Eased investment restrictions	Liberalization and facilitation
Brunei Darussalam	2016	Exempted seven business activities from business license requirement	Facilitation
Philippines	2016	Launched "Project Repeal" to reduce red tape	Facilitation
Cambodia	2016	Introduced an online business registration system	Facilitation
Lao People's Democratic Republic	2017	Abolished the minimum registered capital requirements for foreign investors	Liberalization
Thailand	2017	Exempted certain business activities from the requirement to obtain a license under the Foreign Business Act	Facilitation
Singapore	2017	Introduced an enhanced visa scheme to attract promising foreign start-up talent	Facilitation
Indonesia	2017	Increased minimum local content requirement for smartphones	Less favourable
Philippines	2018	Relaxed investment rules to attract foreign direct investment	Liberalization
Indonesia	2019	Set new foreign ownership cap for insurance companies	Liberalization
Malaysia	2019	Relaxed foreign property ownership	Liberalization
Myanmar	2019	Launched Investment Promotion Committee	Promotion
Philippines	2020	Allowed foreign investors full ownership of large-scale geothermal projects	Liberalization
Lao People's Democratic Republic	2020	Amended the Law on Land	Facilitation
Viet Nam	2021	Issued list of sectors restricted or closed for foreign investors	Liberalization
Thailand	2021	Issued incentives to attract foreign investors, retirees and professionals	Liberalization
Cambodia	2021	Implemented investment law that aims to boost FDI	Facilitation
Indonesia	2021	Established Investment Ministry	Promotion
Cambodia	2023	Allowed 100 per cent private investment in high-speed railway	Liberalization
Malaysia	2023	Announced the establishment of an FDI monitoring committee	Facilitation
Philippines	2023	Established :green lanes" for strategic investments	Promotion
Singapore	2023	Raised the minimum investment required for foreign investors to obtain permanent resident status	Less favourable

Source: UNCTAD, Investment Policy Monitor database.

Annex table 4.1. MNEs supporting the semiconductor supply chains in ASEAN, 2022–2024 (selected cases)

MNE	Headquarters	Investment activity	Amount ($ billion)	Location	Year
Amkor Technology	United States	Opened a new factory	1 600	Viet Nam	2023
AT&S	Austria	Opened an integrated-chip substrates campus	1 100	Malaysia	2023
Hana Micron Vina	Republic of Korea	Inaugurated a new plant	600	Viet Nam	2023
		Invested for expansion	1 000		2023
Kyocera	Japan	Expanding capacity to export to China and United States	671 (for 3 years)	Thailand	2023
		Built advanced manufacturing facility for ceramic and tantalum capacitors	300	Thailand	2022
Melexis	Belgium	Expanded facility	76	Malaysia	2023
Murata Manufacturing	Japan	Expanded production facility	78	Philippines	2023
		Built a manufacturing facility	69	Thailand	2023
Nexperia	Netherlands	Opened a factory	364	Malaysia	2022
Osram	Germany	Expanded production facility	1 000	Malaysia	2022
Renesas Electronics	Japan	Invested in an R&D facility	..	Viet Nam	2023
Siltronics	Germany	Opened second fabrication facility	2 200	Singapore	2024
Soitec	France	Expanded wafer fabrication	..	Singapore	2022
United Microelectronics	Taiwan Province of China	Expanded production capacity	5 000	Singapore	2023

Source: *ASEAN Investment Report 2024* research, based on information from company websites and media.
Note: Year is when investment started. Investment for construction of some facilities is spread over a few years.

Annex table 4.2. Top 15 PCB manufacturers: investment activities in ASEAN, 2022–2023

				Recent investments (selected cases)			
Company	**Nationality**	**Industry specializations**	**Presence in ASEAN**	**Location**	**Value** ($ million)	**Year**	**Objectives and motives**
Ibiden	Japan	Communication, infrastructure, automotive	Malaysia Philippines Singapore	Malaysia	201	2022	• Expand production capacity for multilayer PCBs
Tripod Technology	Taiwan Province of China	Communication, automotive, electronics, industrial	Viet Nam	Acquired FICT[a] Vietnam	200	2023	• Expand production capacity for European and United States markets • United States–China trade tensions
Unimicron	Taiwan Province of China	Communication, automotive, industrial	Thailand	Thailand	36	2023	• New manufacturing facility • United States–China trade tensions • Strengthen supply chain • Supplier to Apple and Cisco (both United States), Bosch (Germany), Huawei (China)
Zhen Ding Tech	Taiwan Province of China	Communication, automotive, industrial, aerospace, medical	Singapore Thailand	Thailand	287	2023	• PCB production facility in partnership with Saha Group (Thailand) • Supplier to Cisco (United States), Foxconn (Taiwan Province of China), Nokia (Finland)
Nippon Mektron	Japan	PCBs	Indonesia Philippines Singapore Thailand Viet Nam	Partnership with Skytizens	..	2023	• Develop document management platform
YoungPoong Electronics	Republic of Korea	Consumer electronics, communication, automotive, industrial	Viet Nam	Viet Nam	200	..	• Second production plant • Supplier to Apple (United States), BOE (China), Kyocera (Japan), LG Electronics and Samsung (both Republic of Korea)
Daeduck Electronics	Republic of Korea	Defence, industrial equipment, electronics components	Viet Nam	..	..	..	..
Sumitomo Denko Printed Circuits	Japan	PCBs	Through its sister companies: Indonesia Malaysia Myanmar Philippines Singapore Thailand Viet Nam	..	..	..	..

/...

Annex table 4.2. Top 15 PCB manufacturers: investment activities in ASEAN, 2022–2023 (Concluded)

Company	Nationality	Industry specializations	Presence in ASEAN	Recent investments (selected cases) Location	Value ($ million)	Year	Objectives and motives
Compeq Manufacturing	Taiwan Province of China	Communication, industrial, automotive, medical	Thailand	Thailand	44	2023	• New investment, production scheduled in 2024 • Strengthen supply chain • Diversification of production facilities • Supplier to Broadcom, Cisco (both United States), Philips (Netherland)
Chin Poon Industrial	Taiwan Province of China	automotive electronics, industrial, communication	Thailand	Thailand	..	2023	• Expansion of production capacity • Increased stake in Draco PCB to 95.5% • Supplier to Bosch, Continental (both Germany), Hitachi (Japan), Siemens (Germany)
Dynamic Electronics	Taiwan Province of China	Communication infrastructure, consumer electronics, automotive	Singapore Thailand	Thailand	..	2023	• Expand production capacity • Supplier to Huawei, Oppo, Xiaomi (all China)
Samsung Electro-Mechanics	Republic of Korea	Mobile devices, electronics, automotive	Malaysia Philippines Singapore Viet Nam	Viet Nam	920	2022	• Expand production capacity • Diversify production base • Supplier to LG Electronics, Samsung Electronics (both Republic of Korea)
Shengyi Technology (SyTech)	China	Telecommunication infrastructure, consumer electronics, industrial equipment	Thailand	Thailand	196	2023	• New investor • Strengthen supply chain
Victory Giant Technology	China	Computing, communication, consumer electronics	Viet Nam	Viet Nam	400	2023	• New investor • Electronic component factory
HannStar Board	Taiwan Province of China	Networking, large-area LCDs, notebooks, tablets	Malaysia	..	..	..	..

Source: Rayming PCB and assembly (https://www.scribd.com/document/693007543/Top-20-PCB-Manufacturers-in-the-World-2023-Updated).
Note: Rankings based on PCB manufacturing revenues.
[a] A subsidiary of Fujitsu (Japan).

Annex table 4.3. ASEAN: Top 10 global EV manufacturers, by world sales volume, 2023

Name	Nationality	EV supply chain segments					Investments in 2022–2023 (selected cases)
		Critical minerals	Batteries	EV production	Charging stations	R&D	
BYD	China	..	..	✓	✓	..	• Started construction of a $491 million EV factory in Thailand • Announced plans to build a $250 million EV component factory in Viet Nam and a second EV production facility in another Member State, and to install 200 EV charging stations in Cambodia
Tesla	United States		⊗	⊗	Planned	..	• Signed a $5 billion nickel mining contract with mining companies in Morowali, Indonesia • Planned to open a head office and a Tesla experience and service centre in Malaysia in 2023
VW Group	Germany	✓	✓	✓	✓	..	• Partnering with Vale (Brazil), Ford (United States) and Zhejiang Huayou Cobalt (China) to develop an EV battery ecosystem in Indonesia • Partnering with Porsche (part of the Volkswagen group) and Shell to establish charge points at some Shell stations in Malaysia
GM including Wuling	United States/	⊗	✓	✓	⊗	..	• Signed an agreement with the Indonesian government to invest in the Battery-Based Electric Vehicles project and battery production • With SAIC, launched the production of Wuling Air EV in Indonesia in 2022
Stellantis[a]	Netherlands	⊗	⊗	Planned	⊗	..	• Acquired Naza Automotive (Malaysia) manufacturing plants in Malaysia to be its ASEAN hub
Hyundai Motor	Republic of Korea	⊗	✓	✓	✓	✓	• Broke ground for a $1.1 billion joint venture to produce nickel, cobalt, manganese and aluminum lithium-ion battery cells with LG Energy (Republic of Korea) in Indonesia, which has a $3.5 billion smelter facility to produce nickel sulfate in Indonesia • Inaugurated a $1.5 billion manufacturing plant in Indonesia to produce battery EVs and EVs • Hyundai Mobis (subsidiary): invested $60 million to manufacture battery systems in Indonesia • Launched its first EV charging station network in Indonesia in 2023 and plans to expand R&D in that country
BMW	Germany	⊗	✓	✓	✓	..	• Producing hybrid EVs and batteries in Thailand • Plans to establish a regional headquarters for EV production in Thailand in 2024 • Partnering with Shell to develop EV charging facilities at Shell's service stations in Malaysia
Geely	China	⊗	⊗		⊗	..	• Volvo (subsidiary): started assembling EV SUVs in Malaysia in 2022, which it also exports to Indonesia and Thailand, and plans to expand to the Philippines and Viet Nam
Mercedez Benz	Germany	⊗	✓	✓	✓	⊗	• Started production of EVs in Thailand in 2022 • Installed more than 120 charging stations in Thailand in cooperation with related government agencies (i.e. Electricity Generating Authority of Thailand) and fast-charger facilities in Malaysia
R-N-M Alliance	France/ Japan	⊗				⊗	• Mitsubishi: investing $667 million (over 2022–2025) to produce EVs and batteries in Indonesia; has invested $160 million to upgrade production facilities to produce EV batteries and hybrid EVs in Thailand; investing in EV charging stations in Thailand; plans to build a $250 million plant in Viet Nam, which will include EV production • Nissan: expanded (with its dealers) the charging infrastructure network for Leaf cars in the Philippines in 2021

Source: Adapted from *ASEAN Investment Report 2023.*
Note: Company ranking is based on EV Volumes, "Global EV sales for 2022". SUV = sports utility vehicle.
[a] Stellantis is a member of the PSA Group including Peugeot.

Annex table 4.4. EV policy development in ASEAN

Country	EV adoption target (sales)[a]	Incentives (2021–2023): Subsidy for consumer adoption	Critical minerals (mining/ smelting)	EV production	EV battery	EV charging network	Foreign wholly owned or majority-owned equity	Remarks
Brunei Darussalam	60% by 2035	..	..	Still developing EV policies and regulations			..	• Launched a two-year EV pilot project in 2021 to raise EV usage awareness
Cambodia	40% by 2050	..	..	..	..	..	..	• Reduced EV import duties since 2022 • Developing further incentives • In discussion with private companies on investment in EV charging stations
Indonesia	20% by 2025	✓	✓	✓	✓	✓	✓	• Provided subsidy for EV adoption in 2023 until 2024 • Drafting an incentive programme for EV and supporting industries, including charging stations
Lao PDR	30% by 2030	✓	✓	✓	✗	✓	✓	• Encourages private investments in EV industry • Working out specific incentives and lower tariff rates
Malaysia	15% by 2030	✓	✓	✓	✓	✓	✓	• Launched incentives in 2021 for EV production and development of EV ecosystem • Provides incentives for sustainable mining projects
Myanmar	100% by 2030	✓	..	✓	✓	✓	✓	• Imposed zero tariffs on EV imports from 1 April 2023 to 31 March 2024, to encourage EV use[b] • Provided income tax exemption for EVs and related activities in 2023
Philippines	50% by 2040	✓	✓	Comprehensive Roadmap for EV Industry to attract EV and EV infrastructure investment			✓	• Provides adoption subsidies and investment incentives for EV production, and battery and EV ecosystems, through the Electric Vehicle Industry Development Act, April 2022 • Developing an incentive strategy for EV manufacturing, including electronic parts, batteries, charging stations and testing facilities[c]
Singapore	Phase out of ICE sales by 2030	✓	..	✓	✓	✓	✓	• Provides incentives for development of EV ecosystem (including mobility solutions, high-technology components, technology solutions, charging stations, R&D centres)
Thailand	30% by 2030	✓	✓	✓	✓	✓	✓	• Launched in 2022 enhanced incentives for EV and EV parts production
Viet Nam	100% by 2050	✓	..	Encourages investment in EV projects				• Offers a limited subsidy (reduction of excise tax on domestically manufactured, assembled and imported EVs); investment incentives for EVs governed under the country's investment law • Developing a policy framework dedicated to EV and charging infrastructure

Source: *ASEAN Investment Report 2023.*
Note: ICE = internal combustion engine.
[a] Refers to cars only.
[b] *The Global New Light of Myanmar*, "MIC to prioritize electric vehicles and related business sector", 19 February 2023.
[c] *Manila Bulletin*, "DTI to seek FIRB okay on incentive-driven EV program", 30 May 2023.

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