

ASEAN Resilience in a Protectionist World

A Competitiveness Analysis

Editors: Banh Thi Hang Huang Yijia

ASEAN Resilience in a Protectionist World: A Competitiveness Analysis

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About ACI

The Asia Competitiveness Institute (ACI) was established in August 2006 as a Research Centre at the Lee Kuan Yew School of Public Policy (LKYSPP), National University of Singapore (NUS). It aims to build intellectual leadership and network for understanding and developing competitiveness and sustainable growth in Asia. ACI seeks to contribute to the enhancement of inclusive growth, living standards, and institutional governance through competitiveness research on sub-national economies in Asia. It identifies mitigating issues and challenges for potential public policy interventions through close collaboration with regional governments, business corporations, policy think tanks, and academics. ACI's three key research pillars include (I) Sub-national economies level competitiveness analysis, (II) emerging sustainable development landscape in 16 Asia economies, and (III) Asia's long-term growth strategies and public policy analysis.

ACI's value propositions may be encapsulated in its acronym:

Analytical inputs to initiate policies for policy-makers and business leaders in Asia

Capacity building to enable others through improvement in productivity and efficiency

Intellectual leadership to create pragmatic models of competitiveness and inclusive growth

Vision and Mission

- ACI's over-arching vision is to build up its research credibility with policy impact, contributing as a professional, world-class think-tank.
- ACI's mission is to establish our niche as a leading policy think-tank by identifying development trends, opportunities, and challenges among Asian economies and business corporations.
- ACI endeavours to articulate sound recommendations, promote discussion, and shape research agenda in the arena of public policy amongst Asian governments.
- ACI undertakes evidence-based analysis of public policy issues and decisions, in order to provide assessment of their effectiveness as well as their economic and societal impact.

Preface

The year 2025 has brought renewed protectionism, rising geopolitical tension, and growing uncertainty to the global economy. For ASEAN, these shifts have created both opportunity and strain. The reconfiguration of global supply chains has strengthened the region's appeal as a destination for diversification and strategic investment. However, it has exposed deeper vulnerabilities, as many ASEAN economies remain dependent on external markets for export growth and on imported industrial inputs for production. Rapid advances in artificial intelligence and the accelerating transition toward decarbonisation are reshaping the competitive landscape, opening new possibilities for innovation and industrial upgrading while also demanding stronger capabilities, institutions, and policy adaptation.

Against this backdrop, the Asia Competitiveness Institute (ACI) at the Lee Kuan Yew School of Public Policy, National University of Singapore, continues its work on the key developmental challenges facing ASEAN. Through its long-standing annual studies on the competitiveness of ASEAN Member States, ACI seeks to contribute rigorous and policy-relevant analysis of the region's evolving economic landscape.

ASEAN Resilience in a Protectionist World: A Competitiveness Analysis builds on this work by examining how ASEAN economies are responding to a more fragmented and uncertain global environment. The volume highlights the uneven effects of tariff escalation, supply-chain realignment, technological disruption and green transition, as well as the diverse policy responses adopted across the region. These responses reflect pragmatism, adaptability and nationally differentiated strategies, shaped by each country's economic structure, development priorities and external vulnerabilities. The analysis points to shared regional priorities: strengthening competitiveness, deepening digital capabilities, upgrading domestic production, diversifying external partnerships and building long-term resilience.

I am confident that this volume will provide policymakers, researchers, and other interested readers with useful insights into the challenges and opportunities facing ASEAN at this important juncture. As regional and global conditions continue to evolve, ACI remains committed to advancing research that supports more resilient, forward-looking, and competitive development strategies for ASEAN.

Professor Paul Cheung
Director, Asia Competitiveness Institute
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Executive Summary

In 2025, ASEAN faces a global environment marked by intensifying geopolitical rivalry, renewed protectionism, and increasing uncertainty in the international trading system. These developments have placed added pressure on the rules-based order that has long supported the region's growth and integration. The reconfiguration of global supply chains has created new opportunities for ASEAN, strengthening its position as a destination for diversification and strategic manufacturing investment. However, these shifts have also exposed a deeper structural challenge: while ASEAN has become more important as an export platform for major global markets, many of its economies remain heavily dependent on upstream imports, capital goods and industrial inputs from China. The region's resilience is therefore increasingly shaped by its place in a more fragmented and contested global trade system.

Alongside these shifts, rapid advances in digital technologies, particularly in artificial intelligence, have attracted substantial investment to ASEAN and could significantly raise regional GDP. However, these opportunities are accompanied by risks, especially those associated with automation and labour displacement. Strengthening digital and AI readiness, including institutional capacity, digital infrastructure, human capital, and business capabilities, will therefore be critical to sustain ASEAN's competitiveness. In parallel, accelerating efforts by governments and firms to address climate change are increasing demand for clean technologies, including electric vehicles, solar modules, batteries, and storage systems. These developments create important opportunities for ASEAN economies, especially those with established manufacturing capacity in these sectors.

ASEAN Resilience in a Protectionist World: A Competitiveness Analysis presents the latest findings from the ACI ASEAN Annual Competitiveness Analysis and the newly developed ASEAN+ Digital Competitiveness Analysis. The report offers a broad assessment of ASEAN's evolving economic trajectory through quantitative analysis and a review of major policy developments at both the regional and national levels. Its central concern is how ASEAN and its member states can maintain resilience and competitiveness in an increasingly protectionist, technologically disruptive, and structurally transformed global economy.

Chapter 1 reviews ASEAN's recent economic landscape, including trends in growth, trade, and foreign direct investment, while also providing a snapshot of competitiveness in digital development and governance. It highlights several major forces shaping the region's future development path, including great-power rivalry, the spread of protectionist policies, technological disruption associated with artificial intelligence, and increasingly ambitious climate-related regulatory and policy agendas.

Chapter 2 examines how ASEAN is responding to renewed US protectionism at a time when many of its economies are becoming more deeply dependent on Chinese industrial supply. It shows that the effects of escalating US tariffs are unevenly distributed across countries and sectors, with some member states more vulnerable to reciprocal tariff measures and others more exposed to sector-specific national-security tariffs. Growing

imports from China have reinforced ASEAN's dependence on upstream industrial inputs, narrowing the room for autonomous industrial adjustment, increasing exposure to supply-chain disruption and heightening scrutiny on transshipment and rules of origin. The chapter argues that ASEAN's challenge is no longer defined by tariff exposure alone, but by the need to build resilience under triangular dependence: continued reliance on the US as a major export market together with deepening dependence on China as a source of industrial inputs. As a result, policy responses across ASEAN have been nationally differentiated rather than uniform, combining short-term stabilisation measures with longer-term efforts at industrial upgrading, localisation, diversification and strategic realignment. The chapter also presents case studies of Vietnam's automotive industry and Malaysia's solar photovoltaic sector.

Chapter 3 features the 2025 editions of ACI's Annual ASEAN Competitiveness Index and ASEAN Digital Competitiveness Index. In the overall competitiveness rankings, Singapore remains the region's strongest performer, leading in all major dimensions, followed by Thailand and Malaysia. Indonesia, the Philippines, and Vietnam continue to trail these higher-ranking economies in most dimensions of competitiveness. A similar pattern appears in the digital rankings, where Singapore maintains a substantial lead, followed by Malaysia, Thailand, the Philippines, Vietnam, and Indonesia. These findings underscore the persistence of significant development gaps within ASEAN, particularly in digital capability and readiness.

The report also emphasises that strengthening ASEAN's long-term resilience will require more than short-term adaptation to external shocks. Sustained competitiveness will depend on improving digital connectivity, institutional capacity, human capital, technological adoption and industrial upgrading, while also deepening the region's ability to capture opportunities arising from the green transition and changes in global production networks. As ASEAN moves toward a more integrated digital economy, narrowing internal development gaps will become increasingly important.

Taken together, the findings of this report suggest that ASEAN's resilience in a more fragmented global economy will depend on its ability to respond flexibly to rising protectionism, technological disruption, structural transformation and shifting patterns of trade dependence. Although member states face different vulnerabilities and opportunities, the broader regional challenge is clear: to strengthen competitiveness, diversify external partnerships, deepen domestic capabilities and build more adaptive and forward-looking development strategies in an era of heightened uncertainty.

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This year's volume, *ASEAN Resilience in a Protectionist World: A Competitiveness Analysis*, was supervised and led by Dr. Banh Thi Hang and Huang Yijia, with contributions from Dr. Liu Jingting, Goh Yuh Xian, Ma Qi Xiang, Tran Thi Ngoc My, Le Dan and Brendan Lee Juan Xin.

This book presents the latest edition of the Annual ASEAN Competitiveness and Digital Competitiveness studies, drawing on the most recent available data. Our comprehensive frameworks monitor and evaluate the factors influencing the economic and digital competitiveness of regional economies, while offering insights into how they can remain resilient amid rising protectionism and capitalise on emerging opportunities from global supply chain reconfiguration and the digital economy. Our analysis aims to provide readers with a nuanced understanding of these multi-faceted topics, which debunks conventional assumptions and opens new avenues for further examination and development.

This publication would not have been possible without the support of our research and administrative colleagues. In particular, we would like to extend our sincere thanks to the competent and dedicated administrative team at ACI, including Cai Jiao Tracy, Po Lai Yin Lyne, Nur Atiqah Binte Rahmat, and Dewi Jelina Ayu Binte Johari.

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List of Abbreviations

Abbreviation	Full Name
ACFTA	ASEAN-China Free Trade Area
ADB	Asian Development Bank
AI	Artificial Intelligence
AM	ASEAN Member States
APAEC	ASEAN Plan of Action for Energy Cooperation
ASEAN	Association of Southeast Asian Nations
BACI	Base pour l'Analyse du Commerce International
BEC	Broad Economic Categories
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BIS	Bureau of Industry and Security
BPO	Business Process Outsourcing
BSP	Bangko Sentral ng Pilipinas
CATL	Contemporary Amperex Technology Co., Limited
CBAM	Carbon Border Adjustment Mechanism
CEPII	Centre d'Études Prospectives et d'Informations Internationales
CI	Core Inputs
COD	Cash-on-Delivery
CPC	Central Product Classification
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
DDS	Digitally-deliverable services
DEFA	Digital Economy Framework Agreement
DEI	Double Exposure Index
DESTA	Design of Trade Agreements
DI	Digital Infrastructure
DO	Digital Output
DU	Digital Utilisation
DVA	Domestic Value Added
EO	Executive Order
ETS	Emission trading system
EU	European Union
EV	Electric Vehicle
FBMC	Financial, Businesses and Manpower Conditions
FTA	Free Trade Agreement
FVA	Foreign Value Added
GDP	Gross Domestic Product
GIS	Government and Institutional Setting

Continued on next page

List of Abbreviations continued from previous page

Abbreviation	Full Name
GRIT	Graduate Industry Traineeships
GST	Goods and Services Tax
GTA	Global Trade Alert
GVCs	Global Value Chains
HS	Harmonised System classification
IC	Institutional Capacity
ICT	Information and Communication Technology
IEEPA	International Emergency Economic Powers Act
IFC	International Financial Centre
IMF	International Monetary Fund
IMTS	International Merchandise Trade Statistics
JS-SEZ	Johor-Singapore Special Economic Zone
Lao PDR	Lao People's Democratic Republic
MAS	Monetary Authority of Singapore
MENA	Middle East and North Africa
MHDV	Medium-and Heavy-Duty Vehicles
MRIO	Multiregional Input-Output
MS	Macroeconomic Stability
NCII	National Critical Information Infrastructure
ND-CP	Ngh ãnh ca Chính ph
NIC	National Innovation Center
NTMs	Non-Tariff Measures
NUS	National University of Singapore
OECD	Organization for Economic Co-operation and Development
PIT	Personal Income Tax
PV	Photovoltaic
PWCS	Progressive Wage Credit Scheme
QLID	Quality of Life and Infrastructure
R	Rank
RCEP	Regional Comprehensive Economic Partnership
RM	Ringgit Malaysia
ROW	Rest of World
S	Score
S.Korea	South Korea
SGD	Singapore Dollar
SMEs	Small and Medium-sized Enterprises
TEI	Trade Exposure Index
TPP	Trans-Pacific Partnership
UNSTATS	United Nations Statistics Division

Continued on next page

List of Abbreviations continued from previous page

Abbreviation	Full Name
UPU	Universal Postal Union
US	United States
USD	US Dollar
USMCA	United States–Mexico–Canada Agreement
VAT	Value-Added Tax
VND	Vietnamese Dong
WAT	Weighted Average Tariff
WDI	World Development Indicators
WITS	World Integrated Trade Solution
WTO	World Trade Organization

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Chapter 1

ASEAN's Economic Landscape: Challenges and Opportunities in a Volatile Global Economy

Ma Qi Xiang, Huang Yijia, Banh Thi Hang

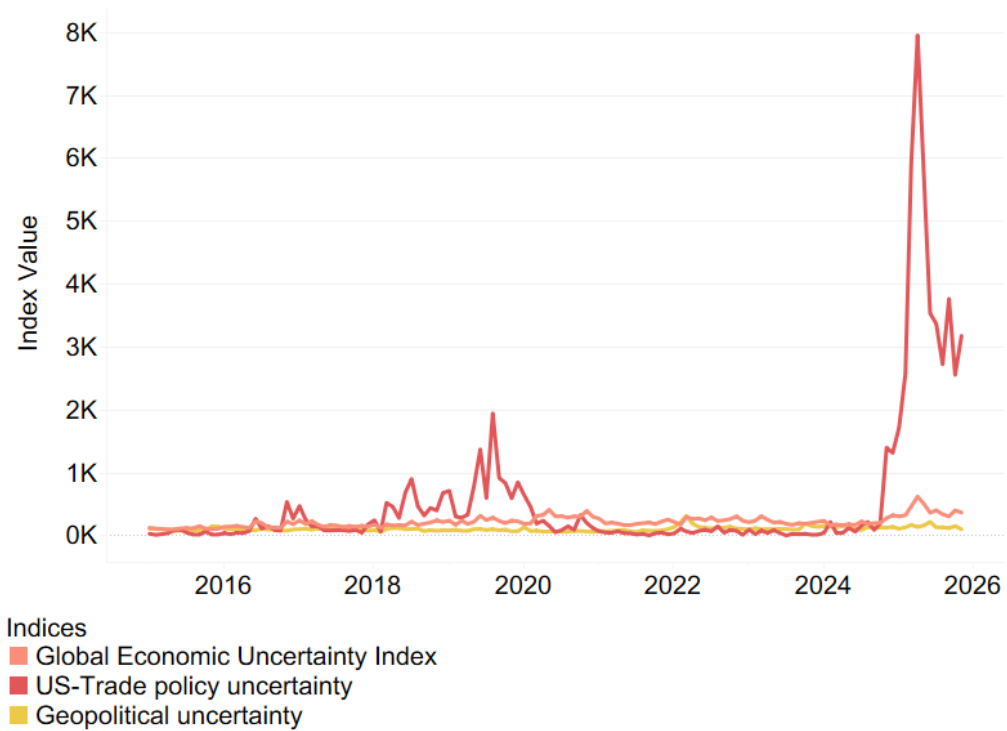
1.1 Introduction

The year 2025 has been marked by intensifying geopolitical tensions, trade conflicts, and policy uncertainty. Reflecting this volatility, the International Monetary Fund (IMF) revised its global growth forecasts several times during the year: from 3.3% for 2025 and 2026 (International Monetary Fund (IMF), 2025d), down to 3.2% and 3.1% amid escalating trade tensions (International Monetary Fund (IMF), 2025e), before restoring the forecast to 3.3% on the back of stronger technology- and artificial intelligence (AI)-related investment (International Monetary Fund (IMF), 2026). These repeated revisions highlight the fragility of the global economy and the growing risks facing countries that depend heavily on an open and stable international environment. This is especially true for the member states of the Association of Southeast Asian Nations (ASEAN), whose economies remain deeply reliant on trade, investment, and cross-border production networks.

ASEAN Member States (AMS) are therefore navigating a world increasingly characterised by uncertainty. Trade restrictions, geopolitical rivalry, and technological fragmentation have all intensified in recent years (Figure 1.1), forcing governments to reassess their development strategies. ASEAN's latest Community Vision, *ASEAN 2045: Our Shared Future*, identifies a set of major trends that will shape the region's future (The ASEAN Secretariat, 2025a). Four dimensions are particularly important:

1. Great power rivalry and geopolitical tensions.
2. Rising protectionism and barriers to trade and investment, and growing concern over supply chain resilience.
3. Digitalisation, including cybersecurity, AI, and their impacts on future work.
4. The green economy, accelerated by climate pressures and the increasing frequency of natural disasters.

To achieve the goal of building a "Resilient, Innovative, Dynamic, and People-Centred ASEAN", the region must take these challenges and opportunities into consideration when calibrating its economic strategies.

Figure 1.1: Global Uncertainty Indices, 2015-2026

Source: *Economic Policy Uncertainty* (accessed 20 March 2026)

ASEAN has already taken steps to respond to these mounting pressures, particularly through deeper regional and interregional cooperation. The accession of Timor-Leste to ASEAN on 26 October 2025 marks a significant milestone in regional integration. At the same time, ASEAN continues to expand its engagement through major trade arrangements such as the Regional Comprehensive Economic Partnership (RCEP) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), both of which aim to broaden membership and deepen economic links (Baharuddin, 2025; Jalil, 2025).

In digital governance, ASEAN published the *ASEAN Responsible AI Roadmap (2025–2030)* in 2025. The Roadmap provides guidance for member states in two broad areas: establishing regulatory foundations for responsible AI, and operationalising sustainable AI strategies tailored to differing national capacities (The ASEAN Secretariat, 2025b). In the area of green transition, the *ASEAN Plan of Action for Energy Cooperation (APAEC) 2026–2030* raises the regional target for renewable energy to 45% of total installed power capacity by 2030, up from 35% in the previous APAEC (ASEAN Centre for Energy, 2025).

As global fragmentation reshapes trade, technology, and investment flows, understanding the competitiveness of AMS in global supply chains, the digital economy, and the green transition becomes increasingly important for forward-looking policymaking. This volume therefore brings together data, analysis, and case studies to support ASEAN's strategic development in a more un-

certain world.

This volume comprises three chapters. The remainder of Chapter 1 outlines the major opportunities and challenges shaping ASEAN's development and provides an overview of the region's economic landscape. This establishes the broader context for the chapters that follow.

Chapter 2 examines how ASEAN and its member states responded to rising US tariffs in 2025. It argues that the region's policy challenge is best understood as one of resilience under triangular dependence: ASEAN economies remain dependent on Chinese upstream inputs while also relying on the US market for downstream exports. This creates a form of double exposure, in which vulnerability stems not only from tariff escalation itself, but from the interaction between export dependence and import dependence. The chapter shows that policy responses were selective and nationally differentiated. Most governments relied primarily on adaptive-adjustment measures and short-term support, while deeper transformative restructuring remained limited. Case studies of Vietnam's automobile and supporting industries and Malaysia's solar photovoltaic (PV) sector illustrate these broader dynamics.

Chapter 3 provides an in-depth analysis of general and digital competitiveness across six AMS. The General Competitiveness Index evaluates strengths and weaknesses in macroeconomic stability, government and institutional settings, financial, business and manpower conditions, and quality of life and infrastructure. The Digital Competitiveness Index assesses performance in digital outputs, institutional capacity, digital infrastructure, core inputs, and digital utilisation. Together, these analyses identify areas in which ASEAN and its member states can strengthen competitiveness and better seize opportunities arising from supply-chain reconfiguration, the green transition, and the digital economy.

Taken together, the chapters in this volume highlight both the scale of the challenges facing ASEAN and the scope for strategic adaptation. To build a more inclusive, sustainable, dynamic, and resilient ASEAN, the region must not only respond to immediate external shocks, but also strengthen the domestic capabilities needed to compete in an increasingly fragmented global economy.

1.2 ASEAN Economic Landscape

Against this backdrop of rising uncertainty, geopolitical rivalry, and structural transformation, it is necessary to assess ASEAN's current economic position more closely. Before turning to the specific policy challenges discussed in later chapters, this section maps the region's broader economic landscape. By examining recent macroeconomic trends, trade patterns, investment flows, and developments in the digital economy, it provides a baseline for understanding both the strengths that continue to underpin ASEAN's growth and the vulnerabilities that may constrain its resilience in a more fragmented global environment.

Drawing on data from major international sources, Table 1.1 presents the key macroeconomic and demographic indicators for ASEAN in 2024. These indicators highlight the diversity of AMS and provide a foundation for understanding the region's broader economic landscape.

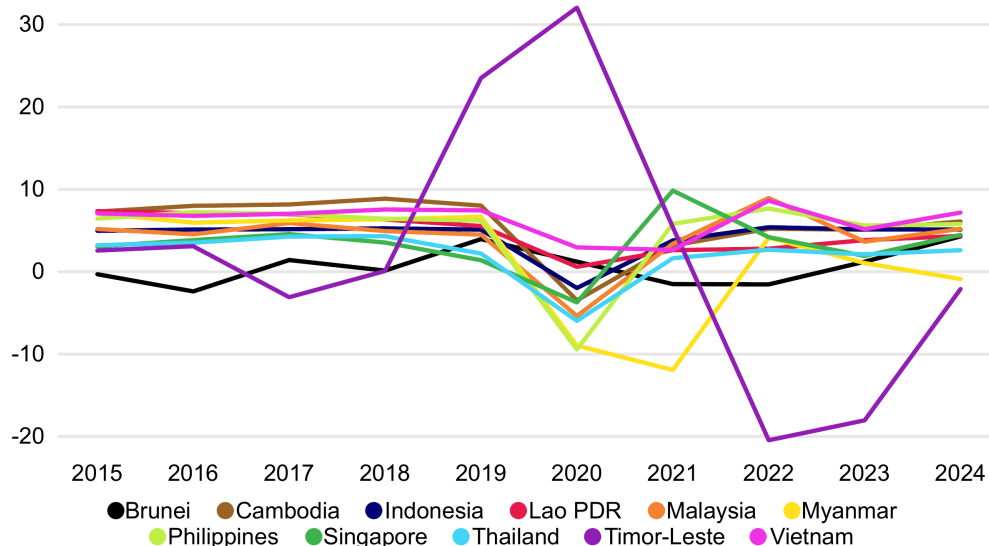
ASEAN remains a highly diverse region in both demographic and economic terms. With a combined population of 695.4 million and GDP of US\$3,984.4 billion, it represents a major economic bloc whose strategic direction, policy choices, and development trajectory increasingly attract global attention.

Table 1.1: ASEAN Key Indicators 2024

Country	Land Area (‘000 km ²)	Population (Millions)	Human Development Index	GDP (current prices in US\$ billions)
Brunei	5.8	0.5	0.837	15.5
Cambodia	181.0	17.6	0.606	46.4
Indonesia	1892.4	283.5	0.728	1,396.3
Lao PDR	236.8	7.8	0.617	16.5
Malaysia	330.4	35.6	0.819	422.0
Myanmar	676.6	54.5	0.609	74.1
Philippines	300.0	115.8	0.720	461.6
Singapore	0.7	6.0	0.946	547.4
Thailand	497.4	71.7	0.798	526.4
Timor-Leste	14.9	1.4	0.634	1.9
Vietnam	331.3	101.0	0.766	476.4
ASEAN	4467.4	695.4	-	3,984.4
Country	GDP per capita (const. 2015 US\$)	Trade (% of GDP)	FDI Inflow	
			US\$ millions	% of GDP
Brunei	29,605.9	133	29.1	0.2
Cambodia	2,183.6	143	4,394.6	9.5
Indonesia	4,367.9	43	24,107.3	1.7
Lao PDR	2,724.4	111	988.5	6.0
Malaysia	11,868.4	137	15,593.2	3.7
Myanmar	1,158.5	37	1,095.3	1.5
Philippines	3,925.3	66	8,929.8	1.9
Singapore	67,706.8	322	151,941.2	27.8
Thailand	6,573.4	137	10,099.2	1.9
Timor-Leste	1,235.8	51	232.2	12.3
Vietnam	4,017.7	164	20,170.0	4.2
ASEAN	-	122	237,580.5	6.0

Note: Figures in red are data from 2023.

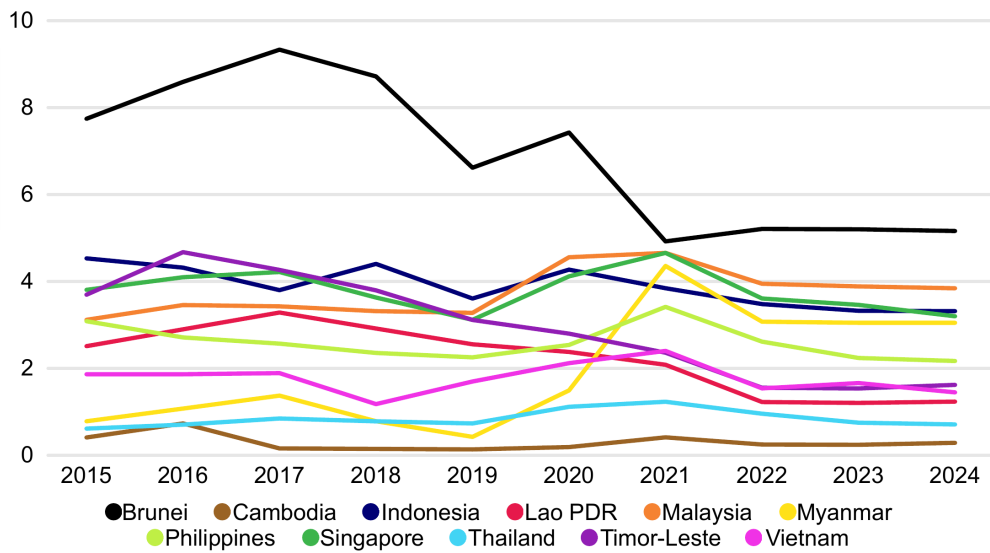
Source: Collectively aggregated from ASEANstats, The World Bank Group World Development Indicators (WDI), UNDP, and ADB (accessed 9 Dec 2025)

Figure 1.2: Annual GDP Growth Rate of the AMS (%), 2015-2024

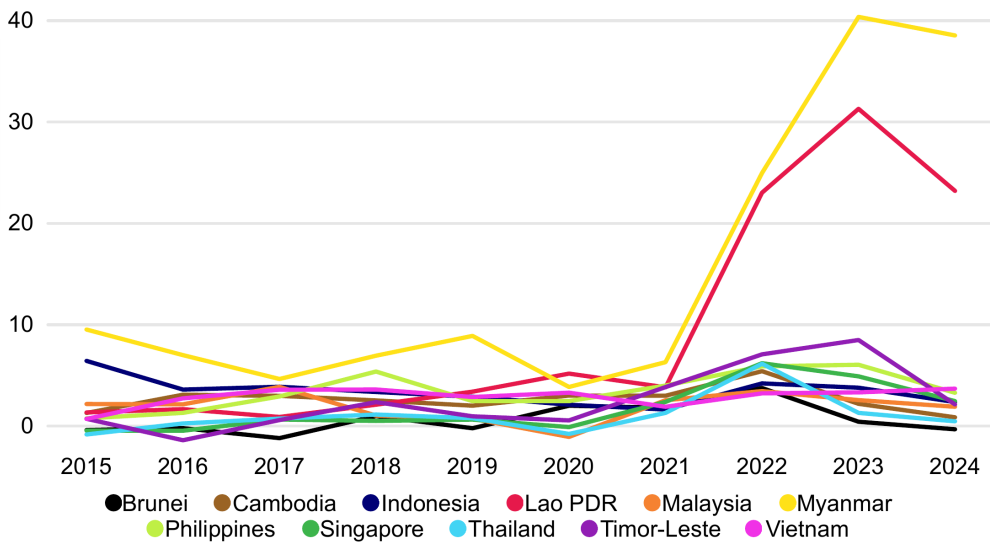
Source: Asia Competitiveness Institute based on The World Bank Group WDI (accessed 18 Sep 2025)

Despite their diversity, AMS have followed broadly similar growth trajectories in recent years. Excluding Myanmar and Timor-Leste, all AMS recorded positive GDP growth in 2024 (Figure 1.2). Myanmar's economy continued to underperform, as political conflict and extreme climate conditions disrupted supply chains and weakened production capacity (Asian Development Bank, 2025). Timor-Leste, meanwhile, remained constrained by a decline in its oil and gas sector. Production stoppages, together with persistently weak oil and gas prices since 2022, pushed overall GDP growth into negative territory despite continued expansion in the non-oil economy (World Bank, 2025c).

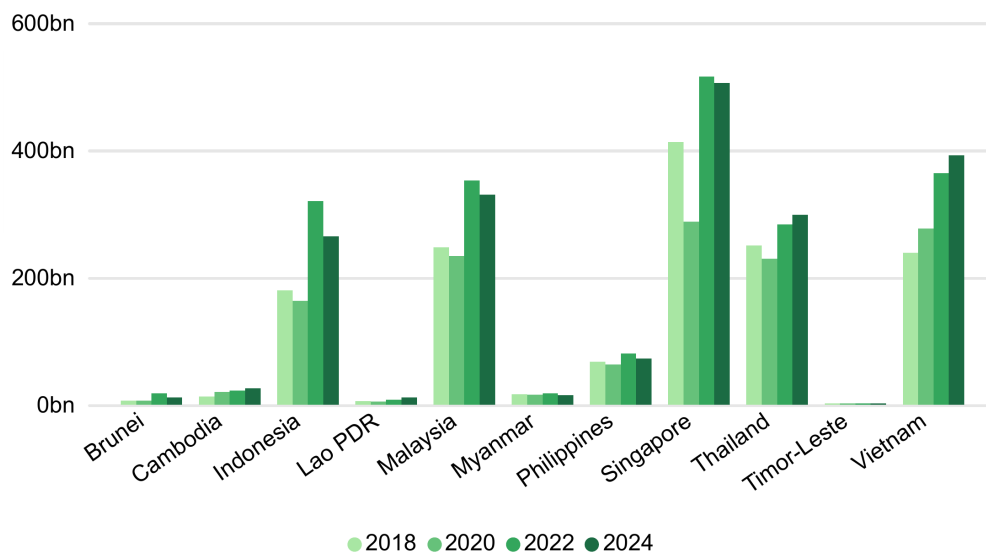
The conditions of the labour-market and prices showed partial stabilisation in the region. Unemployment remained generally stable after the pandemic (Figure 1.3), while inflation eased in most AMS in 2024, with Vietnam as an exception (Figure 1.4). However, inflation remained elevated in Lao PDR and Myanmar. In Lao PDR, inflation reached 23.13%, driven largely by currency depreciation since 2022 (U.S. Department of State, 2025; World Bank, 2024a). In Myanmar, inflationary pressure continued to come from supply-chain disruption, food-production shocks, conflict, and exchange-rate weakness (Asian Development Bank, 2025).

Figure 1.3: Annual Unemployment Rate of the AMS (%), 2015-2024

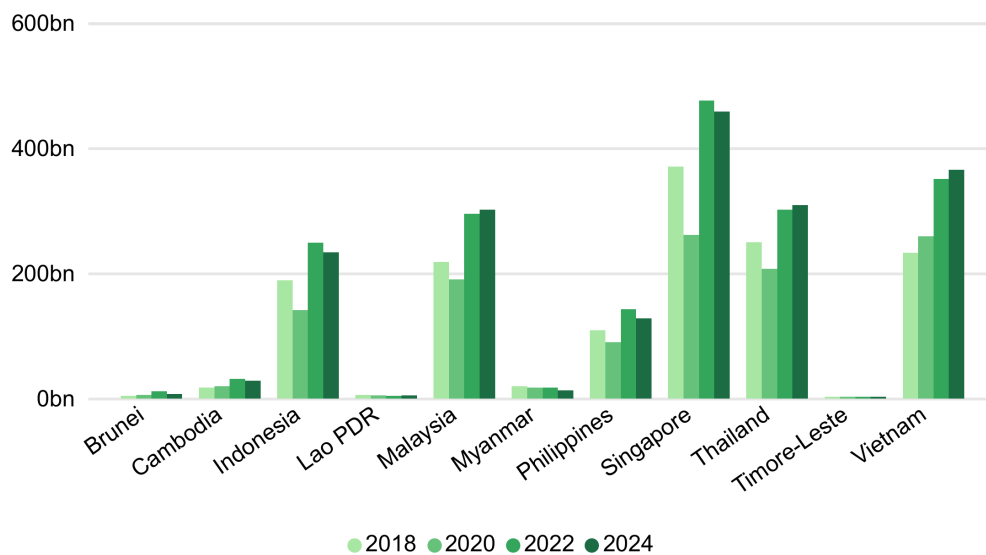
Source: Asia Competitiveness Institute based on Economist Intelligence Unit (accessed 2 Oct 2025)

Figure 1.4: Annual Inflation Rate of the AMS (%), 2015-2024

Source: Asia Competitiveness Institute based on The World Bank WDI (accessed 18 Sep 2025)

Figure 1.5: Export of Goods across the AMS (US\$)

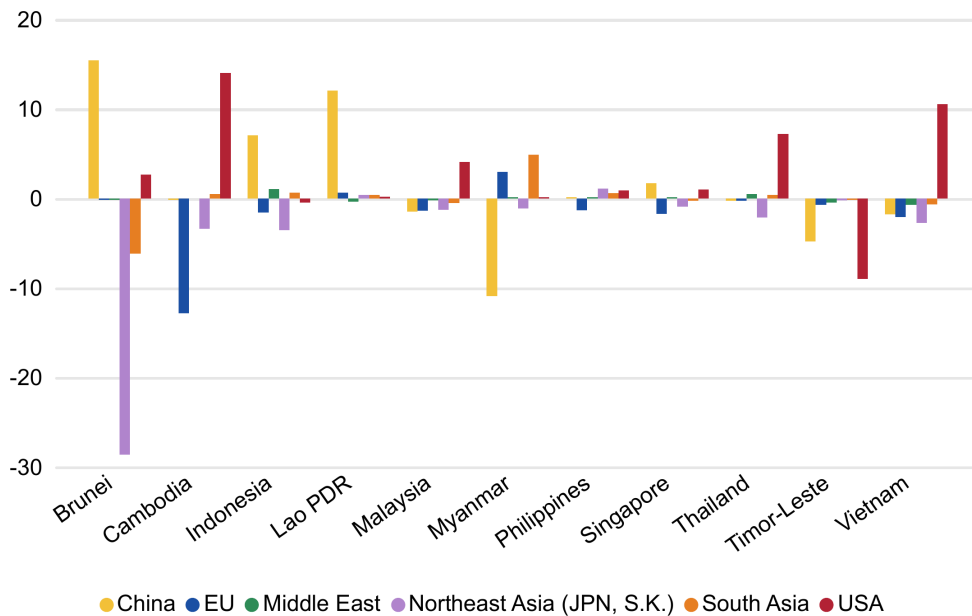
Source: Asia Competitiveness Institute based on IMF (accessed 6 Oct 2025)

Figure 1.6: Import of Goods across the AMS (US\$)

Source: Asia Competitiveness Institute based on IMF (accessed 6 Oct 2025)

Trade remains a central pillar of ASEAN's economic strength. Singapore maintains the highest trade-to-GDP ratio at 322%, while the region stands at 122% (Table 1.1). However, in contrast with 2022, the export of goods for 2024 declined for all AMS except Cambodia, Lao PDR, Thailand, and Vietnam (Figure 1.5). Imports mirrored this trend, with a decrease across the region, except in Lao PDR, Malaysia, Thailand, and Vietnam (Figure 1.6). Exports across the board suffered in 2024, due to demand from key markets in Asia and the US tapering down (Asian Development Bank, 2024).

Figure 1.7: Changes in Export Share Composition (%), 2024 minus 2018

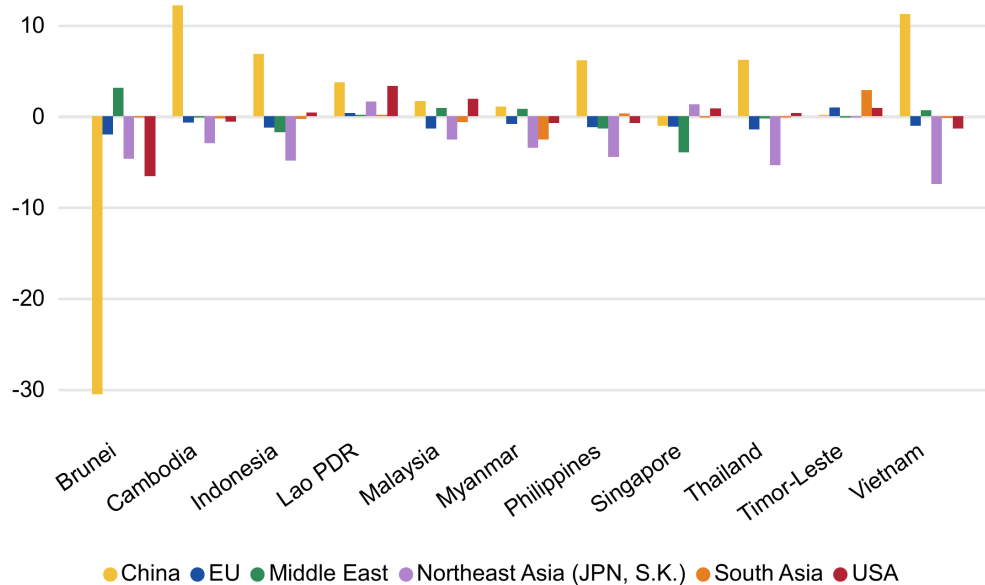


Note: South Asia comprises Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.

Source: Asia Competitiveness Institute based on IMF (accessed 6 Oct 2025)

A related trend is ASEAN's deepening dependence on China and the US. On the export side, Brunei and Lao PDR recorded increases of more than 10 percentage points in export shares to China between 2018 and 2024, while Cambodia and Vietnam recorded similarly large increases in export shares to the US (Figure 1.7). On the import side, all AMS except Brunei and Singapore increased their import shares from China over the same period, with Cambodia and Vietnam again posting rises of more than 10 percentage points (Figure 1.8).

The sharp increase in total trade shares with China and the US underscores ASEAN's over-reliance on them and serves as a timely warning for AMS to diversify their trading partners, lest ASEAN become even more exposed to the economic conditions of these markets. The broad decline in exports observed in Figure 1.5 illustrates the consequence of this dependence, where weakened consumption in both markets directly translates to an underperforming export sector.

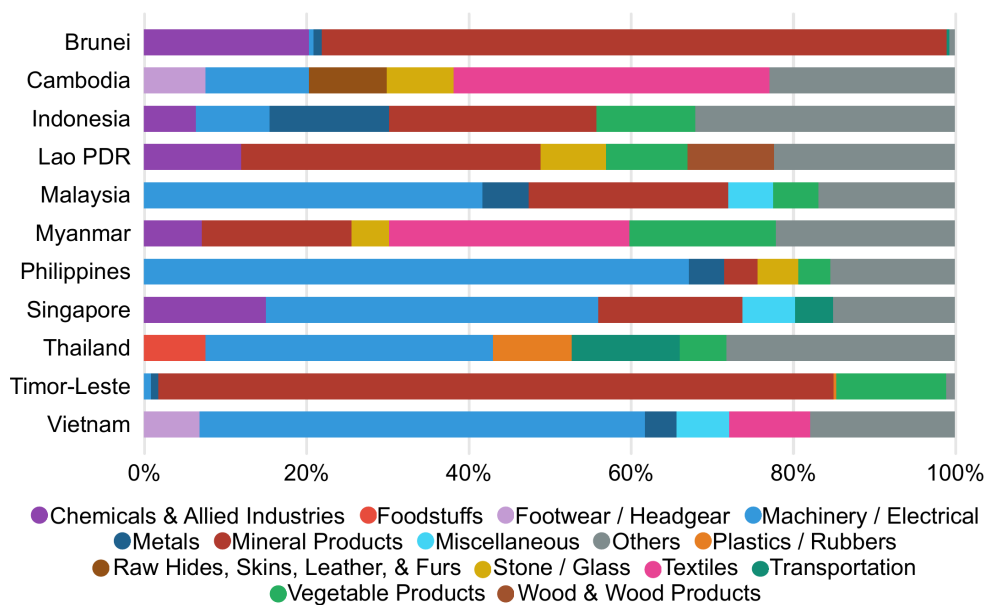
Figure 1.8: Changes in Import Share Composition (%), 2024 minus 2018

Note: South Asia comprises Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.

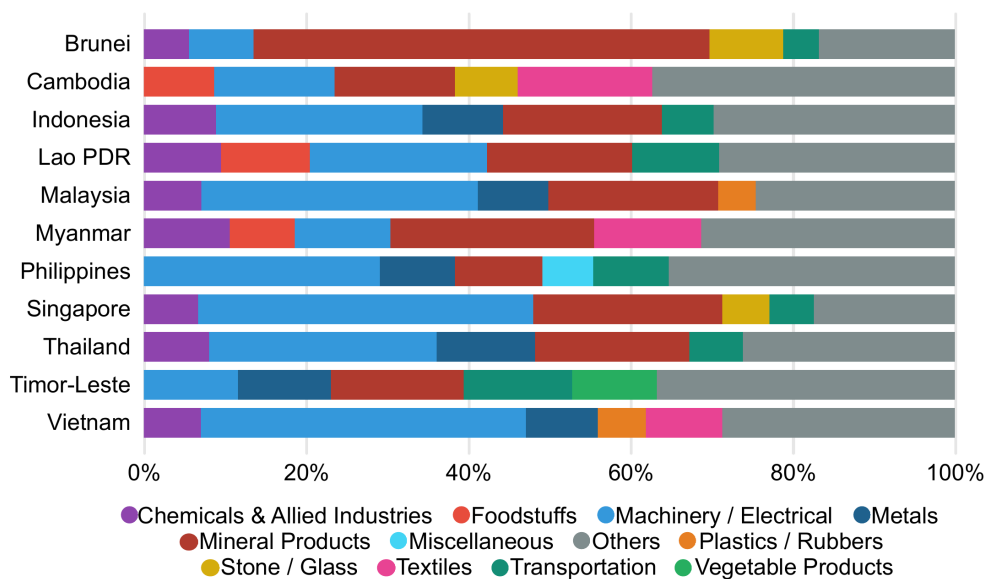
Source: Asia Competitiveness Institute based on IMF (accessed 6 Oct 2025)

Beyond the dependence on specific trading partners, AMS must also guard against overconcentration in particular sectors. More than half of the exports of Brunei, the Philippines, Timor-Leste, and Vietnam originate in a single sector. Brunei and Timor-Leste's exports are heavily reliant on mineral products, while machinery and electrical products dominate exports from the Philippines and Vietnam (Figure 1.9). In contrast, imports are relatively more diversified throughout the region. Only Brunei remains significantly exposed, with mineral products accounting for 56.16% of total imports (Figure 1.10).

Malaysia and Singapore have benefited from the global surge in demand for AI goods in 2023 (Asian Development Bank, 2025), which has boosted their machinery and electrical exports, which accounted for 41.73% and 40.95% of total exports, respectively (Figure 1.9). However, this same concentration leaves them vulnerable should demand for AI goods soften, underscoring the broader need for ASEAN to diversify not only its trading partners, but also its sectoral composition. Otherwise, a negative shock to a dominant sector could severely constrain overall economic growth, as evidenced by the case of Timor-Leste's oil and gas sector.

Figure 1.9: Top 5 Export Sectors (%), 2023

Source: Asia Competitiveness Institute based on CEPII BACI (accessed 7 Oct 2025)

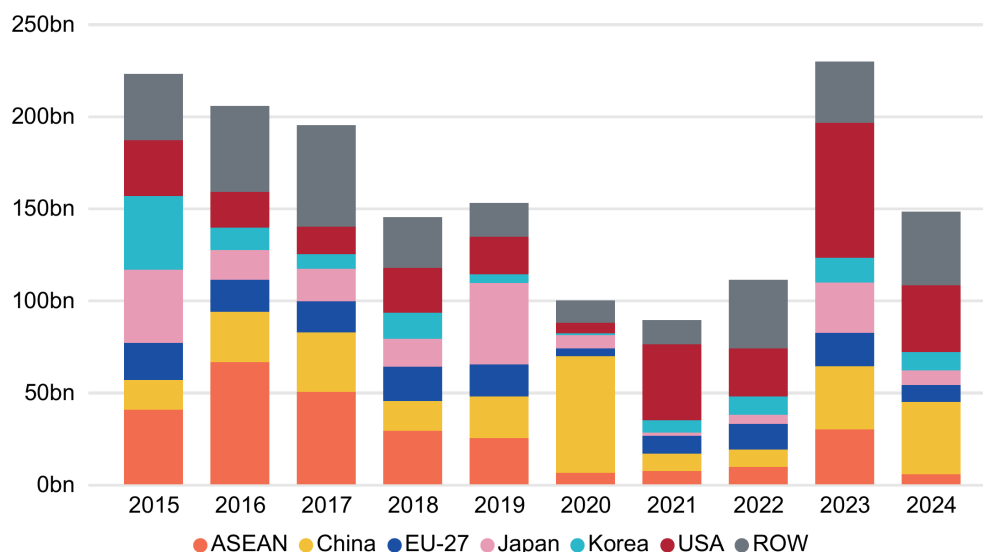
Figure 1.10: Top 5 Import Sectors (%), 2023

Source: Asia Competitiveness Institute based on CEPII BACI (accessed 7 Oct 2025)

Foreign direct investment (FDI) remains a core measure of ASEAN's global attraction and competitiveness. While earlier iterations of the book analysed the overall FDI flow into ASEAN, this iteration focuses on greenfield FDI, which tracks the foreign capital invested into building new facilities. Greenfield FDI provides a more accurate gauge of long-term, sustainable growth in ASEAN.

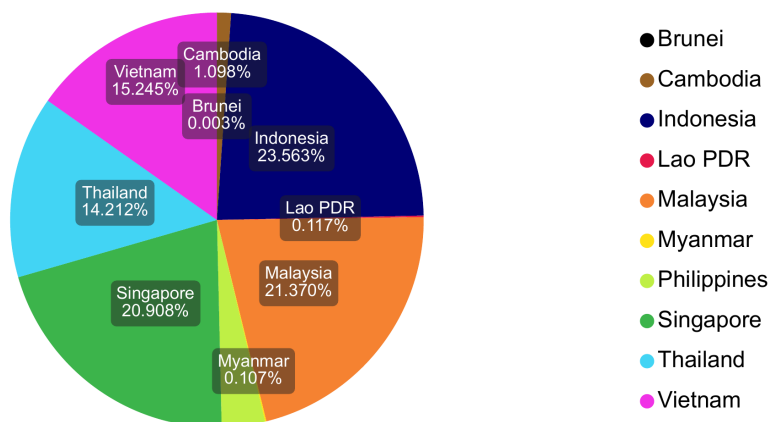
ASEAN continues to attract significant investment, recording US\$148 billion in greenfield FDI in 2024 (Figure 1.11). However, this still falls short of the US\$229 billion peak achieved in 2023, largely due to a drop in FDI from the US, as significant US FDI flowed into Singapore's financial and insurance sector during 2023 (K. G. Tan et al., 2025). Reduced FDI from Japan, the EU-27, and intra-ASEAN also contributed to the overall decline in greenfield FDI.

Figure 1.11: Greenfield FDI Inflow to ASEAN (US\$), 2015-2024

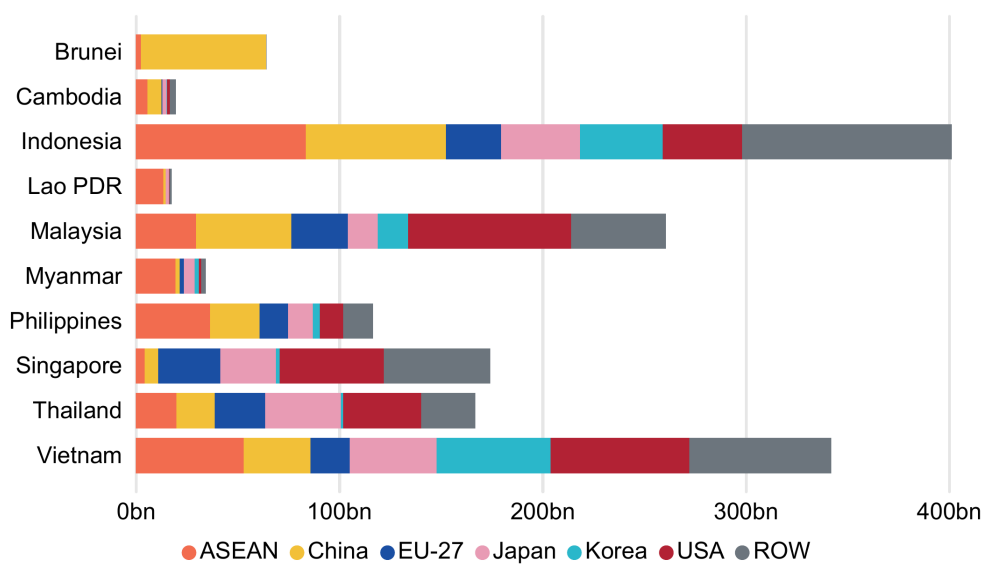


Source: Asia Competitiveness Institute based on Orbis (accessed 8 Oct 2025)

Indonesia, Malaysia, Singapore, Thailand and Vietnam collectively accounted for over 95% of ASEAN's total greenfield FDI in 2024 (Figure 1.12). This pattern has persisted from 2015 to 2024 (Figure 1.13), reflecting the continued adaptability of the five economies to global investment trends and their sustained competitiveness. At the same time, it exposes the disparity in the distribution of foreign capital across ASEAN and the untapped potential of the remaining AMS to attract greater investment.

Figure 1.12: Greenfield FDI Composition (%), 2024

Source: Asia Competitiveness Institute based on Orbis (accessed 8 Oct 2025)

Figure 1.13: Inward Greenfield FDI Stock (US\$), from 2015 to 2024

Source: Asia Competitiveness Institute based on Orbis (accessed 8 Oct 2025)

Table 1.2: ASEAN Digital Economic Indicators

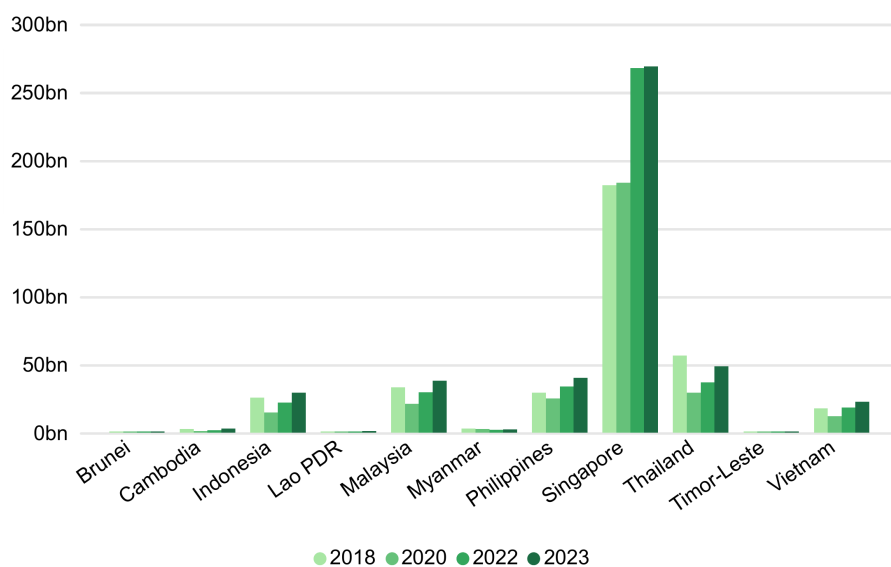
Country	Internet Users 2024 (% Total Population)	Trade of digitally-deliverable services in 2024		Online Retail Sales (billion US\$) in 2024	ICT Goods Exports 2024 (% Total Exports)	ICT Goods Imports 2024 (% Total Imports)
		Millions US\$	% Total Trade in Services			
Brunei	99.2	603	28.0	N/A	0.1	1.3
Cambodia	64.2	969	12.0	N/A	1.5	2.0
Indonesia	72.8	51,818	53.7	63.8	2.7	8.1
Lao PDR	67.0	254	8.5	N/A	2.6	2.4
Malaysia	98.0	39,886	36.3	14.7	35.2	28.3
Myanmar	62.1	964	35.2	N/A	1.0	0.9
Philippines	85.6	39,481	44.2	29.3	43.6	16.4
Singapore	94.4	410,600	55.0	7.2	34.6	32.7
Thailand	90.9	74,353	51.0	30.6	16.9	17.2
Timor-Leste	34.0	112	23.0	N/A	0.1	3.8
Vietnam	84.2	9,515	15.8	24.2	35.9	28.6

Note: Figures in red are estimates by the EIU; N/A indicates data are not available; where available, figures for 2024 are shown. Where figures for 2024 are absent, figures from 2023 are used instead.

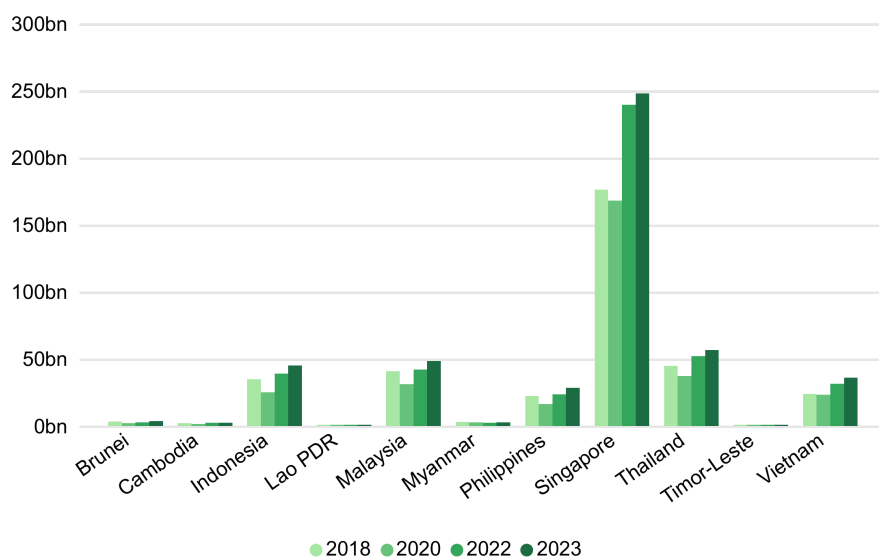
Sources: Euromonitor, UNCTAD, EIU, and The World Bank World Development Indicators (accessed 9 Dec 2025)

The expansion of the digital economy remains a cornerstone of ASEAN's long-term competitiveness strategy. Table 1.2 presents the updated figures for ASEAN's digital economy in 2024. Consistent with the assessments of the previous iterations, ASEAN's digital trade and internet utilisation have been steadily growing.

Figures 1.14 and 1.15 further illustrate the growing importance of digitally deliverable services (DDS) in ASEAN trade. With the exception of Myanmar and Timor-Leste, all AMS increased their utilisation of DDS in the post-COVID period.

Figure 1.14: Export of DDS Across the AMS (US\$)

Source: Asia Competitiveness Institute based on WTO (accessed 10 Oct 2025)

Figure 1.15: Import of DDS Across the AMS (US\$)

Source: Asia Competitiveness Institute based on WTO (accessed 10 Oct 2025)

Table 1.3: ASEAN E-Governance Indicators

Country	UN E-Government Survey 2024				ITU Global Cybersecurity Index 2024
	E-Government Index	Online Service Index	Human Capital Index	Telecommunication Infrastructure Index	
Brunei	0.7554	0.5802	0.6991	0.9868	70.38
Cambodia	0.5754	0.4503	0.5149	0.7609	37.02
Indonesia	0.7991	0.8035	0.7293	0.8645	100
Lao PDR	0.4404	0.3265	0.4608	0.5338	33.74
Malaysia	0.8111	0.7280	0.7192	0.9862	98.82
Myanmar	0.5001	0.3259	0.5081	0.6662	73.72
Philippines	0.7621	0.8054	0.7256	0.7554	93.49
Singapore	0.9691	0.9831	0.9362	0.9881	99.86
Thailand	0.8351	0.7611	0.8032	0.9410	99.22
Timor-Leste	0.4020	0.3406	0.5104	0.3551	16.82
Vietnam	0.7709	0.7081	0.7267	0.8780	99.74

Source: United Nations E-Government Development Database and ITU (accessed 4 Dec 2025)

However, as with greenfield FDI, DDS activity is concentrated in the more advanced economies of ASEAN. The levels of e-governance across the AMS further reinforce the digital disparity. Table 1.3 presents the 2024 data for all AMS e-government services provision, confirming that economies with high levels of digital trade also offer higher levels of e-governance.

Table 1.4 showcases the types of digital legislations implemented by the AMS, underscoring the lack of uniformity in the regulatory mechanisms governing the digital economy. The absence of a homogenised regulatory system in the digital economy, coupled with the apparent disparity in the provision of digital infrastructure among the AMS, poses a key challenge to the ASEAN integration goal and the advancement of ASEAN's digital economy.

That said, the ASEAN Digital Economy Framework Agreement (DEFA) will be implemented in 2026 and seeks to standardise digital regulations in ASEAN while promoting digital trade (Feingold and Pfister, 2025). Amid tightening global regulations on physical goods and the ongoing transfer of technology to Southeast Asia, the digital economy will serve as a catalyst for the export-oriented AMS to pursue sustainable, innovation-driven growth.

Table 1.4: State of Digital Legislation in ASEAN

Country	E-Transaction Laws	Online Consumer Protection Laws	Data Protection & Privacy Laws	Cybercrime Laws
Brunei				
Cambodia				
Indonesia				
Lao PDR				
Malaysia				
Myanmar				
Philippines				
Singapore				
Thailand				
Timor-Leste				
Vietnam				

Legend

	Has Legislation
	Legislation Drafted
	No Legislation

Source: Asia Competitiveness Institute based on UNCTAD (accessed on 4 Dec 2025)

1.3 Policy Challenges and Opportunities Shaping ASEAN Development

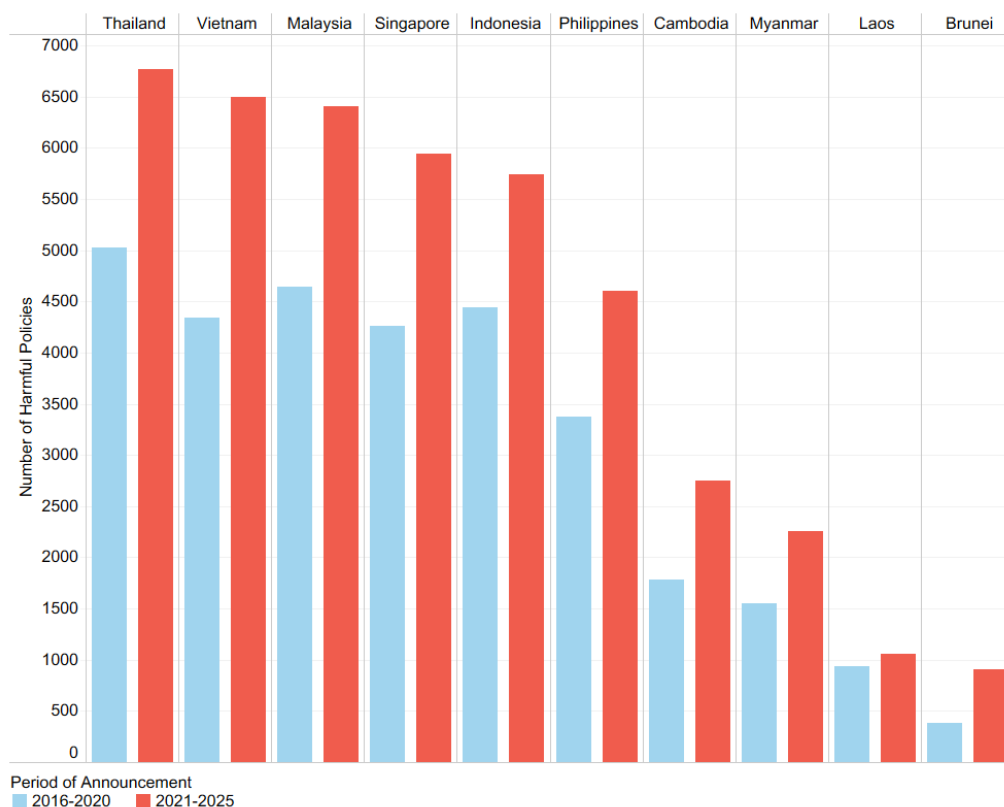
1.3.1 Geopolitical Tensions and Rising Protectionism

Geopolitical tension and rising protectionism have become defining features of ASEAN's external environment. Trade restrictions have intensified markedly in recent years: the volume of harmful policies affecting the AMS increased significantly from 2021 to 2025 compared to 2016 to 2020 (Figure 1.16). Thailand, Vietnam, Malaysia, and Singapore remained the principal targets of such measures. Vietnam experienced a 49.7% increase in harmful interventions between the two periods, while Singapore, Malaysia, and Thailand recorded average increases of around 37%. Cambodia, although less affected in 2016–2020, saw a sharp 54.2% rise in restrictive measures in 2021–2025.

In 2025 alone, 1,396 harmful trade policies affected the AMS, accounting for roughly one-third of such measures worldwide. Malaysia, Thailand, Singapore, and Vietnam were among the most exposed, each affected by about one-fifth of all global harmful interventions. The products most affected were electrical machinery and equipment (HS 85), machinery and mechanical appliances (HS 84), and optical, photographic, medical, and precision instruments (HS 90).¹ These product

¹HS 85 represents the harmonised system (HS) subheadings 85. Similar for HS 84 and 90.

Figure 1.16: Number of Harmful Trade Policies Affecting ASEAN Countries, Announced During 2016-2020 VS 2021-2025



Note: Harmful trade policies refer to the policies in amber or red in the GTA evaluation, which are interventions likely (amber) or almost certainly (red) to discriminate against foreign commercial interests. See (Evenett and Fritz, 2022).

Source: Authors' calculations based on the Global Trade Alert database (accessed 23 March 2026)

groups are central to strategic manufacturing sectors, including semiconductors, clean technologies, critical mineral derivatives, and pharmaceuticals, all of which are increasingly important to ASEAN's export structure and future industrial upgrading (ASEAN, 2025a).²

A major source of disruption in 2025 was the resurgence of US tariff protectionism. As ASEAN's largest extra-regional export market, the US has become a critical source of uncertainty for the region. Most notably, the so-called "Liberation Day Tariffs" imposed reciprocal tariffs on all countries, with particularly severe effects on the AMS. Cambodia faced the highest reciprocal tariff rate at 49%, followed by Vietnam at 46% (Trump, 2025d). Although negotiations before, during, and after the 2025 ASEAN Summit reduced these tariffs to a 20% baseline (Walker, 2025), this still represented a substantial increase over the pre-Trump trade-weighted average tariff range of 0.6% to

²Strategic sectors comprise mainly the manufacturing of batteries and accumulators, domestic appliances, electronic components and boards, and general-purpose machinery. See International Monetary Fund (IMF), 2023f; United Nations Conference on Trade and Development, 2024. Authors' calculations based on the Global Trade Alert database. Data accessed on 23 March 2026.

10.1% (United Nations Conference on Trade and Development, 2026). More broadly, these measures should not be seen as an isolated event. Between 2020 and 2023, ASEAN is estimated to have lost nearly US\$10 billion in exports due to renewed protectionism (Banh and W. Lu, 2025). The 2025 tariff escalation therefore reflects a deeper trend of fragmentation in the global trading system.

Rising protectionism coupled with intensifying geopolitical rivalry, has also contributed to the reconstruction of the global supply chain. Globally, the geopolitical distance of announced greenfield FDI projects dropped by 13%. Notably, around 48% of Japanese and South Korean companies, and more than 30% of American, Chinese and European companies have reduced geopolitical distance of their announced greenfield FDI projects, from 2022 to 2025, compared to 2015–2019 (McKinsey Global Institute, 2025). For ASEAN, this has created both opportunities and vulnerabilities. The region has emerged as a preferred destination for diversification strategies aimed at reducing overdependence on China. Advanced manufacturing and technology-related activities have increasingly relocated to ASEAN as firms pursue “China + N” strategies. Vietnam, for example, became the US’ sixth-largest import source in 2024, up from 11th in 2017, with especially strong gains in electronics and semiconductors (Alfaro and Chor, 2025). At the firm level, producers such as Goertek and other Apple suppliers have expanded operations in Vietnam in response to friend-shoring pressures (Z. Deng, Wang, and Xu, 2025).

ASEAN has also attracted major investment in cloud infrastructure, AI, and data centres. Malaysia and Thailand, in particular, have become important destinations for data-centre investment from both the US and China (Devesa et al., 2025; Masaya et al., 2025), while NVIDIA has established an AI research facility in Vietnam (Tien Nguyen, 2024). More broadly, ASEAN’s semiconductor market is projected to grow from US\$135 billion in 2025 to US\$191 billion by 2030 (Mordor Intelligence, 2025). These developments suggest that ASEAN is no longer viewed solely as a low-cost manufacturing base, but increasingly as a strategic location for higher-value production and technology deployment.

At the same time, the opportunities created by supply-chain diversification are accompanied by mounting geopolitical pressure. Research on ASEAN’s political alignment with China and the US points to the growing salience of external expectations regarding the region’s strategic orientation (Khong and Liow, 2025). This pressure is reinforced by increasingly direct rhetoric from both powers. While the US has urged countries to reduce economic dependence on China, China has warned against attempts to marginalise it (Liow and Khong, 2025). In response, ASEAN states have generally sought to avoid taking sides and to preserve strategic flexibility (Kuok, 2025; Liow and Khong, 2025).

The technology sector has become a particularly sensitive arena of US–China rivalry. Export controls, investment restrictions, and heightened scrutiny of Chinese firms in sectors such as electric vehicles, batteries, and advanced software have increased uncertainty across regional production networks. Measures targeting firms such as Contemporary Amperex Technology Co., Limited (CATL), together with US proposals to restrict Chinese software and technology platforms, illustrate the extent to which technological competition now has direct implications for ASEAN’s manufacturing ecosystems (Kuo, 2025). Because ASEAN is deeply integrated into production networks tied to both China and the US, such restrictions have broad implications for trade, investment, and industrial upgrading.

These pressures have been compounded by new geopolitical shocks beyond East Asia. The renewed conflict between the United States and Iran, which began on 28 February 2026 (BBC, 2026), has introduced additional uncertainty through energy and shipping channels. The Strait of Hormuz, through which roughly one-fifth of global oil and gas supply passes, has become a renewed

point of risk (*ibid.*). In the immediate aftermath of the conflict, global oil prices reportedly rose from about US\$60 per barrel to US\$100 per barrel, while gas prices and US crude prices increased by more than 50% (Raimi, Krupnick, and Prest, 2026). Prolonged instability in the Middle East could sustain upward pressure on global energy prices, increasing costs for ASEAN economies that remain heavily reliant on imported energy. For instance, the Philippines, Vietnam, and Thailand source 96%, 87%, and 74% of their oil from the Persian Gulf, respectively (Calabrese, 2026), rendering their domestic energy market particularly sensitive to global price fluctuations and disruptions from the Middle East conflict.

The consequences extend beyond energy prices. Higher insurance premiums and freight costs linked to maritime insecurity have added pressure on ASEAN's export-oriented economies (Medina, 2026). Tourism-dependent economies such as Cambodia and Thailand may also be affected indirectly as airlines reroute or suspend flights through the Middle East (Ang, 2026).

Some ASEAN governments have already responded. Thailand has suspended exports of oil-related products, while Indonesia has committed to more oil imports from the United States (Mai and Poling, 2026). Taken together, these developments underscore how geopolitical instability in multiple theatres can rapidly spill over into ASEAN's trade, energy, and growth outlook.

1.3.2 Technological Transformation: AI and the Digital Economy

Together with geoeconomic and geopolitical pressures, technological transformation is reshaping ASEAN's development trajectory. AI has emerged as the most visible example. In ASEAN, 46% of enterprises have either fully scaled or are scaling AI use, while another 35% are piloting it, placing the region ahead of the global average (HV et al., 2026). AI also has considerable growth potential. The IMF estimates that AI-related investment and innovation could raise global growth by up to 0.3 percentage points in 2026 and by as much as 0.8 percentage points annually over the medium term, depending on the country's AI readiness (International Monetary Fund (IMF), 2026). For ASEAN, estimates suggest that AI could raise regional GDP by 10% to 18% by 2030, equivalent to approximately US\$1 trillion (ASEAN Secretariat, 2024).

This potential has attracted significant investment into the region, especially in Singapore and Malaysia. Major US technology firms, including Amazon Web Services, Google, and Microsoft, have invested around US\$50 billion in AI-ready data centres and cloud infrastructure in ASEAN (HV et al., 2026). Singapore has emerged as a leading regional hub, hosting more than 60 AI centres of excellence and receiving approximately US\$7 billion in AI investment in 2025 alone, ranking it among the world's top 10 destinations for AI investment (Statista, 2025). Malaysia has likewise become an important destination for data-centre investment. It has 690 MW of data-centre capacity and another 2,414 MW in the pipeline, the largest among the ASEAN-6 (Google, Bain & Company, and Temasek, 2025). Leading technology company Alibaba has established three data centres in it, with plans for a fourth one. ByteDance plans to invest about US\$2.13 billion in an AI hub, and expand investment in its data centre in Johor. Similarly, Google announced a US\$2 billion investment in data centre and cloud in the country in 2024 (HV et al., 2026).

In spite of the benefits, the AI boom carries important risks. The IMF has warned that spending could slow sharply if productivity gains fail to meet expectations (International Monetary Fund (IMF), 2026). More fundamentally, AI is likely to reshape labour markets unevenly. On one hand, it is expected to create new jobs in areas such as big data, software, and virtual reality, while raising productivity by 1.5% to 3% in sectors such as technology, finance, and professional services (Grosskurth and Battista, 2026; World Economic Forum, 2025). On the other hand, AI will also displace labour by automating routine tasks. The World Economic Forum estimates that AI and re-

lated technologies could displace millions of jobs globally between 2025 and 2030 (World Economic Forum, 2025). This challenge is particularly salient for ASEAN economies with large service and business-process outsourcing industries. In the Philippines, for example, the IMF estimates that 36% of jobs are highly exposed to AI (International Monetary Fund (IMF), 2024b). ASEAN's relatively low labour costs may slow outright replacement in the short term (Google, Bain & Company, and Temasek, 2025), but sustained resilience will depend on workforce upskilling and adaptation.

A further concern is that AI-driven gains are unlikely to be distributed evenly across ASEAN. Lower- and middle-income economies may benefit less because of weaker digital infrastructure, lower skill levels, financing constraints, and fragmented regulatory systems (Chaar et al., 2025; Google, Bain & Company, and Temasek, 2025). This raises the risk that AI could widen intra-regional disparities. The IMF's AI Preparedness Index reflects this unevenness. Singapore ranks among the top-tier countries for pillars such as digital infrastructure, human capital, labour-market policy, and innovation, whereas Laos and Myanmar remain in the bottom tier (International Monetary Fund (IMF), 2023b,c,d,e). Without stronger investment in digital capacity and skills, the spread of AI may deepen rather than reduce regional inequality.

Beyond AI, ASEAN's broader digital economy continues to expand rapidly. Regional gross merchandise value reached US\$305 billion in 2025, a 15% increase from 2024 and roughly ten times its 2015 level. This surpassed the forecast in 2016 by 50% (Google, Bain & Company, and Temasek, 2025). ASEAN has also emerged as a major destination for investment in the digital-economy. Between 2020 and 2024, Malaysia, Indonesia, Singapore, Thailand, and Vietnam were among the top 10 recipients of digital-economy FDI in the Global South, jointly accounting for 37% of such inflows (United Nations Trade and Development (UNCTAD), 2025). Investor interest is expected to remain strong until 2030, particularly in software and services, AI and deep tech, and health and sustainability-related technologies.

Regional cooperation is likely to reinforce this momentum. The ASEAN–China Free Trade Agreement 3.0 Upgrade Protocol, signed in late 2025, includes provisions for emerging digital-economy issues such as AI and fintech (*ACFTA Chapter 9 Digital Economy* 2025a). More importantly, the ASEAN Digital Economy Framework Agreement (DEFA), which reached substantial conclusion in October 2025, aims to promote cooperation in cross-border data flows, data protection, digital identity, digital payments, and AI (ASEAN Economic Community Council, 2025). If successfully implemented, DEFA could reduce regulatory fragmentation, improve interoperability, lower transaction costs, and help expand ASEAN's digital economy to US\$2 trillion by 2030 (Feingold and Pfister, 2025). These developments suggest that, with effective coordination and investment, technological transformation could become an important new source of growth for ASEAN.

1.3.3 Climate Change and the Green Economy

Climate change poses a major long-term challenge to ASEAN's development. The *Climate Risk Index 2026* ranks the Philippines, Myanmar, Vietnam, and Thailand among the 20 countries most affected by climate-related events between 1995 and 2024. Indonesia and Laos also rank relatively high, at 24th and 27th place respectively. Cambodia and Malaysia are the only two relatively resilient countries (Germanwatch e.V., 2025). In general, research suggests that climate change could reduce regional GDP by 18–25%, while flooding alone already causes at least US\$2 billion in direct annual losses (World Economic Forum, Boston Consulting Group (BCG), and Singapore International Foundation, 2025). These pressures make climate resilience and green transition increasingly central to ASEAN's development strategy.

External regulatory shifts add to this challenge. One of the most important recent examples is the European Union's Carbon Border Adjustment Mechanism (CBAM), which entered its implementation phase in January 2026. As ASEAN's fourth largest export destination from 2022 to 2024, the EU accounts for approximately 9% of ASEAN's goods exports (ASEANstats, 2023, 2024, 2025), making CBAM a significant policy development for the region. CBAM is intended to address carbon leakage by imposing a carbon price on imported emissions-intensive goods, thereby levelling the playing field between foreign producers and EU firms subject to carbon regulation (European Commission, 2025b). It currently covers aluminium, cement, fertilisers, iron and steel, electricity, and hydrogen.

ASEAN's direct exposure to CBAM is moderate at the aggregate level, because the EU still accounts for a relatively limited share of the region's exports of covered products. Between 2021 and 2024, the EU absorbed on average 9.0% of ASEAN's aluminium exports and 8.4% of its iron and steel exports, while its share in cement, fertilisers, and hydrogen-related products remained below 1%.³ Nevertheless, the impact varies significantly among different countries. As shown in Figure 1.17, Indonesia appears most exposed, with CBAM product exports to the EU facing a 0.76% higher carbon payment than the average EU producer. The excess carbon payment reaches 4.3% for fertilisers and 1.37% for aluminium. In contrast, Cambodia could face a modest competitiveness gain, with average embodied carbon payments, which are 0.11% below those of EU producers, especially in iron and steel (Maliszewska et al., 2025; World Bank, 2025a).

The longer-term challenge could be more substantial. CBAM's coverage is due to expand in 2028 to include selected downstream steel- and aluminium-intensive products used in machinery and specialised equipment (European Commission, 2025a). This could have broader implications for Indonesia, Malaysia, and Thailand, which are deeply integrated into global value chains in electronics, machinery, and motor vehicles (A. Tan et al., 2025). Compounding the issue is the fact that, apart from Indonesia and Singapore, the AMS generally do not yet have carbon-pricing systems in place. Although Malaysia intends to introduce its carbon tax in 2026, details are yet to be disclosed. Even where carbon pricing exists, as in Indonesia, the domestic price remains far below the EU level (*State and Trends of Carbon Pricing Dashboard* 2025).⁴ This limits the extent to which ASEAN exporters can offset CBAM-related costs.

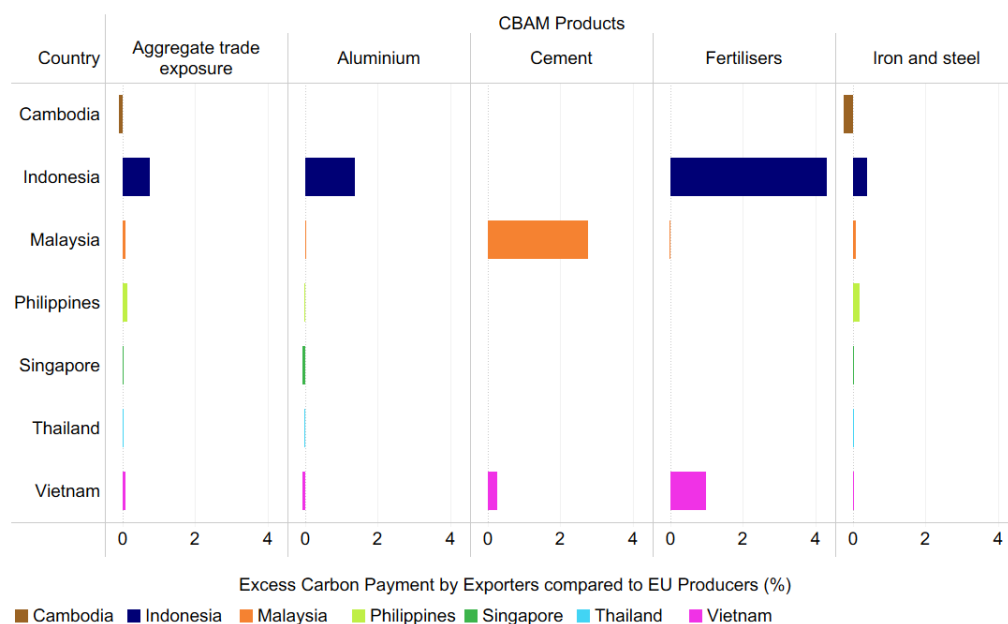
Nevertheless, green regulation also creates opportunity. As firms seek to decarbonise supply chains in response to both compliance requirements and consumer demand, ASEAN has begun attracting greater green investment (The ASEAN Secretariat and United Nations Trade and Development, 2025). Private green investment in the region reached around US\$8 billion in 2024, up 43% from 2023, with roughly two-thirds directed to the power sector, especially solar projects in Malaysia, Singapore, and Thailand (Bain & Company et al., 2025). Vietnam and Indonesia have emerged as attractive destinations for battery-related FDI, while Malaysia has attracted EV assembly projects (McKinsey Global Institute, 2025). Looking ahead, ASEAN could potentially capture around US\$300 billion in economic gains from the green transition by 2030, supported by its critical mineral resources and growing solar photovoltaic, electric vehicle, and battery industries (Bain & Company et al., 2025).

Realising these gains, however, requires stronger policy coordination and sustained investment. ASEAN 2045 places sustainability across value chains at the centre of regional strategy (The ASEAN Secretariat, 2025a). This commitment is also reflected in ASEAN's external economic

³ Authors' calculations based on WITS. HS (2017 version) code selection follows (European Commission, 2025b).

⁴ Indonesia's carbon price was only at US\$0.72/tCO₂e, far below the EU's US\$70.4/tCO₂e (*State and Trends of Carbon Pricing Dashboard* 2025). US\$0.72/tCO₂e refers to US\$0.72 per ton of carbon dioxide equivalent.

Figure 1.17: ASEAN Countries' Trade Exposure to the Carbon Border Adjustment Mechanism



Source: Asia Competitiveness Institute based on CBAM Exposure Indices (accessed 14 November 2025)

partnerships. The upgraded ASEAN–Australia–New Zealand Free Trade Area, which entered into force in April 2025, includes ASEAN’s first FTA chapter on sustainable development, covering climate cooperation, the green and blue economy, circular economy practices, and energy transition (Australian Government Department of Foreign Affairs and Trade, 2026a,b). The ASEAN–China Free Trade Area 3.0 also expands cooperation in green trade, investment, and finance (*ACFTA Chapter 10 Green Economy* 2025), while greater collaboration with China has supported ASEAN’s clean-energy ambitions (Xinhua, 2025). Together, these initiatives suggest that climate pressure and green regulation, while posing real adjustment costs, may also accelerate ASEAN’s transition toward more sustainable and competitive growth.

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