Economic Outlook for Southeast Asia, China and India 2017

ADDRESSING ENERGY CHALLENGES

OECD DEVELOPMENT CENTRE

Economic Outlook for Southeast Asia, China and India 2017

ADDRESSING ENERGY CHALLENGES

OECD DEVELOPMENT CENTRE

Please cite this publication as:
OECD (2017), *Economic Outlook for Southeast Asia, China and India 2017: Addressing Energy Challenges*, OECD Publishing, Paris.
http://dx.doi.org/10.1787/saeo-2017-en

ISBN 978-92-64-26248-5 (print)
ISBN 978-92-64-26816-6 (PDF)

Series: Economic Outlook for Southeast Asia, China and India
ISSN 2310-1105 (print)
ISSN 2310-1113 (online)

Photo credits: © Cover design by the OECD Development Centre based on images of LIUSHENGFILM, Various-Everythings, Olga Kashubin/Shutterstock.com

Corrigenda to OECD publications may be found on line at: *www.oecd.org/about/publishing/corrigenda.htm*.

Foreword

The *Economic Outlook for Southeast Asia, China and India* is a biannual publication on Asia's regional economic growth, development and regional integration processes. It focuses on the economic conditions of the Association of Southeast Asian Nations (ASEAN) member countries (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam) and two large economies in the region, China and India. This publication evolved from the *Southeast Asian Economic Outlook*. Beginning with the Outlook Update, released in June 2016, the Outlook has become a biannual publication, with the main report released in the autumn and its update released the following spring.

The *Outlook* was initially proposed at an informal reflection group on Southeast Asia in 2008 as a follow-up of the Council Meeting at Ministerial level (MCM) in 2007 and was accepted by ministers/senior officials from ASEAN countries at the occasion of the 2nd OECD-Southeast Asia Regional Forum in Bangkok in 2009. The *Outlook* project was officially launched in 2010 and each edition is regularly presented at the occasion of the ASEAN/East Asia Summit. It was included in the OECD's Southeast Asia Regional Programme (SEARP) at the Steering Group Meeting in Jakarta, Indonesia in March 2015, with its role of providing a horizontal view of activities, identifying emerging trends in the region and providing a backbone for the different streams of the Programme confirmed at the 2015 MCM. The *Outlook* serves as a strategic foresight and policy dialogue tool for the SEARP and includes summaries of recent developments in the region on issues related to the Programme's six Regional Policy Networks and three Initiatives.

Each edition of the *Outlook* is comprised of four main parts: a regional economic monitor, an overview of recent developments in regional integration, structural policy country notes and a thematic focus specific to each year's report. The 2017 edition of the *Outlook* focuses on the energy challenges faced by Emerging Asia as economic and population growth result in large increases in energy demand. At the same time, most of the region has committed to specific targets for implementing renewable energy technologies to slow the increase of fossil fuel use in the future. While the region has considerable potential, expanding the supply of energy and improving the prospects of alternative energy sources in particular requires the implementation of the right policies. Private investment in the energy sector is also likely to play a major role in the sector's future development.

The OECD Development Centre is committed to working alongside governments of developing and emerging economies and regional actors to identify key areas of intervention in order to address these challenges. The Centre enjoys the full membership of three Southeast Asian countries, namely Indonesia, Thailand and Viet Nam, as well as India and China. This project has also benefited from the generous support of other Emerging Asian countries.

This edition of the *Outlook* is the result of policy dialogue and consultation at the regional level, at the 5th OECD-AMRO-ADB/ADBI-ERIA Asian Regional Roundtable on Macroeconomic and Structural Policy Challenges, held in Tokyo, Japan, in July 2016. Like other regional economic outlooks produced by the OECD Development Centre, the report was prepared in collaboration with regional partners; UNESCAP and the Economic Research Institute for ASEAN and East Asia (ERIA) contributed to the 2017 edition. The *Outlook* also benefited from discussions with the ASEAN Secretariat. The OECD is committed to supporting Asian countries in their efforts to promote economic and social well-being through rigorous analysis, peer learning and best practices.

Acknowledgements

The 2017 edition of *the Economic Outlook for Southeast Asia, China and India: Addressing Energy Challenges* was prepared by the Asia Desk of the OECD Development Centre, in co-operation with United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and Economic Research Institute for ASEAN and East Asia (ERIA). The publication also benefited from discussions with the ASEAN Secretariat.

The team was lead by Kensuke Tanaka, Head of the Asia Desk and overall guidance was provided by Mario Pezzini, Director and Naoko Ueda, Deputy Director of the OECD Development Centre. This volume was drafted by a team composed of Kensuke Tanaka, Masato Abe, Derek Carnegie, Jingjing Xia, Juita Mohamad, Guro Persen, Megumi Kubota, Ryan Jacildo, Prasiwi Ibrahim and Han Phoumin. Jingjing Xia also contributed to statistical work related to this publication and Candice Lea Marie Branchoux and Jaewon Kim provided useful inputs. Laura Golden provided useful administrative supports for this project. Elizabeth Nash, Delphine Grandrieux, Studio Pykha and Aida Buendia turned the manuscript into the publication.

The *Outlook 2017* benefited from discussions with OECD Delegations at three *Informal Consultation Group (ICG) meetings* in Febuary, October and December 2016 in Paris, led by co-chairs of the Outlook consultation group, Ambassador Jong-Won Yoon and Ambassador Maria Theresa Lazaro, together with Ambassador Pierre Duquesne. The *Outlook* also benefited from discussion with experts in the region at the 5*th Asian Regional Roundtable on Macroeconomic and Structural Policy Challenges*, jointly organised by the ASEAN+3 Macroeconomic Research Office (AMRO) and the Asian Development Bank (ADB), the Asian Development Bank Institute (ADBI), ERIA and the OECD, in Tokyo on 14-15 July 2016. The *Outlook* was presented at the occasion of the ASEAN/East Asia Summit in Vientiane, Lao PDR in September 2016 in a joint session with ERIA. The authors are grateful to Rintaro Tamaki, Deputy Secretary-General of the OECD, Chang Junhong, Director of AMRO, Naoyuki Yoshino, Dean of the ADBI, Hidetoshi Nishimura, Executive Director of ERIA, as well as Endy D. Tjahjono, Jesus Felipe, Izuru Kobayashi, Ng Chuin Hwei, Luke Hong, Yumiko Murakami, Jay Rosengard, Suahasil Nazara, Xunpeng Shi, Toshiyuki Shirai, Kazushige Tanaka, Laszlo Varro, Sanjayan Velautham, Etsuaki Yoshida, Fauziah Zen, and Joseph E.Zveglich,Jr.

Support from OECD delegations and embassies of Asian countries in Paris, in particular, Ambassador Kazuo Kodama, Rapunzel Acop, Fajar Harijo, Tran Phan Linh, Takuma Kajita, Masahiro Katsuno, Sisouphanh Keobandavong, Venugopal Menon, Canh Cuong Nguyen, Sovanra Nong, Tze Shen Ong, Hye Ryoung Song, Widya Sadnovic, Rakesh K. Sharma, Houmpheng Souralay, Soveasna Sun, Jürg Schneider, Sirichada Thonhtan, Seinn Lei Tun and Tomoki Watanabe, is gratefully acknowledged.

The Medium-term Projection Framework for Growth and Development (MPF) used in this edition was prepared by a team managed by Kensuke Tanaka and Masakazu Someya.

Last but not least, the OECD Development Centre would like to acknowledge gratefully the financial support received from the goverments of Japan, Korea and Switzerland.

Table of contents

Tables

Chapter 4

Annex

Figures

Overview

Chapter 1

Boxes

Chapter 1

Chapter 2

Chapter 3

Chapter 4

Acronyms and abbreviations

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ABA	ASEAN Business Awards
ABC	ASEAN Broadband Corridor
ABIF	ASEAN Banking Integration Framework
ABIS	ASEAN Business and Investment Summit
ABMI	Asian Bond Market Initiative
ACAP	ASEAN Competition Action Plan
ACCMSME	ASEAN Coordinating Committee on Micro, Small, and Medium Enterprises
ACCP	ASEAN Committee on Consumer Protection
ACCSQ	ASEAN Consultative Committee on Standards and Quality
ACIA	ASEAN Comprehensive Investment Agreement
ADB	Asian Development Bank
ADBI	Asian Development Bank Institute
AEC	ASEAN Economic Community
AEF	ASEAN Ecotourism Forum
AEGC	ASEAN Experts Group on Competition
AEGFS	ASEAN Expert Group on Food Safety
AERN	ASEAN Energy Regulators' Network
AFAS	ASEAN Framework Agreement on Services
AFC	Asian Financial Crisis
AFRL	ASEAN Food Reference Laboratories
AFSIP	ASEAN Food Safety Improvement Plan
AFSN	ASEAN Food Safety Network
AFTA	ASEAN Free Trade Area
AGLP	ASEAN Global Leadership Programme
AGTP	APG Generation and Transmission System Operating Group
AHN	ASEAN Highway Network
AIFS	ASEAN Integrated Food Security
AIIF	ASEAN Insurance Integration Framework
AIMS	ASEAN International Mobility for Students
AIX	ASEAN Internet Exchange Network
AMC	Asset Management Company
AMEM	ASEAN Ministers on Energy Meeting
AMRO	ASEAN+3 Macroeconomic Research Office
APAEC	ASEAN Plan of Action for Energy Cooperation
APEC	Asia-Pacific Economic Cooperation
APG	ASEAN Power Grid
APGCC	ASEAN Power Grid Consultative Committee
APLMA	Asia Pacific Leaders Malaria Alliance
APO	Asian Productivity Organization
APSC	ASEAN Political-Security Community
AQRF	ASEAN Qualification Reference Framework
ARAC	ASEAN Risk Assessment Centre for Food Safety
ASAPCP	ASEAN Strategic Action Plan for Consumer Protection
ASCC	ASEAN Socio-Cultural Community
ASEAN	Association of Southeast Asian Nations

ASEAN+3	ASEAN-10 countries plus China, Japan and South Korea
ASEAN+6	ASEAN+3 countries plus Australia, India and New Zealand
ASEAN-6	Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand
ASEAN-5	Indonesia, Malaysia, the Philippines, Thailand and Viet Nam
ASEAN-BAC	ASEAN Business Advisory Council
ASEAN-OSHNET	ASEAN Occupational Safety and Health Network
ATIGA	ASEAN Trade in Goods Agreement
ATISA	ASEAN Trade in Services Agreement
ATSO	APG Transmission System Operator
AWGIPC	ASEAN Working Group on Intellectual Property Co-operation
BEPS	Base Erosion and Profit Shifting
BI	Bank Sentral Republik Indonesia
BIC	Bio-Innovation Corridor
BIMP-EAGA	Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area
BIPS	Business and IPC Partnership Scheme
BIT	Bright Indonesia Programme
BOJ	Bank of Japan
BOT	Build–Operate–Transfer
BPO	Business Process Outsourcing
BR1M	Bantuan Rakyat 1Malaysia
BRIC	Brazil, Russia, India and China
CADP	Comprehensive Asian Development Plan
CBD	Convention on Biological Diversity
CBM	Central Bank of Myanmar
CDS	Credit Default Swap
CEPT	Common Effective Preferential Tariff
CESR	Comprehensive Education Sector Review
CHAS	Community Health Assist Scheme
CHP	Combined Heat and Power Plants
CIS	Collective Investment Scheme
CLM	Cambodia, Lao PDR, Myanmar
CLMV	Cambodia, Lao PDR, Myanmar and Viet Nam
CPI	Consumer Price Index
DES	Distributed Energy Systems
EAS	East Asia Summit
ECB	European Central Bank
ECTT	European Council on Tourism and Trade
EID	Emerging Infectious Diseases
EIF	Entry-into-Force
EMM	Education Ministers Meeting
EPIC	Education Promotion Implementation Committee
ERIA	Economic Research Institute for ASEAN and East Asia
ESMAP	Energy Sector Management Assistance Program
EU	European Union
EVN	Electricity Viet Nam
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investment
FINL	Foreign Investment Negative List
FiT/FIT	Fee-in Tariff

FPI Foreign Portfolio Investment
FTL Food Testing Laboratories
GAP Good Agricultural Practices
GDP Gross Domestic Product
GFC Global Financial Crisis
GHG Greenhouse Gas
GHP Good Hygienic Practices
GIH Global Infrastructure Hub
GIZ Gesellschaft für Internationale Zusammenarbeit
GMO Genetically Modified Organisms
GMP Good Manufacturing Practices
GMS Greater Mekong Subregion
GST Goods and Service Tax
GW Gigawatt
HACCP Hazard Analysis and Critical Control Points
HIV/AIDS Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome
HRD Human Resource Development
IAI Initiative for ASEAN Integration
ICT Information and Communication Technology
IEA International Energy Agency
ILO International Labour Organization
IMF International Monetary Fund
IMT-GT Indonesia-Malaysia-Thailand Growth Triangle
IoT Internet of Things
IP Intellectual Property
IPP Independent Power Producers
IPR Intellectual Property Rights
IRENA International Renewable Energy Agency
ISDS Investor-State Dispute Settlement
ISIC International Standard Industrial Classification
IT Information Technology
JETRO Japan External Trade Organization
JICA Japan International Cooperation Agency
LCOE Levelised Cost of Electricity
LNG Liquefied Natural Gas
MAS Monetary Authority of Singapore
MERS Middle East Respiratory Syndrome
MNP Movement of Natural Persons
MOA Memorandum of Agreement
MPAC Master Plan on ASEAN Connectivity
MPF Medium-term Projection Framework
MRA Mutual Recognition Arrangement
MRA-TP Mutual Recognition Arrangement on Tourism Professionals
MRT Ministerial Roundtable Meeting
MSMEs Micro, Small and Medium Enterprises
Mtoe Million tonnes of oil equivalent
MW Megawatt
NDGI Narrowing Development Gap Indicators
NEG New Economic Geography

NFRL National Food Reference Laboratories
NHP National Housing Policy (Malaysia)
NPL Non-performing Loan
NQF National Qualification Framework
NREL National Renewable Energy Laboratory
NTB Non-Tariff Barrier
NTM Non-Tariff Measure
NTO National Tourism Organisations
ODA Official Development Assistance
OECD Organisation for Economic Co-operation and Development
OVOP One Village One Product
PEZA Philippine Economic Zone Authority
PGP Pioneer Generation Package
PISA Programme for International Student Assessment
PM 2.5 Fine Particulate Matter
PMET Professionals, Managers, Executives and Technicians
PPA Philippine Ports Authority
PPP Public-Private Partnership
PR1MA Perumahan Rakyat 1Malaysia
PV Photovoltaic
R&D Research and Development
RCA Revealed Comparative Advantage
RCEP Regional Comprehensive Economic Partnership
REC Renewable Energy Certificate
REHDA Real Estate and Housing Developers' Association Malaysia
REN21 Renewable Energy Policy Network for the 21st Century
RES Renewable Energy Sources
RGT Regasification Terminals
RoRo Roll-on/Roll-off
RPCC Regional Power Coordination Centre
RPO Renewable Purchase Obligation
RRP Overnight Reserve Repurchase
RTO Rent to Own
SAFT Southeast Asian Food Trade
SARS Severe Acute Respiratory Syndrome
SEAMAO Southeast Asian Ministers of Education Organisation
SEC Special Employment Credit
SECM Securities and Exchange Commission of Myanmar
SEDS Socio-Economic Development Strategy
SERC State Electricity Regulatory Commissions
SETUP Small Enterprise Technology Upgrading Programme
SEZ Special Economic Zone
SHARE European Union Support to Higher Education in ASEAN Region
SITC Standard International Trade Classification
SKRL Singapore-Kunming Rail Link
SMEs Small and Medium-sized Enterprises
SOE State-Owned Enterprise
SPA-FS Strategic Plan of Action on Food Security
SPS Sanitary and Phytosanitary

TAGP	Trans-ASEAN Gas Pipeline
TBT	Technical Barriers to Trade
TFC	Total Final Consumption/ Total Final Energy Consumption
TFP	Total Factor Productivity
TPED	Total Primary Energy Demand
TPES	Total Primary Energy Supply
TPP	Trans-Pacific Partnership
TPPA	Trans Pacific Partnership Agreement
TRIPS	Trade-Related Aspects of Intellectual Property Rights
TRQ	Tariff Rate Quota
TVET	Technical and Vocational Education and Training
UMFCCI	Union of Myanmar Federation of Chambers of Commerce
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
URA	Urban Redevelopment Authority
VAT	Value Added Tax
VEPF	Vietnam Environmental Protection Fund
WDA	Workforce Development Agency
WEF	World Economic Forum
WHO	World Health Organization
WTO	World Trade Organization
WTS	Workfare Training Support
YSE	Yangon Stock Exchange

Editorial

Growth in Southeast Asia, China and India – what we collectively call Emerging Asia – is expected to remain robust over the medium term, backed by solid domestic demand. GDP growth in the region is forecast to average 6.2% per year over 2017-21. Despite the region's strengths, risks remain, particularly those posed by slowing trade, China's rebalancing and lower rates of growth, depressed commodity prices, sustained low interest rates in advanced economies, and sluggish productivity performance. One significant issue affecting Emerging Asia's ongoing economic growth and improving well-being is the critical role of energy. Thus, this edition of the *Economic Outlook for Southeast Asia, China and India* includes a particular focus on the energy challenges that will shape the region's development, including growing demand, the prospects of renewable energy and private investment in the sector.

Emerging Asia is expected to account for an increasingly large share of future global energy demand. The large increase in fossil fuel use indicated in these projections confirms the region's hunger for energy and illustrates the need for policies that promote alternative energies. Most of the region has set targets for renewable energy technologies and implemented measures to encourage their development, though challenges remain in making these policies effective and efficient. In addition, financing renewables, which often have relatively large upfront costs, requires diverse sources of investment. Private investment can be one source of finance that can also create jobs and facilitate technological diffusion. However, technical, administrative and economic barriers will need to be addressed to make the most of these potential private flows. The *Outlook* includes a country-by-country structural analysis in its final section to shed light on such key country-specific policy challenges as infrastructure, education and skills development, tourism, foreign direct investment, and energy.

In delving into Emerging Asia's energy landscape, the *Outlook* reaffirms how regional integration remains one of the best strategic responses to global uncertainty. It highlights the gradual progress that continues to be made under the new ASEAN Economic Community Blueprint 2025 and associated plans, including integration in the energy sector. The *Outlook* not only provides robust analysis but also feeds policy dialogues about the region, its challenges and the measures required to overcome them. As a powerful tool to facilitate policy dialogue in the region and beyond, the *Outlook* informs debates of the OECD-AMRO-ADB/ADBI-ERIA Asian Regional Roundtable, serves as a pillar of the OECD's Southeast Asia Regional Programme (SEARP) and supports the Development Centre's ongoing commitment to partner with Emerging Asia on sustainable and inclusive development solutions.

Mario Pezzini

Director, OECD Development Centre
and Special Advisor to the OECD
Secretary-General on Development

Executive summary

The 2017 edition of the *Economic Outlook for Southeast Asia, China and India* focuses on four main areas: the regional economic outlook up to 2021 (Chapter 1), recent developments in regional integration efforts (Chapter 2), developing renewable energy (Chapter 3) and detailed country notes on key structural policy challenges in the region (Chapter 4).

Economic outlook to 2021

Real gross domestic product (GDP) growth in Emerging Asia (the ten ASEAN member countries – Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam – plus China and India) is expected to remain robust at an average of 6.2% over 2017-21 compared with 6.5% in 2016. Private consumption should continue to make a large contribution to growth. The ten ASEAN economies are projected to see a slight improvement in growth, from 4.8% in 2016 to 4.9% in 2017, and average annual growth of 5.1% over 2017-21. Growth in the Philippines and Viet Nam is expected to continue to be the highest among the ASEAN-5 countries (Indonesia, Malaysia, the Philippines, Thailand and Viet Nam), at 6.1% and 6.2% per year, respectively, over the medium term. The other ASEAN-5 countries are expected to see fairly stable or improving growth over the medium term, compared with recent performance. Brunei Darussalam will see a return to moderate growth, while stable but moderate growth will continue in Singapore. Cambodia, Lao PDR and Myanmar (CLM) will continue their catch-up, with the strongest growth rates among ASEAN countries, exceeding 7% annually over the next five years and reaching 8.5% on average in Myanmar.

China's growth is expected to slow to an annual average of 6% over the medium term. Growth in India will remain high, at 7.3% over the medium term, similar to the 7.4% expected in 2016.

Risks to growth

Despite a largely favourable outlook, policy makers in the region will need to pay careful attention to several potentially important downside risks to growth:

- Growth in trade has slowed in the region over the past five years, as in the rest of the world. While this is partly due to factors that cannot be influenced by policy, such as China's slowdown, increased focus on areas of comparative advantage may help to boost exports. The increasing prevalence of non-tariff barriers (NTBs) could further impede trade activities.
- Persistent low interest rates in advanced economies, if not managed appropriately, may result in market instability in Emerging Asia. In particular, the banking sector needs to be carefully monitored.
- Plateauing productivity growth threatens long-term growth prospects. Promoting enhanced productivity requires reforms to the business environment and policies to foster the emergence of productive firms, including through developing domestic capacities to benefit from international knowledge and technology flows.

Recent developments in regional integration

Integration remains a good way for the region to build resilience and improve growth prospects. This is especially true in the current context of slower global economic growth

and the implementation of more inward-looking policies in some parts of the world. The ASEAN Economic Community was established at the end of 2015, and a number of sector plans for the community have been set under the new ASEAN Economic Community (AEC) Blueprint 2025 to facilitate the free flow of goods, services, investments, capital and skilled labour.

Recent achievements have been made in 12 key policy areas: trade in goods; trade in services; investment and capital markets; competition and consumer protection; intellectual property rights; infrastructure and connectivity; small and medium-sized enterprises (SMEs); food, agriculture and forestry; tourism; human and social development; energy; and the Initiative for ASEAN Integration. However, the overall progress of integration is relatively slow in ASEAN, with many regional initiatives delayed by challenges in the timely and effective implementation of supportive domestic policies. Such supportive policies facilitate deeper co-operation and improve long-term commitments to regional integration.

Developing renewable energy

Long-term projections by the International Energy Agency (IEA) show that a large increase in energy consumption is to be expected in Emerging Asia as a result of a variety of socio-economic factors, including increasing population, sustained economic growth, and increasing access to electricity. Total Primary Energy Supply is expected to increase from 4 406 million tonnes of oil equivalent in 2013 to 6 998 million in 2040, with fossil fuels remaining the main source of energy used in the region.

Much of the region has adopted specific targets for the implementation of renewable energy capacities, as well as policy mechanisms to foster the development of renewables that are not yet competitive with conventional energy sources. Among these, feed-in tariffs (FITs), a price-driven policy mechanism that offers long-term purchase agreements to power producers for given renewable energy technologies, are commonly used. While FITs can be effective, setting appropriate tariffs levels can be challenging.

Because of their size, China and India are making very large contributions to global investment in renewable energy. Viet Nam, Thailand, Malaysia and Lao PDR are leading investment among ASEAN countries, with particularly large investments in hydropower. Foreign direct investment (FDI) will be an important channel for investment in renewables that also enables the transfer of capital, technology and expertise. India, China and Indonesia have received the largest inflows in the region, accounting for more than 60% of the total. FDI is also helping to support the expansion of green jobs.

Setting the right conditions for the development of renewable energy in Emerging Asia will require solutions to challenges in grid access, administrative barriers and energy pricing mechanisms.

Key structural policy challenges

Domestic-level structural policy reform is critical in providing the conditions to maintain robust and sustainable growth in Emerging Asian economies. In pursuing their plans for national development, common priority areas for reform for the region include infrastructure, education and skill development, tourism, FDI, and energy. Other important issues to be addressed by the countries of this diverse region include housing, the digital economy, economic diversification, capital market development and entrepreneurship.

Overview

Economic outlook for 2017-21

Overall, the growth prospects of the Emerging Asian economies (Southeast Asia, China and India) are expected to remain robust over the medium term amid global economic uncertainty. Emerging Asian countries will see real gross domestic product (GDP) growth of 6.5% in 2016, 6.4% in 2017 and 6.2% per year over 2017-21, below the rates seen in the recent past (Table 1). Growth rates and trends will vary across the region, however. While China's gradual slowing will continue, growth will remain strong in India – exceeding 7% per year. Amongst the ASEAN-5, the Philippines and Viet Nam are expected to remain in the lead. Growth should see improvement in Indonesia and Thailand, but decline in Malaysia, particularly, in the near term. The CLM (Cambodia, Lao PDR and Myanmar) can expect continued high rates of growth, with more than 8% growth in Myanmar. Private consumption will continue to be an important factor of growth in most countries, particularly as exports grow slowly. Infrastructure also contributed to growth in many countries in the region. Overall, fiscal balances will worsen slightly in the medium term.

Table 1. **Real GDP growth in ASEAN, China and India**

Annual percentage change

Country	2015	2016	2017	2017-21 (average)	2011-13 (average)
ASEAN-5 countries					
Indonesia	4.8	5.0	5.1	5.4	6.2
Malaysia	5.0	4.2	4.5	4.7	5.2
Philippines	5.9	6.8	6.2	6.1	5.9
Thailand	2.8	3.2	3.3	3.6	3.2
Viet Nam	6.7	6.0	6.2	6.2	5.6
Brunei Darussalam and Singapore					
Brunei Darussalam	-0.6	0.7	2.0	1.8	0.9
Singapore	2.0	1.8	2.0	1.8	4.1
CLM					
Cambodia	7.0	7.1	7.1	7.3	7.3
Lao PDR	7.4	7.1	7.3	7.5	8.1
Myanmar	8.7	8.3	8.4	8.5	6.9
Two large economies in the region					
China	6.9	6.7	6.4	6.0	8.2
India	7.6	7.4	7.6	7.3	5.5
Average of ASEAN 10 countries	4.7	4.8	4.9	5.1	5.4
Average of Emerging Asia	6.6	6.5	6.4	6.2	7.0

Note: The cut-off date of data is 28 November 2016. Weighted averages are used for ASEAN and Emerging Asia. The figures for China, India and Indonesia (2016 and 2017 projections) are based on the OECD Economic Outlook 100. India data refer to fiscal years starting in April.
Source: OECD Development Centre, MPF-2017 (Medium-Term Projection Framework). For more information on the MPF, please see www.oecd.org/dev/asia-pacific/mpf.htm.

Growth will be relatively solid among the large ASEAN-5 countries, with the highest rates of growth in the Philippines and Viet Nam. Robust domestic demand, together with steady remittances, has contributed to growth in the Philippines, which will reach 6.8% in 2016. Growth in Viet Nam will increase slightly, from 6.0% in 2016 to 6.2% in the next five years. Strong growth in exports, foreign direct investment (FDI) and domestic demand have helped to support recent growth. Private consumption and fixed investment have been important drivers of economic activity in Indonesia, as has the expansion of the services sector. Malaysia's growth fell in 2016, owing to slowing exports and growth in the services sector, but is expected to improve and reach 4.7% over the medium term. Thailand's growth is also projected to improve, partly owing to recent improvements in private consumption. The movement in global oil prices has seriously affected the exports and growth of Brunei Darussalam, which is heavily dependent on the sector, but a recovery in prices is anticipated. Singapore's growth is expected to be largely unchanged, averaging 1.8% in the medium term.

Growth in the CLM countries will continue to be the highest among Association of Southeast Asian Nations (ASEAN) member countries – exceeding 7% average growth – as these lower-income countries continue to catch-up with the wealthier countries in the region. Cambodia's strong growth has been driven by private consumption and government spending. Growth in Lao PDR will decline from that of the recent past, but will remain very high. Construction – on new hydropower projects and other residential and commercial projects – has been strong. Myanmar's growth, rising from 8.3% in 2016 to 8.5% over 2017-21, will be the highest in Emerging Asia. While manufacturing growth has been slow recently, the services sector has continued to expand quickly. The country's rapid growth has also been driven by strong domestic demand.

China's slowing growth will fall gradually from 6.7% in 2016 to an average 6% per year over 2017-21. Industrial overcapacity continues to be a challenge and export growth has been weak. India, on the other hand, will see high and relatively stable growth over the projection period, at an average of 7.3%. Liberalising reforms could help to support robust growth and improve currently weak private investment.

Risks and policy challenges of economic outlook to 2021

Emerging Asia is projected to experience favourable growth over the near and medium terms. To harness the region's growth potential, it is critical for policy makers to implement effective policies to cope with various risks, including:

- Coping with slow export growth;
- Managing the impact of zero and negative interest rates in OECD economies; and
- Addressing slowing productivity growth.

New trade strategies are needed to deal with the reversal in the export recovery

Global trade volume growth has slowed down substantially in the last five years. The world is poised to register its 20th straight quarter of less than 3% growth in trade since 2011 Q4. Given the current backdrop of depressed commodity prices, the trend of trade revenue depicts an even grimmer picture.

Domestic demand in China underpins much of the current global commodity flows, being the biggest commodity trading country in the world. Slowdown in Chinese demand affected all major trading partners, including Emerging Asia as a group, although there are manifestations that the contraction in trade is easing lately. While Chinese demand for Indian commodities continues to lose steam, growth in the nominal value of shipments from ASEAN year-to-date (as of October 2016) has in fact already turned positive (0.3%) – an encouraging turnaround after dipping by 9.8% in 2015. The recovery was driven by the surge of imports from Brunei Darussalam, Viet Nam and Cambodia and by the reversal of the trend in Indonesia which more than offset the double digit drop in import growth from the Philippines, Singapore and Malaysia and the slight contraction in imports from Lao PDR and Thailand.

Recent trends may be promising, but they also suggest that countries in Emerging Asia – particularly ASEAN members – have to recalibrate their medium-term trade programmes in a way that would allow their exporting sector to tap other markets – and not depend on China excessively as a source of export growth. In the last ten years, China's share in ASEAN's exports has risen substantially. Renewed weakness in China´s domestic market can thus easily nip the budding signs of export recovery. From a technical standpoint, it may be useful for additional attention to be paid to the export comparative advantages in countries facing weakening trade. It is interesting to note that even during periods of downturn, some countries have managed to increase exports to China based on product specialisation. In the case of Cambodia, exports of consumer goods (e.g. textile and clothing and footwear), capital goods as well as intermediate goods increased significantly, while exports of raw materials softened. Viet Nam is another case in point. Although its exports of raw materials to China have decreased continuously since 2011, Vietnamese exports of consumer, capital and intermediate goods increased significantly. This is a good example of shifting export reliance on raw materials to higher value-added products such as machinery and electronics and electrical products.

Examining the revealed comparative advantage indices (RCA) covering the top five products exported to China by Cambodia, Indonesia, Philippines and Viet Nam reveals that maximising comparative advantage can potentially reduce the impact of slowing global activity on trade (Table 2). For instance, the comparative advantage held by Cambodia over China in its top five exports can be a plausible explanation of why the growth of exports to China never went below 18% between 2012 and 2014. The strength of Viet Nam's top three products also appears to have kept the shipments to China from falling. The steep drop in the prices of oil seems to have dented Indonesia's exports, yet other products where Indonesia has comparative advantage have held firm. The Philippines have managed to maintain positive export growth rates from 2011 to 2014 on the back of steady orders of machinery and electrical equipment and robust mineral trade – two commodities where the country has revealed comparative advantage. Exports eventually dipped by a good 20% with domestic regulatory issues slowing down mining operations in the Philippines, increasing geopolitical tensions, and the weakening of demand for other products where comparative advantage is weak.

Table 2. **Revealed comparative advantage of selected economies in their top five exported goods to China**

	2011	2012	2013	2014
Cambodia				
Wood	9.04	6.24	10.95	12.07
Textiles and clothing	16.18	20.81	18.56	17.83
Vegetable	0.06	1.39	2.55	3.49
Plastic or rubber	5.50	3.86	3.35	1.61
Footwear	49.86	41.78	28.22	24.93
Indonesia				
Fuels	2.11	2.19	2.23	2.11
Vegetable	4.42	4.24	3.22	4.55
Wood	2.52	2.75	3.14	4.14
Chemicals	0.87	0.49	0.60	1.16
Plastic or rubber	1.56	1.36	1.36	1.18
Philippines				
Machinery and electrical	2.32	2.46	2.32	2.25
Minerals	1.13	1.59	1.44	2.17
Vegetable	1.01	0.56	0.68	0.87
Transportation	0.02	0.03	0.05	0.04
Chemicals	0.10	0.10	0.08	0.09
Viet Nam				
Machinery and electrical	0.93	1.49	1.53	1.54
Vegetable	3.54	3.50	3.06	2.71
Textiles and clothing	3.60	3.03	4.47	5.89
Fuels	1.48	0.72	0.52	0.52
Plastic or rubber	1.09	1.25	1.04	0.92

Source: OECD Development Centre, based on World Bank WITS database, http://wits.worldbank.org.

Moreover, the resurgence of trade protectionism and the increasing prevalence of non-tariff barriers (NTBs) can further impede global commodity trade channels. NTBs are used not only with ASEAN's external trading partners, but are also widely used among ASEAN countries. NTBs that are commonly used in the region are trade defence measures such as anti-dumping, countervailing and safeguard measures. Import restrictions on specific products such as electronic goods and non-hazardous and non-toxic products are commonly practised, and export taxes and restrictions in kind on mining products are also widely imposed in the region. Efforts have been made through the ASEAN framework to combat the use of NTBs, for example through the introduction of the ASEAN Trade Repository. But this has not been effective in eliminating the practice of harmful NTBs in the region and further efforts will be needed (Table 3).

Table 3. **Reported use of NTBs in ASEAN and selected trading partners in the region**

Implementer	Affected	Red measures	Total of red	Harmful measures (amber and red)	All measures (including green measures)
Brunei Darussalam		0	0	0	1
Indonesia	Brunei Darussalam	8			
	Cambodia	7			
	China	74			
	India	56			
	Lao PDR	2	365	170	384
	Malaysia	66			
	Philippines	41			
	Singapore	67			
	Viet Nam	44			
Malaysia	Brunei Darussalam	2			
	Cambodia	3			
	China	18			
	India	9	63	31	70
	Philippines	5			
	Singapore	9			
	Thailand	10			
	Viet Nam	7			
Singapore	China	13			
	India	11			
	Indonesia	12			
	Malaysia	12	62	22	34
	Philippines	2			
	Thailand	10			
	Viet Nam	2			
Thailand	Cambodia	1			
	China	18			
	India	5			
	Indonesia	2			
	Lao PDR	1	36	28	66
	Malaysia	2			
	Myanmar	1			
	Singapore	3			
	Viet Nam	3			

Note: An amber measure is a measure that has been implemented and may involve discrimination against foreign commercial interests, or a measure that has been announced or is under consideration and would (if implemented) almost certainly involve discrimination against foreign commercial interests. A red measure is a measure that has been implemented and almost certainly discriminates against foreign commercial interests.
Source: OECD Development Centre's compilation based on Global Trade Alert database, available at www.globaltradealert.org/measure.

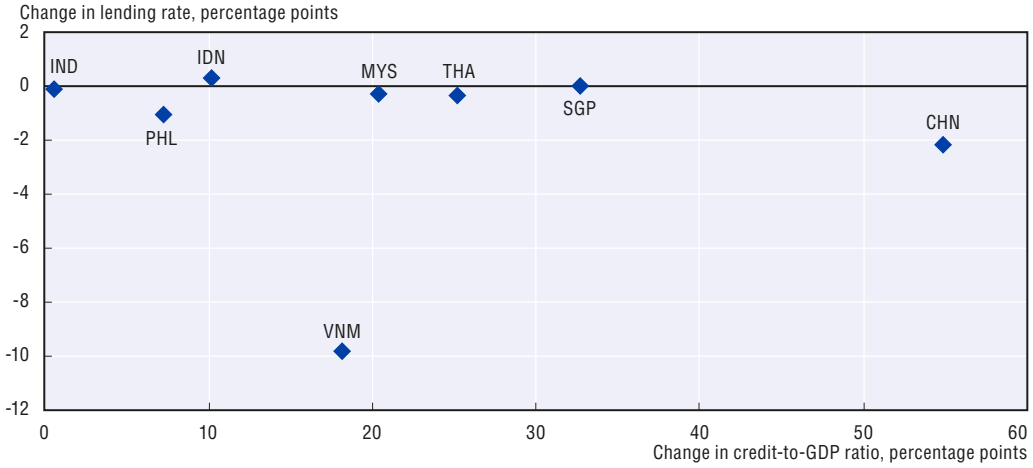
Persistent low interest rates in advanced economies can cause some market disruptions if spillover effects are not aptly managed

In the financial sector, persistent low interest rates in advanced economies, if not managed by national authorities through vigilant supervision, may result in domestic market instability. Apart from its palpable influence on securities trading, the decrease in the cost of borrowing in large economies has strained the balance sheets of financial sector corporations as fixed income earnings decline. At this point, the macroeconomic fundamentals of Emerging Asia are stable enough to keep near-term risk at bay. Increased interest rates bear their own risk and the ease at which financial markets in

the region would be able to ride out the swings in the mood of investors when monetary policy direction in advance economies changes hinges mainly on how reforms would improve the standing of key financial institutions as well as systemically relevant public corporations.

Global liquidity flooding operations that began in 2008 have driven the ratio of domestic credit-to-GDP upwards across Emerging Asia (Figure 1). The ratios of China, Thailand, Malaysia, Singapore and Viet Nam, which were already relatively high pre-Global Financial Crisis (in 2007), have seen the highest mark-ups in the last ten years relative to other countries in Emerging Asia. Nonetheless, lending rates have not changed much, reflecting the cautious stance of monetary officials in mirroring the extent of quantitative easing in advanced economies, presumably to maintain financial market discipline. This could be one of the channels that could explain why the impact of low interest rates overseas on domestic real sectors has been mixed.

Figure 1. **Change in credit-to-GDP ratio and lending rate, 2011 vs 2015**



Source: OECD Development Centre calculations based on World Bank *World Development Indicators*.
StatLink http://dx.doi.org/10.1787/888933443202

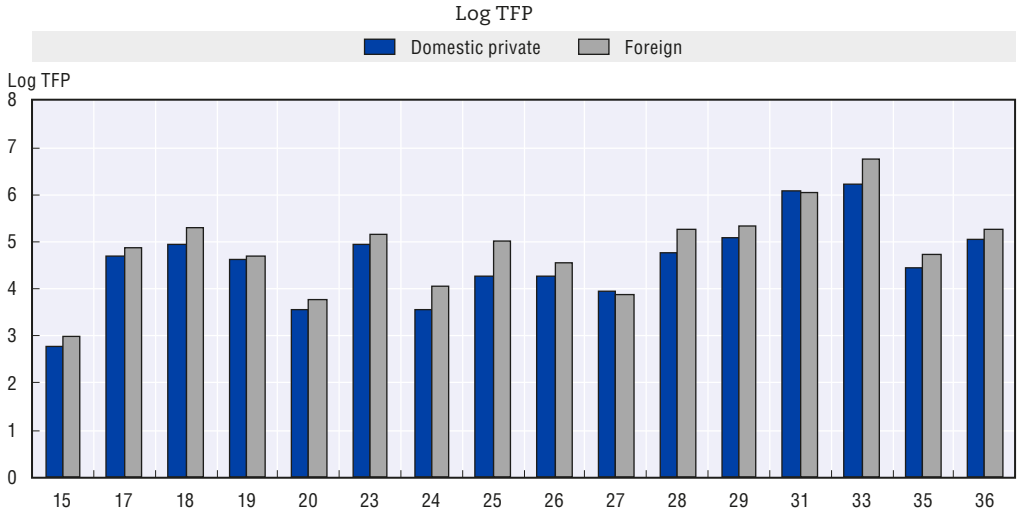
Yet even with some caution in monetary policy making, the ensuing credit expansion has exposed vulnerabilities in bank supervision frameworks in light of the continued weakness in international markets and subdued oil prices. Instances of loan defaults among highly leveraged corporations have increased, and bank portfolios have generally deteriorated as a consequence, even though banks in the region remain well capitalised. India's banking system, in particular, stands out in terms of relatively high level and growth of its non-performing loans (NPL) ratio. The case of China cannot be overlooked as well. It is vital that banks maintain a healthy loan portfolio because fixed income earnings are already under stress owing to the decline in yields, which dragged down profitability. To their advantage, prudential regulations in many countries in Asia are strong as a result of a series of measures undertaken years before, but the continuation of reforms in Emerging Asia will be needed. In addition to the impact on the financial sector, downside risks to fiscal stability in Emerging Asia caused by interest rates in advanced economies are benign at the moment. The current evidence concerning impact of low-interest rates on the real economy is mixed.

Plateauing productivity growth threatens long-term growth prospects

Various stakeholders in Emerging Asia have long recognised the challenge brought about by slowing productivity growth. Recent trends both in economic and political spheres make this issue even more pressing. Productivity growth in the four years following the global financial crisis and its immediate aftermath (2010-13) has tended to be lower than in the four years preceding it (2004-07), except for total factor productivity (TFP) growth in Indonesia, the Philippines and Thailand, and labour productivity growth in Brunei Darussalam, India, Indonesia, Lao PDR and Thailand. Performance has varied across sectors, and there has been some evidence of faster growth in lower-productivity sectors in recent years.

The analysis of firm-level productivity in Emerging Asia, using data from Indonesia, the Philippines and Viet Nam, highlights how firm-level factors – including age, size, ownership and numerous other measurable and non-measurable traits – can be associated with large differences in productivity levels and growth rates. For example, TFP varies between domestic and foreign-owned firms in Indonesia (Figure 2). Average annual growth rates by firm size in the Philippine manufacturing sector have varied considerably (Figure 3). While the smallest group of firms (with 1-9 workers) had the highest average growth rates in the years studied, their growth was also the most volatile.

Figure 2. **Median TFP in Indonesia, by ownership, 2013**

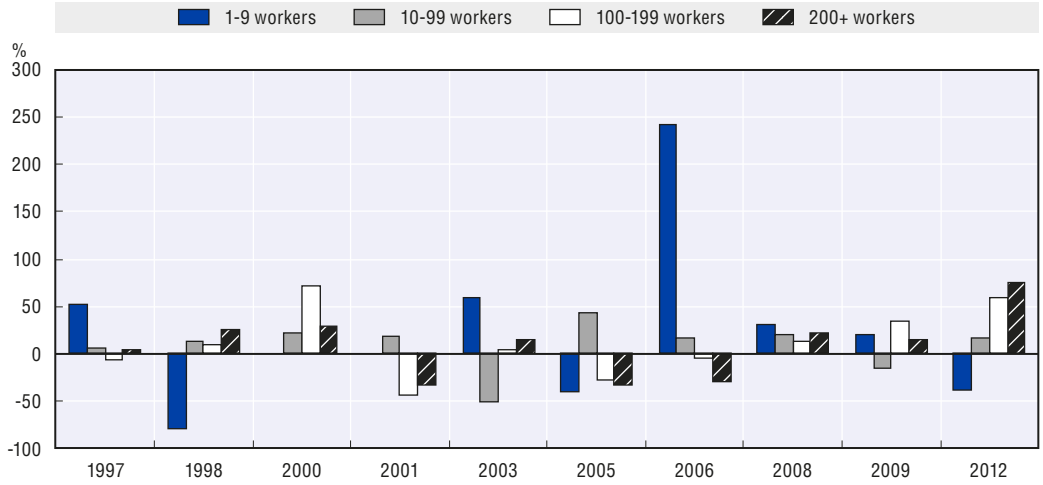


Note: Manufacturing sectors represented by their ISIC Rev.3.1 two-digit codes, with the following definitions: 15: Manufacture of food products and beverages; 16: Manufacture of tobacco products; 17: Manufacture of textiles; 18: Manufacture of wearing apparel; dressing and dyeing of fur; 19: Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear; 20: Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials; 21: Manufacture of paper and paper products; 22: Publishing, printing and reproduction of recorded media; 23: Manufacture of coke, refined petroleum products and nuclear fuel; 24: Manufacture of chemicals and chemical products; 25: Manufacture of rubber and plastics products; 26: Manufacture of other non-metallic mineral products; 27: Manufacture of basic metals; 28: Manufacture of fabricated metal products, except machinery and equipment; 29: Manufacture of machinery and equipment n.e.c.; 30: Manufacture of office, accounting and computing machinery; 31: Manufacture of electrical machinery and apparatus n.e.c.; 32: Manufacture of radio, television and communication equipment and apparatus; 33: Manufacture of medical, precision and optical instruments, watches and clocks; 34: Manufacture of motor vehicles, trailers and semi-trailers; 35: Manufacture of other transport equipment; 36: Manufacture of furniture; manufacturing n.e.c.; and 37: Recycling.

Source: OECD Development Centre calculations based on BPS (2002-13), *Survei Tahunan Perusahaan Industri Manufaktur*, Badan Pusat Statistik, Jakarta.

StatLink http://dx.doi.org/10.1787/888933443210

Figure 3. **Average annual growth in TFP by firm size in the Philippines, 1997-2012**



Note: Growth rates are not available for 1999, 2002, 2004, 2007, 2010 and 2011. In addition, the growth rate for firms with 1-9 workers is not available for 2000.

Source: OECD Development Centre calculation based on Philippine Statistics Authority (1996-2012), *Annual Survey of Philippines Business and Industry (ASPBI)*, Philippine Statistics Authority, Quezon City.

StatLink http://dx.doi.org/10.1787/888933443225

Even these within-firm factors are influenced by the policy environment, meaning that effective productivity policies can provide the conditions needed for productive firms to emerge and thrive. In particular, management practices such as monitoring, targeting and incentives may not be used effectively, and managers may not be delegated sufficient authority to improve efficiency. These problems are compounded when insufficient access to finance leads to underinvestment in improved management skills or when there is a lack of opportunity for talented managers to establish or grow their firms.

Innovation through experimentation with new knowledge and technologies is critical for improving productivity in firms. Policy priorities for fostering improvements among these leading firms include innovation policies – such as investments in basic research, the provision of fiscal incentives and reform of intellectual property rights.

While high-productivity foreign firms can boost the productivity of domestic suppliers and competitors, the benefits of spillovers from foreign investment will not be realised without the development of domestic capacities. Small firms in particular are likely to face more of these downsides of foreign competition, while all domestic firms face a loss of skilled labour due to the wage premiums that tend to be offered by foreign firms. Human capital is a critical element in the development of the domestic capacities needed to capitalise on knowledge and flows and absorb productivity spillovers from FDI, at the level of both the economy and the firm.

Regional integration in ASEAN

With the establishment of the ASEAN Economic Community at the end of 2015, the year 2016 kick-starts many efforts in realising the dream of a seamless region, in terms of free flow of goods, services, investments, capital and skilled labour. Against the backdrop of slower global economic growth and a shift towards more inward-looking national policies in some parts of the world, the challenges faced by ASEAN on the path for further integration are greater than ever. Recent achievements have been made in

trade in goods, services, investment and capital markets, competition and consumer protection, intellectual property rights, infrastructure and connectivity, development of small and medium-sized enterprises (SMEs), food, agriculture and forestry, tourism, human and social development, energy as well as Initiative for ASEAN Integration (IAI) (Table 4).

Table 4. **Progress in Emerging Asia's integration in key policy areas**

Policy area	Assessment of progress
Trade in goods	There has been some progress in the area of the elimination of tariffs for most tradeable products. The issue of Non-Tariff Measures (NTMs) needs to be addressed by each country as part of their national policy so that trade can be intensified within the region.
Trade in services	The Mutual Recognition Agreements (MRAs) are successfully implemented in different sectors. Owing to the existence of skill gaps within ASEAN, the issue of the applicability of MRAs needs to be addressed.
Investment and capital market liberalisation	Efforts have been made in integrating the capital market. Nevertheless, ASEAN countries need to harmonise their laws and regulations, particularly investment protection.
Competition and consumer protection	Many ASEAN countries still face difficulties in enforcing details of competition and consumer protection policies.
Intellectual property	Progress made in this sector is somewhat slow as different countries have different levels of development and intellectual property (IP) awareness.
Infrastructure and connectivity	The past decade has seen progress on regional infrastructure projects such as the ASEAN Highway Network, power and gas connectivity, and the ASEAN Broadband Corridor. Nevertheless, the implementation of rail links remains a challenge in the region.
Small and medium-sized enterprises	There are key deliverables from the Strategic Action Plan 2010-2015, such as the ASEAN SME Policy Index, the ASEAN Guidelines on One Village One Product and the ASEAN SME Online Academy.
Food, agriculture and forestry	Much progress has been made in information sharing, food safety testing and inspection efforts. High risk of exposure to foodborne disease and the complexity of regional food industry in the region remain as difficult obstacles.
Tourism	Integration in the tourism sector has received wide attention from policy makers in the region especially after the inception of AEC in 2015. The development of ecotourism clusters will enhance connectivity of ecotourism sites among ASEAN countries and improve economic conditions of rural areas.
Human and social development	Human and social development concerns are addressed in the ASEAN Socio-Cultural Community Blueprint and recent ASEAN sectoral plans. A strong focus is given to human and social development issues.
Energy	Though the progress in developing the ASEAN Power Grid (APG) continues steadily, it has been slow owing to technical and financial challenges.
Initiative for ASEAN Integration (IAI)	The Initiative for ASEAN Integration (IAI) co-ordinates action addressing development gaps among and within ASEAN members in support of regional integration. The CLMV countries are the primary focus of the IAI.

Source: OECD Development Centre.

Overall, progress of integration is relatively slow in ASEAN. Regional-level policy statements and plans need to be supported by each country in the form of national policies that are coherent, timely and effective. Sound policy frameworks will not only encourage further co-operation among member states, they will also reduce the risks of policy reversal and back-pedalling in the long run.

In **trade in goods**, there has been some progress owing to the reduction of tariffs for most of the products listed on the Inclusive List, Sensitive List and Highly Sensitive List since the inception of the ASEAN Free Trade Area (AFTA) in 1993. By early 2010, the ASEAN-6 countries had cut tariffs to 0-5% on 99.7% of their tariff lines. As of early 2015, the CLMV countries (CLM plus Viet Nam) had reduced or eliminated tariffs on 98.9% of their tariff lines. To a certain extent, this endeavour has led to an increase in intra-regional trade activity. However, despite the recent National Single Window initiative that attempts to streamline all information on Non-Tariff Measures (NTMs) used in each member country, challenges remain and the issue of NTMs needs to be addressed by each country as part of its national policy so that trade can be intensified within the region.

The services sector in ASEAN remains significant and continues to grow steadily. As of 2013, this sector accounted for around 47% of GDP on average for the ASEAN economies. Even among Cambodia, Lao PDR, Myanmar and Viet Nam, the contribution of the sector is significant. In Singapore, around 60% of GDP is contributed

by the services sector. In Malaysia and the Philippines, more than 50% of the economy is driven by business activities in this sector. For **trade in services** under the ASEAN Economic Community (AEC) Blueprint 2025, negotiations are due to commence on the ASEAN Trade in Services Agreement that aims to strengthen the existing ASEAN Framework Agreement on Services (AFAS) and sectoral Mutual Recognition Agreements (MRAs). Nevertheless, the applicability of MRAs needs to be examined because of skill gaps within ASEAN or other administrative obstacles.

Access to insurance, capital markets and the banking sector has improved. The ASEAN Insurance Integration Framework (AIIF), signed in 2015 and due to take effect before the end of 2016, provides for cross-border supply of marine, aviation and goods in international transit insurance. The ASEAN Banking Integration Framework (ABIF), approved by central bank governors in December 2014, allows banks meeting certain criteria to be certified as qualified ASEAN banks, providing them greater access in other ASEAN markets. Additionally, progress has been made in the integration of capital markets. The ASEAN Collective Investment Scheme (CIS) framework authorises fund managers in one country to operate a cross-border offering of funds in other ASEAN countries. Although regional **investment and capital markets liberalisation** has been progressing under the AEC blueprint, ASEAN economies need better connectivity and member countries need to harmonise laws and regulations at the national level. Insurance policies are also needed for ASEAN countries to build deeper, more efficient markets with greater resiliency and easier access.

The quality and adequacy of national competition policies and consumer protection vary among ASEAN countries depending on the level of economic development and according to differences in the structure of the economy, institutions, sectors, concentration and production. The speed of adoption of these policies differs among ASEAN countries and is relatively slow. The new blueprint in place has renewed older commitments that focus on a people-oriented ASEAN community for consumer interests and welfare. The marketplace requires comprehensive and well-functioning national and regional consumer protection systems enforced by effective legislation, redress mechanisms and public awareness initiatives. One focus of the ASEAN Strategic Action Plan for Consumer Protection 2016-2025 (ASAPCP) is the consumer in a people-oriented ASEAN. Many ASEAN countries still face difficulties in enforcing their competition and **consumer protection policies**, as well as in harmonising the administrative and technical aspects of these policies within the region.

The **Intellectual Property Rights** (IPR) Action Plan of 2011-15 resulted in somewhat deeper co-operation within ASEAN. The plan had five strategic goals, all of which were adopted in the new IPR Action Plan of 2016-20 to strengthen co-operation and integration among member countries. Developing a more robust IP system in the region has been a major focus for the ASEAN Working Group on Intellectual Property Co-operation (AWGIPC). The previous plan set out 13 initiatives towards achieving this goal, from reducing average turnaround time for trademark registration to protection of geographical indications. The initiatives in the action plans are very timely and appropriate for achieving the main goals. Progress made in this sector is somewhat slow as different countries have different levels of development and intellectual property (IP) awareness. Additionally, national policies on IP need to be aligned with regional policies to realise these goals in a timely manner.

Progress has been steady in the **infrastructure and connectivity** sector, whereby progress is made on several regional infrastructure projects such as the ASEAN Highway Network, power and gas connectivity, and the ASEAN Broadband Corridor in the past ten years. Three new initiatives have been highlighted in the master plan on

ASEAN Connectivity 2025. The first initiative is to establish a rolling priority pipeline list of potential ASEAN infrastructure projects and sources of funds. Its aim is to address information issues and capability gaps associated with developing a strong infrastructure pipeline in ASEAN member states. The second initiative is to establish an ASEAN platform to measure and improve infrastructure productivity. The platform will conduct a diagnostic on overall infrastructure productivity and identify opportunities to improve the planning, delivery and operation of infrastructure. The third initiative is to develop sustainable urbanisation strategies in ASEAN cities in order to scale up the sharing of smart urbanisation models across cities in ASEAN member states. Nevertheless, challenges remain for further development of rail links in the region that are still lagging behind.

Small and medium enterprises (SMEs) are very important to ASEAN countries owing to the sector's presence in terms of its share of total establishments. Recent data show that between 88.8%and 99.9% of establishments fall into this category. The competitiveness and robustness of ASEAN economies depend heavily on the competitiveness and robustness of the regions' SMEs, since they make up the majority of establishments in member countries. From the previous Strategic Action Plan 2010-2015 there are key deliverables that include the ASEAN SME Policy Index, the ASEAN Guidelines on One Village One Product and the ASEAN SME Online Academy. The new Action Plan sets out five strategic goals for empowering SMEs in the region: i) promoting productivity, technology and innovation; ii) increasing access to finance; iii) enhancing market access and internationalisation; iv) enhancing the policy and regulatory environment; and v) promoting entrepreneurship and human capital development. Nevertheless, numerous hardware challenges remain for the region's SMEs such as difficulty in accessing financial assistance from the outset and harnessing technology and new innovative methods. Other software challenges include a lack of entrepreneurship skills, problems within compliance with standards and marketing and managerial issues. Efforts should be increased on knowledge sharing of best practices in order to narrow the information gap between SMEs in more developed and less developed countries. Continuous skills upgrading and education initiatives must take centre stage as part of an effort to develop the region's human resource potential.

In the **food, agriculture and forestry** sector progress has been made in five priority areas, including information sharing, food safety testing and inspection. Efforts to enhance regional co-operation in food safety have intensified with the introduction of the ASEAN Food Safety Policy and ASEAN Risk Assessment Centre for Food Safety (ARAC) in 2016. However, because of the high risk of exposure to foodborne disease and the complexity of regional food industry in the region, ensuring food safety in Southeast Asia remains a difficult task. Challenges to reach harmonised food safety standards in ASEAN also remain owing to gaps in the legal framework among ASEAN member states and lack of institutional co-ordination. Education and literacy improvement can also play an important role in changing public opinion regarding food and health issues. There is currently little co-operation among food producers and consumers for Good Agricultural Practices (GAP), Good Manufacturing Practices (GMPs) and Good Hygienic Practices (GHPs), and this could hamper implementation of food safety regulations.

Integration in the **tourism** sector has received wide attention from policy makers in the region especially after the inception of AEC in 2015. The tourism industry has experienced significant growth in the past decade in Southeast Asia. Total tourism revenues per visitor have increased by almost 50% in many ASEAN countries and have more than doubled in Thailand in recent years. The potential benefits of developing ecotourism have been recognised by several ASEAN countries, including Cambodia, Lao PDR, Malaysia and Thailand, as ecotourism is included in the national plans of

these countries as an important component of service sector development. The recent development of a regional network of ecotourism sites will enhance connectivity of ecotourism sites among ASEAN countries and improve economic conditions of poor communities along the tourism corridors given that issues of hospitality standards and tourists safety are addressed through regional co-operation.

Human and social development concerns are addressed in the ASEAN Socio-Cultural Community Blueprint and recent ASEAN sectoral plans. One of the plan's five characteristics outlines the creation of a "resilient, people-oriented and people-centred ASEAN", through goals for strengthening MSMEs, developing the private sector, using public-private partnerships (PPPs), narrowing development gaps in the region and involving stakeholders in regional integration. Other human and social development themes are also touched upon in relation to education financial literacy, consumer empowerment, research and development, and information and communication technology (ICT) use, sustainable economic development, food security and health care. Co-operation through the East Asia Summit has tended to include a strong focus on issues of human and social development, particularly in education and health. Various regional frameworks have enabled productive co-operation on trans-border issues, though gaps in national capacities can hinder these efforts.

As for the **energy** sector, the first phase of the ASEAN Plan of Action for Energy Cooperation (APAEC) outlines key strategies for energy sector integration in the region spanning multiple programme areas. Improved connectivity, however, remains fundamental to these efforts to deepen market connections and improve security and efficiency. Connectivity projects have been grouped together under the ASEAN Power Grid (APG) and Trans-ASEAN Gas Pipeline (TAGP) initiatives. There has been steady development in the APG in recent years even though technical and financial challenges remain as obstacles for further development in this sector. The harmonisation of legal, regulatory and technical standards are in the preparation phase for study, but their implementation has yet to be planned. As for the TAGP initiative, while the construction of liquefied natural gas (LNG) terminals can be managed at a national level, regional co-operation is needed in establishing a standard clause for LNG cargo diversion and destination flexibility for ASEAN contracts, and allow third-party access to terminals. A unified strategy in the sector would also strengthen the region's bargaining power in a global LNG market where Asian importers are subject to high prices with the Asian premium.

As for the **Initiative for ASEAN Integration**, the new Work Plan III has replaced the previous Work Plan. It not only provides greater detail on types of support to be given, it has also shifted its focus, with special focus on fostering improved development prospects in the CLM countries through sustained economic growth; the reform of business regulations and access to finance; competitiveness in rural economies, as well as the development of MSMEs. It was agreed during an April 2016 meeting of the ASEAN Integration Task Force in Jakarta that the association would focus on addressing development gaps in food and agriculture, trade facilitation, development of MSMEs, education, health and social welfare. IAI Work Plan III, which covers 2016-20, follows the priorities outlined in AEC Blueprint 2025 with a strategic framework of actions in five areas: food and agriculture; trade facilitation; MSMEs; education; and health and well-being. The plan document highlights its "strong focus" on AEC Blueprint goals in the first three of these areas, and "some focus" on food and agriculture actions of ASEAN Socio-Cultural Community (ASCC) and on AEC goals in the last two areas (which also have a "strong focus" on ASCC targets).

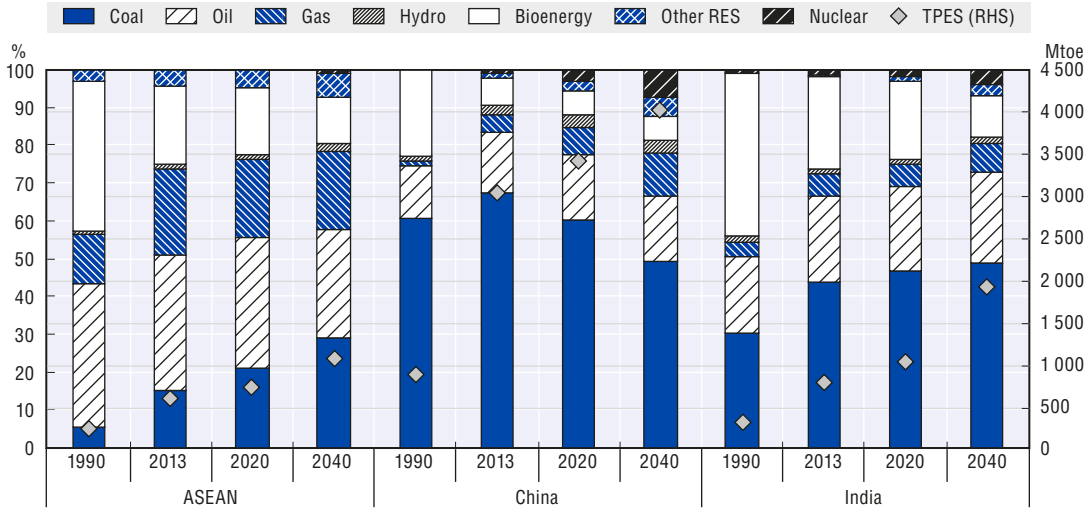
Increasing investment in renewables

Emerging Asia's energy supply will continue to be dominated by fossil fuels

Emerging Asia is facing a rapidly increasing energy demand over the coming decades, which is driven by a variety of socio-economic factors, including increasing population, sustained economic growth, and increasing access to electricity. According to projections under the International Energy Agency (IEA)'s New Policy Scenario (a baseline scenario taking broad policy commitments and plans into account), Emerging Asia will experience a significant growth in Total Primary Energy Supply (TPES), increasing from 4 406 million tonnes of oil equivalent (Mtoe) in 2013 to 6 998 Mtoe in 2040. This poses major challenges to achieving and balancing energy policy objectives in the region, including energy security, sustainable development, energy access and affordability.

Fossil fuels are expected to remain the main energy sources in the region throughout the period, with the share of fossil fuels in TPES decreasing slightly from 83% in 2013 to 79% in 2040 (Figure 4). Coal retains its status as the most important energy source in Emerging Asia, although China's efforts to reduce dependence on coal contribute to reduce the share of coal in the region's TPES from 56% in 2013 to 46% in 2040. Furthermore, the IEA expects a rapid deployment of solar power and wind power in the region, with China and India accounting for a significant share of the global installed capacity. Though its energy supply will grow more slowly than that of either India or ASEAN, China's TPES will continue to account for the largest share of the energy supply in Emerging Asia, totalling 4 020 Mtoe by 2040. India's TPES is expected to increase from 775 Mtoe in 2013 to 1 908 Mtoe in 2040, and ASEAN's TPES is projected to rise significantly from 594 Mtoe in 2013 to 1 070 Mtoe in 2040.

Figure 4. Total primary energy supply in Emerging Asia, 1990-2040



Note: Other RES includes wind, solar PV, and geothermal. Calculations are based on IEA's New Policy Scenario.
Source: OECD Development Centre, based on IEA (2015), *World Energy Outlook 2015*; IEA (2015), *World Energy Outlook 2015: Special Report on Southeast Asia*.
StatLink http://dx.doi.org/10.1787/888933443239

Renewable energy targets have been adopted by China, India and nine ASEAN member states

Significant reforms will be needed to mitigate contributions to climate change and facilitate the transition to a low-carbon economy. Emerging Asia is particularly

exposed to climate change risks, and there has been a widespread adoption of targets for renewable energy in the region, with China and India showing global leadership in terms of the absolute scales of their targets. The Indian government announced a target of increasing the solar capacity from 3 GW to 100 GW by 2022, while increasing the overall capacity of renewable energy to 175 GW. Meanwhile, ASEAN's energy ministers have set an aspirational target to increase the share of renewables in TPES to 23% by 2025. In addition to the region-wide target, all ASEAN member states except Cambodia have implemented some renewable energy targets, although the targets vary greatly in terms of technology, time horizon, measurement unit and level of ambition. As ASEAN's regional target is not translated into national targets for member states, there are few mechanisms for governance, incentivising and monitoring on a regional level. Hence, the effectiveness of the target could be improved by co-ordinating national action plans and establishing a roadmap to 2025 for ASEAN. In China, Indonesia, Malaysia and the Philippines, regulatory support for the renewable energy targets are provided through renewable energy laws, which enhances the investment environment and strengthens the commitment to renewable energy development.

Feed-in tariffs are a common policy mechanism to support renewable energy development, but setting rates remains a challenge

All of the ASEAN-5 countries, as well as China and several Indian states, have introduced feed-in tariffs (FITs), a price-driven policy mechanism that offers long-term purchase agreements to power producers for given renewable energy technologies (Table 5). In addition to providing subsidies and reducing the price risk for investors, some FIT systems are also combined with guaranteed grid access, which theoretically reduces the volume risk. Notably China, India, Malaysia and the Philippines provide guaranteed grid access and/or priority dispatch to renewable energy. However, grid issues remain a key barrier to development and generation of renewable energy in the region, even in countries where guaranteed grid access is backed by the national renewable energy laws. In addition to feed-in tariffs, tax reliefs and financing support are common measures for encouraging renewable energy development in the region.

Table 5. **Renewable energy policy supports in Emerging Asia**

Country	Economic support policies and fiscal incentives							Regulatory support	
	Feed-in tariff	Capital subsidy, grant or rebate	Public investment, loans or grants	Tax relief	Net metering	Auction schemes	Carbon pricing	Renewable Portfolio Standard	RE Act/Law (REA)/ (REL)	RE Action Plan / Roadmap
ASEAN										
Brunei Darussalam										
Cambodia										
Indonesia	✓	✓	✓	✓		✓			2014 Geothermal	Roadmap NRE 2015-2025
Lao PDR				✓						
Malaysia	✓	✓	✓	✓		✓			2011 REA	2010 FIT RE Action Plan
Myanmar				✓						
Philippines	✓	✓	✓	✓	✓			✓	2008 REA	NREP 2011-2030
Singapore		✓		✓						
Thailand	✓	✓	✓	✓	✓					AEDP 2015-2036
Viet Nam	✓	✓		✓						REDS 2015-2030
China and India										
China	✓	✓	✓	✓		✓	✓		2005 REL	13th FYP 2016-2020
India	✓	✓	✓	✓	✓	✓	✓			

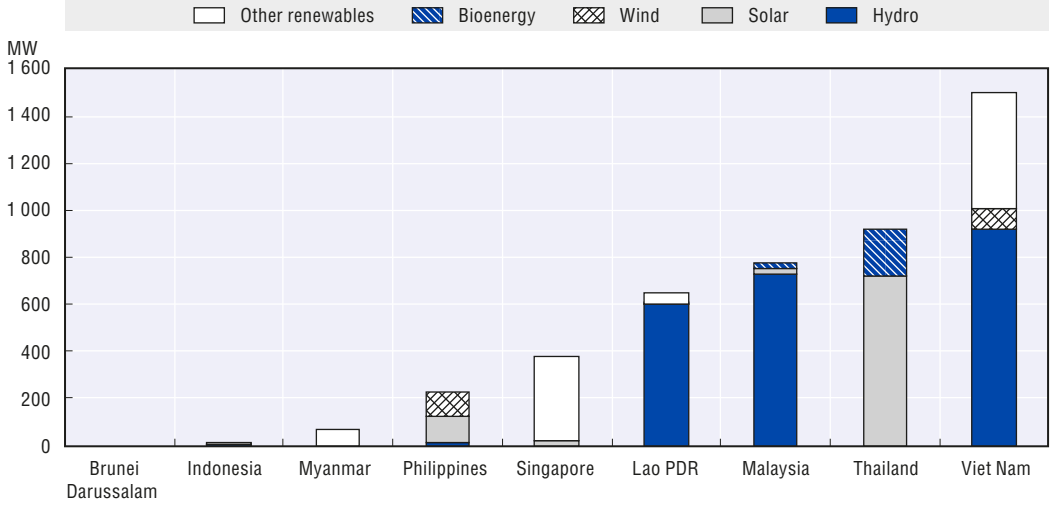
Sources: OECD Development Centre, based on ASEAN Centre for Energy and REN21, *Renewables 2016 Global Status Report*, www.ren21.net/status-of-renewables/global-status-report/.

Setting the payment level is one of the most complex parts of an FIT system, as it should provide cost recovery for producers without overcompensating them. In several cases in Emerging Asia, the feed-in tariffs have been too low to attract substantial investments in renewables. Although this can partly be attributed to the challenge of estimating appropriate tariff rates in general, the low FIT rates also reflect issues related to securing enough funding for FIT systems and insufficient cost control mechanisms. While the tariffs levels are often set administratively in the region, China, India and Indonesia have used competitive bidding (i.e. auctions and tenders) to set feed-in tariffs. The use of auctions can provide potential for discovering the real production cost of renewable energy, and hence the adequate feed-in tariffs, which would improve the cost-efficiency of the FIT system. However, this depends on a large market size that makes the bids competitive, and avoidance of underbidding. India provides an example of such a large market that has significantly benefited from introducing competitive bidding as a measure to enhance the cost-effectiveness. While the auctions for wind power in India have resulted in tariff reductions up to 30%, they have also been linked to low deployment effectiveness with less capacity than intended being installed. The risk of low deployment effectiveness in auctions can partly be attributed to underbidding, which may drive the tariff below levels that are necessary for sufficient cost recovery for most of the projects. If feed-in tariffs are combined with auctions, it is therefore essential that measures are taken to prevent underbidding , such as the imposition of strong penalties for not commissioning the projects.

Investment in renewable energy is increasing

China is making large investments in developing renewable energy, totalling USD 102.9 billion in 2015, or 36% of global investment in renewables. India was the region's second-largest investor, at USD 10.2 billion in 2015. Following China and India, Thailand was the only other country in Emerging Asia to reach USD 1 billion in asset finance for renewable energy in 2015. Large-scale hydropower made up the vast share of new installed capacity of renewable energy in ASEAN in 2015. If large-scale hydropower is excluded, on the other hand, Thailand led the increased capacity of renewable energy followed by solar power (Figure 5). In contrast, wind was the major source of new installed renewable energy capacity in China and India.

Figure 5. **New installed capacity of renewable energy by energy source in ASEAN in 2015**



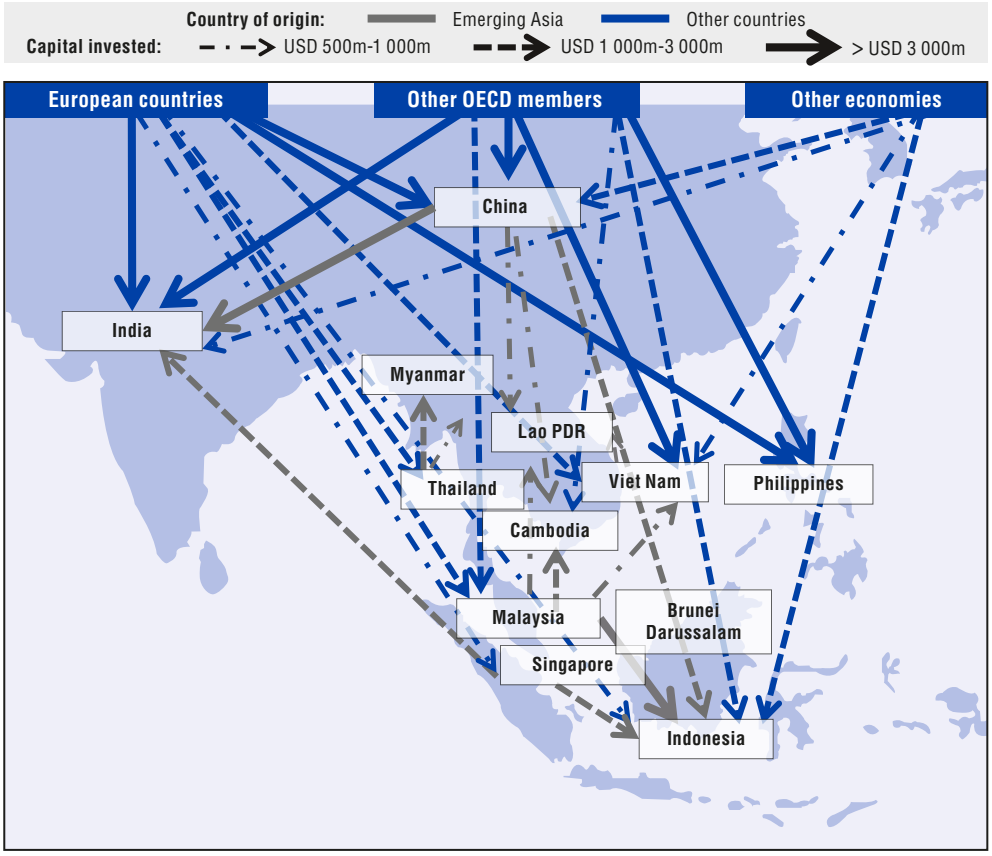
Note: Other renewables include waste, solid, other biofuels, biogas, geothermal.

Source: OECD Development Centre, based on IRENA, *Renewable Capacity Statistics 2016*, and Federal Ministry for Economic Affairs and Energy, *Thailand Solar PV Policy Update*.

StatLink http://dx.doi.org/10.1787/888933443248

FDI flows can help to provide the financing needed for developing renewable energy. It also enables the transfer of capital, technology and expertise from home countries to host countries; in other words, it allows both multinationals and local companies to engage in such transfers through trade and investment for climate-smart goods and technologies. India (USD 24 688 million), China (USD 13 555 million) and Indonesia (USD 11 930 million) attract the majority of greenfield FDI in the region; they account for more than 60% of the total greenfield FDI received in the region in the renewable energy sector (Figure 6). Brunei Darussalam and Singapore are two of the smallest markets for the renewable energy sector (USD 409 million and USD 946 million, respectively). ASEAN countries (USD 24 347 million) receive together about the same amount as India, but Indonesia welcomes almost half of it by itself.

Figure 6. **Greenfield FDI inflows in Emerging Asia's renewable energy sector, January 2003 – August 2016**



Note: European countries: OECD Members which are members of the European Union; Norway and Switzerland. Other OECD Members: Australia; Canada; Israel; Japan; Mexico; New Zealand; Korea; Turkey; the United States. Other economies: Argentina; Chinese Taipei; Hong Kong, China; Russian Federation; Saudi Arabia.

Source: OECD Development Centre's calculations based on the dataset of the FDI Markets (2016), https://www.fdimarkets.com.

FDI flows are an important driver of green growth, through investment in the development of green energy and the creation of green jobs. While job creation from FDI projects in renewable energy a decade ago was dominated by jobs in the biomass power sector, in 2015 it came from a more diversified combination of renewable energy subsectors, both in the Asia-Pacific region and in ASEAN. This trend is present in China and India as well, although biomass power-related FDI still created the largest number

of jobs in China in 2015. At the same time, the total number of jobs created from 2011 to 2015 in China through solar electric power-related FDI increased significantly compared with those created between 2006 and 2010.

Grid issues, administrative barriers and pricing are challenges to renewable energy development

Grid access is a key requirement in order for development of renewables to be realised, whether it is under an FIT system or another economic support mechanism. In ASEAN, China and India, grid issues are a key barrier to renewable energy generation, albeit in various ways. First, physical issues stemming from underdeveloped grid infrastructure and lack of investments in grid upgrades are restraining investors from developing renewable energy projects. In addition to technical issues such as voltage rise and lack of local load due to distant locations of renewable energy source (RES) plants, there are also issues with delays and utility connection at local levels. Grid development and upgrades should thus be a key priority to facilitate further development of renewable energy. In addition, improved planning is essential to ensure that new renewable energy capacity is installed in locations that are suitable in terms of demand centres and grid connections. While infrastructure development is a prerequisite to facilitate renewable energy development, the investment environment can also be enhanced by incorporating guaranteed grid access into renewable energy laws, which have been implemented in the Philippines and China. It is, however, essential that the grid access is guaranteed de facto. As the cost of renewable energy projects continues to decline thanks to learning effects, in particular in China and India, sufficient infrastructure will become an increasingly important factor for generation of renewable energy. The development of renewable energy must therefore be supported by upgrades and expansions of interconnectors in the region

A prerequisite for the RES policy support mechanisms to be effective is that non-economic barriers are solved, including those related to administrative hurdles and restrictions on foreign ownership. Slow regulatory approval processes, overlap of government bodies regulating the renewables industry and lack of legislative guidance are all factors that hamper renewable energy investment in the region. It is therefore essential to simplify the license procedures and coordinate the responsibilities among different institutions, in order to enhance the effectiveness of the renewable energy policies.

In the long term, the development of renewable energy could be further supported by creating more competitive electricity markets and introducing more appropriate energy pricing mechanisms. Moving forward towards a low-carbon energy system, appropriate energy pricing is essential. This calls for phasing out fossil-fuel subsidies and introducing carbon prices. Owing to the negative externalities related to fossil-fuelled power generation, the full cost to society is not reflected in the power plants' marginal costs of production. On top of this, the energy market is distorted even further as long as fossil fuel subsidies prevail.

Key structural policy challenges in Emerging Asia

The *Outlook*'s country notes highlight the key structural policy challenges in Emerging Asia (Table 6).

Table 6. **Medium-term policy challenges and responses in Emerging Asia**

Country	Topic	Focus
ASEAN-5		
Indonesia	Tourism	Strengthen investment in tourism
	Infrastructure	Improve connectivity and infrastructure development
	Energy access	Reduce urban-rural gaps in energy access
Malaysia	Housing	Keep housing affordable and ensure the supply of affordable housing
	Social safety net	Enhance the social safety net to ensure the wellbeing and participation of citizens
Philippines	Infrastructure	Invest in infrastructure improvements
	Services sector	Foster growth in the services sector to create new jobs
	FDI	Eliminate hurdles to attract more FDI
Thailand	Digital economy	Develop the digital economy as a new engine of growth
	Human capital	Develop human capital through education to make the most of the country's economic potential
Viet Nam	Skills development	Train a skilled workforce to supply high-tech manufacturing
	Infrastructure	Build hard and soft infrastructure to support participation in the fourth industrial revolution
Brunei Darussalam and Singapore		
Brunei Darussalam	Economic diversification	Promote economic diversification by inviting foreign investment and supporting the private sector
	Competition	Improve legislation on business competition
Singapore	Population ageing	Support the older population in the labour market and strengthen their social safety net
	Urban planning	Pursue efficient urban planning and optimise land use
CLM		
Cambodia	Agriculture	Advance the agricultural sector
Lao PDR	Hydropower development	Promote small hydropower projects
	SEZs	Strengthen skills to make the most of Special Economic Zones
	Tourism	Boost tourism by fully exploring opportunities in the ASEAN Economic Community
Myanmar	Capital market development	Promote capital-markets to bolster the private sector
	Infrastructure	Support investment in infrastructure
	Higher education	Reform higher education to deliver better quality
China and India		
China	Capacity utilisation	Work off excess capacity
	Environment	Upgrade environmental quality
India	FDI	Foster foreign direct investment (FDI) and promote Make in India
	Entrepreneurship	Strengthen Startup India initiatives

Source: OECD Development Centre.

ASEAN-5

Indonesia

- **Tourism**: Indonesia has achieved recent goals in expanding tourism, but can further improve the sector's prospects. Recent reforms have facilitated travel to the country and identified ten priority tourism destinations: Lake Toba in North Sumatra, Tanjung Kelayang beach in Belitung Island, Tanjung Lesung beach in Banten, Thousand Islands in Jakarta, Borobudur temple in Central Java, Mount Bromo, Tengger and Semeru in East Java, Mandalika beach in West Nusa Tenggara, Labuan Bajo in East Nusa Tenggara, Wakatobi in Southeast Sulawesi and Morotai Island in North Maluku. Each of these areas has received significant infrastructure investment and will have tourism authorities established. Co-operation between all stakeholders, including the multiple government ministries involved in the sector, is critical for the success of these initiatives. An attractive investment environment and skills development will also be needed in tourism and associated sectors. Niche tourism markets may also have strong potential in the country.

- **Infrastructure**: Improving infrastructure is a priority of the government and is critical for the country's economic development. Austerity measures have been put in place, and infrastructure spending accounts for a large share of government spending. Securing funding for infrastructure therefore requires the use of multiple financing sources. Options include municipal bonds, which have been underutilised. While local governments receive budget transfers from the central government, including the Special Allocation Fund, developing local government capacities in managing projects will also be necessary in many cases.
- **Energy access**: Access to energy varies considerably between urban and rural areas and across regions of the country. Electrifying remote areas is often not commercially feasible and may face further challenges from geography, human resources and financing. Government programmes, such as the Bright Indonesia Program or Program Indonesia Terang (PIT), have helped to expand electricity access in more remote areas. As it pursues improved access, the government has also set targets for increasing the use of renewable energy. Private investment should play a role in helping to realise these goals.

Malaysia

- **Housing**: The rate of home ownership is relatively high in Malaysia, but housing prices have increased dramatically and faster than incomes in the recent past. The government has implemented assistance and other programmes, such as Perumahan Rakyat 1Malaysia (PR1MA), to try to ensure that housing remains affordable. These programmes do not address rising construction costs, however. Reforms could also be made to reduce application delays for developers proposing new projects.
- **Social safety net**: Malaysia has many social safety net programmes, but the removal of general subsidies, such as the oil subsidy, has created the need for additional targeted initiatives. The Bottom 40 and other vulnerable groups are in need of support to move into the middle-income group. Existing programmes, including the Bantuan Rakyat 1Malaysia unconditional cash transfer, the Tuition Aid Scheme and the Poor Students' Trust Fund, could benefit from improved monitoring for effective targeting and greater transparency on budgeting.

Philippines

- **Infrastructure**: The Philippines faces many infrastructure challenges, particularly in transportation and utilities infrastructure. Progress has been made through private sector involvement in developing energy and utilities, information and communications technology (ICT) and social infrastructure. PPPs have the potential to increase investment and introduce external expertise in developing new projects. The PPP for School Infrastructure Project (PSIP), a build-and-transfer project to deliver new school facilities, is one of several significant infrastructure PPPs currently underway. Further private involvement could be facilitated by reforms to move to longer-term planning, clarified administrative roles and strengthened competition.
- **Services sector**: While income growth has been strong, rates of job creation in the Philippines have often been disappointing. The services sector is already relatively large, having seen growth through business process outsourcing (BPO) and other industries. BPO jobs tend to be filled by more educated employees, leaving the need for jobs for less educated workers. Tourism is a promising area for future development, though there is additional need for skills upgrading and infrastructure development.

- **FDI:** The Philippines has many positive attributes that help in attracting FDI, including abundant natural resources, a growing working-age population with a large number of English speakers and a large domestic market. However, it also has many restrictions in place, particularly in the accounting and audit, architectural, business services, engineering, legal and media sectors. Recent liberalising reforms have helped to improve the investment environment, though further change may be needed to attract FDI that will bring positive spillovers for domestic firms. Government initiatives such as SETUP, which helps smaller firms with technological adaptation, will also play an important role in improving the capacities of domestic firms to realise the benefits from investment inflows.

Thailand

- **Digital economy**: Thailand has set a number of goals to support the vision of a transition to a digital economy. The new Ministry of Digital Economy and Society acts as a focal point in the government. Programmes have been established to promote ICT use in the country, though barriers to the development of the sector remain to be addressed. These include inadequate ICT use, the lack of a proper regulatory framework for ICT infrastructure and services, using ICT to improve the efficiency of trade administration, private investment in the sector, and ICT literacy and advanced skills.
- **Human capital**: Rapid improvement has been made at all levels of education in Thailand, though further work can be done to develop highly skilled human capital. The quality of teachers, curricula and textbooks is a constraint to improving education, and there are barriers to access in remote and rural areas in particular. Incentives could be offered to attract teachers to work in remote schools, along with other reforms to school organisation and funding. A comprehensive plan for education reform, including a strategy for the teaching of ICT skills, would help in reforming the sector.

Viet Nam

- **Skills development**: The development of advanced manufacturing in Viet Nam will require skills upgrading. Various measures have been implemented to improve training, including administrative and curricula reforms and new promotional efforts for vocational training programmes. International partners are also contributing financial and other forms of assistance to the development of technical and vocational training and education (TVET) in the country. Training programmes could benefit from further co-operation with the private sector, including multinational companies. While the Law on Vocational Training of 2015 highlights the need for private sector and civil society involvement, this has proved difficult to achieve in practice. Incentives for providing on-the-job training may be a useful tool.
- **Infrastructure**: Along with worker skills, hard and soft infrastructure will need to be improved to facilitate technological upgrading and the expansion of advanced manufacturing. Efficiency in hard infrastructure projects is being improved through greater involvement of private and foreign partners via PPPs and equitisation. In 2016, a group of projects was opened to foreign investment in four main areas of infrastructure: transport, power, urban and industrial parks. Inter-ministerial co-operation on soft infrastructure is also critical, and may include the development of consolidated sources of information for technology-intensive industry.

Brunei Darussalam and Singapore

Brunei Darussalam

- **Economic diversification**: Low oil prices have highlighted the need for economic diversification in Brunei Darussalam. Foreign investment can be a useful driver of economic growth and diversification, though most FDI in the country has been concentrated in the resource sector. Incentives are being offered by the Brunei Economic Development Board (BEDB) and other parts of the government to attract investment, including recently for the purpose of developing new sectors. Domestic initiatives are also being pursued, with a focus on small and medium-sized enterprises, though these have faced challenges in financing and marketing.
- **Competition**: Local competition has tended to be weak in Brunei Darussalam – a situation that has contributed to the lack of economic diversification. The passing of the country's first national competition law has provided the legislative framework for the development of a more effective competition policy.

Singapore

- **Ageing population**: The challenges associated with Singapore's ageing population are being addressed by the government, including through changes to retirement and re-employment policies to encourage older workers to remain in the labour force. Training programmes, such as Workfare Training Support (WTS), and other forms of assistance are being used to encourage the hiring of older workers. Social programmes focusing on the elderly are also being strengthened to provide support for medical and other needs.
- **Urban planning**: Managing land use is a critical issue for improving economic growth and well-being in Singapore. In addition to the country's Concept Plan and Master Plan for land use planning, the Ministry of National Development's Land Use Plan addresses housing, green cities, public transport, economic growth and technology and innovation.

CLM countries

Cambodia

- **Agriculture**: Agriculture remains the largest sector by employment in Cambodia. Enhanced productivity and modernisation are needed to raise incomes in the sector. An important element of this will be the shift from traditional to modern inputs through mechanisation and the adoption of higher-quality seeds, fertilisers and irrigation systems. Improvements will also be needed to outlying infrastructure that limits the efficiency of production and distribution, as well as increases in the labour productivity of farming.

Lao PDR

- **Hydropower development**: Small hydropower projects have the potential to contribute to rural development and employment in Lao PDR, as well as to rural electrification efforts. The development of large hydropower projects in the country has tended to be focused on electricity exports rather than improving access domestically. Small hydropower projects may also have smaller environmental impacts. The success of such projects depends on increased access to finance, improved skills and greater institutional capacities to ensure their smooth implementation.

- **SEZs**: There are 13 Special and Specific Economic Zones in Lao PDR, comprised of industrial zones, tourism and new urban centres, and trade and logistics areas, administered by the Lao National Committee for Special Economic Zones (NCSEZ). Efforts are being made to attract further investment in the country's SEZs. Moving into higher value-added sectors will, however, require the development of a more highly skilled workforce. Future development may be in the ICT, business support services, knowledge-based activities and research and development (R&D) sectors.
- **Tourism**: Most tourists visiting Lao PDR come from neighbouring Thailand and Viet Nam. The country is making efforts to improve the quality of tourism offerings, working through regional and domestic initiatives. Ecotourism is a particularly promising area for the country. New programmes aim to promote tourism in natural areas while conserving their resources and the customs of local people, as is being done through the Nam Ha project.

Myanmar

- **Capital market development**: Capital markets are underdeveloped in Myanmar. Recent progress in the country includes the introduction of an interbank foreign exchange market by the Central Bank of Myanmar and the launching of the Yangon Stock Exchange. The benefits of stock markets for financial diversification and corporate governance will be hard to attain without infrastructure, scale and supervision that may not be possible in Myanmar. Regional co-operation, such as through the Asian Bond Markets Initiative (ABMI), will also play a role in promoting capital market development.
- **Infrastructure**: Myanmar's infrastructure gap is a considerable brake on the country's economic development. Diverse sources of financing, including from the private sector, will be needed to finance the needed infrastructure. PPPs have been used in Myanmar for large infrastructure projects, but the country lacks an infrastructure strategy that incorporates PPPs and lacks an institution capable of promoting their use.
- **Higher education**: Despite the expansion of higher education in Myanmar, there are concerns about its quality and cost-effectiveness. Problems have been identified with the sector's physical infrastructure, access to and use of information, curricula, facility quality, administration and governance, and international engagement. A new education law passed in 2014, following the Comprehensive Education Sector Review (CESR), has been criticised for centralising the administration of higher education under the National Education Commission.

China and India

China

- **Capacity utilisation**: The removal of excess capacity in China's economy is a necessary step in the country's ongoing adjustment towards lower, but higher quality, growth. Excess capacity dampens investment and hinders productive resource reallocation. The National Development and Reform Commission (NDRC) has issued public warnings about this since the early 2000s. Recently, the government has disbursed funds to re-employ, relocate or retire redundant workers in manufacturing industries with the greatest excess capacity, though this has not been entirely successful. Excess capacity is also a concern in the real estate sector, particularly in third- and fourth-tier cities, while demand outstrips supply in large cities.

- **Environment**: Environmental protection has recently been made a policy priority, primarily through efforts to reduce emissions and improve air quality. Progress has been made in the regions with the greatest pollution problems. The draft Environmental Tax Law would impose levies on air, water, noise and waste polluters, though it exempts several important sectors. Sub-national authorities may adopt more stringent standards according to circumstances, however, and 2014 revisions to environmental laws set unlimited fines for polluters. Green bonds have been issued to finance environmentally friendly investment, including projects such as "clean coal" that are not eligible under the Green Bond Principles and the Climate Bonds Standard.

India

- **FDI**: The Make in India initiative, launched in 2014 and implemented in 2015, opened up 25 sectors to increased FDI, including automobiles, aviation, biotechnology, chemicals, construction, defence manufacturing, electrical machinery, electronic systems and mining. The initiative also eased administrative barriers in an effort to attract new investment. FDI inflows increased dramatically following these reforms. Further reforms are planned to put more sectors under the automatic track.
- **Entrepreneurship**: Startup India was launched in January 2016 to encourage innovation and entrepreneurship, particularly by youth and minorities. The initiative eases and assists the launch of new firms. However, changes may be needed to achieve the goal of creating new firms across a diverse range of sectors, as many have so far involved e-commerce and Internet-related businesses.

Chapter 1

Economic outlook and macroeconomic assessment for Emerging Asia

The growth prospects of the Emerging Asian economies are expected to remain robust, though growth rates and trends will vary across the region. China's growth will continue to slow but will remain strong, while India's growth will remain high. The Philippines and Viet Nam will lead growth among the large ASEAN-5 economies. The lower-income CLM countries (Cambodia, Lao PDR and Myanmar) will continue their catch-up with the highest growth rates in ASEAN. Private consumption should continue to make a large contribution to growth. Despite largely favourable growth outlooks, policy makers in the region will need to pay careful attention to potentially important international and domestic downside risks associated with slowing export growth, persistent low interest rates in the advanced economies and sluggish productivity growth.

Introduction

The growth prospects of the Emerging Asian economies – Southeast Asia, China and India – are expected to remain robust over the medium term. Growth rates and trends will vary across the region, however. While China's gradual slowing will continue, growth will remain strong, exceeding 7% per year in India and the CLM countries (Cambodia, Lao PDR and Myanmar). Among the large ASEAN-5 countries, Viet Nam and the Philippines will be the fastest-growing. Private consumption will continue to be an important factor in driving growth in most countries, particularly as exports grow slowly. Several potentially important downside risks require particular attention. It will be necessary to cope with slow export growth, manage the impact on the region of zero and negative interest rates in OECD economies, and address slowing productivity growth.

Overview and main findings: The economic outlook for 2017-21

On average, the Emerging Asian countries will see real gross domestic product (GDP) growth of 6.5% in 2016, 6.4% in 2017, and 6.2% per year on average over 2017-21 (Table 1.1). These projected rates, based on data from the OECD Development Centre's *Medium-term Projection Framework* (MPF-2017), are lower than those seen in the recent past. Growth rates and trends will vary across the region, however. While China's gradual slowing will continue, growth will remain strong – exceeding 7% per year – in India. Among the ASEAN-5, growth is expected to continue to be led by the Philippines and Viet Nam. Indonesia and Thailand should see improving growth, while Malaysia should see a decline. The CLM countries can expect continued high rates of growth, with more than 8% growth in Myanmar. Private consumption will continue to be an important factor in driving growth in most countries, particularly given the slow growth of exports. Infrastructure contributed to growth in many countries in the region. Overall, fiscal balances will worsen slightly in the medium term.

Table 1.1. **Real GDP growth of ASEAN, China and India**

Annual percentage change

Country	2015	2016	2017	2017-21 (average)	2003-07 (average)	2011-13 (average)
ASEAN-5 countries						
Indonesia	4.8	5.0	5.1	5.4	5.5	6.2
Malaysia	5.0	4.2	4.5	4.7	6.0	5.2
Philippines	5.9	6.8	6.2	6.1	5.7	5.9
Thailand	2.8	3.2	3.3	3.6	5.6	3.2
Viet Nam	6.7	6.0	6.2	6.2	7.2	5.6
Brunei Darussalam and Singapore						
Brunei Darussalam	-0.6	0.7	2.0	1.8	1.7	0.9
Singapore	2.0	1.8	2.0	1.8	7.9	4.1
CLM						
Cambodia	7.0	7.1	7.1	7.3	10.6	7.3
Lao PDR	7.4	7.1	7.3	7.5	7.1	8.1
Myanmar	8.7	8.3	8.4	8.5	-	6.9
Two large economies in the region						
China	6.9	6.7	6.4	6.0	11.7	8.2
India	7.6	7.4	7.6	7.3	8.8	5.5
Average of ASEAN-10 countries	4.7	4.8	4.9	5.1	5.9	5.4
Average of Emerging Asia	6.6	6.5	6.4	6.2	9.5	7.0

Note: The cut-off date of data is 28 November 2016. Weighted averages are used for ASEAN and Emerging Asia. The figures for China, India and Indonesia (2016 and 2017 projections) are based on the *OECD Economic Outlook* 100. India data refer to fiscal years starting in April.
Source: OECD Development Centre, MPF-2017 (Medium-term Projection Framework). For more information on the MPF, please see www.oecd.org/dev/asia-pacific/mpf.htm.

Growth will be relatively strong among the large ASEAN-5 countries, with the highest rates of growth in the near- and medium-term in the Philippines and Viet Nam. In the Philippines, robust domestic demand, together with steady remittances and strong public spending under an expansionary monetary policy environment, have contributed to growth, which will rise to 6.8% in 2016 and will average 6.1% over 2017-21. As elsewhere in the region, infrastructure spending has made a large contribution to growth in the past year, and private spending has also improved. Growth in Viet Nam will increase slightly, from 6.0% in 2016 to 6.2% over the next five years. Strong growth in exports, foreign direct investment (FDI) and domestic demand have helped to support recent growth. In Indonesia, private consumption and fixed investment have been important drivers of economic activity, as has the expansion of the services sector. Indonesia is expected to see improving growth rates over the coming years, though below the 6.2% growth of 2011-13. Malaysia's growth cooled in 2016, with slowing exports and slowing growth in the services sector. But Malaysia is expected to enjoy improvement in the future, with growth reaching 4.7% over the medium term. Thailand's growth is also projected to improve, without reaching the rates of growth of the 2003-07 pre-crisis period. Recent improvements have been made in private consumption and fixed capital formation.

The decline in global oil prices has seriously affected the exports and growth of Brunei Darussalam, which is heavily dependent on the sector, though a further recovery in prices is anticipated. Following a drop in output in 2015, a return to positive growth is expected in 2016, with the rate rising to 1.8% annual growth over 2017-21. Singapore's growth is also expected to average 1.8% in the medium term, below its 4.1% average in 2011-13. Government consumption spending and investment have recently increased in Singapore, while private consumption growth was moderate and private fixed investment was affected by weakness in housing.

The CLM countries will continue to enjoy the highest growth rates among Association of Southeast Asian Nations (ASEAN) member countries. Average growth rates are expected to exceed 7% as these lower-income countries continue catching up with their wealthier neighbours. Cambodia's strong growth has been driven by private consumption and government spending, and exporting has also been strong. Growth in Lao PDR will decline from that of the recent past, but will remain very high. Construction – on new hydropower projects and residential and commercial projects – has been strong. Lao PDR has had relatively large current account deficits, however, and is facing challenges related to depressed commodity prices. Myanmar's growth, rising from 8.3% in 2016 to 8.5% over 2017-21, will be the highest in Emerging Asia. While manufacturing growth has been slow recently, the services sector has continued to expand quickly. The country's rapid growth has been driven by strong domestic demand, though Myanmar faces challenges in taming inflationary pressure, improving tax collection and managing the current account deficit, among other issues.

China's growth will continue to slow, falling from 6.7% in 2016 to an average 6% per year over 2017-21. In parallel with slowing growth, economic restructuring continued, with consumption and the services sector gradually becoming more important sources of growth. Industrial overcapacity continues to be a challenge. India, on the other hand, will see high and relatively stable growth over the projection period, at an average of 7.3%. Increases to wages and pensions have contributed to increasing consumer demand. Liberalising reforms could help to support robust growth and improve currently weak private investment.

The key messages of the economic outlook and assessment are as follows:

- GDP growth in Emerging Asia is expected to remain robust over the near term at 6.5% in 2016 and 6.4% in 2017. The trend is projected to continue, with an average rate of 6.2% per year over 2017-21. The ten ASEAN countries will see an improvement in growth, led by the CLM countries, Viet Nam and the Philippines. China's gradual slowdown will continue, as will India's strong rates of growth. Private consumption will make a large contribution to growth, while exports will grow more slowly than in the past.
- The region's current account surplus is projected to decline, mainly in more developed countries, but to remain positive over the next five years. Indonesia, the CLM countries and India will retain their deficits, while the rest of the region will continue to have positive current account balances. Relative to GDP, a large decline is expected in Thailand's surplus and a considerable improvement in that of Brunei Darussalam. Overall, fiscal balances will worsen slightly in the medium term, partly owing to a relatively expansionary fiscal stance.
- Slowing of growth in trade represents a downside risk to the region's economic outlook. Growth in trade has slowed in the region over the past five years, as in the rest of the world. While this is partly due to factors that cannot be influenced by policy, such as China's slowdown, increased focus on areas of comparative advantage may help to boost exports. Even during periods of downturn, some countries have managed to increase exports to China based on product specialisation. However, the resurgence of trade protectionism and the increasing prevalence of non-tariff barriers (NTBs) can further impede global commodity trade channels.
- Persistent low interest rates in advanced economies pose an additional risk that, if not managed by national authorities through vigilant supervision, may result in domestic market instability in Emerging Asia. Persistent low interest rates in advanced economies have a palpable influence on the dynamics of securities trading in Emerging Asia. The situation also affects the investment earnings of financial institutions. With the cooling of real sector activity and some concerns about bank asset quality, monetary authorities in Emerging Asia have to be vigilant to strike a balance when setting policy.
- Productivity growth has slowed recently in many Emerging Asian countries. According to analyses of firm-level data on manufacturing, in Viet Nam, for instance, productivity is affected by ownership, firm size and linkages to foreign firms. Larger firms are more productive in Indonesia. Critical elements of enhancing productivity include innovation, through experimentation with new knowledge and technologies or the adoption of existing knowledge and technologies, and improvement of skills, as highlighted by the study of firm-level drivers of productivity growth.

Recent macroeconomic developments and near-term prospects

Near-term growth prospects are solid despite sluggish global growth

Overall, growth prospects for Southeast Asia, China and India have remained solid against increased uncertainty in the form of weak demand in advanced countries such as the United States and the euro area, divergent monetary policy in the advanced economies and persistently low global commodity prices. Growth in global trade has sharply decelerated in real terms since the end of 2011. The major drivers of weak global trade are slower economic growth and lower investment growth in advanced and developing countries. This synchronised slowdown in productivity growth in many economies is still posing challenges to global economic growth.

Near-term growth in Southeast Asia, China and India is relatively strong compared with other regions. Indonesia, the Philippines and Thailand are growing, while economic growth in Cambodia, Myanmar and Lao PDR remains robust in the near term. In contrast, growth in Malaysia is slowing, and it remains unchanged in Viet Nam, Singapore and China (Table 1.2). For example, year-on-year real GDP growth in the Philippines was 7.1% in the third quarter of 2016. China's economic growth remained unchanged in the third quarter of 2016 despite internal and external rebalancing. Although real GDP growth slowed in Viet Nam at the beginning of 2016, its level of economic activity trended upward, with a growth rate of 6.4% in the third quarter of 2016. In India, economic growth has slowed in the short term. Private investment weakened temporarily owing to monetary tightening (during the taper tantrum) and highly leveraged banks and corporates (leverage ratio was about 0.79 in March 2016). Leverage ratios in China (0.9) and India (0.8) in 2015 show accumulating debt faster than equity after the global crisis. An improvement of the investment climate and reliance on public infrastructure can help crowd-in or catalyse private investment. India's investment is expected to accelerate to boost GDP growth in 2017.

Table 1.2. **Real GDP growth in Emerging Asia**

Annual and quarterly (YoY)

Country	2014	2015	2015 Q1	2015 Q2	2015 Q3	2015 Q4	2016 Q1	2016 Q2	2016 Q3
ASEAN countries									
Indonesia	5.0	4.8	4.7	4.7	4.7	5.0	4.9	5.2	5.0
Malaysia	6.0	5.0	5.7	4.9	4.7	4.5	4.2	4.0	4.3
Philippines	6.2	5.9	5.0	5.9	6.2	6.5	6.8	7.0	7.1
Singapore	3.3	2.0	2.7	1.7	1.8	1.8	2.0	2.0	1.1
Thailand	0.8	2.8	3.0	2.7	2.9	2.8	3.2	3.5	3.2
Viet Nam	6.0	6.7	6.1	6.5	6.8	7.0	5.5	5.8	6.4
China and India									
China	7.3	6.9	7.0	7.0	6.9	6.8	6.7	6.7	6.7
India*	7.2	7.6	7.5	7.6	7.2	7.9	7.1	7.3	-

Note: *India data refer to fiscal years starting in April. For example, GDP growth in 2015 Q1 refers to FY2015/16 Q1 which is 2015 Q2 in calendar year.
Source: CEIC and national sources.

Economic performance is uneven across the region

This section will consider economic developments across Southeast Asia, China and India on a country-by-country basis, beginning with the ASEAN-5 countries: Indonesia, Malaysia, the Philippines, Thailand and Viet Nam.

ASEAN-5 (Indonesia, Malaysia, Philippines, Thailand and Viet Nam)

Real GDP in **Indonesia** grew by 5.0% in 2016 Q3. The main drivers of economic activity are private consumption and fixed investment, and the services sector. Bank Sentral Republik Indonesia conducted monetary easing by cutting the policy rate six times in 2016; it stood at 4.75% in October 2016. Overall inflation stood at 3.6% in November, in line with Indonesia's inflation targeting zone (4+/-1). A large portion of portfolio investments could be costly at a time of US monetary tightening if surges in capital outflow occur, which could lead to a drastic depreciation in the Indonesian rupiah (IDR).

Malaysia's economic growth slowed to 4.3% in 2016 Q3 owing to sluggish growth in external demand and low world commodity prices. Growth in exports of goods and services is slow, the country's trade surplus is deteriorating and fiscal deficits are widening. Overall inflation is low and stabilised at 1.4% in October 2016. Bank Negara

Malaysia conducted an accommodative expansionary monetary policy by cutting the policy rate in July 2016 to boost economic growth.

The **Philippines** has experienced an expansion in economic activity, with an economic growth rate of 7.1% in 2016 Q3. Bangko Sentral ng Pilipinas cut the policy rate from 4% to 3% in June 2016. With inflation of 1.6% in May 2016 (lower than the inflation targeting zone of 3+/1), it boosted overall inflation to 2.5% in November 2016, with resultant economic growth. Key economic factors are private consumption supported by remittance inflows, fixed investment and the services sector. The government has also recently boosted public spending on infrastructure, education and health care.

Economic activity in **Thailand** has strengthened, with growth reaching 3.2% in 2016 Q3, up from 2.8% in 2015 Q4, owing to increases in private consumption. The services sector (particularly tourism) is also a main driver of growth. Budget deficits have widened since the government increased thresholds of personal income tax and deductible allowances in June and extended the period of free state education from 12 to 15 years. Overall consumer price index (CPI) inflation rates, which were negative until March, are now positive but remain very low, at 0.3% in October 2016.

Viet Nam's GDP growth slowed to 6.4% in 2016 Q3. The main drivers of economic activity are private consumption, fixed investment and the services and industry sectors. Strong export growth, FDI and domestic demand help foster economic growth. Severe weather conditions (drought and arable land salinisation) weighed on the agriculture sector, where production fell sharply, diminishing growth. Overall inflation is mild and stabilised at 4.1% in October 2016. The State Bank of Viet Nam has kept accommodative monetary policy loose, with a 6.5% policy rate.

Brunei Darussalam and Singapore

Economic activity in **Brunei Darussalam** grew at a slow pace, owing to lower global commodity prices. CPI inflation has registered negative rates since 2014, and was -0.5% in October 2016, with deflation possibly imported from the pegged economy of Singapore. The country's main export is mineral fuels, and further decline in oil and liquified natural gas (LNG) prices have reduced export benefits. This has narrowed the merchandise-trade and current-account surpluses, and widened budget deficits. Diversification in export sectors would help buffer persistent global lower commodities.

Singapore's real economic activity grew 1.1% in 2016 Q3, reflecting robust fundamentals. The country's small economy is not only highly open and well diversified but also a global financial centre. Singapore has tight links to China and Europe through FDI inflows. Global lower commodity prices put disinflationary pressure on the overall CPI, which stood at -0.1% in October 2016 (inflation began declining in 2013, and negative rates have persisted since November 2014). However, Singapore is a net energy importer, meaning that lower energy prices would benefit the economy and contribute to boosting the current account surplus.

The CLM countries (Cambodia, Lao PDR and Myanmar)

Cambodia has just graduated from lower-income to lower-middle-income status. Its solid economic performance has continued thanks to strong private consumption and public spending. The industrial sector outperformed the services sectors in contribution to real GDP. The National Bank of Cambodia has sought to cool rapid credit growth, although monetary policy is less effective owing to high dollarisation. Robust FDI inflows would help, despite wide current account deficits.

Economic growth in **Lao PDR** is robust. An increase in imports of capital goods (one-third of the import bill) due to ongoing hydropower investment projects has led to high current account deficits. These investment projects also attract capital inflows. Lower global commodity prices have reduced export revenues from copper and gold and lowered overall CPI inflation. Remittances from Thailand – which accounted for two-thirds of total remittance receipts – support the external sector.

Rapid growth in **Myanmar** is driven by sturdy domestic demand. Important for growth will be the country's ability to attract foreign investors to special economic zones in Kyauk Phyu in Rakhine state, Dawei in the Thanintharyi region and the Thilawa in Yangon. These zones are being strengthened. Ongoing financial sector liberalisation will also be key. However, strong economic growth and the weak exchange rate of the Myanmar kyat (MMK) are fuelling inflationary pressure. Poor tax collection capacity and higher public spending on education and health are having an impact on budget deficits, while fast import growth is widening the current account deficit.

China and India

China's economic growth remained unchanged at 6.7% in 2016 Q3. The country's rebalancing process is shifting economic activity toward the service sector and consumption. Overall inflation was lower, at 2.3% in November 2016, while domestic credit is growing at a fast pace. External debt accumulation has been substantial despite the country's current account surplus. Slackened global economic activity is partially due to China's overcapacity in many industrial sectors, as well as agricultural production and housing supply. Accordingly, industrial overcapacity has dropped somewhat.

India's strong economic growth of 7.3% in 2016 Q2 (fiscal year) is supported by robust private consumption and public spending (i.e. infrastructure projects). GDP growth could be fostered by government-led initiatives such as Make In India, as well as liberalisation in FDI and the accommodative expansionary monetary policy of the Reserve Bank of India (RBI). A slowdown of momentum due to temporary weakness of private investment is expected to ease in 2017. The modest monsoon season contributed to stabilised overall inflation that contributed to RBI's monetary decision. India's solid domestic conditions and pull factors like robust economic growth could attract capital inflows, although accumulating debts in the corporate sector might be a red flag.

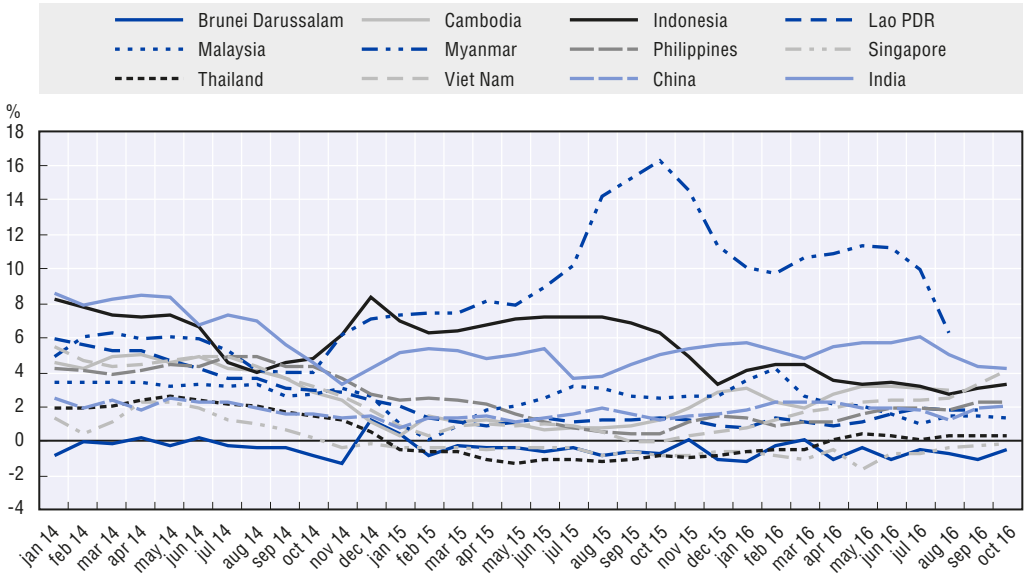
Overall, inflationary pressures are subdued in the region

A recent characteristic of the region has been persistently low inflation, except for India and Myanmar (Figures 1.1 and 1.2). Two factors are exerting downward pressure on consumer price inflation: lower global commodity prices and persistent global economic slack (i.e. China). After the plunge of oil prices in June 2014, commodity prices declined drastically. But it seems that after hitting bottom levels in January 2016, global commodity prices have begun to increase. Headline inflation is low in most Southeast Asian countries and, while core inflation rates are slightly higher than headline inflation, they are still relatively low in the region. Brunei Darussalam, Singapore and Thailand, for example, have shown negative and/or near zero inflation rates. Lower global oil prices undermine export and public revenues for oil and gas exporters such as Brunei Darussalam, where the fiscal deficit is widening. Singapore has seen a decline in headline inflation since June 2014. In Thailand, relatively lower inflation rates started in 2013 owing to stagnation of overall economic activity, with the drop in commodity prices further contributing to the decline of headline inflation. Lower energy prices exert downward pressure on inflation in Malaysia, the Philippines and Lao PDR as well. China has faced lower inflation rates due to overcapacity (ADB, 2014).

Viet Nam's inflation rate has been increasing modestly with 1.7% in March 2016 and has reached 4.5% in November 2016 since it hit a trough at zero in autumn 2015. Cambodia also displayed modest inflation in 2016 after lower inflation in 2015, while agriculture commodity prices are recovering despite short-term volatilities.

Figure 1.1. **Consumer price inflation (headline CPI) in Emerging Asia**

Year-on-year percentage change

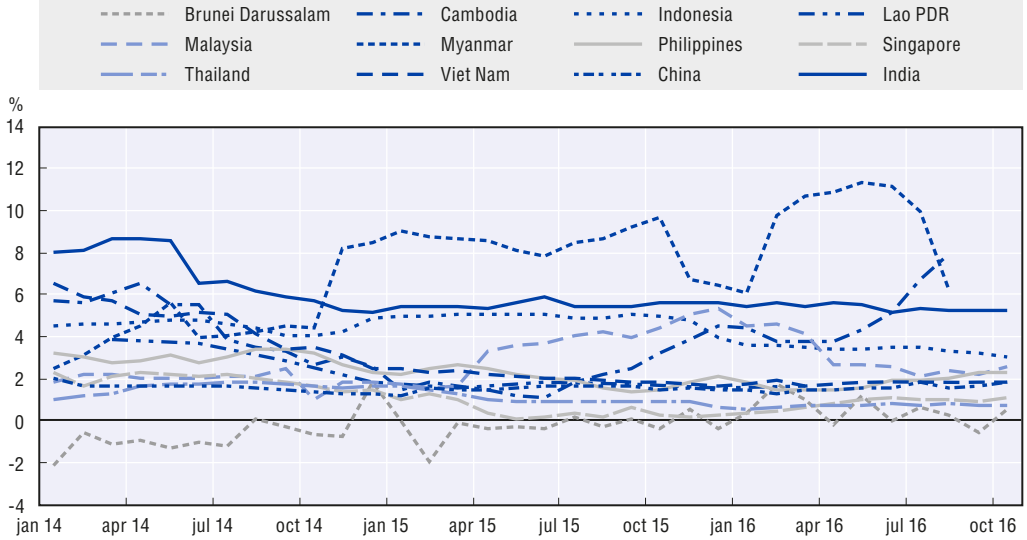


Source: CEIC.

StatLink http://dx.doi.org/10.1787/888933443259

Figure 1.2. **Consumer price inflation (core CPI) in Emerging Asia**

Year-on-year percentage change



Source: CEIC.

StatLink http://dx.doi.org/10.1787/888933443266

Other countries, such as Myanmar, have registered relatively high inflation rates. Myanmar's year-on-year inflation rose sharply in November 2014 due to the weakening of the kyat against the US dollar in late October 2014, while the monetisation of widening fiscal deficits and rapid growth heated up the economy to increase domestic inflation.

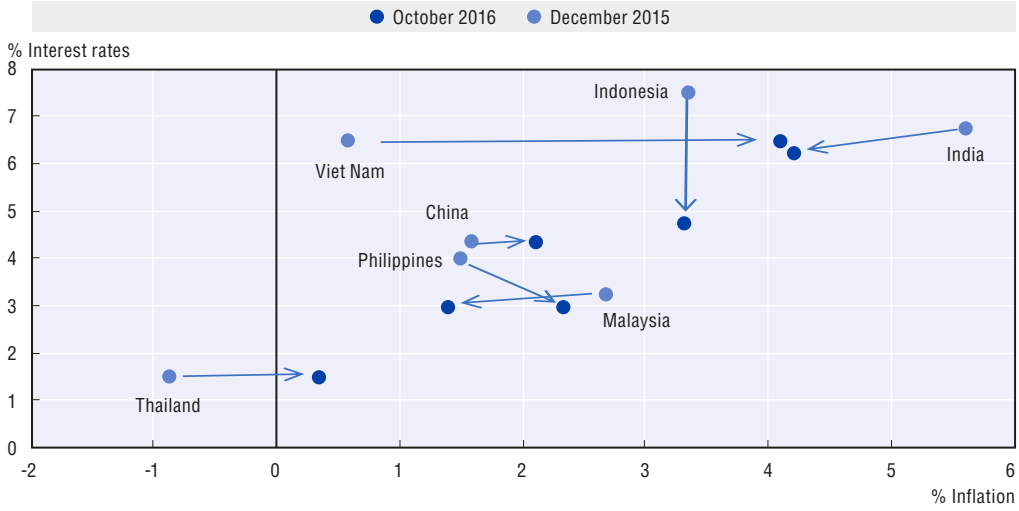
In the near term, the country's headline inflation has decreased to a year-on-year rate of 6.3% in August 2016 following a period of double-digit inflation from July 2015 to June 2016. Core inflation, excluding food and energy, also cooled to 6.25% in August 2016 from double-digit inflation in June 2016. Factors that could drive up future inflation include a weak domestic exchange rate, monetarisation of fiscal deficits, an increase in current account deficits and rapid economic growth. A widening current account deficit exerts downward pressure on the kyat against the US dollar; monetised fiscal deficits transmit inflationary pressure to the domestic economy; and rapid economic growth and strong domestic demand could accelerate overall inflation.

Accommodative monetary policies in the region need careful management

The central banks of India, Indonesia, Malaysia, the Philippines and Singapore have conducted an accommodative and expansionary monetary policy to boost their economies and counter sluggish external factors (Figure 1.3). The Reserve Bank of India cut its policy repo rate from 6.75% to 6.5% in April 2016 and to 6.25% in October 2016. The October decision was made for the first time by a six-member monetary policy committee including three academics. After double-digit inflation rates in India in 2013, attributed partly to the taper tantrum depreciation incident, inflation had decelerated to 4.2% by October 2016, within the inflation target zone (4+/-2.) Bank Sentral Republik Indonesia's BI 7-Day (Reverse) repo rate stood at 4.75% in October 2016, following six policy rate cuts in 2016. In August 2016, the BI board of governors formally published the BI 7-Day (Reverse) repo rate as the new policy rate with the aim of improving the effectiveness of monetary transmission. Inflation in Indonesia is within the monetary policy target zone (4+/-1) in the near term; however, solid fundamentals and a recovery in commodity prices are expected to bring inflation closer to the target zone in 2017, coinciding with expansionary monetary policy. The country will be ready for an expected tightening of the policy rate by the US Federal Reserve in December 2016.

Figure 1.3. **Evolution of inflation and policy interest rates in Emerging Asia**

Annual percentage change



Note: Inflation refers to headline inflation. The policy rate of the Bank Sentral Republik Indonesia in October is the BI 7-Day reserve repo rate while the BI rate was their policy rate before August 2016.

Source: CEIC and national sources.

StatLink http://dx.doi.org/10.1787/888933443278

Headline inflation in the Philippines stood at 1.9% in June and 1.8% in August, below the target zone (3+/-1). It reached along the target zone at 2.26% in September and 2.33% in October. The Bangko Sentral ng Pilipinas cut the overnight reserve repurchase (RRP)

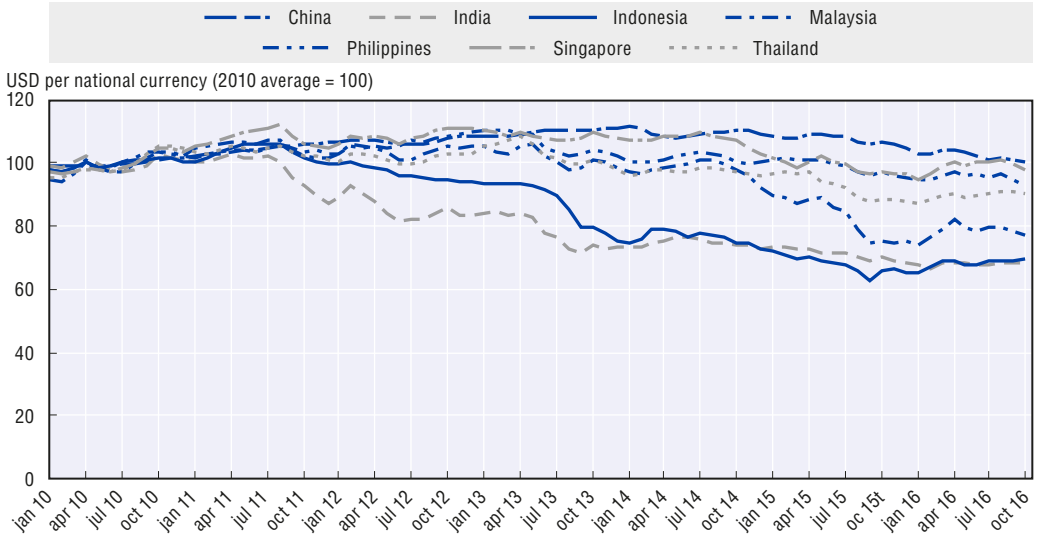
rate from 4% to 3% in June 2016 to target inflation, and an accommodative expansionary monetary policy was conducted to stimulate economic growth. Malaysia and Singapore also conducted a monetary easing, although neither uses the inflation targeting framework. Bank Negara Malaysia cut its overnight policy rate from 3.25% to 3% in July 2016, to stimulate the economy at a time when GDP growth has been generally slowing since 2015. The monetary policy manoeuvre somehow aided in arresting the growth deceleration after economic expansion turned faster from 4.0% in 2016 Q2 to 4.3% in 2016 Q3. The monetary authority of Singapore (MAS) conducted an unexpected accommodative monetary policy by reducing the slope of appreciation of the nominal effective exchange rate slightly from 0.25% to zero in April 2016, while keeping the 2% band. This adds to a cycle of monetary easing that began in January 2015.

Exchange rates are relatively stable in the region, though volatility exists in some countries

The exchange rates of most major Emerging Asian currencies have been relatively stable against the US dollar through 2016 (Figure 1.4). An appreciation of the Malaysian ringgit in early 2016 was followed by a small decline, while a smaller increase in the value of the Singaporean dollar has been sustained. A gradual decline in the value of the Chinese renminbi has continued since 2014. The slight appreciation of the Thai baht has continued without sudden change, and the value of the Indian rupee, Indonesian rupiah and Philippine peso remained relatively stable over the past year following several years of gradual depreciation.

Figure 1.4. **Nominal exchange rate in Emerging Asia, 2010-16**

USD per national currency (2010 average = 100)

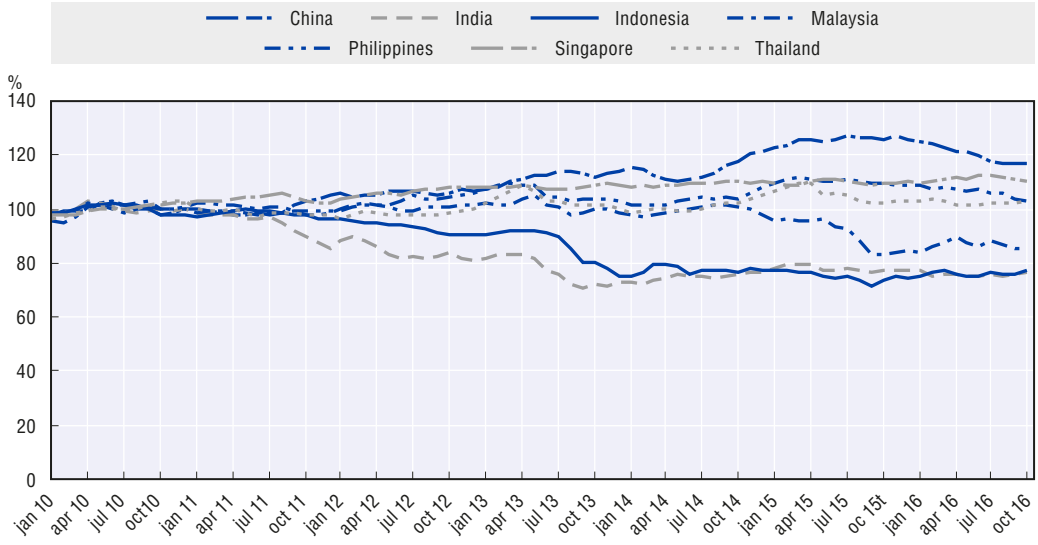


Source: CEIC.

StatLink http://dx.doi.org/10.1787/888933443287

The region's effective exchange rates – which measure exchange rate movements against a currency basket representative of a country's trade – have shown somewhat different trends (Figure 1.5). China's effective exchange rate appreciated in late 2014, but declined in the first half of 2016. The effective exchange rates of India, Indonesia, the Philippines, Singapore and Thailand have all been relatively stable since at least early 2015, despite larger variation in their nominal exchange rates. Malaysia's effective exchange rate appreciated in early 2016, as did its nominal exchange rate.

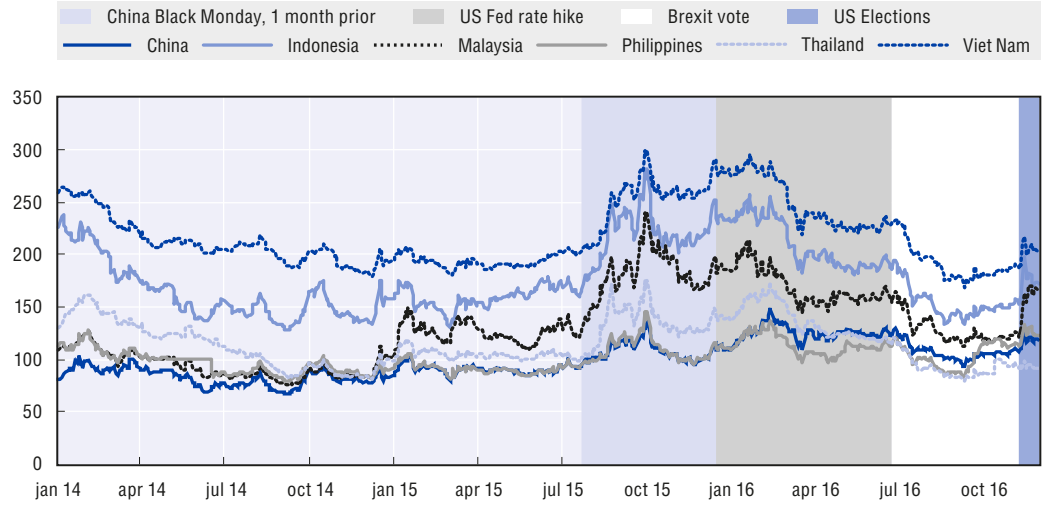
Figure 1.5. **Nominal effective exchange rate in Emerging Asia, 2010-16**
Broad basket of currency per national currency (2010 average = 100)



Source: BIS (2016), *BIS Statistics*, www.bis.org/statistics/eer.htm.
StatLink http://dx.doi.org/10.1787/888933443293

Credit default swap (CDS) spreads in Emerging Asia appear to be heading for a U-turn after seven months of continuous decline due mainly to uncertainties in the US political situation and monetary policy direction. Speculation snowballed in the weeks leading up to the US presidential election, resulting in foreign placement sell-offs and flight to safety. Among Emerging Asian economies, Malaysia, Viet Nam and Indonesia registered the biggest upward spread adjustment, according to available data, particularly in the last three weeks before the vote on 8 November (Figure 1.6). Spreads in China, the Philippines and Thailand also trekked upwards, but rather gradually. The recent rise in Emerging Asia's sovereign risk premia is arguably more pronounced than the market response to the unanticipated results of the Brexit referendum in June, which appears to be quite limited and transitory. Nonetheless, the trend over the last two years suggests that the prevailing CDS spreads of Emerging Asia are still generally well anchored, remaining in line with the historical average during normal years. The current risk perception is likewise a lot less pessimistic compared with the sentiments during the period of uneasiness beginning 12 June that led to a series of large day-on-day losses in the order of 6-8% in Shanghai Stock Exchange including the Black Monday and Tuesday on 24-25 August 2015, and after the US Fed's rate hike in December 2015.

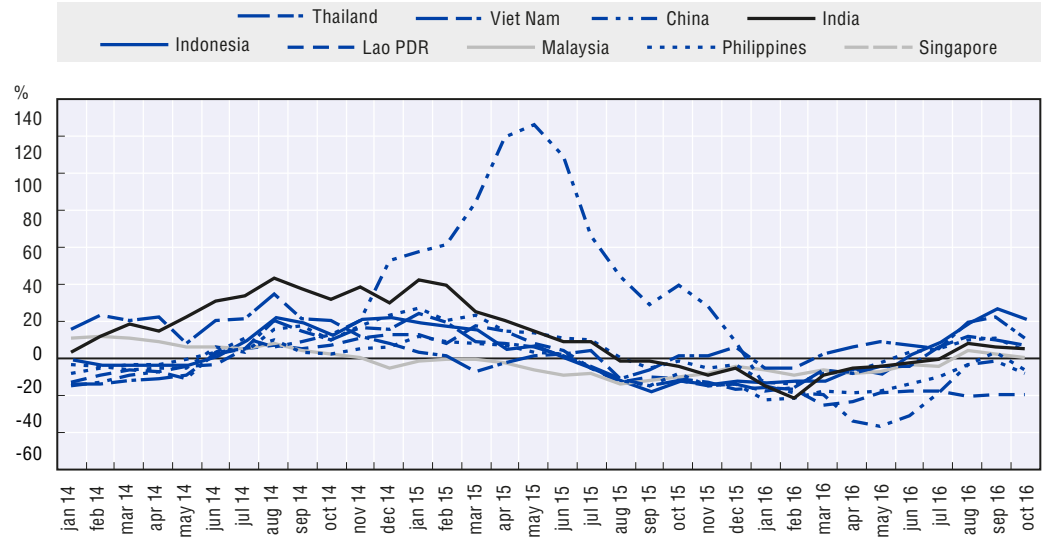
Figure 1.6. **Credit Default Swap (CDS) premiums in Emerging Asia**
Midspread basis points



Note: CDS premiums refer to 5-year senior CDS spreads.
Source: OECD Development Centre, based on Datastream.
StatLink http://dx.doi.org/10.1787/888933443302

Stock returns (measured by year-on-year variation of stock prices) were recovering in many economies in the region as of October 2016 (Figure 1.7). In Indonesia and Viet Nam, for example, stock returns improved to reach 21.71% and 11.27% respectively, the highest levels among the nine countries, while Lao PDR showed the lowest performance with a 20% decline. Stock returns recovered in Thailand (7.22%, up from -11.94% in October 2015), the Philippines (3.79%, up from -1.13%), India (4.78%, up from -4.34%) and Malaysia (0.41%, up from -10.21%). In contrast, China and Singapore showed disappointing numbers, at -8.34% and -6.15%, respectively, in October 2016. In China, where stock returns were recorded at 39.76% in October 2015, there was a large decline for a year. But in Singapore, where stock returns stood at -8.43% in October 2015, gains were significant even though the percentage remains negative.

Figure 1.7. **Stock returns in Emerging Asia**



Source: OECD Development Centre calculations, based on CEIC.
StatLink http://dx.doi.org/10.1787/888933443314

Capital flows need to be carefully monitored

Foreign capital placements in Emerging Asia have generally outweighed withdrawals over the past two quarters. Net inflows in China continue to recover with the uptick in all investment categories which helped the economy post a positive net financial account (liability) position for the first time in four quarters. India has seen its foreign net placements decline for the second quarter in a row in 2016 owing to the reduction in derivative and other investment foreign position. Nonetheless, the financial account (liability side) bottom line has remained positive with the sustained influx of FDI and foreign portfolio investment (FPI). Indonesia and the Philippines have kept a rather stable position in foreign investors' radar this year with high positive net financial investment inflows, averaging over USD 10.3 billion in the first two quarters which is about the same magnitude as the 2015 average indicating enduring interest in the two economies. Foreign sentiments based on the financial account data have maintained an upbeat mood particularly in terms of FDI. Inflows in Viet Nam appear to follow the same upward track even as Thailand experienced capital reversals in the third quarter especially in FDI and other investments. Placements in Singapore have also risen quite markedly in the first half of the year reversing the bearish outlook at the end of 2015. Although it is arguable that much of the risk has already been priced by institutional investors, the potential interest rate hike in the US (by the end of this year) may trigger capital outflows in Emerging Asia. As such, it is possible that countries which absorbed strong hot money inflows in recent months or those with weak external balance could still feel some pinch that could in turn result in some further exchange rate revaluation..

Net FDI inflows continue to grow in Emerging Asia, and India enjoys a surge

The ample FDI inflow in Emerging Asia during the first half of this year is seemingly a continuation of the trend last year. Net FDI in Emerging Asia totalled USD 305.5 billion in 2015, or about 6.1% higher than net inflows the previous year based on UNCTAD's data. By comparison, the pace of FDI accumulation was slightly slower in the ASEAN-5 subgroup, registering 4.2%, although it was an improvement from the contraction in 2014. The acceleration in long-term equity and debt placement in the region was driven mainly by inflows to China, India and Thailand. Net FDI inflows to China continued to gain momentum, growing by 5.5% in 2015 after retreating slightly in 2012. In India, inflows surged by 28% following an almost equally impressive 23% growth in 2014. Thailand, after experiencing a spate of foreign capital withdrawals in 2014, regained some ground, attracting USD 10.8 billion in net placements in 2015, or more than three times what it managed to attract the year before. Beyond the traditional FDI destinations, Myanmar and Lao PDR have proved successful in enticing foreign capital over the last three years. Myanmar has enjoyed average annual growth in inflows of 93% since 2013, while Lao PDR averaged 61% during the same period. Lao PDR and Viet Nam recorded their highest ever net inflows in 2015. Net placements in Singapore and Indonesia marginally declined in 2015, even though these two countries continued as the second and fourth largest FDI beneficiaries in terms of sheer value, respectively. A downward trend in net FDI inflows was also seen in the Philippines, Brunei Darussalam and Cambodia. Malaysia, on the other hand, managed to buck this trend with a modest uptick in net inflows.

Credit growth remains robust, but non-performing loans are on the rise

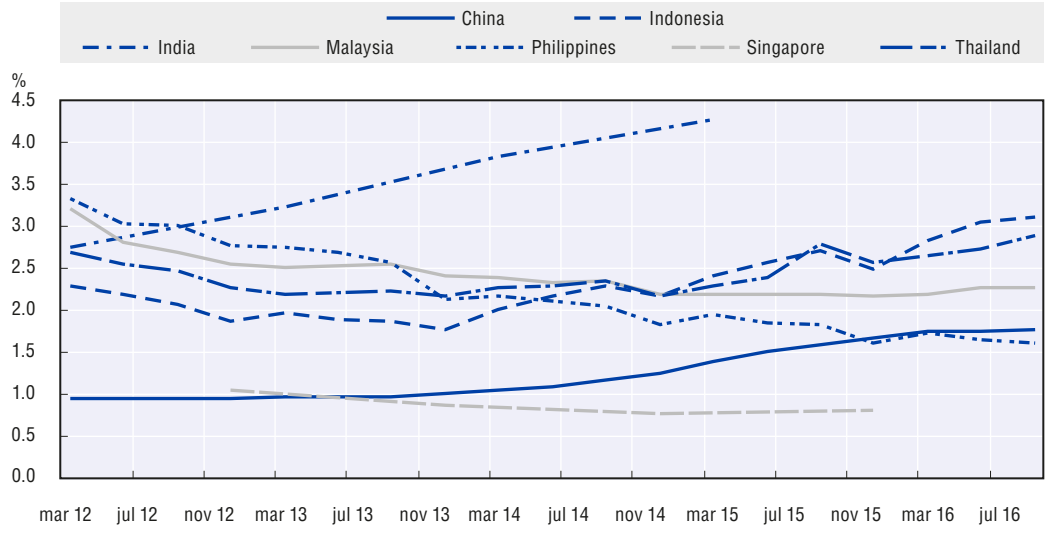
Nominal year-on-year bank credit growth has maintained a robust pace of over 5% in most countries in the region even as Singaporean banks reined in outstanding loans for the fourth straight quarter. Banks have been particularly aggressive in Viet Nam and the Philippines, where outstanding credit has grown by 16.8% and 17.2%, respectively,

as of 2016 Q3. Banks' total loan portfolios have also increased in China (up 13%) and India (up 12.3%) albeit the trajectory of Chinese bank loan stock growth has somewhat flatlined between 13% and 15% since December 2012 whereas that of Indian banks' seems to be on the upswing. Banks in Indonesia, Malaysia and Thailand have expanded their outstanding loans as well but at a comparatively moderate pace (i.e. ranging from 4.2% to 6.4%). By contrast, credit growth in Singapore has been negative since 2015 Q4 and stands at -0.8% in 2016 Q3.

The rising non-performing loans (NPL) ratios, however, are raising some cautionary red flags (Figure 1.8). Currently, India has the highest NPL ratio in Emerging Asia (with available data) at 4.27% (as of March 2015), which is roughly 150 basis points higher that the ratio in March 2012. Banks' NPL ratios in Indonesia, Thailand and China are also on the rise though ratios of around 3.1% or less (as of September 2016) are not expected to move markets in the near-term. Meanwhile, Singaporean and Philippines banks have the most enviable portfolio in the region with the former having less than 1% of bad debts by the end of 2015 whereas the latter has only about 1.6% in September 2016 – or half of what it was in March 2012.

Figure 1.8. **Non-performing loans in Emerging Asia**

Percentage of total loans



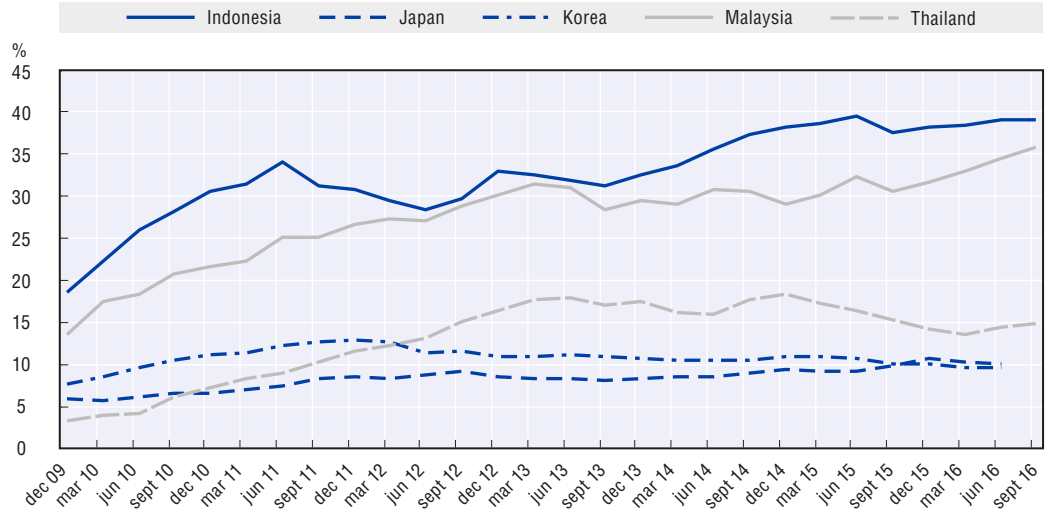
Source: CEIC.

StatLink http://dx.doi.org/10.1787/888933443328

Foreign holdings (as a percentage of total local currency government bonds) measure how much of external agents are exposed to domestic markets for five selected countries (Figure 1.9). The government bond market is a cornerstone of the domestic financial market because it forms the structure of the corporate sector and develops the fixed income market for government debts, housing and other asset-backed securities. The percentage of foreign holdings could thus shed light on the dynamics of the domestic financial markets. For example, the share of foreign holders of the domestic government bonds of Indonesia, Malaysia and Thailand has been increasing, reaching 39.2%, 35.8% and 14.8%, respectively, in September 2016. The share of foreign bond holders is relatively small in Japan and Korea, at 10.0 % and 9.7% in June 2016, respectively. This is because their government bonds are typically held domestically and are consequently easier to roll over.

Figure 1.9. **Foreign holdings of local currency government bonds for selected Asian countries**

Percentage of total local currency government bonds



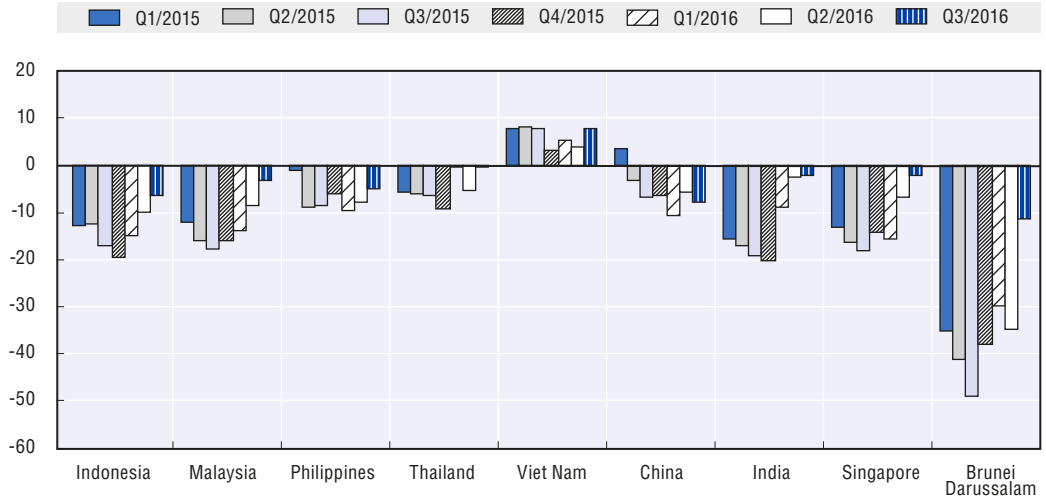
Source: ADB (2016a), *AsianBondsOnline*, https://asianbondsonline.adb.org/index.php.

StatLink http://dx.doi.org/10.1787/888933443338

Export growth in the region remains weak, though contraction is easing

Growth in trade has slowed in the region over the past five years, as in the rest of the world. Slowing of growth in trade represents a downside risk to the region's economic outlook (see "Risks and policy challenges" section of this Chapter for more detailed discussion). However, the contraction in real export growth in Emerging Asia generally shows signs of easing (Figure 1.10). China, the largest commodity trader in the region, saw the volume of shipments decline by 7.8% in the third quarter year-on-year which was deeper than the 5.5% reduction registered the previous three months albeit shallower than the 10.8% drop in the first quarter. While October nominal values indicate that shipments kept contracting, the government reported a sharp reversal in export value growth to a positive 5.9% for the month of November. Export contraction is easing recently in many countries in the region. Excluding Viet Nam, the drop in export volume growth of ASEAN-5 has decelerated by about 4.1 percentage points on average with Malaysia and Thailand leading the recovery. Viet Nam, which appears to be the only economy to escape the spate of downturns in the region in the last seven quarters, also saw a considerable improvement in shipments after more than doubling its growth from 3.8% in the second quarter to 7.9% in the third quarter. Singapore's export volume, which went down by 18% in 2015 Q3, has steadily improved to -2.1% in 2016 Q3. The same can be said of India which managed to trim the contraction from a low of -20.1% in 2015 Q4 to -2.0% in 2016 Q3. Brunei Darussalam, whose outbound cargos plummeted by an average of 38% between 2015 Q1 and 2016 Q2, has likewise limited the reduction in shipments to 11.4% based on the latest estimate.

Figure 1.10. **Real export growth in Emerging Asia**
Year-on-year percentage change



Source: CEIC.
StatLink http://dx.doi.org/10.1787/888933443349

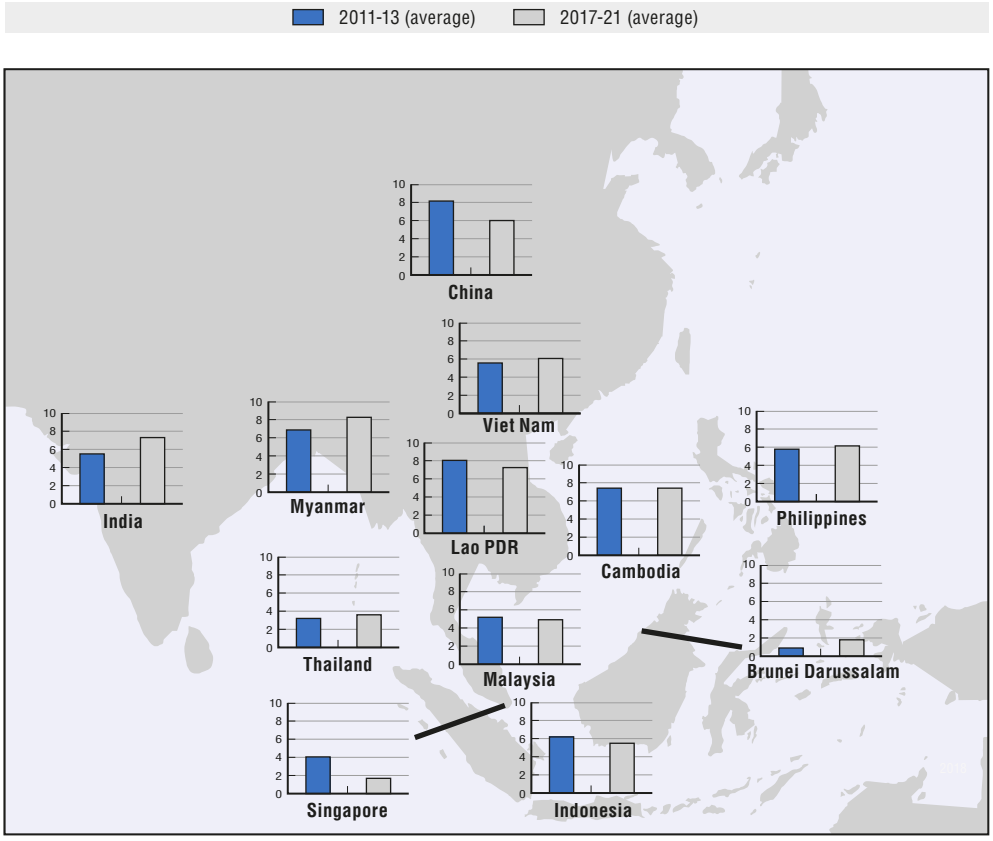
Medium-term growth prospects

Regional growth is projected to remain robust over the medium term. On average, the Emerging Asian countries will see real GDP growth of 6.2% per year over 2017-21 according to the OECD Development Centre's Medium-term Projection Framework (Box 1.1) The growth prospects of the ten ASEAN member countries look somewhat better. Growth is expected to improve slightly, to 5.1% over 2017-21, led by the CLM countries, and by Viet Nam and the Philippines among the ASEAN-5. China's gradual slowdown will continue, as will India's strong rates of growth. Infrastructure investment has made a large contribution to growth in many Emerging Asian countries. Private consumption will make a large contribution to growth. Domestic demand is a major driver of economic growth in Southeast Asia, China and India. Private consumption is the main driver of real GDP growth in the region for both 2016 Q3 and all of 2015, though investment and government consumption were also important factors in some countries. The services and industry sectors are key engines of economic growth.

Box 1.1. **Key assumptions of the medium-term outlook to 2021**

- The output gap – the gap between actual and potential GDP – will converge to zero by 2021.
- Inflation-targeting countries will continue to pursue stability and to adjust monetary policies to support their targets.
- Regional economic integration initiatives and projects will advance at the same pace as before.
- The national medium-term development plans of Emerging Asia countries will largely be implemented, subject to budgetary and other policy considerations (see Chapter 4).
- Unanticipated economic events and other external factors will not significantly alter the situation beyond the cut-off date.
- The cut-off date of data for the projection is 28 November 2016. For more detailed information on MPF, please see www.oecd.org/dev/asia-pacific/mpf.htm.

Figure 1.11. **Real GDP growth of Southeast Asia, China and India**
Percentage



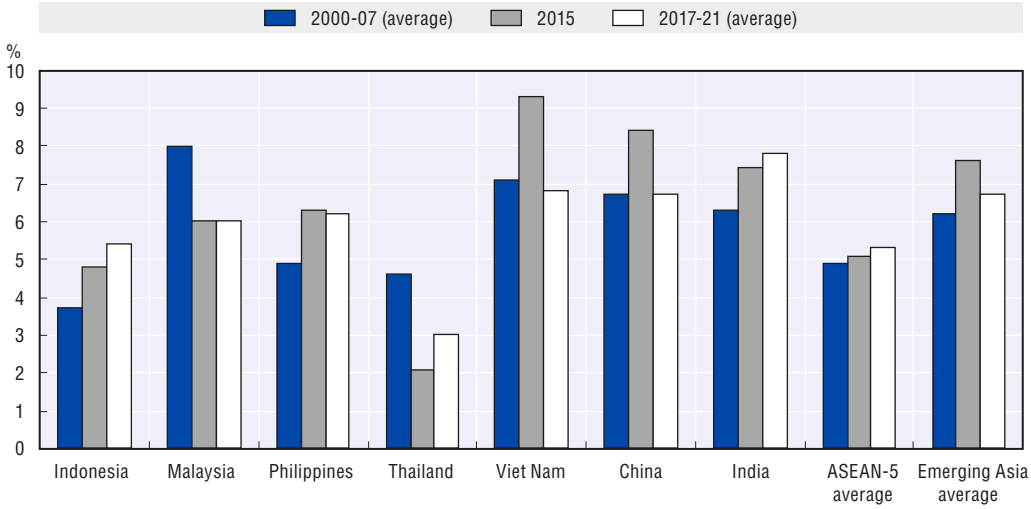
Source: OECD Development Centre, MPF 2017.
StatLink http://dx.doi.org/10.1787/888933443353

Vigorous private consumption will be a boon to growth in the region

Private consumption in Emerging Asia over the next four years is generally expected to remain robust overall, even if the direction of the expansion momentum will be mixed across economies relative to the growth rates seen before the global financial crisis (GFC) (Figure 1.12). Collectively, average private consumption growth in ASEAN-5 is anticipated to exceed the pace recorded from 2000 to 2007 – though only marginally – despite the prevailing external headwinds. Optimistic consumer outlooks put Indonesia and the Philippines in a good position to grow faster, at 5.4% and 6.2% respectively. Malaysia and Viet Nam will post growth rates above 6%, although growth of private consumption is expected to be slower than in 2000-07. By comparison, private consumption in Thailand will be less vibrant as the economy continues to grapple with political uncertainties. India, the second largest economy in Emerging Asia, will likely anchor the region's push in boosting domestic demand, with household and corporate expenditure projected to grow by 7.8% annually until 2021 (up from 6.3% before 2008).

Figure 1.12. **Private consumption in ASEAN-5, China and India**

Percentage changes



Note: The cut-off date of data is 28 November 2016. The weighted averages are used for ASEAN-5 average and Emerging Asia average.

Source: OECD Development Centre, MPF-2017

StatLink http://dx.doi.org/10.1787/888933443362

Many Emerging Asian countries enact stimulus measures to spur consumption

Fiscal policy became more expansionary in many Emerging Asian countries in the first part of 2016, and this involved some elements of short-term stimulus.

Over the past year, the Thai government has introduced a range of short-term stimulus measures. While most of these are investment-focused – targeting farmers, small and medium-sized enterprises (SMEs) and the property market in particular – efforts to boost consumption also include temporary income tax deductions for the purchase of selected goods and services, reduction in the statutory corporate income tax and soft loans through village funds. The travel and tourism sector has been one of the primary beneficiaries of these measures, as deductions were offered on selected items purchased in later 2015, some travel and related expenses between January and December 2016, and other travel costs during the Songkran holiday season in April.

Though not explicitly designed as a stimulus package, the Indian government announced in June that about 10 million federal employees and pensioners in India would receive a 23% pay increase, entailing an increase in government expenditure of about INR 1.02 trillion (Indian rupees). In addition to affecting price levels, these increased payments are expected to affect consumption and savings in the country, though the extent of the impact over the near and long term is not yet clear. To insulate consumption from price pressures, the Indian government has remained steadfast in keeping the substantial coverage of food and crop subsidies. These include transfers to the publicly owned Food Corporation of India and to schemes designed to dampen fertiliser retention prices, guarantee farm-gate crop prices and partially reimburse household spending on cooking gas. That India would breaching the approved fiscal gap of 3.5% of GDP appeared certain, with the half-year deficit above 80% of the full-year programme.

Further pump priming can be expected in other countries as well. The newly appointed budget secretary of the Philippines announced a planned increase in the budget deficit target to 3% of GDP, from 2%. The measure aims to allow for additional

social and infrastructure spending. In China, measures adopted in the last couple of years to support consumption include making it easier for tourists to get refunds off shopping expenditure, allowing foreign tourists to visit more places within a 72-hour window without a visa, reducing tariffs on imported consumer goods, creating a public platform for e-commerce registration and certification, and expediting household registration. The last measure aims to boost the number of people relocating to cities in order to stimulate property and home appliance consumption. Singapore also increased spending in 2016, with a specific focus on supporting SMEs through measures such as greater corporate income tax rebates, as well as investment in infrastructure and concessions for the marine sector and other industries in difficulty. Meanwhile, Indonesia rolled out the 9th to 14th economic stimulus packages between January and November this year. The packages, which were first launched in the third quarter of 2015, outlined various tax cuts (e.g. import and export taxes, energy tax on labour-intensive industries and aircraft spare parts tax), investment licensing enhancement strategies, and subsidies covering loans of export-oriented SMEs.

By contrast, the governments of several countries in the region have recently signalled their intentions to slow or prevent the expansion of stimulus programmes and expenditure. The 2017 budget presented by Prime Minister Datuk Seri Najib Razak of Malaysia in October outlined a small spending increase of 3.4% over the previous year, but appeared to favour fiscal consolidation. Stimulus has been explicitly rejected as a response to risks faced in the near term in some cases, where governments have expressed confidence in the capacities of existing programmes to cushion their economies. In September, the Philippines' finance secretary said that full-scale stimulus measures would not be needed in response to capital flight from an anticipated US interest rate increase, arguing that the country is well positioned and that the government has sufficient cash holdings to absorb a depreciation of the peso. In October, the deputy prime minister of Thailand said that no additional economic measures would be needed in response to a potential slowdown during the year of mourning for the late King Bhumibol Adulyadej.

Moreover, governments in China, India, Indonesia and Malaysia have either cut back on their fuel subsidies or floated the idea to do so. The benign global oil price has provided policy makers some room to recalibrate their fiscal incentive structures from more general to targeted mechanisms, with the objective of freeing up more resources for programmes that directly deal with the low-income segment of the population. In accordance with the bilateral trade settlement between the United States and China, and considering the efforts of the Chinese authorities to pare down industrial overcapacity, China will reduce subsidies to firms producing goods such as textiles, chemicals, seafood and metals, among others.

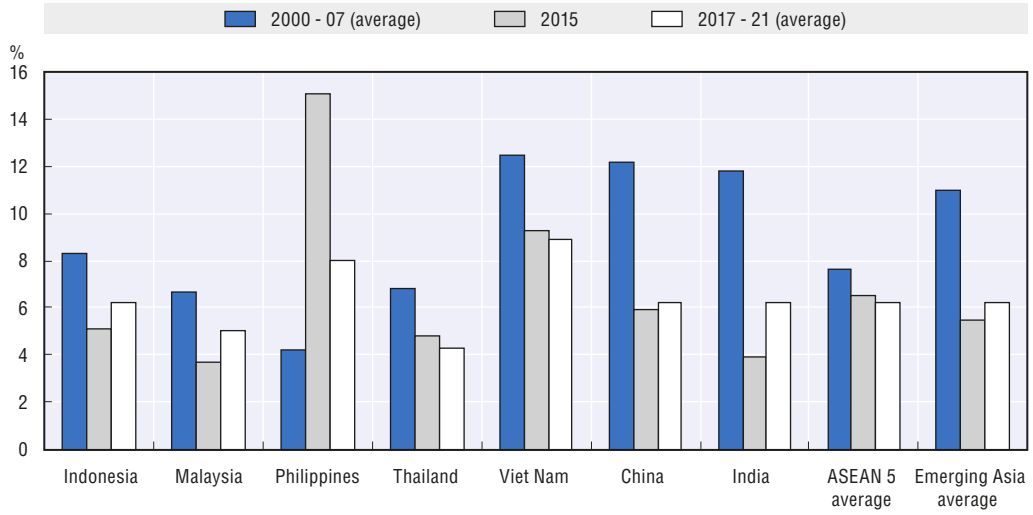
Fixed capital investment will continue to grow, but more slowly than before the crisis

Investment in Emerging Asia is likewise expected to post decent growth rates during the next five-year cycle (Figure 1.13). Nevertheless, the projected 6.2% pace of capital formation will be much slower than the pre-crisis rate of 11%. Current conditions indicate that expansion in fixed capital investments in China and India between 2017 and 2021 will be about 6.2% for both countries, or around half of the pre-GFC rates of 12.2% and 11.8%, respectively. Construction activities in ASEAN-5 are also projected to grow more conservatively compared with the average growth rates before 2008, with the exception of the Philippines. Indonesia, Malaysia and Thailand are expected to see an expansion in fixed capital at an average rate of 5.2%, or more than 2 percentage points slower than their 2000-07 combined average of 7.3%. Viet Nam, which led the region in capital formation spending prior to the crisis, is projected to keep the top spot from 2017

to 2021, although the growth rate is expected to decelerate by more than 3 percentage points (8.9%, down from 12.5%). With a new government at the helm expressing more willingness to widen the target annual budget deficit and to materialise more public-private partnership (PPP deals), the Philippines is expected to register an increase in fixed capital spending at a rate almost twice its average from 2000 to 2007 (8.0%, up from 4.2%). Issues such as debt sustainability and the depth of external demand weakness will definitely affect capital formation in the coming years. Environmental shocks can also be a factor.

Figure 1.13. **Gross fixed capital formation in ASEAN-5, China and India**

Percentage changes



Note: The cut-off date of data is 28 November 2016. The weighted averages are used for ASEAN-5 average and Emerging Asia average.

Source: OECD Development Centre, MPF-2017.

StatLink http://dx.doi.org/10.1787/888933443379

A boom in infrastructure investment targets rural areas and housing

Public investment in infrastructure has been strong in much of the region, providing a boost to economic activity in the near term. In some countries, such as Indonesia, this has been achieved by speeding up the disbursement of planned spending. Accelerated procurement boosted the rate of capital spending in Indonesia early in 2016 relative to the pace of spending in 2015, despite a reduced annual allocation to the Public Works Ministry. This led to strong growth in infrastructure and housing construction – 7.0% in the first half of 2016. A series of economic reform packages introduced since September 2015, including some measures to attract additional private investment, have improved the business environment generally. Announcements have included commitments to pursue deregulation to promote competitiveness, cut red tape and improve the rule of law and business certainty. Fiscal stimulus measures have included targeted tax cuts and reforms, as well as lower energy tariffs in labour-intensive industries.

In Thailand, rural areas and the farming sector are to be the targets of a THB 17.5 billion (Thai baht) budget. The country's cabinet approved 75 655 Village Funds, of THB 250 000 each, in October. These funds are to be used for local development projects started between November and January, including construction and repair of roads, schools and silos. The stimulus follows significant spending in rural areas through Village Funds allocations.

Infrastructure spending remains at the core of the Chinese government's development agenda. To broaden the capital base of big-ticket projects, the government established a PPP fund to encourage private sector participation in infrastructure building. It also tapped policy banks to support some 300 projects (greenfield and brownfield investments combined), amounting to CNY 4.7 trillion (Chinese yuan renminbi), or USD 720 billion. Spending through policy banks is off budget and thus will not bloat the central government deficit, although it will effectively become the government's contingent liability. However, some delays in project implementation have limited the impact of the stimulus so far.

In Viet Nam, infrastructure development included a VND 30 trillion (Vietnamese dong) housing stimulus package under the Ministry of Construction. Originally announced in 2012, the initiative was designed to promote development and lending, targeting the affordable middle-income market through bank commitments to provide cheap loans to 56 181 households and individuals and to 51 social housing projects. By the end of August, a total of VND 28 trillion had been disbursed. Recent warnings by government leaders about the risks of debt-fuelled growth suggest a potential slowing of future stimulus.

The new government in the Philippines is likewise gearing up to join the infrastructure spending binge. From 2.5% of GDP (based on a government estimate), the current administration intends to raise infrastructure spending to at least 5% annually. However, in light of the dissolution of the Disbursement Acceleration Programme, some regulatory frictions need to be ironed out in order to avoid critical delays in capital outlay disbursement. Over the longer term, the use of a wider range of infrastructure financing tools will play an important role in supporting the development and maintenance of infrastructure across the region (Box 1.2).

There appears to be a concerted effort in the region to increase investment in human capital in terms of education, health, social security and the ability of workers to find employment that will ultimately increase the buoyancy of domestic consumption. China, for example, has steadily expanded the reach of compulsory education, subsidised pension schemes and health-care insurance. The government has also lowered the corporate contribution to certain social security benefits in order to reduce the cost of business operations. The government of India has announced plans to use additional revenues collected during a tax amnesty programme to increase social security spending, and to enhance delivery of social security benefits through its first national social security platform. In the Philippines, social services figure prominently in the 2017 proposed national budget. They include education, health, social welfare and labour, and account for over more than 40% of the pie. The planned allotment for the sector increased by 20.1% year-on-year – more than the total budget growth of 11.6% and infrastructure spending growth of 13.8%. Meanwhile, Singapore raised the coverage of its monetary support to skills development courses for residents aged 40 and above to 90% in October 2015 under the SkillsFuture Mid-Career Enhanced Subsidy. The government also launched a Silver Support Scheme for senior citizens as a new feature of its social security system. Authorities estimate that the new measure will cost the fiscal house about SGD 320 million (Singapore dollars) during the first year.

Box 1.2. **Diversifying sources of infrastructure financing in Emerging Asia**

Increased infrastructure spending is needed for growth and development to continue in Emerging Asia. Addressing the domestic infrastructure gap in ASEAN member countries is projected to require an annual investment of at least USD 110 billion between 2015 and 2025 (UNCTAD, 2016). Financing these investments – in both the development of new infrastructure and the maintenance of existing infrastructure – will require mobilisation of a diverse range of resources.

A broader base of financing options can help to reduce funding costs and facilitate investment in challenging sectors and regions. Government spending and official development assistance (ODA) are insufficient sources of financing, though they may play complementary roles in supporting other forms of investment. The tax-to-GDP ratio in Indonesia, for example, was only 12.2%, well below the OECD average of 34.2% (OECD, 2016). The use of tax as a tool for infrastructure financing, therefore, still has a lot of potential in Emerging Asia. Earmarked taxation, especially from vehicle and energy-related taxes including the carbon tax, for instance, is more common in OECD countries while still very limited in Emerging Asia. Switzerland, for example, allocates a portion of net revenues from petroleum tax and petroleum tax surcharge to finance transport infrastructure. Earmarking petrol and other car-related taxes for infrastructure development projects was also implemented in Japan when the country shifted from World Bank finance to domestic resources in 1966. Funding sources could also be generated from taxes or fees charged at the subnational level. Congestion fees, for example, are applied at city level in some OECD countries, for example Stockholm and Gothenburg in Sweden, and London in the United Kingdom. In Asia, Singapore's congestion charge generates significant revenue that is partly allocated for construction and maintenance of roads and public transportation. Other countries, such as Japan, apply special-purpose taxes at the local level. These include property-related taxes, such as a city or urban planning tax, that are collected from land or building owners and could be allocated for city planning projects such as construction of streets, bridges, sewerage, etc.

A range of instruments and vehicles for infrastructure financing can be included in efforts to increase private involvement beyond that of commercial banks. Possible finance instruments include bonds (e.g. project, municipal and green bonds), loans (e.g. direct/co-investment lending to projects), hybrid instruments (e.g. subordinated loans and bonds, or mezzanine finance), listed equity (e.g. YieldCos and closed-end funds) and unlisted equity (e.g. direct or co-investment in equity and PPPs). The use of such instruments could be maximised as funding sources, particularly at the local government level. The municipal bonds market, for instance, has not been fully developed and utilised in Emerging Asian economies, while it is very large in some OECD countries, such as the United States and Japan. The city of Cambridge in the United States, for example, conducted a bond sale of around USD 75 million in March 2015 to finance various infrastructure projects, including municipal and school building renovation, and reconstruction of roads. Some Emerging Asian countries, such as Indonesia, the Philippines and Viet Nam, have already started to use this tool, although still in a very limited way. Indonesia's West Java province is planning to issue the country's first municipal bonds to fund infrastructure. Some challenges still need to be addressed, however, such as the weak capacity of local government, the limited development of capital markets and an inadequate institutional, legal and regulatory framework.

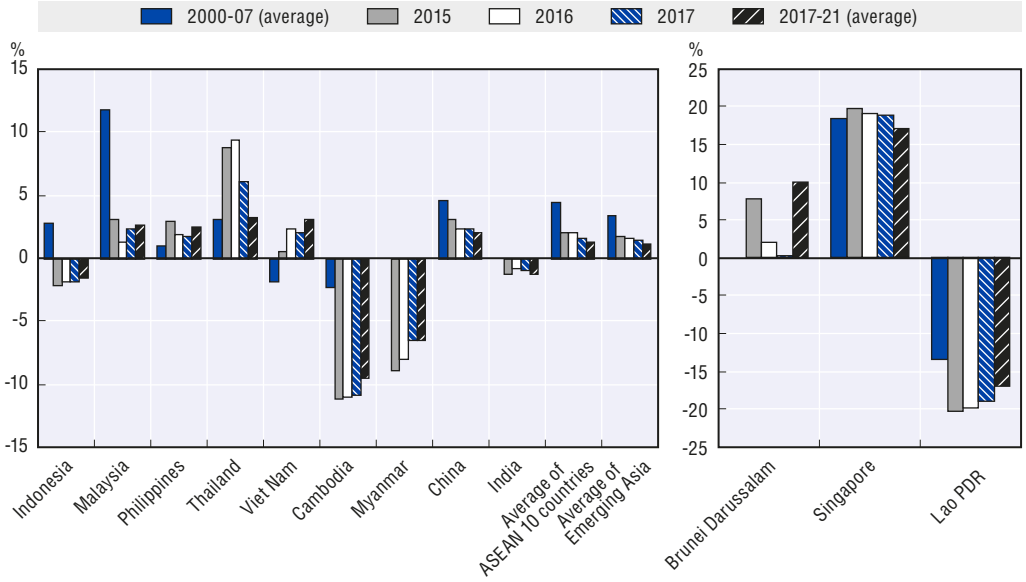
Greater use could also be made of long-term investors. Institutional investors such as pension funds and insurance companies are potential sources of funds for infrastructure. Pension funds in some OECD countries, such as Australia and Canada, have been investing in infrastructure since the early 1990s. Japan collected public funds for infrastructure investment through its National Pension Fund, Postal Savings Fund and Postal Life Insurance Fund.

Current account surpluses shrink in some countries, but deficits narrow in others

Current account surpluses decreased in 2016 for oil-producing countries such as Malaysia and Brunei Darussalam (Figure 1.14). The Philippines observed the same trend, with its surplus decreasing to 1.9% in 2016 from 2.9% in 2015. The deficit decreased slightly in 2016 for all countries that recorded a deficit in 2015, among them Indonesia, Cambodia, Lao PDR, Myanmar and India. Myanmar observed the most significant narrowing in 2016, with the current deficit declining by 0.9% of its GDP. Even against the backdrop of slower trade and global growth, Thailand and Viet Nam recorded increases in their current account surpluses to 9.4% and 2.4% respectively. Looking forward, projections for 2017-21 indicate that the current account deficit will continue to shrink for Indonesia, Cambodia, Lao PDR and Myanmar in the near term thanks to higher projected global economic growth and global trade growth from 2016 onwards. For India, however, the deficit is expected to rise by 0.4% of GDP on average from 2017-21. For oil exporters like Malaysia, Brunei Darussalam and Viet Nam, the projected surplus will increase until 2021. In China, owing to structural changes and the move towards a consumption-driven economy, the average surplus in the near term will be 2.1%, or significantly lower than in the pre-crisis period of 2000-07, when a surplus of 4.6% of GDP was recorded.

Figure 1.14. **Current account balances of Southeast Asia, China and India**

Percentage of GDP



Note: The cut-off date of data is 28 November 2016. The weighted averages are used for ASEAN average and Emerging Asia average. The results of China, India and Indonesia (for 2016 and 2017 projections) are based on the *OECD Economic Outlook* 100, released in November 2016. The 2000-07 average does not include Brunei Darussalam and Myanmar.

Source: OECD Development Centre, MPF-2017.

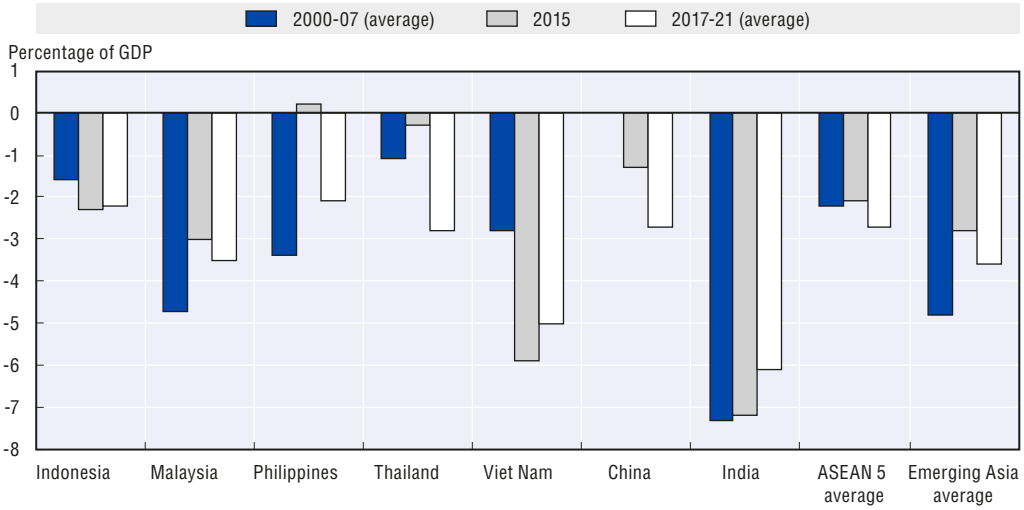
StatLink http://dx.doi.org/10.1787/888933443387

Fiscal balances are expected to deteriorate over the medium term

The fiscal balances of most large Emerging Asian economies have improved recently compared with the pre-crisis period, but are largely expected to deteriorate over the medium term. On average, the ASEAN-5 countries will see their deficit grow from -2.1% of GDP to -2.7% of GDP between 2015 and 2017-21 (Figure 1.15). Including China and India, the regional average will grow from -2.8% to -3.6%, with a large decline in the

fiscal balance expected for China. In relative terms, the largest declines expected for the 2017-21 period are in Thailand (from -0.3% to -2.8% of GDP) and the Philippines (from 0.2% to -2.1%). While India's deficit will remain the largest in the region, at -6.1% of GDP, the country's fiscal balance is expected to improve, as will Viet Nam's, to -5.0% of GDP. Indonesia's deficit is expected to improve slightly over 2017-21 from the 2015 level.

Figure 1.15. **Fiscal balances (central government) of ASEAN-5, China and India**



Note: Data refer to consolidated public sector balance in Malaysia. The cut-off date of data is 28 November 2016. The weighted averages are used for ASEAN-5 average and Emerging Asia average. 2000-07 average does not include China.

Source: OECD Development Centre, MPF-2017.

StatLink http://dx.doi.org/10.1787/888933443391

Indonesia, the Philippines and Viet Nam seek increased revenues through fiscal reforms

Among the ASEAN-5 countries, Indonesia, the Philippines and Viet Nam have undergone notable fiscal reforms in recent years.

Most of the large ASEAN-5 countries are pursuing reforms to broaden their tax bases and improve efficiency in order to obtain increased revenues. The tax amnesty bill passed by Indonesia's House of Representatives in June 2016 is one of the most significant recent changes affecting revenues. Over three phases lasting a total of nine months, the amnesty allows individual and corporate tax residents who owe past taxes on hidden and undeclared assets to have these debts forgiven in exchange for reporting their assets and paying a tariff. Repatriated assets will need to be retained in Indonesia for three years and invested in designated instruments, and newly registered onshore assets will be barred from transfer out of the country for three years. The amnesty is intended to broaden the tax base, increase revenues from the non-oil and gas sector, and draw in offshore corporate revenues.

With the participation of large Indonesian firms, assets totalling IDR 3 603.6 trillion (Indonesian rupiah), or 90.1% of the government's target, were declared in the first phase of the programme, which ended on 30 September 2016. The repatriation of offshore funds totalled only 13.6% of the target, however, and asset repatriation is expected to decline in the second and third phases of the amnesty as tax tariffs are raised. The government estimates that around IDR 4 000 trillion is hidden in international tax havens.

On the expenditure side, the Indonesian budget approved in June 2016 widened the fiscal deficit from the 2.2% of GDP set in the original plan to 2.4% of GDP. Though

spending – particularly on infrastructure – is set to rise, this increase is limited by the constitution's deficit target of 3% of GDP.

The government of the Philippines plans to increase spending on infrastructure, human capital and social protection. To provide space for this increased spending, the fiscal deficit ceiling has been increased to 3% of GDP, though bureaucratic barriers have often resulted in underspending in the Philippines. The Comprehensive Tax Reform Programme being developed by the Philippine Department of Finance is intended to help ensure financial sustainability. It will reduce tax burdens for low-income taxpayers and SMEs while broadening the tax base, strengthening large taxpayer collection and raising taxes on the very rich.

The Philippine programme includes five tax reform packages, concerned with personal income and consumption taxes, corporate income taxes and fiscal incentives, property taxes, the harmonisation of the tax on capital and the tax on investment instruments, and luxury taxes. The first package, which was submitted to the House of Representatives in September 2016, would set progressive personal income tax rates at 20% to 35% in 2018 and 15% to 35% in 2019, and would exempt the first PHP 250 000 (Philippine pesos) of an individual's taxable income from income tax. It is expected that by 2019 the tax reforms would increase revenue by PHP 400 billion, with administrative reforms adding an additional PHP 200 billion.

Tax reforms are also being pursued in Viet Nam, with the intention of reducing compliance costs for enterprises. Agreements were signed with 41 commercial banks to deploy electronic tax declarations, and the corporate tax rate was lowered from 22% in 2015 to 20% in 2016. Recent initiatives have sought to reduce dependence on oil and tariffs on trade as sources of revenue. Further reforms planned over the coming years to 2020 aim to address tax policy transparency and simplicity, apply information technology, improve professionalism, develop taxpayer support services, strengthen inspection and monitoring, and raise taxpayer satisfaction.

Viet Nam's infrastructure development plans mean that only gradual progress on fiscal consolidation is to be expected over the medium term. Reform of state-owned enterprises (SOEs) and reduced spending in other areas, such as the cuts to health-care subsidies enacted in March 2016, will slow growth in public expenditure, however.

Singapore introduces corporate income tax reforms and backs innovation

Moderate reforms are being made to corporate taxes in Singapore. The Corporate Income Tax Rebate is to be raised to 50% of corporate tax payable for 2016 and 2017, up from 30% under the 2015 budget, though the rebate cap will be lowered from SGD 30 000 to SGD 20 000. These changes are expected to benefit SMEs in particular. Under the Business and IPC Partnership Scheme (BIPS) introduced in the 2016 budget, a tax deduction on wages and related expenses was offered to firms that send their employees to volunteer and provide services to Institutions of a Public Character (IPCs). Singapore has joined the OECD project on base erosion and profit shifting (BEPS) and has committed to implementing the minimum standards on countering harmful tax practices, preventing treaty abuse, transferring pricing documentation and enhancing dispute resolution.

Singapore's expansionary 2016/17 budget emphasises innovation. It includes a SGD 4.5 billion industry transformation programme to back investment in automation and research and development spending. The budget also provides for new social programmes targeting health care, child care and the elderly.

Cambodia revamps its tax administration to improve revenue collection and attract FDI

Among the CLM countries, Cambodia is pursuing considerable change in tax administration with the passing of a new law. The Law on Financial Management 2016, passed in December 2015, unified and simplified the country's tax system by eliminating the estimated regime, leaving the "real" or "self-assessed" regime. The estimated regime had previously applied to small taxpayers, but was considered to be inefficient and lacking in transparency. Under the new system, small taxpayers will now be required to charge value-added tax (VAT), file monthly and annual tax returns, collect and pay certain withholding taxes, and be subjected to audits. It is expected that the loopholes closed by this reform will improve revenue collection and boost FDI.

Expenditure is expected to increase in Cambodia as social spending rises in the lead-up to the 2018 general election. There is also additional pressure faced for increased infrastructure investment. The reduction of tariffs under ASEAN-led trade agreements will affect revenue collection, though this will be offset by increased collection from direct taxes.

China and India work to modernise and streamline their tax systems

Recent tax reforms in China have affected local administrations, business taxes and online purchases from abroad. Public financing reforms in the first half of 2016 granted China's local administrations increased leeway to issue bonds directly and allowed them to swap bank debt for bonds with lower financing costs until the end of 2017. While these changes will increase fiscal transparency, the effective pricing of risk will be challenging. The final stage of the replacement of the business tax with a VAT on construction, real estate and the financial and consumer services sectors was implemented in May 2016. Since its launch as a trial programme in 2012, the VAT reform has been applied to railway transportation, postal services, telecommunications and some service sectors in an effort to reduce burdens on firms and speed up structural adjustment. Goods purchased online from foreign sellers are to be subject to import tax, import VAT and consumption tax rather than just a parcel tax. An annual limit of CNY 20 000 per individual consumer will be imposed on these purchases as part of set of reforms aiming to encourage the purchase of local products.

The government's fiscal position is expected to be affected over the medium term as expansionary policies are pursued to offset the Chinese economy's slowing growth and as previous off-budget spending is brought onto the official books. Restrictions on infrastructure spending are being eased and access for private investors in sectors such as education and medical care expanded.

The government of India has been working to address challenges in the country's tax system related to the multiplicity of taxes, the dominance of indirect taxes, systematic imbalance and the complexity of taxes. The Goods and Service Tax (GST) constitutional amendment bill was passed by parliament in August 2016 to streamline India's fragmented tax system, with rates for the new system set by the government in November. The reform is expected to benefit foreign direct investors and the economy as a whole by streamlining the tax structure, establishing a single customs union with a single tax across states and improving firms' tax compliance. A rise in the tax on services could push up inflation and reduce consumption, however.

India met its 3.9% of GDP deficit target last year and a committee has been formed to look into options for fiscal consolidation. Nevertheless, budget deficits over the medium term are expected in India as a result of spending on infrastructure, financial assistance for rural areas and other public goods increases. Fiscal decentralisation is increasing states' share of the overall tax take, and should lead to a reduction in spending by the central government in future.

Risks and policy challenges

Emerging Asia is projected to experience favourable growth over the near and medium terms. To harness the region's growth potential, it is critical for policy makers to implement effective policies to cope with various risks. Several downside risks require careful attention:

- **Coping with slow export growth**. Owing to slower global economic growth, export growth momentum in the region is declining. In the past, ASEAN economies have relied heavily on Chinese demand for their exports, whether commodities, machinery or intermediary products. In the current global economic slowdown, each country needs to find new trade strategies to ensure that export growth momentum can be increased or maintained, either by partial trade diversion or by product diversification. Signs of increasing protectionism will be a concern.
- **Managing the impact on the region of zero and negative interest rates in OECD economies.** Persistent low interest rates in advanced economies have a palpable influence on the dynamics of securities trading in Emerging Asia. The situation also affects the investment earnings of financial institutions. With the cooling of real sector activity and some concerns about bank asset quality, monetary authorities in Emerging Asia have to be vigilant to find a balance when setting policy.
- **Addressing slowing productivity growth.** While productivity growth rates have generally been positive in Emerging Asia recently, slowing growth in a number of countries (in particular following the global financial crisis) is a potential cause for concern. Based on analyses of firm-level data in manufacturing, several policy implications need to be addressed. In Viet Nam, for instance, productivity is affected by ownership, firm size and linkages to foreign firms. Larger firms are more productive in Indonesia, though some small firms perform very well.

Coping with slow export growth

Slow growth in world trade volume may impact Emerging Asian economies

In recent years, world trade growth in volume has been low. This is very much in parallel to slower global economic growth in the past few years. In 2015, according to the World Trade Organization (WTO), trade growth is registered at only 2.8%. Projected world trade growth in 2016 has been revised to a much lower rate of 1.7% (WTO, 2015). This is due to various factors, including the slowing of China's economy, higher volatility in the financial market and the exposure of economies with large foreign debts to highly volatile exchange rate movements.

Consequently, the global economy is poised to register its 20th straight quarter of less than 3% growth since 2011 Q4 based on WTO data. Although trade growth has been sluggish, it has remained positive. However, while the volume of world trade has been growing, the value of traded goods has fallen owing to low commodity prices as well as the volatility of exchange rates worldwide. Global trade value shed around 12% in 2015 and will shed more this year albeit at a lower rate. This instability may impact the economies of weak developing countries, especially given the risk of increased protectionism through the usage of non-tariff barriers (NTBs) by many governments. Owing to the slower than anticipated trade growth in 2016, sluggish growth of trade in volume is also expected in 2017, with a growth projection of 1.8%-3.1%.

Trade growth in the region is affected by protectionism and the global slowdown

The intra-ASEAN trade share has remained significantly lower than the intra-ASEAN+3 and intra-ASEAN+6 trade shares since the 1990s, as described in the "Trade in goods" section of Chapter 2. Economists view the use of NTBs in the region as the main cause of stagnant trade growth within ASEAN. While the intra-ASEAN trade share reached 24% in 2015, the intra-ASEAN, +3 and +6 groups reached a share of almost 40% of total world trade in the same year. This demonstrates the dependency of ASEAN countries on their +3 and +6 trading partners, and in particular on China.

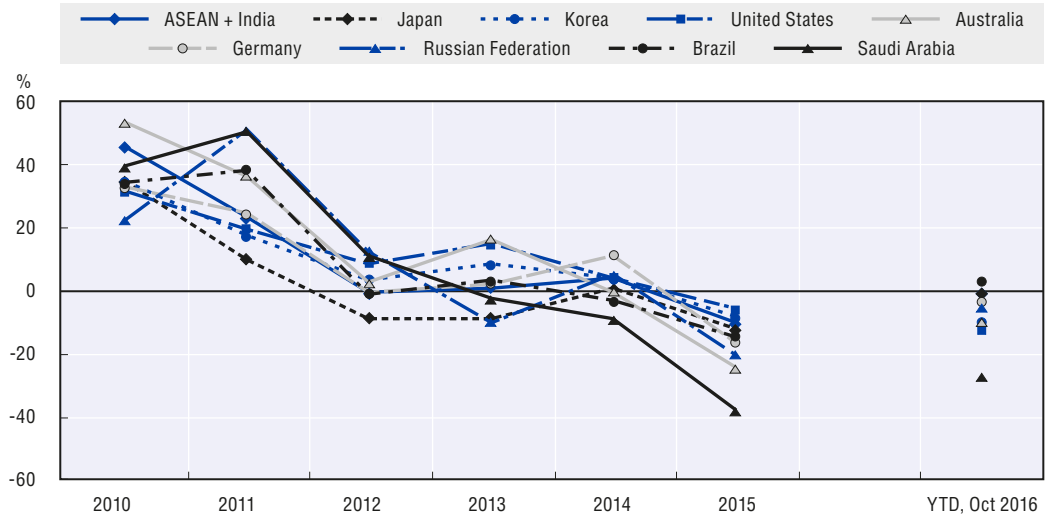
Two main factors are slowing trade growth in Emerging Asia: the global economic slowdown (and in particular, the slowing Chinese economy), and the widespread use of protectionist measures in the region.

China's economic slowdown is affecting imports from top trading partners

Recently, China has made a significant policy shift, switching from an external-demand-driven economy to a domestic-demand-driven economy. Domestic consumption will be an important driver for the country's growth in the near to medium term. Because of this structural shift, China's economic growth is gradually slowing. This slowdown is affecting its imports from its top trading partners, notably Korea, Japan, other Emerging Asian countries, the United States, Germany and Australia (Figure 1.16). Although China's import partners remain the same over the 2011-15 period, the value of its imports from all these countries have been in a decline since 2011.

Figure 1.16. **China's imports from top trade partners**

Year-on-year growth



Source: OECD Development Centre calculations based on data from CEIC.

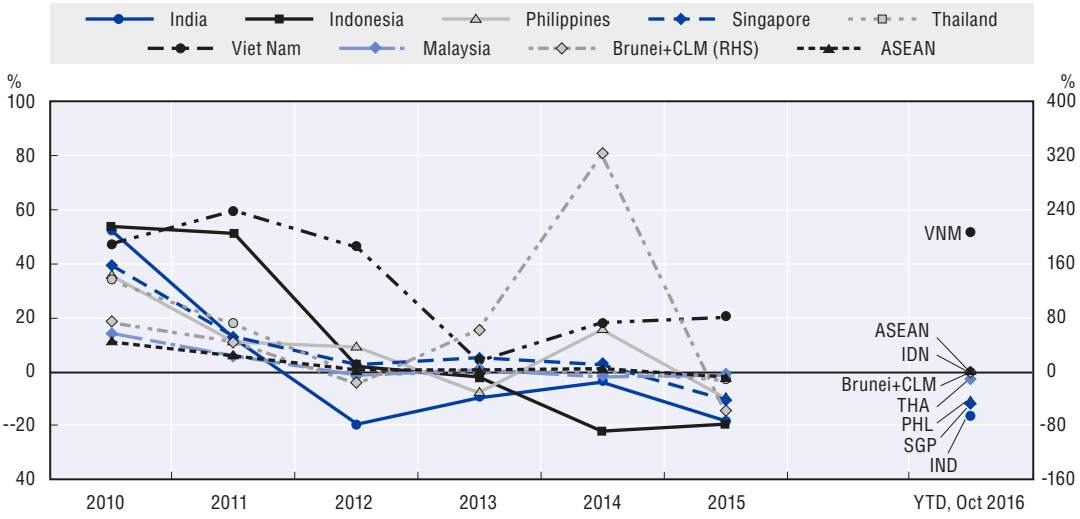
StatLink http://dx.doi.org/10.1787/888933443409

China remains one of the top five global export destinations for ASEAN countries. The slowdown in Chinese demand negatively affected imports from the rest of Emerging Asia (ASEAN and India) as a group although there are manifestations that the contraction in trade is easing lately (Figure 1.17). While Chinese demand for Indian commodities continues to lose steam, growth in the nominal value of shipments from ASEAN year-to-date (as of October 2016) has in fact already turned positive (0.3%) – an encouraging turnaround after dipping by 9.8% in 2015. The recovery this year has been driven by the surge of imports from Brunei Darussalam (up 179%), Viet Nam (up 51.3%), and Cambodia

(up 23.6%) and by the reversal of import trends from Indonesia which more than offset the double digit drop in the growth of imports from the Philippines, Singapore and Malaysia, and the slight contraction in imports from Lao PDR and Thailand.

Figure 1.17. **China's imports from ASEAN and India**

Year-on-year growth



Note: CLM refers to Cambodia, Lao PDR and Myanmar.

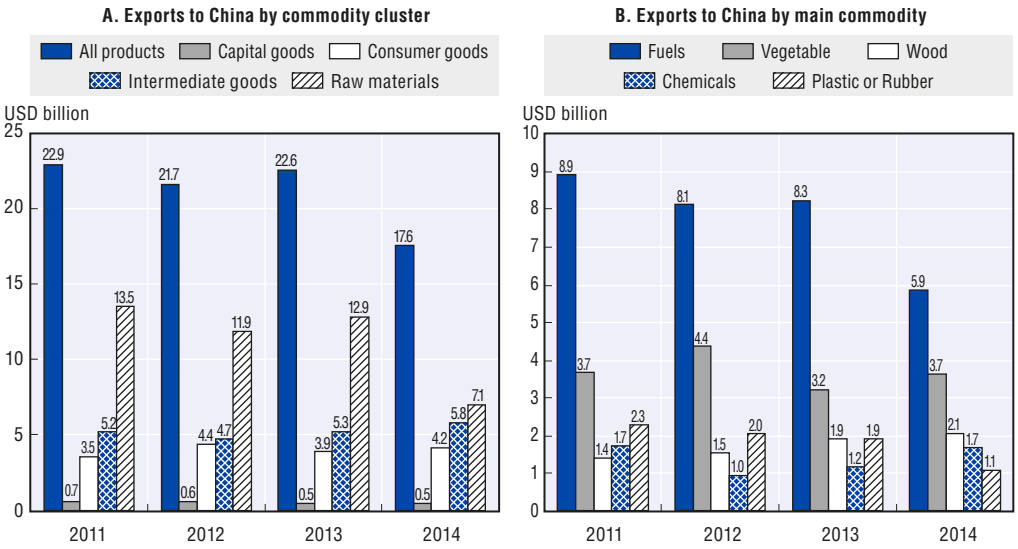
Source: OECD Development Centre calculations based on data from CEIC.

StatLink http://dx.doi.org/10.1787/888933443413

Recent trends may be promising but they also suggest that countries in Emerging Asia – particularly the ASEAN – has to recalibrate its medium-term trade programmes in a way that would allow its exporting sectors to tap other markets and depend less on China as a source of export growth. In the last ten years, China's share in ASEAN's exports has risen from 8.7% in 2006 to 13.4% in 2015, based on ADB data. Renewed weakness in China´s domestic market can thus easily nip the budding signs of export recovery. Moreover, the resurgence of trade protectionism and the increasing prevalence of non-tariff barriers can further impede global commodity trade channels.

Going down to the commodity level indicates that even during periods of downturn some countries have managed to dampen the effects of slowdown in Chinese demand, if not even increase exports to China by virtue of product specialisation. For example, Indonesia's raw material exports value which are mostly crude oil exports have gone down markedly between 2013 and 2014, most likely owing to the downward adjustments to global oil prices (Figure 1.18). But exports of intermediate goods and consumer goods have picked up to absorb some of the slack.

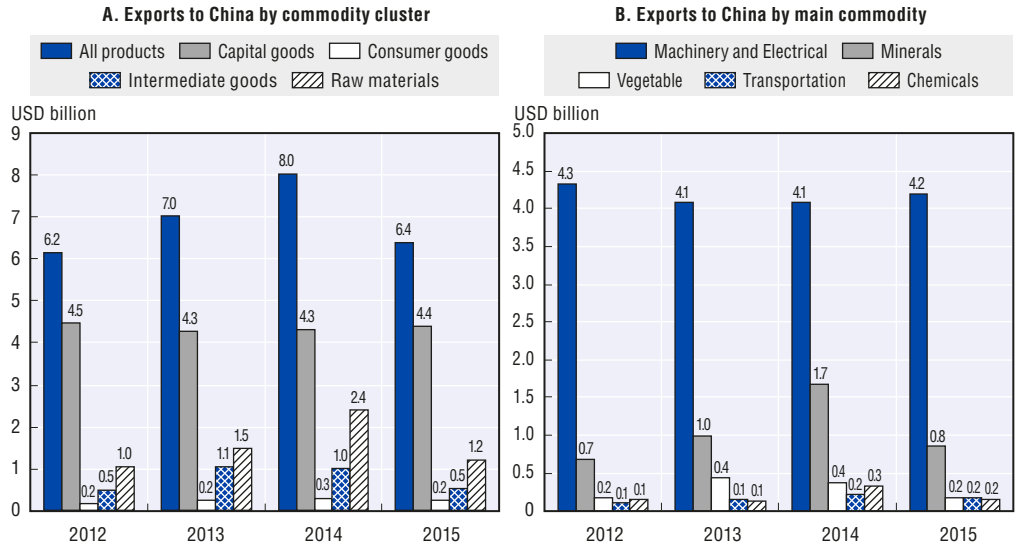
Figure 1.18. **Indonesia's exports to China, 2011-14**



Source: World Bank (2016a), *World Integrated Trade Solution* (database), http://wits.worldbank.org.
StatLink http://dx.doi.org/10.1787/888933443424

The Philippines has also seen a recent decline in exports to China. The reduction in the total value is mainly accounted for by the drop in raw material exports, (e.g. unprocessed minerals and intermediate goods). This trend may be due to domestic regulatory issues which stifled mining operations in the Philippines and geopolitical tensions coming to the fore of the two countries' bilateral relations (Figure 1.19). Nevertheless, exports of capital goods which accounted for almost 70% (e.g. machinery, electronics, and electrical equipment) remained steadfast.

Figure 1.19. **The Philippines' exports to China, 2012-15**

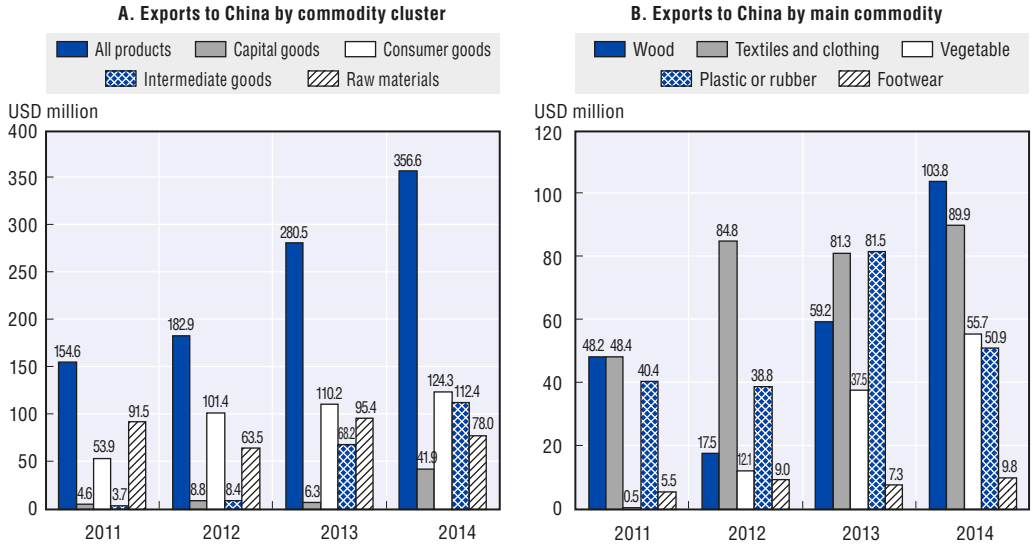


Source: World Bank (2016a), *World Integrated Trade Solution* (database), http://wits.worldbank.org.
StatLink http://dx.doi.org/10.1787/888933443438

By contrast, exports from Cambodia and Viet Nam to China remained strong in 2014. Cambodia has enjoyed growth in exports to China across all commodity clusters between 2011 and 2014 (Figure 1.20). During the period, the value of total shipments to

China averaged 33% growth annually. In particular wood products, vegetables, as well as textile and clothing have delivered large increases in exports receipts from the Chinese market.

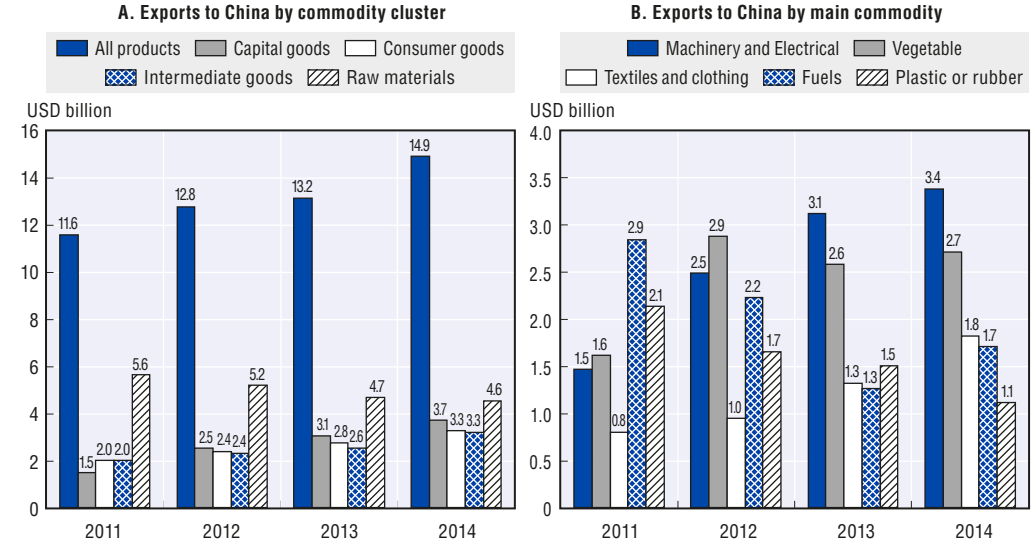
Figure 1.20. **Cambodia's exports to China, 2011-14**



Source: World Bank (2016a), *World Integrated Trade Solution* (database), http://wits.worldbank.org.
StatLink http://dx.doi.org/10.1787/888933443448

Another example of strong export growth in the region is set by Viet Nam. Although its exports of raw materials to China have decreased continuously since 2011, Vietnamese exports of capital, intermediate, and consumer goods have increased significantly (Figure 1.21). This is a perfect example of shifting export reliance on raw materials to higher value-added products like machinery, electronics and electrical products.

Figure 1.21. **Viet Nam's exports to China, 2011-14**



Source: World Bank (2016a), *World Integrated Trade Solution* (database), http://wits.worldbank.org.
StatLink http://dx.doi.org/10.1787/888933443458

In the near to medium term, if ASEAN countries continue to rely heavily on China for their exports – as is highly likely, given the ASEAN-China FTA 2.0 Update signed a few years ago – they may need to rethink their strategy in light of China's economic slowdown, for example by considering the revealed comparative advantage (RCA) of the products they export to China (Box 1.3).

Box 1.3. **Measuring the comparative advantage of exporting partners**

The RCA is the calculated ratio of a country's exports of a good to the world's exports of that good divided by that country's share of exports of manufactures in the world exports of manufactures. An index value greater than one indicates that there is revealed comparative advantage for that good. An index less than one indicates that there is a revealed comparative disadvantage for that good. The RCA has been used in many papers analysing trade competitiveness between different countries and the products they trade.

Another measurement for comparative advantage is the Product Space concept, which was developed by Hidalgo et al. (2007). Along with the application of network theory, the authors measured the "distance" between products by their relative similarities in needed capabilities. The degree of similarity between two products (proximity) is calculated by examining trade outcomes and not by physical similarities between the products or its inputs. From the visualisation results, we can examine which countries have existing comparative advantage on which products. These countries can then move to producing other products relatively easier than other products that are located in the periphery of the product space. This methodology has been used by Usui (2010) to gauge the comparative advantage of ASEAN countries such as the Philippines and Thailand.

Source: Usui (2010), "Transforming the Philippine Economy: "Walking on Two Legs", *ADB Economics Working Paper Series*, No. 252, March, https://www.adb.org/sites/default/files/publication/28754/economics-wp252.pdf.

The RCA has been used in many papers analysing trade competitiveness between different countries and the products they trade. According to Chandran (2010), even though the RCA index has its limitations it may be a useful guide to underlying comparative advantage and offer insight into the different competitiveness levels of different countries. This will then reveal possibilities for increased trade co-operation between them. On that note, ASEAN countries may want to revisit their RCA index to examine whether their trade strategy remains competitive in terms of the products they export. In general, all of Indonesia's top five export products have RCAs higher than one, while the RCAs for the Philippines' three of the top five exports have been smaller than one since 2011 (Table 1.3). As for Viet Nam, the RCAs for vegetables and for machinery electrical and electronics were above one in 2014, while the RCAs for fuels and plastics or rubber products have dropped below one since 2011.

Table 1.3. **Revealed comparative advantage of selected economies in their top five exported goods to China**

	2011	2012	2013	2014
Cambodia				
Wood	9.04	6.24	10.95	12.07
Textiles and clothing	16.18	20.81	18.56	17.83
Vegetable	0.06	1.39	2.55	3.49
Plastic or rubber	5.50	3.86	3.35	1.61
Footwear	49.86	41.78	28.22	24.93
Indonesia				
Fuels	2.11	2.19	2.23	2.11
Vegetable	4.42	4.24	3.22	4.55
Wood	2.52	2.75	3.14	4.14
Chemicals	0.87	0.49	0.6	1.16
Plastic or rubber	1.56	1.36	1.36	1.18
Philippines				
Machinery and electrical	2.32	2.46	2.32	2.25
Minerals	1.13	1.59	1.44	2.17
Vegetable	1.01	0.56	0.68	0.87
Transportation	0.02	0.03	0.05	0.04
Chemicals	0.10	0.1	0.08	0.09
Viet Nam				
Machinery and electrical	0.93	1.49	1.53	1.54
Vegetable	3.54	3.50	3.06	2.71
Textiles and clothing	3.60	3.03	4.47	5.89
Fuels	1.48	0.72	0.52	0.52
Plastic or rubber	1.09	1.25	1.04	0.92

Source: OECD Development Centre, based on World Bank (2016a), *World Integrated Trade Solution* (database), http://wits.worldbank.org.

Examining the RCA indices covering the top five products exported to China by Cambodia, Indonesia, Philippines and Viet Nam reveals that maximising comparative advantage can potentially reduce the impact of slowing global activity on trade. For instance, the comparative advantage held by Cambodia over China in its top five exports can be a plausible explanation why the growth of exports to China never went below 18% between 2012 and 2014. The strength of Viet Nam's top three products also appears to have kept the growth rates of shipments to China from turning negative. The steep drop in the price of oil seems to have dented Indonesia's exports, yet other products where Indonesia has comparative advantage have held firm. Steady orders of machinery and electrical equipment and robust mineral trade – two commodities where the Philippines has revealed comparative advantage – has likewise kept the growth of the country's export to China in green from 2011 to 2014 before eventually dipping by a good 20% presumably as a result of domestic and idiosyncratic turn of events.

Stagnation in trade is linked to non-tariff barriers within ASEAN

As noted above, the intra-ASEAN trade share has stagnated at 25%. This stagnation is linked to the harmful use of NTBs in the wake of drastic tariff reductions for goods on the Inclusion, Sensitive and Highly Sensitive List.

NTBs are measures used by governments that take the form of prohibitions, conditions or specific market requirements. These measures are used to protect domestic industries from foreign competition in some cases. When implemented, they make trade activities more complex, and hence more costly. These measures also include the improper use of non-tariff measures (NTMs), such as sanitary and phytosanitary (SPS) measures, and other technical barriers to trade (TBT), such as import restrictions and labelling and packaging requirements.

NTBs are used not only with ASEAN's external trading partners, but are also widely used among ASEAN countries (Table 1.4). NTBs that are commonly used in the region are trade defence measures such as anti-dumping, countervailing and safeguard measures. Import restrictions on specific products such as electronic goods and non-hazardous and non-toxic products are commonly practised, and export taxes and restrictions in kind, on mining products are also widely imposed in the region.

Efforts have been made through the ASEAN framework to combat the use of NTBs, for example through the introduction of the ASEAN Trade Repository. But this has not been effective in eliminating the practice of harmful NTBs in the region, which lacks a penalisation mechanism for reported NTBs like the one under the Trans-Pacific Partnership Agreement (TPPA) framework. The issue of the use of NTBs in the region will remain as a non-deliverable goal without further co-operation between different authorities to steer trade policies in a more cohesive manner.

Table 1.4. **Reported use of NTBs in ASEAN and selected trading partners in the region**

Implementer	Affected	Red measures	Total of red	Harmful measures (amber and red)	All measures (including green measures)
Brunei Darussalam		0	0	0	1
Indonesia	Brunei Darussalam	8	365	170	384
	Cambodia	7			
	China	74			
	India	56			
	Lao PDR	2			
	Malaysia	66			
	Philippines	41			
	Singapore	67			
	Viet Nam	44			
Malaysia	Brunei Darussalam	2	63	31	70
	Cambodia	3			
	China	18			
	India	9			
	Philippines	5			
	Singapore	9			
	Thailand	10			
	Viet Nam	7			
Singapore	China	13	62	22	34
	India	11			
	Indonesia	12			
	Malaysia	12			
	Philippines	2			
	Thailand	10			
	Viet Nam	2			
Thailand	Cambodia	1	36	28	66
	China	18			
	India	5			
	Indonesia	2			
	Lao PDR	1			
	Malaysia	2			
	Myanmar	1			
	Singapore	3			
	Viet Nam	3			

Note: An amber measure is a measure that has been implemented and may involve discrimination against foreign commercial interests, or a measure that has been announced or is under consideration and would (if implemented) almost certainly involve discrimination against foreign commercial interests. A red measure is a measure that has been implemented and almost certainly discriminates against foreign commercial interests.
Source: OECD Development Centre's compilation based on Centre for Economic Policy Research (2016), *Global Trade Alert* (database), London, www.globaltradealert.org/measure.

Managing the impact on the region of zero and negative interest rates in OECD economies

Interest rates in advanced economies are in a race to the bottom

With market uncertainties threatening to freeze credit channels at the height of the global financial crisis (GFC), monetary authorities of the United States, European Union, United Kingdom and Japan began slashing key interest rates in an almost synchronous fashion in an effort to re-establish stability in the financial markets as well as to arrest implosion in the real sector. From their peaks in 2007, the US Federal Reserve (Fed), the European Central Bank (ECB) and the Bank of England (BOE) trimmed their policy rates by somewhere between 300 and 525 basis points over a span of two years. Bank of Japan (BOJ) likewise slashed its overnight call rate from 0.5% to a measly 0.1% by end of 2008. Whereas the Fed and BOE kept their rates near zero for a few years following the GFC, the lingering malaise brought about by the sovereign debt crises in Europe drove the ECB to impose negative deposit rates in 2014.[1] The BOJ followed suit more recently to stimulate its lethargic domestic activity. [2] In addition to rate cuts, major central banks have made sure that the markets are awash with liquidity.[3] The prolonged environment of low interest rates in the advanced economies is affecting the macroeconomic and financial conditions of Emerging Asia.

Near-term financial stability risks appear manageable

Persistent low interest rates in advanced economies have a palpable influence on the dynamics of securities trading in Emerging Asia as expected. The conditions also affected investment earnings of financial institutions. With the cooling of real sector activity and some concerns about bank asset quality, monetary authorities in Emerging Asia have been vigilant to finding a balance in policy actions instead of mirroring the direction that their counterparts in advanced economies have taken. At this point, fundamentals indicate that near-term financial stability risks associated with the interest rate movements in advanced economies are manageable. However, the ease at which financial markets in Emerging Asia would be able to ride out potential stresses due to monetary policy changes in advanced economies, hinges substantially on how well reform measures would improve the balance sheets of financial institutions.

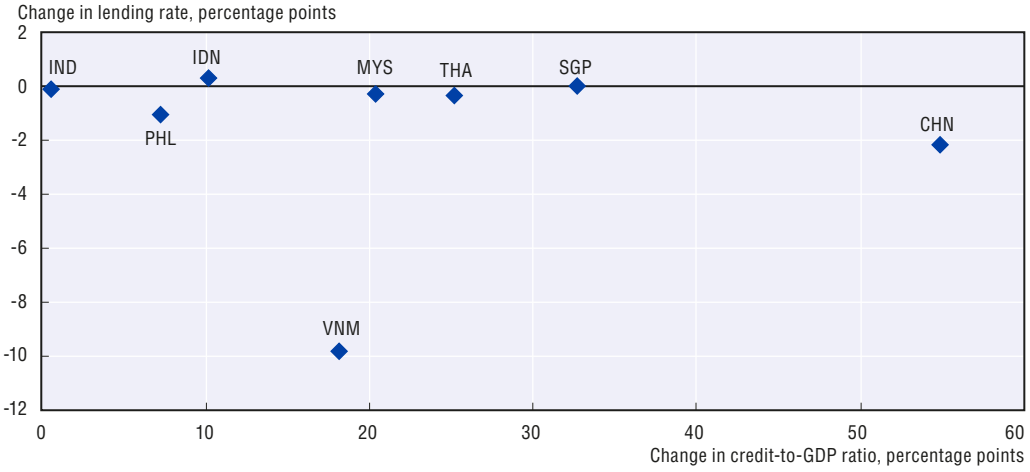
The effects of low interest rates coupled with a highly liquid environment are evident in the capital markets of Emerging Asia. Given the disparity in benchmark yields that averaged over 4.25 percentage points annually from 2011 to 2015, foreign investors gobbled security issuances of Asian economies such as Indonesia, Philippines, Thailand and India.[4] Equity markets in Emerging Asia were also beneficiaries of capital flows. Financial account annual average inflows into the three Southeast Asian economies have risen to USD 80 billion between 2010 and 2014 from USD 37.9 billion before the crisis, (i.e. from 2005 to 2007). The annual average of direct and portfolio investment net inflows in India also rose to USD 55.8 billion (2010-14) from USD 22.1 billion (2005-07).

Nonetheless, the rise in the price-earnings ratios of traded equities, which jumped two- to three-fold since bottoming in 2008, and the narrowing of the yield spreads to about 3.8 percentage points appears to have in part stymied foreign placements in recent months.[5] Unsettling external political incidents also partially triggered capital flight in the past few months. Episodes of market correction have occurred, with equity prices retreating from record highs registered in 2015. Fortunately, these corrections have had limited impact on market stability thus far. There are also indications that a global search for yields has taken off anew, with the increasing number of sovereign bonds in advanced economies yielding negative rates reinforced by the apparent willingness of major central banks to flood the market with additional liquidity.[6] However, these sentiments were weighed down by anticipation of the change in US leadership following the November elections and the strengthening of the US dollar.

Global liquidity flooding operations that began in 2008 have driven the ratio of domestic credit-to-GDP upwards across Emerging Asia (Figure 1.22). The ratios of China, Thailand, Malaysia, Singapore and Viet Nam, which were already relatively high pre-GFC (2007), have seen the highest mark-ups in the last ten years relative to other countries in Emerging Asia. Given these developments, policy makers in Emerging Asia have opted for a more cautious adjustment to policy rates instead of mirroring the stance of their counterparts in advanced economies. Thus, while domestic bank lending rates have been generally on a decline since the GFC, the drop in interest rates in the region has been less dramatic, save for Viet Nam.[7] This indicates that central bankers are being careful to find the right balance between stimulating real activity and reining in speculative capital flows on the one hand, and pursuing long-term financial stability (keeping credit quality in good standing) on the other. This is one of the channels that could possibly explain why the impact of low interest rates overseas on domestic real sectors has been mixed.

All seems well at this point. However, if the low-interest rate environment in advanced economies carries on over the next few years and starts pulling down interest rates in Emerging Asia significantly, then it can be expected that fixed-income asset earnings would also fall more pronouncedly than they have so far which will further strain the balance sheets of financial institutions. A reversal in interest rates (although highly unlikely in the near-term) has its own risk especially since non-performing loans have been rising in some economies in the region.

Figure 1.22. **Change in credit-to-GDP ratio and lending rate, 2011 vs 2015**



Source: OECD Development Centre calculations based on World Bank (2016b), *World Development Indicators*, http://data.worldbank.org/data-catalog/world-development-indicators.
StatLink http://dx.doi.org/10.1787/888933443202

Even with some caution in monetary policy making, the ensuing credit expansion has exposed vulnerabilities in bank supervision frameworks in light of the continued weakness in international markets and subdued oil prices.[8] Instances of loan defaults among highly leveraged corporations have increased notably in some areas in the region, and bank portfolio has generally deteriorated as a consequence, even as banks remain well capitalised. India's banking system, in particular, stands out in terms of level and growth of its non-performing loans (NPL) ratio.[9] The case of China cannot be overlooked as well. Albeit still comparatively low, the share of bad debts in the total lending portfolio of Chinese banks has almost doubled since 2012.[10] The returns on assets and equity of Indian and Chinese banks have dipped the most vis-à-vis other economies in Emerging Asia.

One of the ex-post mechanisms for getting rid of commercial banks' bad debts is to establish a special purpose vehicle, a bad bank or an asset management company (AMC). Emerging Asia is no stranger to AMCs, as they were utilised to clean up the banking sector following the Asian financial crisis (AFC). Centralised and institution-specific AMCs or special purpose vehicles were established in China, India, Indonesia, Malaysia, the Philippines and Thailand. In 2003, Viet Nam set up its Debt & Asset Trading Corporation to undertake a similar function. While AMCs or AMC-type establishments in India, Indonesia, Malaysia and the Philippines eventually closed, largely because of their built-in sunset provisions, China and Viet Nam decided to prolong the operations of their AMCs. In China, regional AMCs were added to complement the existing bank-specific AMCs dedicated to the four largest state-owned commercial banks.[11] India is also warming up on the idea of having its own bad bank (although the possibility of implementing such a proposal in the near term is remote).[12] On the other hand, Thailand closed down the Thai Asset Management Company, but the smaller Sukhumvit Asset Management Co., Ltd. continues to operate.

It is vital that banks maintain a healthy loan portfolio because fixed income earnings are already under stress owing to the decline in yields which dragged down profitability. To their advantage, prudential regulations in many countries in Asia are strong as a result of a series of measures undertaken years before. In fact, a number of local central banks have imposed benchmarks that are more than compliant with the Basel 3 Accords' prescriptions. The continuation of reforms in Emerging Asia, however, is more than welcome. For instance, China recently enhanced its macro prudential assessment mechanism, implemented equalisation of capital requirements and risk weights for certain off- and on-balance-sheet activity, and approved a stringent deposit insurance programme.[13] In India, an audit was implemented starting fourth quarter of 2015. Public banks were mandated to recognise fully the value of distressed assets, the banks' loan loss buffer was raised and their debt recovery mechanisms were enhanced, to name some of the measures. In Indonesia, banks were directed to set aside an extra capital buffer over and above the existing capital requirements. Meanwhile, in the Philippines, banks are now obliged to comply with the liquidity coverage ratio under Basel 3.

The negative impact of low interest rates on fixed income asset returns is why non-bank financial institutions (NBFIs) should be watchful of their balance-sheet conditions even though solvency risks are not a big issue in Emerging Asia at present. Asian pension systems already have to contend with ageing populations, relatively high replacement rates and institutional capacity issues.[14] If interest rates slide further, NBFIs may be forced to increase the risk profile of their portfolio (if they have not already done so) to avert a duration gap problem, which could have long-term implications for their financial viability. Bond yields in Emerging Asia have so far been less affected by the low interest than those in OECD economies (Box 1.4).

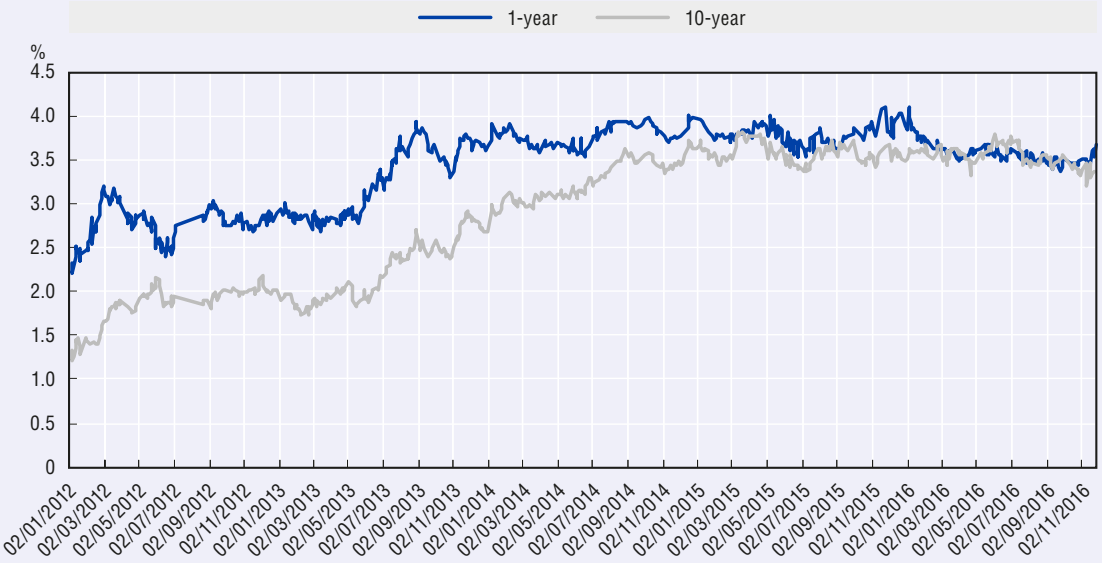
Whether or not a policy reversal from the current low interest rate environment poses more potent near-term risks is hard to say at this juncture. On the one hand, change in monetary policy (especially in the United States) is likely to have already been priced as far as speculative flows are concerned. On the other hand, vulnerabilities in the banking sector can be exacerbated when interest rates go up. With NPL already gaining traction in some countries (albeit still below alarming levels), along with falling corporate profitability, an uptick in the cost of borrowing could further fuel the accumulation of bad debts. Under such a scenario, lending would face significant frictions as banks are forced to increase loan loss provisions. This is already happening in India, and also in Singapore to an extent. The impact on Emerging Asia of a policy reversal will depend largely on how industrial and trade activity responds to a change in financial conditions.

How eager national governments are to roll out support packages and debt guarantees could also be a determining factor.

Box 1.4. **Bond yield movements: Emerging Asia and OECD economies**

Monetary easing in advanced economies has brought yields down to historic lows.[15] Yet although the decline in fixed asset rate of returns did not discriminate between emerging and advanced economies, there appears to be some form of decoupling in terms of the degree to which yields have been affected. First, yields in Emerging Asia have responded less profoundly than yields in OECD economies, in both short-term and long-term instruments (Figure 1.23). This could reflect the difference in the monetary policy stance of the central banks. It also implies that the interest earnings potential of financial institutions exposed to capital markets in Emerging Asia is relatively more encouraging than the prospects facing firms exposed mainly to OECD markets.

Figure 1.23. **Spread of average yields, Emerging Asia vs OECD**



Note: Spread of average yields is the simple average of Emerging Asian government bond yields minus the simple average of OECD government bond yields. Emerging Asia=China, India, Indonesia, Philippines, Singapore and Thailand. OECD=Austria, Belgium, France, Germany, Italy, Japan, Spain, United Kingdom and United States.

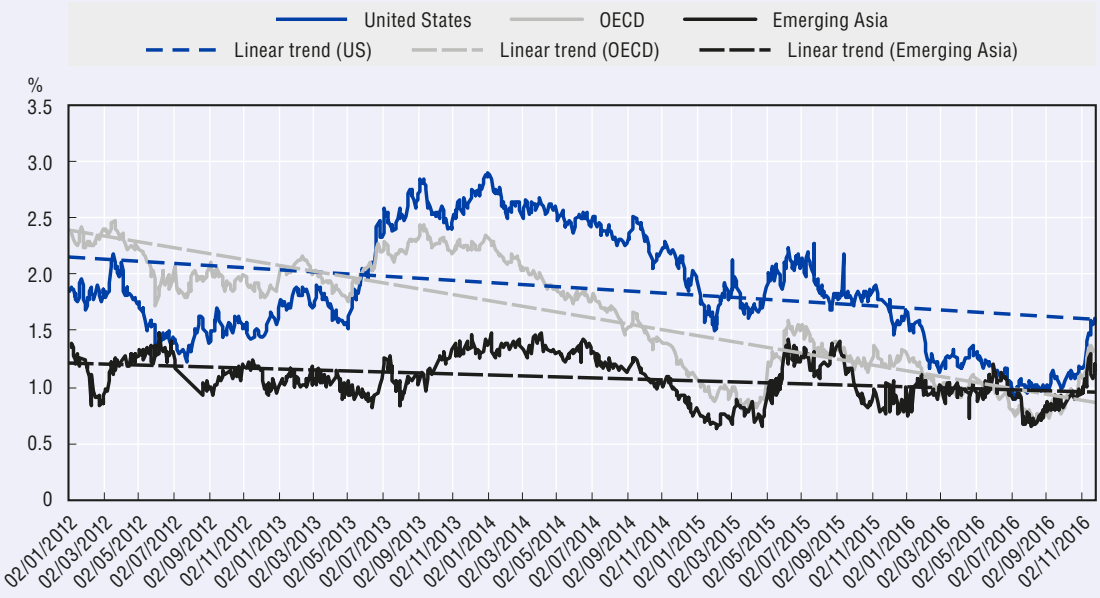
Source: OECD Development Centre using data from Fusion Media Ltd. (2016), www.investing.com.

StatLink http://dx.doi.org/10.1787/888933443465

Second, the extent to which the gap has narrowed between the average rates of return of long-term and short-term instruments has also noticeably differed between Emerging Asia and the OECD. Yield differentials (1-year versus 10-year) have drastically tightened in advanced economies since mid-2013, particularly in European economies, while yield differentials in Emerging Asian economies only nudged down marginally (Figure 1.24). In both cases, the fall in long-term yields has been bigger than the drop in short-term yields, although apparently the difference between short-term and long-term yield reductions is more pronounced in OECD economies. What transpired in OECD economies – investor sentiment becoming heavily biased towards long positions – is hardly surprising considering that short-term sovereign bonds in Europe are already trading in negative territory. In contrast, given that breaching the zero lower bound is not even a risk in markets in Emerging Asia, this behaviour is not yet apparent in the region.

Box 1.4. **Bond yield movements: Emerging Asia and OECD economies** (*cont.*)

Figure 1.24. **Difference in average yields, 1-year vs 10-year**



Note: Difference in average yields is average 10-year government bond yields minus average 1-year government bond yields for corresponding country and regions. Emerging Asia=China, India, Indonesia, Philippines, Singapore and Thailand. OECD=Austria, Belgium, France, Germany, Italy, Japan, Spain, United Kingdom and United States.

Source: OECD Development Centre using data from Fusion Media Ltd. (2016), www.investing.com.

StatLink http://dx.doi.org/10.1787/888933443471

As an aside, when so much liquidity chases long positions, resulting in flattening of the yield curve, the ability of institutions that have substantial fixed-rate medium- to long-term liabilities (e.g. pension and insurance funds) to meet their obligations is negatively affected. If the time it takes to accumulate revenues to square liabilities becomes longer than the maturity period of the firm's obligations (i.e. there exists a duration gap in the balance sheet), insolvency can ensue. As such, the flattening of the yield curve can also give rise to excessive short-term risk taking, especially among non-bank financial institutions, primarily to avert duration gap.

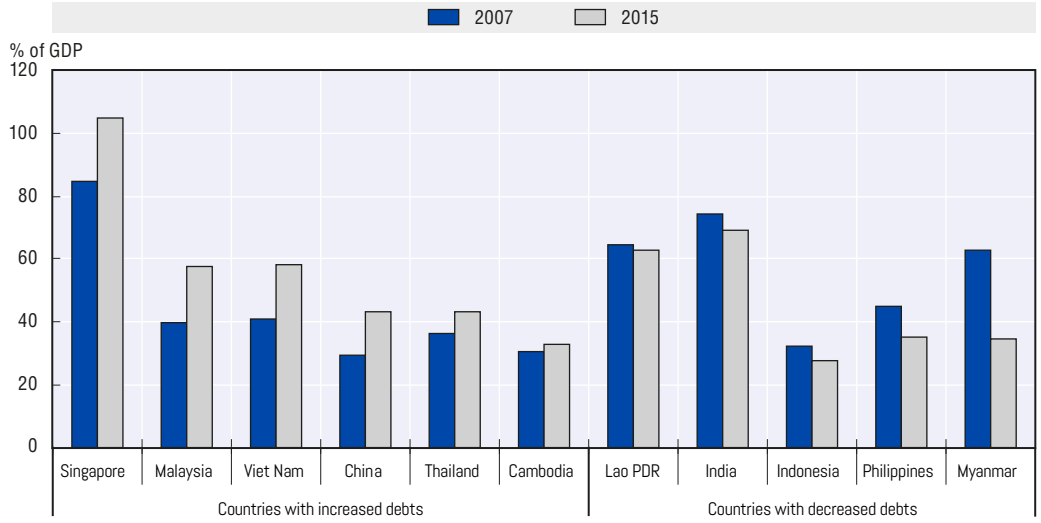
On the other hand, banks may be able to escape the insolvency trap if they have limited fixed-rate arrears accrued beforehand, although profitability will definitely take a hit. By paying negative rates on deposits (as some European deposit-taking institutions are already doing), banks would be able to even out their payables and receivables. Presupposing that banks are heavily reliant on bond yield earnings, if deposit rates are "more negative" than investment yields they can theoretically still extract rent under current conditions. Banks will also continue to earn positively from traditional commercial loans, whose rates are highly unlikely to go sub-zero.

Interestingly, the average term premia (difference in between short-term and long-term yields) in advanced and Emerging Asian economies seemed to have converged starting in early 2015. The premia have likewise increased in an almost synchronous fashion in recent months, owing largely to political developments in the United States. To some extent, the convergence indicates that there has been a common set of dominant global factors determining term premia both in advanced and emerging markets in recent months. This may be partly due to increased financial integration globally over the years. If this reading of the convergence story is plausible, then it also indicates that the nature of dominant factors affecting the term spread appears to be fundamentally different from the determinants of yield spreads, which are more idiosyncratic (at least currently). This prognosis will surely be tested once the US Federal Reserve begins to reverse the direction of its monetary policy.

Headline fiscal positions of Emerging Asian economies are generally stable

There appears to be little evidence that governments in Emerging Asia have compromised fiscal discipline in light of the protracted low interest rates. While debt ratios have risen mainly as a result of governments' efforts to stimulate decelerating real economic activity momentum, they remain below alarming levels (Figure 1.25). Interestingly, Lao PDR, India, Indonesia, the Philippines and Myanmar even deleveraged during the period. Singapore, where the government debt ratio exceeds 100% of output, is a special case. Singapore's government papers mainly aim to deepen its domestic debt market, partly in compliance with the investment requirements of the provident fund.

Figure 1.25. **General government gross debt**



Source: IMF Fiscal Monitor Database, October 2016.
StatLink http://dx.doi.org/10.1787/888933443485

Countries in Emerging Asia, having learned from their misfortunes during the AFC, have consciously veered away from the trap of debt maturity and currency mismatch in decisions on the borrowing mix. Emerging Asia still strongly favours long-term to short-term obligations and domestic creditors to foreign creditors (save for Indonesia). Indonesia notably raised the share of debt to foreign investors to 60.1% from 55% about a decade earlier, but 57% of the total outstanding debt papers are in rupiah and only 43% are in foreign currency.

Downside risks to fiscal stability in Emerging Asia caused by interest rates in advanced economies are benign at the moment. Deviations from budgetary targets have been largely minimal. Sovereign credit default swap declined markedly from peaks between July and November 2015, and no significant change has been announced with respect to the long-term sovereign foreign currency credit ratings of these economies. The wild card would be the contingent liabilities of the operations of public corporations, which are difficult to assess owing to sparse data.

Emerging Asian economies are still regaining lost ground in the real sector

Theoretically, the low-interest-rate, high-liquidity environment spurs economic activity. The aggregate demand components outline the channels at which interest rate and liquidity injection can directly influence real sector conditions in emerging markets. But the current evidence concerning this conventional belief is mixed. What can be deduced from a simple comparison of the average real growth rates of aggregate demand components prior to the GFC, (i.e. 2002 to 2007), and during the crisis recovery period, starting in 2010, is that monetary policy easing and stimulus packages launched across

the globe have not been sufficient to lift most of the economies in Emerging Asia back to their growth paths before the GFC. Suffice it to say that most of these economies are still in the process of regaining lost ground amid a still uneasy global economic climate. Of the ten economies in Emerging Asia that were evaluated, only the Philippines and Indonesia are on a higher growth plane vis-à-vis the pre-crisis period. The former benefited from considerable investments and robust government spending, whereas the latter got a boost in terms of capital formation and household consumption. The rise in trade protectionism and the occurrence of geopolitical shocks certainly dampened transmission of monetary actions in advanced economies to real sector growth in other countries.[16]

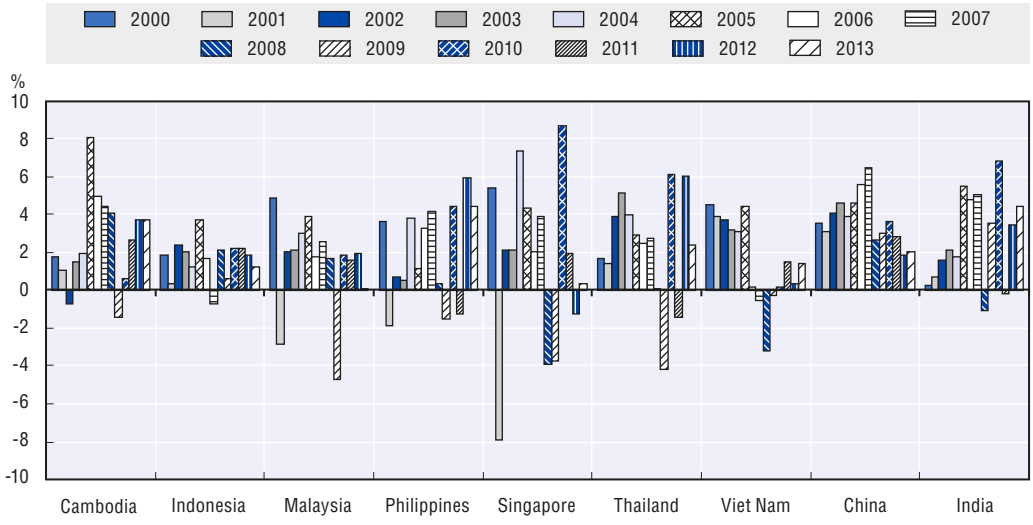
Addressing slowing productivity growth

Productivity needs to improve to sustain strong growth in Emerging Asia

Productivity remains a critical issue for much of Emerging Asia, as sustained growth and development require increased production from available inputs. Although it is an important driver of GDP growth across the region, productivity growth is particularly important in the middle-income countries that are seeing decreasing returns from previous modes of growth reliant on structural transformation, factor accumulation and favourable demographic conditions. Recent trends make this matter more pressing, as much of the region has seen slowing productivity growth. Improving prospects in Emerging Asia will require reforms that facilitate the diffusion of knowledge and technology and that improve allocative efficiency, in order to foster the emergence and growth of more high-productivity firms.

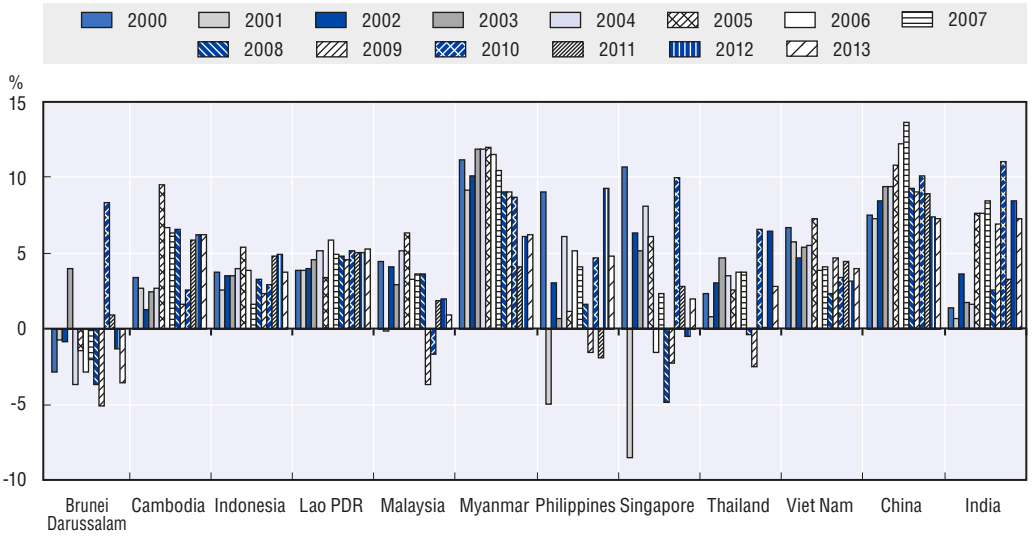
While productivity growth rates have generally been positive in Emerging Asia recently, the slowing rates of growth in a number of countries are a potential cause for concern. Growth in the four years following the global financial crisis and its immediate aftermath (2010-13) has tended to be lower than in the four years preceding it (2004-07), except for total factor productivity (TFP) growth in Indonesia, the Philippines and Thailand, and labour productivity growth in Brunei Darussalam, India, Indonesia, Lao PDR and Thailand (Figures 1.26 and 1.27). Performance has varied across sectors, and there has been some evidence of faster growth in lower-productivity sectors in recent years (Box 1.5).

Figure 1.26. **Annual growth in total factor productivity in Emerging Asia, 2000-13**



Note: TFP data not available for Brunei Darussalam, Lao PDR or Myanmar.
Source: APO (2015), *APO Productivity Database 2015*, www.apo-tokyo.org/wedo/measurement.
StatLink http://dx.doi.org/10.1787/888933443491

Figure 1.27. **Annual growth in labour productivity in Emerging Asia, 2000-13**



Source: APO (2015), *APO Productivity Database 2015*, www.apo-tokyo.org/wedo/measurement.
StatLink http://dx.doi.org/10.1787/888933443501

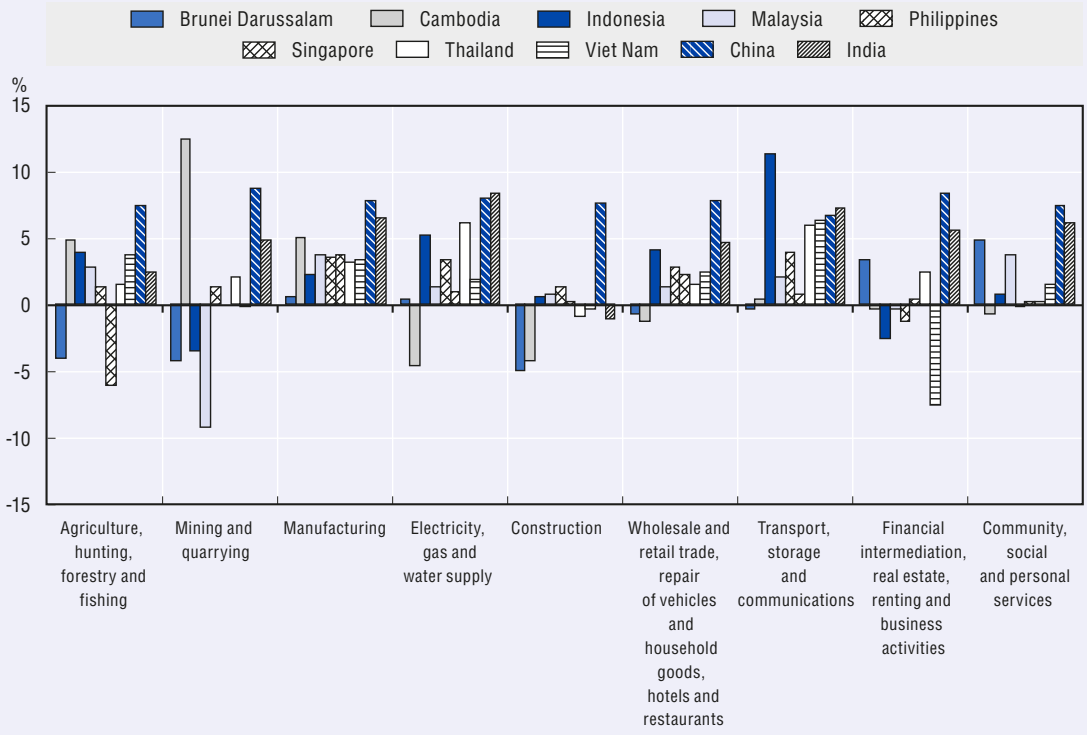
Box 1.5. **Higher-productivity sectors are often not among the fastest-growing sectors**

In 2013, relative labour productivity by sector in Emerging Asian countries tended to be highest in mining and quarrying; financial intermediation, real estate, renting and business activities; and electricity, gas and water supply. However, over 2000-13, output per worker grew fastest, on average, in transport, storage and communications (which was also the fastest-growing sector in Indonesia, the Philippines and Viet Nam); manufacturing; and electricity, gas and water supply (Figure 1.28). Productivity improvements over this period were greatest in China in most sectors, except mining and quarrying (where Cambodia grew faster); electricity, gas and water supply (where India grew slightly faster); and transport, storage and communications (where Indonesia grew faster). While productivity growth in agriculture, hunting, forestry and fishing improved between the four-year periods preceding (2004-07) and following (2010-13) the global financial crisis, most sectors have seen slower growth in recent years. This is particularly true in wholesale and retail trade, repair of vehicles and household goods, hotels and restaurants, and in community, social and personal services.

Box 1.5. **Higher-productivity sectors are often not among the fastest-growing sectors** (*cont.*)

Figure 1.28. **Labour productivity growth by sector in Emerging Asia, 2000-13**

Average annual percentage growth

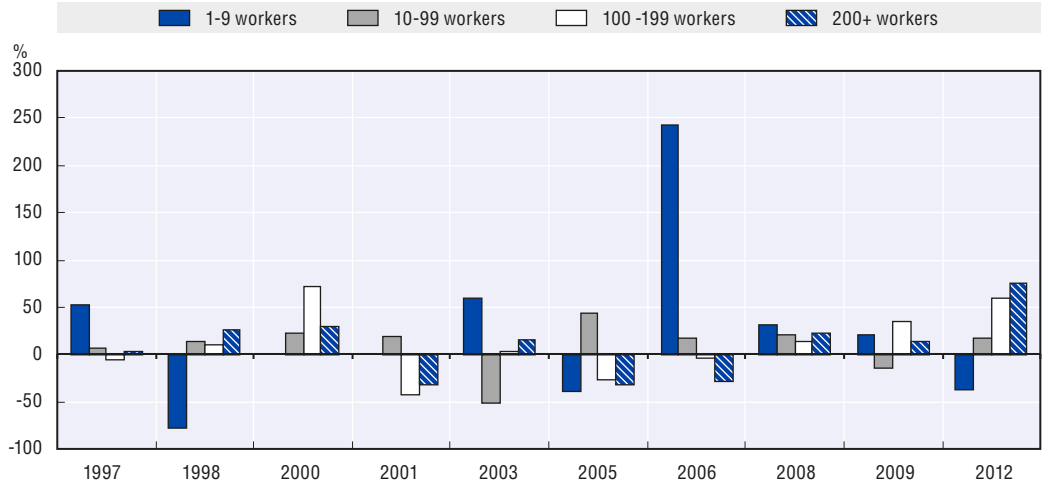


Source: APO (2015), *APO Productivity Database 2015*, www.apo-tokyo.org/wedo/measurement.

StatLink http://dx.doi.org/10.1787/888933443515

While structural transformation and resource reallocation between sectors will continue to boost productivity in some countries, sustained improvements to productivity growth in Emerging Asia will largely depend on within-firm productivity growth and more efficient resource allocation between firms. Firm performance varies widely in the region. A study of firm-level productivity in Emerging Asia, using data from Indonesia, the Philippines and Viet Nam, highlights how firm-level factors – including age, size, ownership and numerous other measurable and non-measurable traits – can be associated with large differences in productivity levels and growth rates (APO, forthcoming). For example, average annual growth rates by firm size in the Philippine manufacturing sector have varied considerably (Figure 1.29). While the smallest group of firms (with 1-9 workers) had the highest average growth rates in the years studied, their growth was also the most volatile.

Figure 1.29. **Average annual growth in TFP by firm size in the Philippines, 1997-2012**



Note: Growth rates are not available for 1999, 2002, 2004, 2007, 2010 and 2011. In addition, the growth rate for firms with 1-9 workers is not available for 2000.

Source: OECD Development Centre calculations, using Philippine Statistics Authority (1996-2012), *Annual Survey of Philippines Business and Industry (ASPBI)*.

StatLink http://dx.doi.org/10.1787/888933443225

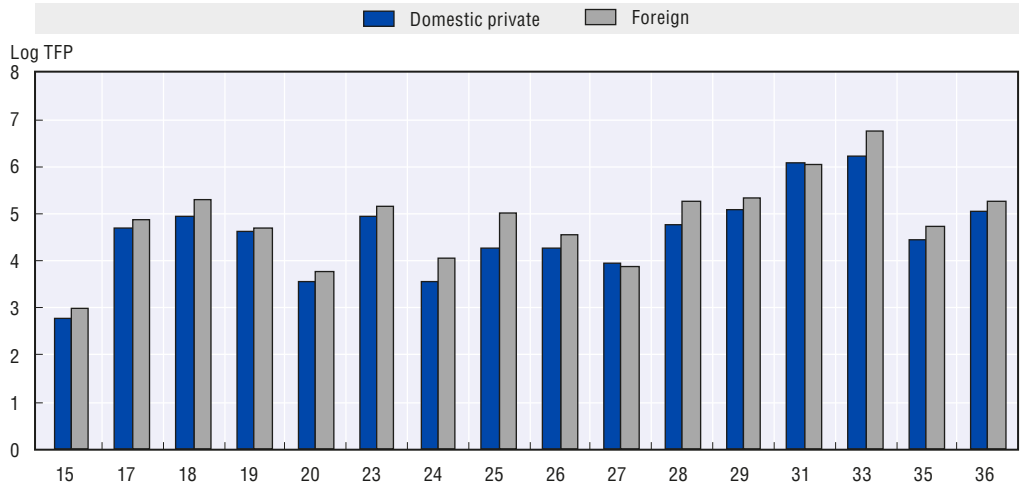
Even these within-firm factors are influenced by the policy environment, meaning that effective productivity policies can provide the conditions needed for productive firms to emerge and thrive. There is evidence that firms in developing countries are more likely than those in advanced economies to be constrained by internal management and financial challenges (Bloom et al., 2010). In particular, management practices such as monitoring, targeting and incentives may not be used effectively, and managers may not be delegated sufficient authority to improve efficiency. These problems are compounded when insufficient access to finance leads to underinvestment in improved management skills or when there is a lack of opportunity for talented managers to establish or grow their firms.

Innovation is essential for firms at the productivity frontier

Innovation through experimentation with new knowledge and technologies is critical for improving productivity in firms at the global frontier. Firms at the productivity frontier tend to be significantly more productive than their peers; they are larger, more profitable and are more likely to be part of a group or conglomerate and to patent innovations (Andrews, Criscuolo and Gal, 2015). Policy priorities for fostering improvements among these leading firms include innovation policies – such as investments in basic research, the provision of fiscal incentives and reform of intellectual property rights systems – and international co-ordination of policies. Frontier firms also benefit from favourable framework policies, such as in product market regulation, employment protection legislation, bankruptcy and judicial efficiency, financing and openness (OECD, 2015).

Foreign-owned firms are often highly productive, and may be more likely to depend on innovation for further productivity growth. In Indonesia, foreign-owned manufacturers tend to have higher productivity than private, domestically owned establishments across most sectors (Figure 1.30). In fact, rates of certification and licensing across the region are higher among firms that are at least 10% foreign-owned than among domestic firms (except for certification rates in Myanmar and licensing rates in Cambodia).

Figure 1.30. **Median TFP in Indonesia, by ownership, 2013**



Note: Manufacturing sectors represented by their ISIC Rev.3.1 two-digit codes, with the following definitions: 15: Manufacture of food products and beverages; 16: Manufacture of tobacco products; 17: Manufacture of textiles; 18: Manufacture of wearing apparel; dressing and dyeing of fur; 19: Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear; 20: Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials; 21: Manufacture of paper and paper products; 22: Publishing, printing and reproduction of recorded media; 23: Manufacture of coke, refined petroleum products and nuclear fuel; 24: Manufacture of chemicals and chemical products; 25: Manufacture of rubber and plastics products; 26: Manufacture of other non-metallic mineral products; 27: Manufacture of basic metals; 28: Manufacture of fabricated metal products, except machinery and equipment; 29: Manufacture of machinery and equipment n.e.c.; 30: Manufacture of office, accounting and computing machinery; 31: Manufacture of electrical machinery and apparatus n.e.c.; 32: Manufacture of radio, television and communication equipment and apparatus; 33: Manufacture of medical, precision and optical instruments, watches and clocks; 34: Manufacture of motor vehicles, trailers and semi-trailers; 35: Manufacture of other transport equipment; 36: Manufacture of furniture; manufacturing n.e.c.; and 37: Recycling.

Source: OECD Development Centre calculations, using BPS (2002-13), *Survei Tahunan Perusahaan Industri Manufaktur*, Badan Pusat Statistik, Jakarta.

StatLink http://dx.doi.org/10.1787/888933443210

While foreign firms can boost the productivity of domestic suppliers and competitors, the benefits of spillovers from foreign investment will not be realised without the development of domestic capacities. A study of firm ownership and productivity in Viet Nam, for example, finds evidence supporting the idea that the presence of foreign firms has tended to have negative effects for competitors and that possible suppliers have not realised the potential for improving backward linkages, as inputs may often be imported rather than sourced within the country. Small firms in particular are likely to face more of these downsides of foreign competition, while all domestic firms face a loss of skilled labour due to the wage premiums that tend to be offered by foreign firms (APO, forthcoming).

Human capital is a critical element in the development of the domestic capacities needed to capitalise on knowledge and flows and absorb productivity spillovers from FDI, at the level of both the economy and the firm. A study of Indonesian manufacturers, for example, found that firms with experience in innovation and more highly educated employees were better able to adopt technology for foreign firms, and that these effects were strongest among firms furthest from the global frontier of best practices (Blalock and Gertler, 2004). Improved capacities therefore require the development of relevant skills through the formal schooling system, Technical Vocational Education and Training (TVET) programmes, on-the-job training and other forms of education and

training. The need for improvements in human capital also applies to managers, and there is considerable evidence that firms in developing countries are more likely than those in advanced economies to be constrained by internal management and financial challenges (Bloom et al., 2010). Promoting entrepreneurship and good management practices for SMEs is a priority for many countries in the region, and is also addressed among the innovation goals of the AEC Blueprint 2025.

Conclusion

Emerging Asia has maintained the growth momentum it carried over from 2015 despite sluggish growth in OECD economies. The growth rates of China and India have remained upbeat. Despite weakness in Malaysia, ASEAN-5 economies were on track to register higher annual growth rates in 2016 than in 2015. The CLM group likewise continued to grow at rates above the regional average. Brunei Darussalam is poised to bounce back from its negative growth. And Singapore was expected to end 2016 in line with expectations set at the beginning of the year, although growth was marginally slower than in 2015. The expansionary fiscal orientation supported growth in Emerging Asia in 2016. Central banks may have been cautious in their conduct of monetary policy for good reasons, but liquidity was kept ample through calibrated downward adjustments in key rates. Moving forward, we expect the pace of output growth in Emerging Asia to remain largely unchanged, with most governments expressing their intention to strengthen their pump-priming efforts in the near term to counter sluggish external demand.

Nonetheless, this outlook is accompanied by a few downside risks. First, further prolongation of subdued global demand could drag down growth prospects in the region. In this regard, policy makers might consider reworking their export policies in accordance with their comparative advantage at the commodity level. Second, protracted low interest rates in advanced economies could lead to market disruption as corporates grapple with strained fixed-income earnings. Even though the impact of the low interest rate environment in the region has been arguably muted thus far, relevant national agencies should keep a close eye on the health of financial corporations, particularly non-bank financial institutions. Third, slowing productivity will likely increase long-term growth frictions unless governments persevere with their programmes to reverse the trend. Finally, recent political developments in the United States and Europe could possibly pave the way to the resurgence of nationalistic policies, posing a risk to the budding global trade recovery. Under these circumstances, it would be wise for governments to deepen regional co-operation initiatives as a buffer against such risks.

Notes

1. The ECB president, Mario Draghi, said in a press conference that the reduction in key rates, which included pushing the deposit rate to -0.10%, was intended to push the inflation rate to below but close to 2% (Draghi, 2014).
2. In September 2016, the interbank overnight rate averaged 0.40% in the United States, -0.34% in Europe, 0.05% in Japan, and 0.21% in the United Kingdom.
3. Since 2007, the assets of the Fed, ECB, BOJ and BOE have risen between four- and five-fold. During the same period, M3 expanded by 52% on average across the four economies, while global gross foreign exchange reserves grew by 64%.
4. Spreads were calculated using the local currency benchmark government bond yields with one year tenor. Of the four economies, spreads with respect to Indian government securities were highest, whereas spreads vis-à-vis Philippine securities were lowest. Between 2011 and 2015, annual average spread ranged from 7.34 to 8.46 percentage points in the case of the former and from 0.9 to 2.24 in the case of the latter.
5. Based on the data presented by Yardeni, Abbott and Quintana (2016), the forward PE ratio of traded equities in India based on MSCI valuation has increased from about 8 since 2008 to 17.7 at present, while the ratio increased in Indonesia from less than 5 to 16.8, in Philippines from about 8 to 18.7, and in Thailand from roughly 5 to 14.4 over the same period.
6. In its most recent *World Economic Outlook* (October 2016), the IMF pointed out that "asset prices and emerging market capital inflows [continue to be] supported by ultra-low interest rates in advanced economies that now seem poised to persist considerably longer than they did last October" (IMF, 2016a). The IMF also stated in its *Global Financial Stability Report* (October 2016) that "the growing share of advanced economy sovereign bonds trading in negative territory, along with expectations for further easing by major central banks, have rekindled the global search for yield" (IMF, 2016b).
7. From over 20% in 2008, Viet Nam's interest rate has fallen to roughly 7%, which is now more in line with the prevailing lending rates in other Emerging Asian economies. The sharp fall in the country's interest rate, especially over the last five years, was mainly intended to cushion the impact of real sector slowdown and allow banks to recoup troubled loans (more than as form of policy that is tied with speculative capital flows).
8. The three biggest banks in Singapore have registered weaker bottom lines owing to their exposure to oil firms in Indonesia. They have subsequently raised loan loss provisions significantly to cover for further potential losses.
9. Pressed to comment on the matter by the Parliamentary Panel, then Reserve Bank of India Governor Raghuram Rajan cited the overall economic situation coupled with inadequate risk appraisal mechanisms as the cause of the surge in NPLs.
10. In 2015, the reported NPL ratio was 1.7%. But, according to Maliszewski et al. (2016), alternative estimates yield a ratio of 5.5%.
11. Credit securitisation was reintroduced by the People's Bank of China to pave the way for a smoother disposal of distressed assets.
12. Even with AMCs, disposing of distressed assets in most Asian countries can still be difficult. The absence of well-developed non-performing assets (NPAs) in the region contributes to the difficulty of liquidation proceedings. Asian regulators also confront issues concerning asset restructuring techniques and valuation. At present, some AMCs in the region are already holding regular forums on matters pertaining to NPA resolution. The Korea Asset Management Corporation, which dealt with Korea's NPL problem during the Asian financial crisis, is giving technical advice to other countries such as Kazakhstan.
13. The 2016 Article IV reports of the IMF (for China and India) enumerated a more comprehensive list of reform measures (IMF, 2016c; IMF, 2016d).
14. OECD (2013) discusses in detail the ageing and replacement rate issues confronting pension funds in the Asia-Pacific region. Meanwhile, Park (2009) highlighted the shortcomings of Asian pension systems in terms of their institutional set-up and technical capabilities.
15. Yield, rate of return and interest rate are used interchangeably in this section. The discussion focuses solely on the nominal yield or nominal rate.
16. WTO/OMC (2016) noted that the number of trade protectionist measures in G20 is rising. The paper of Georgiadis and Gräb (2013) also provides evidence that fragile recovery of G20 economies since the GFC led to a creeping return of trade protectionism. IMF (2016d) highlighted two important dampeners of trade growth: the rise in trade protectionist measures and the government-instigated economic transformation (i.e. from investment to domestic consumption-driven growth) in China. As regards the latter, the report argued that investment slowdown in China has likely contributed to trade slowdown.

References

ADB (2016a), *AsianBondsOnline*, Asian Development Bank, Manila, https://asianbondsonline.adb.org/index.php.

ADB (2016b), *Asia Regional Integration Center* (database). Asian Development Bank, Manila, https://aric.adb.org/integrationindicators.

ADB (2014), *ADB Annual Report 2014*, Asian Development Bank, Manila.

Andrews, D., C. Criscuolo and P. N. Gal (2015), "Frontier firms, technology diffusion and public policy: Micro evidence from OECD countries", *The Future of Productivity: Main Background Papers*, OECD Publishing, Paris.

APO (forthcoming), *Asian Productivity Outlook: Trends and Policies*, Asian Productivity Organization, Tokyo.

APO (2015), *APO Productivity Database 2015*, Asian Productivity Organization, Tokyo, www.apo-tokyo.org/wedo/measurement.

BIS (2016), *BIS Statistics* (database), Bank for International Settlements, Basel, www.bis.org/statistics/eer.htm.

Blalock, G. and P. J. Gertler (2004), "Firm Capabilities and Technology Adoption: Evidence from Foreign Direct Investment in Indonesia," *Working Paper*, Department of Applied Economics and Management, Cornell University, Ithaca, NY.

Bloom, N., et al. (2010), "Why do firms in developing countries have low productivity?", *American Economic Review: Papers & Proceedings*, 100 (2), pp 619-23.

BPS (2002-13), *Survei Tahunan Perusahaan Industri Manufaktur*, Badan Pusat Statistik, Jakarta.

Centre for Economic Policy Research (2016), *Global Trade Alert* (database), London, www.globaltradealert.org/.

Chandran, B.P. Sarath (2010), "Trade complementarity and similarity between India and ASEAN countries in the context of the RTA", *The Indian Economic Journal*, Vol. Specia, December, pp. 111-117, https://mpra.ub.uni-muenchen.de/29279/.

Draghi, M. (2014), "Introductory statement to the press conference (with Q&A)", 5 June, European Central Bank, Frankfurt am Main.

Fusion Media Ltd, (2016), *World Government Bonds* (database), British Virgin Islands, www.investing.com/rates-bonds/world-government-bonds.

Georgiadis, G and J. Gräb (2013), "Growth, real exchange rates and trade protectionism since the financial crisis", *European Central Bank Working Paper Series* No. 1618, Frankfurt am Main.

Hidalgo, C.A. et al. (2007), "The product space conditions the development of nations", *Science* 317, pp. 482-487, http://dx.doi.org/10.1126/science.1144581.

IMF (2016a), *World Economic Outlook October 2016: Subdued Demand Symptoms and Remedies*, International Monetary Fund, Washington DC.

IMF (2016b), *Global Financial Stability Report October 2016: Fostering Stability in a Low-Growth, Low-Rate Era*, International Monetary Fund, Washington DC.

IMF (2016c), "2016 Article IV Consultation-Press Release; Staff Report; And Statement by the Executive Director for the People's Republic of China", *IMF Country Report* No. 16/270, International Monetary Fund, Washington DC.

IMF (2016d), "2016 Article IV Consultation-press release; staff report; and statement by the Executive Director for India", *IMF Country Report* No. 16/75, International Monetary Fund, Washington DC.

Maliszewski, W. et al. (2016), "Resolving China's Corporate Debt Problem", *IMF Working Paper* WP/16/203, International Monetary Fund, Washington DC.

OECD (2016), *Revenue Statistics in Asian Countries 2016: Trends in Indonesia, Japan, Korea, Malaysia, the Philippines and Singapore*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264266483-en.

OECD (2015), *The Future of Productivity*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264248533-en.

OECD (2013), *Pensions at a Glance Asia/Pacific 2013*, OECD Publishing, Paris, http://dx.doi.org/10.1787/pension_asia-2013-en.

Park, D. (2009), "Ageing Asia's Looming Pension Crisis", *ADB Economics Working Paper Series* No. 165, Asian Development Bank, Manila.

Philippine Statistics Authority (1996-2012), *Annual Survey of Philippines Business and Industry (ASPBI)*, Philippine Statistics Authority, Quezon City.

Usui (2010), "Transforming the Philippine Economy: "Walking on Two Legs", *ADB Economics Working Paper Series*, No. 252, March, https://www.adb.org/sites/default/files/publication/28754/economics-wp252.pdf.

UNCTAD (2016), UNCTADStat (database), United Nations Conference on Trade and Development, Geneva, http://unctadstat.unctad.org/EN/.

World Bank (2016a), *World Integrated Trade Solution* (database), World Bank, Washington DC, http://wits.worldbank.org.

World Bank (2016b), *World Development Indicators* (database), World Bank, Washington, DC, http://data.worldbank.org/data-catalog/world-development-indicators.

WTO (2016), *Report on G20 Trade Measures: Mid-October 2015 to Mid-May 2016*, World Trade Organization, Geneva.

WTO (2015), "Trade growth to remain subdued in 2016 as uncertainties weigh on global demand" World Trade Organization, Washington DC, https://www.wto.org/english/news_e/pres16_e/pr768_e.htm.

Yardeni, E., J. Abbot and M. Quintana (2016), *Global Index Briefing: MSCI Forward P/Es*, Yardeni Research, Inc., New York.

Chapter 2

Regional integration challenges in ASEAN and Emerging Asia

2016 marks the first year of the establishment of ASEAN Economic Community. Progress on regional integration in Emerging Asia has been mixed, with relatively more achieved in the areas of trade in goods, trade in services, infrastructure and connectivity and the initiative for ASEAN Integration (IAI) in recent years. More concerted effort needs to be made in other areas that are lagging behind, such as SMEs, competition and consumer protection, as well as intellectual property. To ensure that AEC can be achieved by 2025, regional commitments need to be aligned with timely domestic reforms. This is crucial in producing a highly integrated, resilient and inclusive ASEAN community over the long term.

Introduction

Regional integration has long been a priority in Emerging Asia. ASEAN Vision 2020, adopted by the Association of Southeast Asian Nations (ASEAN) regional leaders in Kuala Lumpur on the organisation's 30th anniversary in 1997, outlined "a partnership in dynamic development" for the region. This included a call for "integration and co-operation" on trade in goods and services, investment, sub-regional issues, the development of regional linkages beyond ASEAN and strengthening the business sector. The goals of deepening economic relationships within the region and with the rest of the world have been reinforced in subsequent regional agreements. This includes the first ASEAN Economic Community (AEC) Blueprint, which was approved in 2007 and led to the establishment of the AEC in 2015, and the AEC Blueprint 2025, which charts the direction of continued work on the community.

More recently, the 28th and 29th ASEAN Summits were held in Lao PDR in September 2016. The theme, "Turning vision into reality for a dynamic ASEAN Community", celebrated the first year of the establishment of the AEC. Over three days, ASEAN leaders discussed implementation of the ASEAN Community Vision 2025 and ways to enhance co-operation with ASEAN's external partners in the coming years. ASEAN leaders met representatives of ASEAN Inter-Parliamentary Assembly and ASEAN Youth, and with the ASEAN Business Advisory Council. Twelve summits took place, including sessions with ASEAN's dialogue partners under the ASEAN Plus One, ASEAN Plus Three and East Asia Summit frameworks. ASEAN leaders reiterated their commitment to implementing the ASEAN Community Vision 2025 and the three community blueprints for achieving it. They also adopted two initiatives that form the backbone of the Vision, highlighted in the Initiative for ASEAN Integration (IAI) Work Plan III and the Master Plan on ASEAN Connectivity 2025.

The IAI Work Plan III is the third installation of a commitment established in 2000 to help new ASEAN members fulfil their commitments under the ASEAN framework. It provides special assistance projects and actions to assist the CLMV countries – Cambodia, Lao PDR, Myanmar and Viet Nam – so that regional integration can take place seamlessly, narrowing the development gap among member countries. In the new work plan, a strategic framework has been introduced to ensure that the implementation rate improves for both projects and action lines. The five strategic focus areas are: *i)* food and agriculture; *ii)* trade facilitation; *iii)* micro, small and medium enterprises; *iv)* education; and *v)* health and well-being. To facilitate the execution of projects and action lines, four important commitments are needed: clear governance and ownership by country leaders; the right resources in terms of people, skills and financing; continuous and proactive engagements with stakeholders in order to channel feedback effectively; and a system to track the performance of all efforts toward realising the work plan goals.

The Master Plan on ASEAN Connectivity 2025 aims to achieve a "seamlessly and comprehensively connected and integrated ASEAN that will promote competitiveness, inclusiveness and a greater sense of Community". To achieve this vision, five strategic areas of interest have been selected for future development: *i)* sustainable infrastructure; *ii)* digital innovation; *iii)* seamless logistics; *iv)* regulatory excellence; and *v)* people mobility. To ensure that implementation can take place smoothly, the Master Plan has highlighted six core areas for improvement for all member countries. Four of these are very similar to those of IAI Work Plan III. The other two emphasise that, given its limited resources, ASEAN needs to target priority areas to ensure that commitments are followed up successfully. The Master Plan on Connectivity plan also emphasises the importance of creating clear and aligned plans for pursuing the objective of each project.

The ASEAN leaders emphasised the importance of narrowing development gaps and improving connectivity in the region in order to ensure that ASEAN as a whole can grow equitably and peacefully, given the uncertainty facing the global economy in the years

to come. While differing levels of implementation capacity and development gaps in the region can complicate the introduction of the reforms needed to support integration, stronger regional ties should help to create opportunities for growth and development. These efforts are particularly important in an external environment marked by sluggish performance and uncertainty.

With the establishment of the ASEAN Economic Community at the end of 2015, the year 2016 kick-starts many efforts in realising the dream of a seamless region, in terms of free flow of goods, services, investment and capital, and skilled labour. In the backdrop of slower global economic growth and a shift towards more inward-looking national policies in some parts of the world, the challenges faced by ASEAN in the path for further integration is greater than ever. The following section highlights recent milestones in the process of ASEAN regional integration in key policy areas. Recent achievements in the sections on trade in goods, services, investment and capital markets, competition and consumer protection, intellectual property rights, infrastructure and connectivity, small and medium enterprises' (SMEs') development, food, agriculture and forestry, tourism, human and social development, energy as well as the Initiative for ASEAN Integration are discussed and the summary is presented in Table 2.1 below. The progress of integration may be slow in ASEAN but what is important to note is that these efforts need to be supported by each nation in the form of national policies that are timely and effective. Sound policies will not only encourage further co-operation among member states, but can also reduce the risks of policy back-pedalling in the long run.

Table 2.1. **Progress in Emerging Asia's integration in key policy areas**

Policy area	Assessment of the progress in integration
Trade in goods	The elimination of tariff rates for most of the tradeable products on the Inclusive and Sensitive Lists has been undergone for all ASEAN countries. The issue of Non-Tariff Measures (NTMs) however needs to be addressed by each country as part of its national policy so that trade can be intensified within the region.
Trade in services	The mutual recognition arrangements (MRAs) have been implemented successfully in a number of sectors in recent years. Liberalisation of the services sector has seen some progress in recent years despite the sector's significant contribution in terms of share of gross domestic product (GDP) in many ASEAN countries. Owing to the existence of skill gaps within ASEAN, the issue of the applicability of MRAs needs to be addressed.
Investment and capital market liberalisation	Efforts have been made in integrating the capital market. Nevertheless, ASEAN countries need to harmonise their laws and regulations, in particular investment protection.
Competition and consumer protection	Many ASEAN countries still face difficulties in enforcing the details of their competition and consumer protection policies, especially with the slow speed of adopting these policies.
Intellectual property	The new Blueprint has highlighted similar sectors to work on to strengthen co-operation and integration among member countries. Progress made in this sector is somewhat slow as different countries have different levels of development and intellectual property (IP) awareness.
Infrastructure and connectivity	There has been incremental progress in this sector. The past decade has seen progress on regional infrastructure projects such as the ASEAN Highway Network, power and gas connectivity and the ASEAN Broadband Corridor. Nevertheless implementation of rail links remains a challenge in the region. The Master Plan on ASEAN Connectivity 2025 was introduced recently.
Small and medium-sized enterprises	Key deliverables from the Strategic Action Plan 2010-2015 include the ASEAN SME Policy Index, the ASEAN Guidelines on One Village One Product and the ASEAN SME Online Academy.
Food, agriculture and forestry	Progress has been made in five priority areas, such as information sharing, food safety testing and inspection. However owing to the high risk of exposure to foodborne disease and the complexity of regional food industry in the region, ensuring food safety in Southeast Asia remains a difficult task.
Tourism	Integration in the tourism sector has received wide attention from policy makers in the region especially after the inception of AEC in 2015. The development of ecotourism will enhance connectivity of ecotourism sites among ASEAN countries and improve economic conditions of poor communities along the tourism corridors given that issues of hospitality standards and tourists' safety are addressed through regional co-operation.
Human and social development	Human and social development concerns are addressed in the ASEAN Socio-Cultural Community Blueprint and recent ASEAN sectoral plans. Co-operation through the East Asia Summit has included a strong focus on issues of human and social development, particularly in education and health.
Energy	Though the progress in developing the ASEAN Power Grid (APG) and Trans-ASEAN Gas Pipeline (TAGP) continues gradually, it has been slow owing to technical and financial challenges. Weak institutional support and limited market openness hamper the development of APG, while liquefied natural gas (LNG) terminals are out-pacing physical pipelines under TAGP.
Initiative for ASEAN Integration (IAI)	The Initiative for ASEAN Integration Work Plan II ended in 2015 and was replaced by Work Plan III, covering 2016-20. The new plan provides greater detail on intended support for improving the implementation of IAI actions.

TRADE IN GOODS

Assessment of progress in integration

- The elimination of tariff rates for most of the tradeable products on the Inclusive and Sensitive Lists on all ASEAN countries have been undergone for all ASEAN countries. The issue of Non-Tariff Measures (NTMs), however, needs to be addressed by each country as part of its national policy so that trade can be intensified within the region.
- Other frameworks seek to intensify trade through both tariff elimination and strong initiatives to tackle the use of NTMs in the region. These include the Trans-Pacific Partnership (TPP) and the Regional Comprehensive Economic Partnership (RCEP).

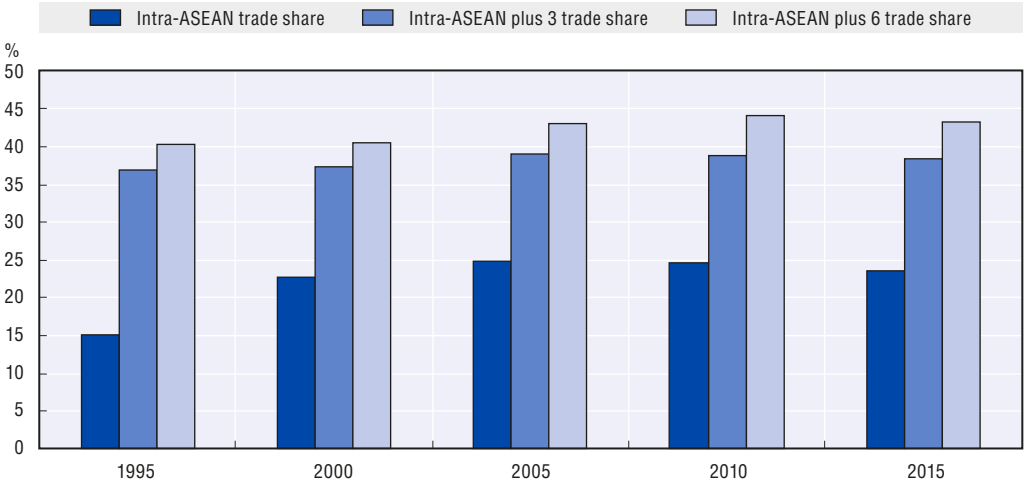
Progress in trade in goods has been very significant, with a drastic reduction of tariffs on products on the preferential tariff Inclusion List since the inception of the ASEAN Free Trade Area (AFTA) in 1993. By early 2010, the ASEAN-6 countries had cut tariffs to 0-5% on 99.7% of their tariff lines. As of early 2015, the CLMV countries had reduced or eliminated tariffs on 98.9% of their tariff lines. This sharp reduction is highlighted in the ASEAN Trade in Goods Agreement (ATIGA).

Thanks to tariff reductions, goods on the Sensitive and Highly Sensitive List – unprocessed, agricultural products – have been phased into the Inclusion List for all countries except Cambodia. This was accomplished in 2010 for ASEAN-6, in 2013 for Viet Nam and in 2015 for Lao PDR. Cambodia's deadline is January 2017.

Tariff reduction under the Common Effective Preferential Tariff (CEPT) aims to encourage trade and strengthen global value chains in the region by making goods traded relatively cheaper through the absence or reduction of import duties. To a certain extent, this endeavour has led to an increase in intra-regional trade activity. The intra-ASEAN trade share increased from 15% to 24% from 1995 to 2015, peaking at 25% in 2005 and 2010 (Figure 2.1). The intra-regional trade share within ASEAN+3 and ASEAN+6 has been significantly higher than 35% since 1995.

Figure 2.1. **Trade shares of ASEAN, ASEAN plus 3, and ASEAN plus 6 countries, 1995-2015**

Percentage of global trade



Source: IMF (2016), *Direction of Trade Statistics* (database), http://data.imf.org/?sk=9D6028D4-F14A-464C-A2F2-59B2CD424B85.

StatLink http://dx.doi.org/10.1787/888933443525

ASEAN countries need to remove trade restrictions

The AEC seeks to become a highly cohesive and integrated economy. To this end, the new AEC 2025 Blueprint highlights the need for member countries to continue efforts to reduce or eliminate border and behind-the-border regulatory barriers that restrict trade. This is necessary for realising competitive, efficient and seamless movement of goods within the region.

Because of the unchanged performance of the share of intra-ASEAN trade in recent years, the AEC Blueprint 2025 highlights the elimination of NTMs as one of its continuous goals (ASEAN Secretariat, 2015a). The increased ease of doing business with reduced costs will translate into a higher intra-regional trade share in the AEC. Although tariffs have been slashed drastically since 1993, non-tariff barriers (NTBs) are still being erected by ASEAN countries.

Not all NTMs are restrictive in nature. According to the United Nations Conference on Trade and Development (UNCTAD), policy measures other than customs tariffs that may have an economic impact on international trade in goods, in terms of quantities and/or prices, are classified as NTMs. It is not surprising that the NTMs come in different forms for both imported and exported goods. Some NTMs are implemented as a commercial policy (such as subsidies and trade defence measures). Other NTMs implemented may have different goals such as protecting public health, food safety and environmental standards. The problem arises when these NTMs, even those addressing legitimate concerns, have a negative impact on international trade, creating NTBs (ERIA-UNCTAD, 2016).

In ASEAN there has been an increasing trend of NTMs being used by the ASEAN member countries. Apart from government procurement restrictions, the use of technical barriers to trade, price control and contingent and protective measures have also been increasing since 2000. For exported goods there has been a pronounced increase in the use of export-related measures by ASEAN member countries.

The ASEAN Blueprint 2025 therefore highlights three tasks for addressing the issue: *i)* accelerating efforts to fully eliminate NTBs; *ii)* streamlining and simplifying standards and conformance measures for technical regulations, standards harmonisation, alignment with international standards and MRAs; and *iii)* streamlining procedures and reducing requirements for certificates, permits and licences for import and export.

The use of NTMs impedes trade growth among ASEAN countries. Apart from the National Single Window initiative, it is important for the committee in charge within ASEAN to assess the nature of the NTMs in use and how these NTMs are actually NTBs in practice. Engagements with freight forwarders, producer/manufacturing associations and traders may shed light on how NTMs used by different countries may hinder trade activities. Initiatives on new NTMs notification by member countries and posting information on existing NTMs have not resulted in the elimination of NTBs in the region. Further dialogue with stakeholders is needed to resolve this issue.

The Trans-Pacific Partnership will phase out tariffs among participating countries

Under the TPP framework, the elimination of tariffs on selected products will be enforced for member countries as early as February 2018 during entry-into-force (EIF). Tariffs will be phased out according to a schedule, with a longer period of 15 years for specific products such as tobacco and alcoholic beverages in the Malaysian market and 20 years for beef in the Japanese market.

In addition, tariff rate quotas (TRQs) will be phased out for agricultural products, with the in-bound parameters reduced in phases. A special mechanism will be used to estimate the appropriate number of products to be allotted as in-bound quota for different years, based on the fulfilment of in-bound quotas of the previous year.

NTMs are addressed in the Technical Barriers to Trade Chapter of TPP, which highlights procedures to be taken when a new NTM is introduced. Countries will have a clear channel for reporting the implementation by another country of a new, unannounced NTM. There will be a committee for resolving issues and disputes over NTMs. If a dispute is not resolved at the committee level, firms and companies may take it to arbitration through the Investor-State Dispute Settlement (ISDS) mechanism. These practices are similar to those of the World Trade Organization (WTO).

Furthermore, each TPP member country is to create a one-stop website with information on procedures for importers and exporters so that trade can take place smoothly and effectively. Introducing this one-stop website will be very beneficial for ASEAN countries as a step for streamlining procedures and standards in the region.

Negotiations on the Regional Comprehensive Economic Partnership are stalled

Fifteen rounds of Regional Comprehensive Economic Partnership (RCEP) negotiations have been completed, with little progress to date. Negotiations are stalled over the final package of services to be offered and the number of goods to be liberalised. Member countries are also seeking direction from ministers who attended the August meeting on whether the three-tiered liberalisation approach should be continued or not.

One factor stalling the talks is that the framework for services liberalisation has not been determined. Another challenge is the ISDS mechanism, the three-tiered approach and the backbone of RCEP's negotiation framework.

Even though both agreements are driven by trade in goods, they are not traditional free trade agreements as they also cover other areas. The future prospects of these agreements remain uncertain, but they currently differ in several key respects (Table 2.2).

Table 2.2. **Difference between TPP and RCEP based on the current negotiations**

	TPP	RCEP
Countries involved	• 12 countries in the Pacific Rim: Australia, Canada, Japan, Malaysia, Mexico, Peru, the United States, Viet Nam and the original P4 countries (Brunei Darussalam, Chile, New Zealand and Singapore).	• ASEAN countries and their plus-6 partners: Australia, China, India, Japan, New Zealand and South Korea.
GDP coverage	• Covers countries accounting for about 38.2% of the world's GDP.	• Covers countries accounting for around 28.4% of the world's GDP.
Trade in goods	• Significant tariff elimination on selected goods at entry-into-force. Tariffs on other products on the list will be phased out according to different scheduling. • TRQs will be phased out in the long run as in-bound quotas expand. • Elimination of non-tariff barriers.	• Scheduled phasing out of tariffs and non-tariff barriers on most products.
Financial services	• The agreement includes cross-border and investment market access opportunities for member countries while ensuring that regulation can take place both daily and in the event of a crisis. • Liberalisation is limited as a few countries negotiate for carve-outs in line with their existing financial blueprints.	• The negotiation aims to build on existing frameworks. • As part of e-commerce negotiations, cross-border mobile payments are included.
State-owned enterprises	• The chapter covers basic yet comprehensive rules for creating a just and level playing field when state-owned enterprises compete with firms in the private sector.	• No known provisions.
Environment	• The chapter covers issues of trade related to the environment. • Issues include conservation and customs co-operation to curb trade in threatened species.	• No known provisions.
Government procurement	• The chapter highlights provisions for promoting transparency and fairness in government procurement activities.	• No known provisions.
Labour	• The chapter is based on the ILO 1997 Declaration to ensure protection of workers' rights and the elimination of human trafficking.	• No known provisions.

Source: OECD Development Centre based on various official sources as of 28 November 2016.

TRADE IN SERVICES

Assessment of progress in integration

- Mutual Recognition Arrangements (MRAs) have been implemented successfully in different sectors in recent years. Liberalisation of the services sector has seen little progress in recent years despite the sector's contribution in terms of share of GDP in many ASEAN countries.
- The applicability of MRAs needs to be addressed, especially owing to skill gaps within ASEAN.

An important component of the AEC Community vision is free flow of trade in services supported by the free movement of skilled workers within ASEAN countries. To achieve this goal, restrictions will be eliminated so that ASEAN service suppliers can expand and compete across national territories, as long as they comply with the minimal rules imposed by the host country.

The services sector in ASEAN remains significant and continues to grow steadily. As of 2013, this sector accounted for between 37.7% and 61.8% of GDP in ASEAN economies (Table 2.3). Even among new members such as Cambodia, Lao PDR, Myanmar and Viet Nam, the contribution of the sector is significant. In Singapore, around 60% of GDP is contributed by the services sector. In Malaysia and the Philippines, more than 50% of the economy is driven by business activities in this sector.

Table 2.3. **Share of services sector in ASEAN (% of GDP)**

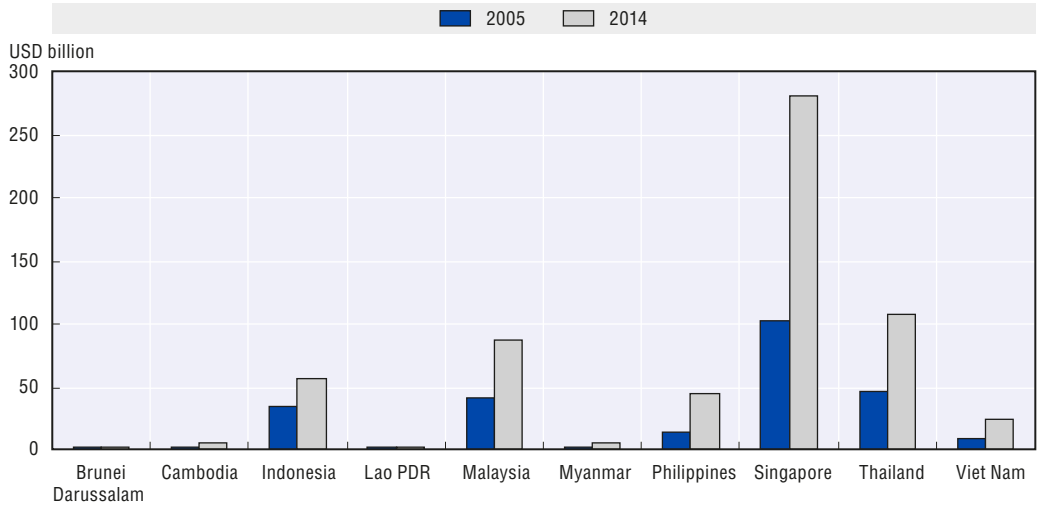
	2005	2008	2013
Brunei Darussalam	37.5	44.1	47.8
Cambodia	38.5	42.1	38.4
Indonesia	41.4	44.3	47.2
Lao PDR	-	39	38.5
Malaysia	46.8	50.9	54.6
Myanmar	-	36.5	37.7
Philippines	54	54.8	56.9
Singapore	62.3	64.2	61.8
Thailand	44	43.3	44.4
Viet Nam	40.3	40.8	42.6

Source: ASEAN (2016a), *ASEAN Stats* (database), http://aseanstats.asean.org/.

According to the ASEAN Integration in Services Report published in December 2015, ASEAN's exports in services grew from USD 113.8 billion in 2005 to USD 305.8 billion in 2014, more than 2.7 times in ten years (ASEAN Secretariat, 2015b). ASEAN trade in services also increased between 2005 and 2014 (Figure 2.2). Singapore is the leading country in services trade with the world in the region followed by Thailand, Malaysia, Indonesia and the Philippines in 2014.

Intra-ASEAN trade in the services sectors within ASEAN countries has increased in the past decade (Figure 2.3). Among the sub-sectors categorised by the ASEAN Secretariat, trade in transport, travel and other business services has increased tremendously in the past decade. Other business services include merchandising and trade-related services, operational leasing, and business professional and technical services such as legal, accounting, advertising, etc.

Figure 2.2. **ASEAN trade in services with the rest of the world in 2005 and 2014**

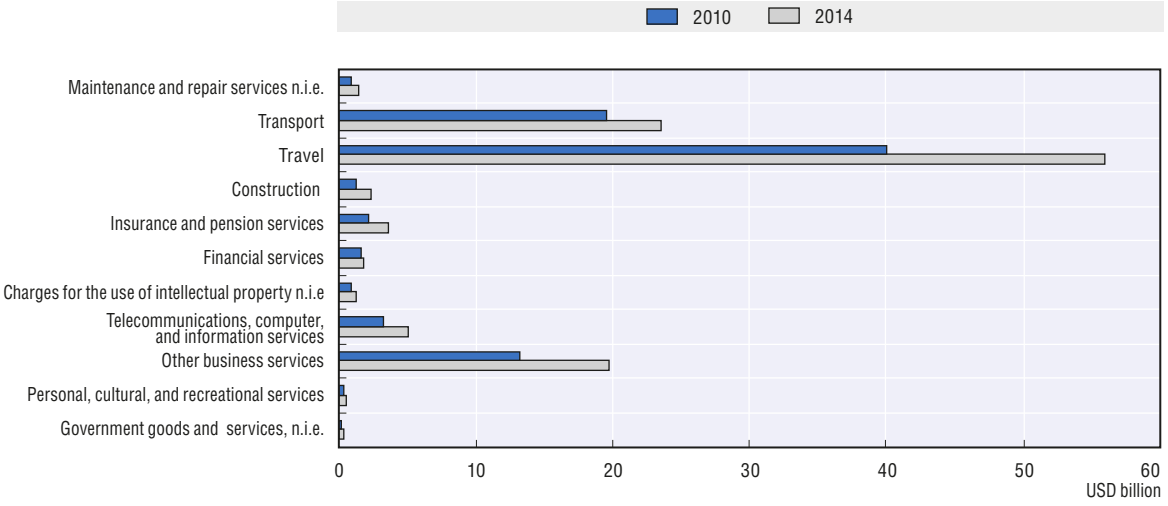


Source: ASEAN (2016), *ASEAN Stats* (database), http://aseanstats.asean.org/.
StatLink http://dx.doi.org/10.1787/888933443533

The strongest services sub-sector is travel, with trade of more than USD 55 billion in 2014, up from USD 40 billion in 2010. The transport sub-sector accounted for more than USD 20 billion in 2014, making this the second largest sub-sector. Transport held first place in 2005, but was overtaken by the travel sector by 2010.

Big growth in trade is not observed across all sub-sectors as highlighted in Figure 2.3 below. Among the lowest levels of activity are the categories: maintenance and repair services; construction; personal, cultural and recreational services; and government goods and services. In 2014, trading activities did not exceed the USD 10 billion mark in these sub-sectors.

Figure 2.3. **Intra-ASEAN trade in services by categories in 2010 and 2014**



Source: ASEAN (2016a), *ASEAN Stats* (database), http://aseanstats.asean.org/.
StatLink http://dx.doi.org/10.1787/888933443547

ASEAN's total trade in services grew tremendously, at an average of more than 12% growth annually (Figure 2.2). However, this level of growth is not replicated in intra-ASEAN trade in the services sector (Figure 2.3). Exports of trade in services have not

surpassed 22% of total trade within ASEAN. The share is highest in 2007 at about 21% of total export within ASEAN. In 2013, however, amidst slower global economic growth, total exports in this sector hit a low of 19%. The recorded import share was also at an all-time low, barely passing the 15% mark. Figure 2.3 also shows that intra-ASEAN trade in services only concentrates on a few sub-sectors.

The observations above show that there is growth potential in many sub-sectors of trade in services and their contribution to local ASEAN economies.

AEC Blueprint 2025 aims to accelerate integration in services

Past initiatives for promoting integration in the services sector include the ASEAN Framework Agreement on Services (AFAS) as well as the sectoral MRAs, although progress is still slow compared with progress in integration in the sector of trade in goods. Owing to limited progress in reforms in AFAS and the MRAs, ASEAN countries have launched a new initiative. Under the AEC Blueprint 2025, negotiations will begin on the ASEAN Trade in Services Agreement (ATISA), which aims to strengthen both existing AFAS and existing agreements with ASEAN dialogue partners. ATISA will function as a legal instrument to bind integration efforts among member countries.

Further integration can be successful, according to the Blueprint, if ATISA is in place and other efforts have been taken to strengthen mechanisms to attract foreign direct investment (FDI), and to establish alternative disciplines on domestic regulations to ensure competitiveness of the services sector while taking other non-economic or development objectives into account. This may include both domestic and foreign equity participation.

To ensure that integration in the services sector is supported by a skilled workforce, efforts on technical co-operation for human resource development (HRD) will also intensify, with three priority goals: *i)* job creation; *ii)* labour market monitoring; and *iii)* facilitating skilled labour mobility. The ASEAN Labour Ministers' Work Programme set concrete objectives for 2001-10, and these efforts are being continued under the AEC Blueprint 2025.

Immigration rules pose challenges to the free flow of skilled workers

MRAs are important because they facilitate trade in services through mutual recognition of authorisation, licensing or certification of professional service suppliers among member states. The goal of the MRAs in the end is to lessen labour movement frictions by achieving the free flow of skilled workers while adhering to minimal domestic rules and market demand conditions in the long run.

ASEAN has signed eight MRAs, covering engineers, architects, nurses, surveyors, accountants, medical practitioners, dental practitioners and tourism professionals. Their implementation differs according to the profession. At present, these MRAs are actively used in the engineering and nursing professions, according to analysis by the Economic Research Institute for ASEAN and East Asia (ERIA) (Fukunaga, 2015). ASEAN's MRAs, which involve strict immigration rules set by national laws, are very different from those of the European Union (EU) and Australia-New Zealand, where the free movement of professionals is permitted.

A further challenge is that the Movement of Natural Persons (MNP) Agreement of 2012 has not been ratified by all member countries. When ratified, this agreement will facilitate the movement of skilled workers not only in the eight MRA sectors but also in the rest of the services sector.

New framework will encourage mobility through education and skills upgrading

The ASEAN Qualification Reference Framework (AQRF) covers education and training sectors. It serves as a common reference document to enable comparison of qualifications of skilled labour across ASEAN countries. The framework supports recognition of qualifications, promotes quality of education and learning, and facilitates labour mobility. It covers all forms of education and training, including formal, non-formal and informal learning (Box 2.1).

Compliance with the AQRF was made voluntary since ASEAN member countries currently have different levels of development. Each country may begin the referencing process at its own pace and ability from 2016 to 2018, with no changes necessary to established national qualifications systems.

Box 2.1. **ASEAN Qualifications Reference Framework**

The ASEAN Qualification Reference Framework is the most recent initiative to encourage the mobility of workers through the promotion of education and skills upgrading in ASEAN. In August 2014, the framework was endorsed by ASEAN economic ministers, and a month later by education ministers. In May 2015, the endorsement of the framework was signed and completed by ASEAN labour ministers.

The framework, which covers all education and training sectors, serves as a common reference document for enabling comparison of qualifications across ASEAN countries. It allows comparison of qualifications according to eight levels of complexity of learning outcomes based on knowledge and skills, on the one hand, and application and responsibility, on the other.

The establishment of this framework enables ASEAN member countries to carry out referencing in a more systematic manner so that the relationship between the AQRF's eight levels can be compared to levels in the National Qualification Framework (NQF) of different countries.

Source: ASEAN Secretariat (2015b), *Integration in Services Report*, www.miti.gov.my/miti/resources/ASEAN_Integration_Report_20151.pdf.

The AQRF's mechanism to facilitate comparison, transparency and higher quality qualifications systems across ASEAN countries can boost the use of MRAs that are already established. When countries agree on certain qualities and standards of professionals, job matching can take place systematically and effectively in areas where expertise is lacking domestically. With this mechanism in place, mobility among skilled labour can improve somewhat in the short and medium term, without ratification of the MNP accord by all member countries.

As noted above, the best indicator for gauging the success of integration in the ASEAN services sector is the implementation of the MRAs under the AFAS and ATISA frameworks. These initiatives will lead to greater mobility of skilled workers in the region.

Sharing of best practices in ensuring improved quality of professionals through HRD activities and the AQRF cannot be emphasised enough. These two initiatives go hand in hand in promoting skills upgrading to enhance skilled labour mobility in the medium to long term.

INVESTMENT AND CAPITAL MARKET LIBERALISATION

Assessment of progress in integration

- Efforts have been made in integrating the capital market. Nevertheless, ASEAN countries need to harmonise their laws and regulations, in particular investment protection.
- Appropriate insurance policies should protect individuals, firms and banks by minimising risks and building safeguards against a banking crisis. ASEAN countries need to build deeper, efficient and more resilient markets with easier access.

Integration and financial liberalisation go hand in hand

The year 2016 is a transition period for ASEAN integration following adoption in November 2015 of the AEC Blueprint 2025. The current document replaced the AEC Blueprint 2007, which followed a roadmap for monetary and financial integration adopted by ASEAN finance ministers in 2003. In 2011, ASEAN agreed on a general approach for liberalisation and integration under the ASEAN Financial Integration Framework: *i)* removing restrictions on intra-ASEAN provision of financial services by ASEAN financial institutions; *ii)* building capacity and infrastructure to develop and integrate ASEAN capital markets; *iii)* liberalising capital flow across the ASEAN countries; *iv)* harmonising payments and settlements systems; and *v)* strengthening capacity building, regional financing arrangements and regional surveillance. In 2013, ASEAN central bank governors launched a summary report, *The Road to ASEAN Financial Integration*, to guide further financial integration.

Although regional investment and capital markets liberalisation has been progressing under the AEC blueprint, challenges remain; ASEAN economies need better connectivity and member countries need to harmonise laws and regulations at the national level. Insurance policies are also needed for ASEAN countries to build deeper, more efficient markets with greater resiliency and easier access.

Domestic financial markets get a boost from regional integration

Financial integration fosters domestic financial development by reducing transaction costs and the costs of capital and creating business opportunities. Further financial integration to develop domestic financial markets would strengthen economies and make them more resilient and sustainable, fostering economic activities.

Access to insurance, capital markets and the banking sector has improved. The ASEAN Insurance Integration Framework (AIIF), signed in 2015 and due to take effect before the end of 2016, provides for cross-border supply of marine, aviation and goods in international transit insurance. The ASEAN Banking Integration Framework (ABIF), approved by central bank governors in December 2014, allows banks meeting certain criteria to be certified as qualified ASEAN banks, providing them greater access in other ASEAN markets. This status allows banks to make bilateral agreements between their home market and countries in which they wish to set up operations. The initiative allows banks, including small and medium banks, from ASEAN countries to enlarge their business in other ASEAN countries. In addition to this first big step for banking integration, each ASEAN country needs to consolidate its banks to minimise systemic risks. Further banking integration will take place by 2020.

The integration of capital markets has also progressed. The ASEAN Collective Investment Scheme (CIS) framework authorises fund managers in one country to operate a cross-border offering of funds in other ASEAN countries. For instance, Malaysia, Thailand and Singapore have initiated ASEAN disclosure standards that facilitate cross-border offerings of securities and support fund-raising activity in the region. Singapore has now surpassed Hong Kong, China as Asia's top financial hub. The ASEAN electronic trading link among Malaysia, Thailand and Singapore, created in 2012, provides more mobility for investors as a single gateway to all three exchanges. The system aims to lower entry barriers for investors and increase market activity. However, the system has not attracted much interest among bankers owing to inadequate linkages between them. They need to build post-trade linkages before market participants will engage in cross-border trading on any scale.

Harmonisation is progressing on investment and capital liberalisation

Thanks to the AEC, harmonisation of domestic policies has been gradually taking place. ASEAN countries have continued enhancing investment and capital liberalisation under the ASEAN Comprehensive Investment Agreement (ACIA), an instrument to create a free and open investment environment among the ASEAN countries. However, there are still some challenges for investors, such as different levels of investment protection among the ASEAN countries and between the ASEAN countries and foreign investors such as the EU, the United States and Japan.

Several ASEAN governments have recently updated their laws and regulations. In Thailand, for instance, some qualified foreign-majority-owned entities may conduct certain business under ACIA treaties. Mining is one of the permitted businesses, with ASEAN members allowed to hold up to 60% of the shares in a mining business in Thailand as long as the Ministry of Industry grants permission under the Foreign Business Act and other relevant laws. For flour production from rice and for farm produce, ASEAN members may hold up to 100% of the shares. ASEAN members may hold up to 51% of the shares in a fishery as long as its business is permitted by the Ministry of Agriculture and Co-operatives.

The Indonesian government, meanwhile, passed a new negative list that took effect on 18 May 2016 under presidential regulation No. 44 of 2016. Indonesian business lines are now open to foreign investment except for sectors specifically mentioned in the 2016 Negative List and other laws and regulations. The simplified categories for the business lines under the 2016 Negative List are: *i)* reserved for or subject to partnership with micro, small and medium enterprises as well as co-operatives; *ii)* with foreign ownership limitations; *iii)* with location requirements; *iv)* with special licensing requirements; *v)* reserved for 100% domestic (Indonesian) ownership; and *vi)* with a higher foreign ownership in the context of co-operation of ASEAN. Consequently, the Indonesian government acknowledges that ASEAN investors can enjoy a higher foreign ownership percentage in certain sectors.

On another front, ACIA forums and seminars are being held to promote awareness and understanding of comprehensive investment agreements. A forum on transforming investment in Thailand through ACIA was held in April 2016. Singapore hosted a forum on creating awareness and understanding of the ACIA among the country's investors and business people.

COMPETITION AND CONSUMER PROTECTION

Assessment of progress in integration

- The new AEC Blueprint renews older commitments from the previous blueprint. Many ASEAN countries still face difficulties in enforcing details of competition and consumer protection policies, especially with the speed of adopting these policies.

The quality and adequacy of national competition policies and consumer protection vary among ASEAN countries depending on the level of economic development and according to differences in the structure of the economy, institutions, sectors, concentration and production. The speed of adoption of these policies differs among ASEAN countries and is relatively slow. In this context, the AEC Blueprint 2025 is expected to foster smooth adoption of harmonised competition policies and consumer protections at the national level. Progress was made under the previous blueprint: nine ASEAN countries – Brunei Darussalam, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam – passed laws of competition and consumer protection in 2015, and Cambodia is expected to follow. However, challenges remain. Many ASEAN countries still face difficulty in enforcing details by sector in terms of local laws, regulations and standards. If some ASEAN countries proceed to endorse the TPP, standardisation of laws, regulations and guidelines to include wider trading partners will be complex at the national level.

The new Blueprint aims to promote a people-oriented ASEAN community for consumer interests and welfare. Administrative and technical processes need to be smoother to integrate the harmonised laws and regulations at the national level. For instance, the public sector should take consumers' interests into account at conferences, workshops and seminars. Developing infrastructure could also help accelerate the speed of adopting and implementing laws, regulations and guidelines at the national level.

The five main characteristics of the AEC Blueprint 2025 that foster competition and consumer protection are: *i)* a highly integrated and cohesive economy; *ii)* a competitive, innovative and dynamic ASEAN; *iii)* enhanced connectivity and sectoral co-operation; *iv)* a resilient, inclusive, people-oriented and people-centred ASEAN; and *v)* a global ASEAN. Consequently, the Blueprint provides integration strategies, strengths to engage with the world and new development opportunities, and fosters a culture of fair business competition for enhanced regional economic performance, contributing to the goal of shared prosperity. As noted above, several ASEAN countries have already adopted competition laws, while the process is still ongoing in Cambodia.

ASEAN endorses new standards for consumer protection

Consumer protection is another integral policy objective for a modern, efficient and fair marketplace. The marketplace requires comprehensive and well-functioning national and regional consumer protection systems enforced by effective legislation, redress mechanisms and public awareness initiatives. One focus of the ASEAN Strategic Action Plan for Consumer Protection 2016-2025 (ASAPCP) is the consumer in a people-oriented ASEAN. The ASAPCP proposes five strategies: *i)* to establish a common ASEAN consumer protection framework; *ii)* to foster a higher level of consumer empowerment and knowledge; *iii)* to strengthen higher consumer confidence and cross-border commercial transactions; *iv)* to promote consumer-related matters in ASEAN policies;

and *v)* to encourage consumer protection measures in the products and services sectors (finance, e-commerce, air transport, energy and telecommunications) (ASEAN Secretariat, 2015c).

Consumer protection laws ensure fair competition and the free flow of correct information. Principal consumer protection acts are in place in most of the region. The post-2015 consumer protection action plan tackles areas that significantly influence business and consumer behaviour in ASEAN countries: increased globalisation, more cross-border purchasing, changes in consumer demographics and advances in technological innovation. Work is underway to outline future projects of the ASEAN Committee on Consumer Protection (ACCP) and to strengthen the development and enforcement of consumer protection policies to address the challenges of an integrated market.

To take one example, the ASEAN countries agreed in 2003 with a cosmetics directive standardised by EU for harmonised cosmetic ingredient standards, and implementation had improved by 2012. Myanmar is still developing a better regulatory scheme, while Malaysia needs to work on matching local standards with international standards. Malaysia's 1999 consumer protection act has only a few specific mandatory performance standards and a broad minimum safety requirement for all consumer goods to be reasonably safe. In contrast, Singapore has implemented national standard regulations for pre-market controls of product safety according to international standards, with some exceptions, including health care and certain foods. Post-market controls guarantee product safety in most ASEAN countries because general consumer regulators can prohibit and force the recall of products deemed unsafe, with or without co-operation from relevant national sectoral regulators. Viet Nam implemented a new consumer protection act in 2010, and Myanmar did so in 2014, while Brunei Darussalam is still working on this framework.

The ASEAN countries endorsed standards for organic agriculture at a meeting held in Viet Nam in May 2016. There is increasing demand for organic agricultural products, particularly in developed countries. Improving the quality of organic agriculture products by synchronising standards in ASEAN countries can make these products more competitive internationally. This effort provides safer and better quality agricultural foods for consumers not only in ASEAN countries but also in the external trading partners. Benefits for consumers include better health, environmental protection, sustainable development and a reduction of adverse impacts on climate change such as excess CO_2.

The Ministry of Agriculture and Forestry in Lao PDR signed a memorandum of understanding with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in May 2016. This project will promote implementation of ASEAN goods standards in Lao PDR under the Southeast Asian Food Trade (SAFT) project, supported by the German Federal Ministry for Economic Co-operation and Development through GIZ GmbH. It has three dimensions: public-private linkages through workshops and training regionally and internationally, collaboration on the capacity development of public inspectors, and policy support in developing a good agricultural practices roadmap and strategy. The overall objective of the EUR 2.5 million project applies international and ASEAN standards for good agricultural practices in the region (Lao PDR, Cambodia, Indonesia, Myanmar and the Philippines). The project provides technical support for the implementation of food standards at the national level and facilitates regional dialogue and co-operation. Difficulties remain in implementing standards, inspection and certification, and in creating accreditation bodies and certification bodies.

There are some regulatory differences between the ASEAN countries and their external trading partners. For example, while Australia requires that suppliers inform national consumer regulators in the event of a voluntary product recall, there is no such requirement in ASEAN. Australia and the EU countries must be informed in the event of a serious product-related accident, while ASEAN lacks equivalent regulations – although Viet Nam requires a specific public alert for such defects.

Capacity building must take the concerns of consumers into account

The ASEAN Experts Group on Competition (AEGC) was established in 2007 as a regional forum to discuss and co-operate on competition policy and law. Its current tasks are guided by the ASEAN Competition Action Plan 2016-2025 (ACAP), with four priorities: *i)* strengthening the regulatory environment in ASEAN; *ii)* promoting institutional capacity building and law enforcement of competition policy and law in ASEAN; *iii)* developing a strategy and tools for regional competition advocacy; and *iv)* building cross-cutting regional initiatives. The AEGC has facilitated workshops, training and seminars to strengthen the capacity of competition-related agencies in the areas of institution building, law enforcement and advocacy. ASEAN has also developed regional guidelines on competition policy and law, and a handbook for business and other publications to guide the drafting and implementation of competition laws in ASEAN member states.

Various sessions have been held to promote the competition process and consumer protection in ASEAN. A regional workshop on economic analysis for competition law enforcement, held in June 2016 in Malaysia, assessed abuse of dominance and collusive practices in public procurement in the context of competition policy and law. The second ASEAN consumer protection conference, held in December 2015 in Thailand, reviewed consumer protection legislation, consumer redress and justice mechanisms, and new emerging trends including sustainable consumption and protection for e-commerce transactions.

In considering the effectiveness of capacity building, differences between the focus of the public sector and the interests of consumers need to be taken into account. Consumers' concerns include: *i)* product safety and labelling; *ii)* phone and internet services and e-commerce; *iii)* consumer credit and banking; *iv)* the environment; *v)* health-care services; and *vi)* professional services. Technological advances in e-commerce are proceeding so quickly that it is difficult to keep up with appropriate regulations for cyber security. The adoption of laws, regulations and guidelines at the national level is still slower. This creates gaps between topics covered at capacity-building sessions and the real issues at the national level in ASEAN countries. Implementation of capacity-building measures can also be slowed by a lack of infrastructure in information technology (IT) and telecommunications, and by shortages of skilled labour and human resources, and these issues need to be tackled at the national level.

INTELLECTUAL PROPERTY

Assessment of progress in integration

- The new Blueprint has highlighted similar sectors to work on to strengthen co-operation and integration among member countries. Progress made in this sector is somewhat slow as different countries have different levels of development and intellectual property (IP) awareness.

The Intellectual Property Rights (IPR) Action Plan of 2011-15 resulted in somewhat deeper co-operation within ASEAN. The plan had five strategic goals, all of which were adopted in the new IPR Action Plan of 2016-2020 (ASEAN Secretariat, 2010a).

Developing a more robust IP system in the region has been a major focus for the ASEAN Working Group on Intellectual Property Co-operation (AWGIPC). The previous plan set out 13 initiatives toward achieving this goal, from reducing average turnaround time for trademark registration to protection of geographical indications. Clear deliverables were also outlined further.

New plan promotes intellectual property as a regional asset

Enhancing the participation of ASEAN member states in a wider market by developing global IP systems is an objective revisited by the new plan. The previous plan focused on encouraging ASEAN member states to sign international treaties for IP registration and co-operation: the Madrid Agreement Concerning the International Registration of Marks, the Hague Agreement Concerning the International Registration of Industrial Designs, and the Patent Co-operation Treaty. The target for the accession to these treaties was 2015. To date, not all countries have signed the treaties.

Another goal highlighted in both action plans is to establish and build an inclusive ASEAN IP ecosystem through further co-operation and engagement with stakeholders in the region. To make this goal a reality, the previous plan's working group outlined initiatives to encourage communication with stakeholders at national and regional meetings.

The new plan introduced a somewhat overlapping goal that aspires to create regional mechanisms, such as IP valuation services, to promote commercialisation and create awareness of the value of an IP as a financial asset. This goal is being built on a previous objective: to advance the region's interests through the promotion of IP creation and awareness. Small and medium-sized enterprises (SMEs) are expected to play a role in generating and utilising IP in the region.

Although the objectives of the two action plans are somewhat similar, the new plan sets out 19 initiatives to be used as a guideline. These initiatives push for the improvement of patent, trademark and industrial design services along with timeliness, quality and transparency of governance. As not all countries have acceded to the international treaties, this will be a continued effort in the new plan. Special focus is given to the CLMV countries in terms of training officers on the ground.

In the near future, free trade agreements may cover non-traditional trade chapters such as IP. The recently signed TPP agreement emphasised provisions covering IP protection and made them much stricter than those in the existing Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). For ASEAN to be a part of a wider

competitive global market the region must step up IP awareness and utilisation. This is especially true for more developed countries that have invested resources in research and development in the past.

The initiatives in the action plans are very timely and appropriate for achieving the main goals mentioned above. National policies on IP need to be aligned with regional policies to realise these goals in a timely manner.

INFRASTRUCTURE AND CONNECTIVITY

Assessment of progress in integration

- There has been incremental progress in this sector. The past decade has seen progress on regional infrastructure projects such as the ASEAN Highway Network, power and gas connectivity, and the ASEAN Broadband Corridor. Nevertheless implementation of rail links remains a challenge in the region.
- The new Master Plan on ASEAN Connectivity 2025 aims to facilitate financing, measure productivity and promote information sharing and smart urbanisation.

New infrastructure initiatives focus on financing, productivity and smart urbanisation

Three new initiatives have been proposed in the recently released Master Plan on ASEAN Connectivity 2025 (Box 2.2). They aim to improve information sharing between stakeholders regarding new infrastructure projects and facilitate the financing of these projects, to create an ASEAN platform to measure and improve infrastructure productivity, and to promote smart urbanisation across the region (ASEAN Secretariat, 2015d).

The first initiative is to establish a rolling priority pipeline list of potential ASEAN infrastructure projects and sources of funds. Its aim is to address information issues and capability gaps associated with developing a strong infrastructure pipeline in ASEAN member states. The first step in the process is to establish selection criteria on whether an infrastructure project has regional relevance for ASEAN. This could relate to the importance of the project in supporting cross-border trade and people movements. A standardised template will be used to gather information on these projects, with support for ASEAN member states to help them complete the information-gathering process.

Once identified, a feasibility study (including cost-benefit analysis) will be conducted to understand financing opportunities, including private sector participation. An online database will provide information on funding sources that could help finance these projects. This reflects the concern of many ASEAN member states that there has been a lack of information on available funding sources.

The second initiative is to establish an ASEAN platform to measure and improve infrastructure productivity. Its aim is to conduct a diagnostic on overall infrastructure productivity and identify opportunities to improve the planning, delivery and operation of infrastructure. Insights will eventually be codified and a platform will be established to share lessons for ASEAN member states and track progress over time. This methodology could build on the work of other institutions in this area, such as the Global Infrastructure Hub (GIH).

The third initiative is to develop sustainable urbanisation strategies in ASEAN cities in order to scale up the sharing of smart urbanisation models across cities in ASEAN member states. There are many examples of smart urbanisation across ASEAN, including the heritage-protection strategy in George Town, Malaysia; efforts in Medan, Indonesia, to reduce dependency on cars and make the city more pedestrian-friendly; and efforts in Da Nang, Viet Nam, to strengthen institutional capacity and manage corruption.

Box 2.2. **Master Plan on ASEAN Connectivity 2025**

The Master Plan on ASEAN Connectivity (MPAC), a flagship project by ASEAN to facilitate deeper integration of the region, was adopted in October 2010. The master plan is a strategic document that aims to improve regional connectivity in order to support economic development across borders by focusing on three important aspects of connectivity: physical connectivity (transport, ICT, and energy), institutional connectivity (trade, investment and services liberalisation) and people-to-people connectivity (education, culture and tourism) (ASEAN Secretariat, 2010b). As the successor document to MPAC 2010, the Master Plan on ASEAN Connectivity 2025 will support the post-2015 development of the AEC and provide guidance to further strengthen regional connectivity "to achieve a seamlessly and comprehensively connected and integrated ASEAN that will promote competitiveness, inclusiveness and a greater sense of Community". MPAC 2025 was adopted in September 2016 during the 28th and 29th ASEAN Summits in Lao PDR.

A total of 52 unfinished initiatives of the 125 proposed in MPAC 2010 will continue to be implemented under MPAC 2025. These initiatives fall under five strategic areas critical to the success of the connectivity project: sustainable infrastructure, digital innovation, seamless logistics, regulatory excellence and people mobility (Table 2.4).

Table 2.4. **Strategic areas identified in MPAC 2025**

	Strategic objectives	Initiatives
Sustainable infrastructure	• Increase public and private infrastructure investment in each ASEAN member state as needed. • Significantly enhance the evaluation and sharing of best practices on infrastructure productivity in ASEAN. • Increase the deployment of smart urbanisation models across ASEAN.	• Establish a rolling priority pipeline list of potential ASEAN infrastructure projects and sources of funds. • Establish an ASEAN platform to measure and improve infrastructure productivity. • Develop sustainable urbanisation strategies in ASEAN cities.
Digital innovation	• Support the adoption of technology by micro, small and medium enterprises (MSMEs). • Support financial access through digital technologies. • Improve open data use in ASEAN member states. • Support enhanced data management in ASEAN member states.	• Enhance the MSME technology platform. • Develop the ASEAN digital financial inclusion framework. • Establish an ASEAN open data network. • Establish an ASEAN digital data governance framework.
Seamless logistics	• Lower supply-chain costs in each ASEAN member state. • Improve speed and reliability of supply chains in each ASEAN member state.	• Strengthen ASEAN competitiveness through enhanced trade routes and logistics. • Enhance supply chain efficiency through addressing key chokepoints.
Regulatory excellence	• Harmonise or mutually recognise standards, conformance and technical regulations for products in key sectors. • Reduce the number of trade-distorting non-tariff measures across ASEAN member states.	• Complete harmonisation of standards, mutual recognition, and technical regulations in three prioritised product groupings. • Increase transparency and strengthen evaluation to reduce trade distorting non-tariff measures.
People mobility	• Support ease of travel throughout ASEAN. • Reduce the gaps between vocational skills demand and supply across ASEAN. • Increase the number of intra-ASEAN international students.	• Enhance ASEAN travel by making finding information easier. • Ease ASEAN travel by facilitating visa processes. • Establish new vocational training programmes and common qualifications across ASEAN member states, in accordance with national circumstances of each ASEAN member state. • Support higher education exchange across ASEAN member states.

Source: ASEAN (2016b), *Master Plan on ASEAN Connectivity 2025*, ASEAN, http://asean.org/storage/2016/09/Master-Plan-on-ASEAN-Connectivity-20251.pdf.

ASEAN makes progress on integrating highways, energy and information technology

Most major infrastructure projects in ASEAN have seen steady progress over the past decade. For example, there are no more missing links in the ASEAN Highway Network (AHN), a project started in early 1990s that will connect and improve the region's existing highways. Improvement efforts have reduced the total length of roads below Class III (a minimum standard highway with two narrow lanes and double bituminous surface treatment) by 46.2%, from 5 311.2 km in 2010 to 2 454 km in 2015. ASEAN countries

have also reached an agreement to facilitate the operation of three priority routes under the ASEAN Roll-on/Roll-off (RoRo) Shipping Network: Dumai-Melaka, Belawan-Penang-Phuket and Davao/General Santos-Bitung.

In terms of energy infrastructure, nine power interconnection projects under the ASEAN Power Grid (APG) and 13 bilateral gas pipelines under the Trans-ASEAN Gas Pipeline (TAGP) have been completed (see Energy section). The latest effort is the completion of electricity interconnection between the Malaysian state of Sarawak and Indonesia's West Kalimantan. The Sarawak-West Kalimantan 275kV transmission line is expected to bring a much needed electricity supply to the Indonesian province and has been supplying roughly 70MW of electricity every day.

Progress has also been made on the information technology front. A study has been completed and endorsed for the creation of an ASEAN Broadband Corridor. The initiative aims to identify and develop locations in each ASEAN country that can offer quality broadband connectivity, and to enable seamless usage of broadband services and applications across ASEAN to enhance information and communications technology (ICT) development. The study will provide the framework to identify key drivers for broadband rollout and offer recommendations on relevant government initiatives. The ASEAN Internet Exchange Network (AIX) project was concluded with a report on the status of peer-to-peer connections between Internet exchange providers across ASEAN member states and a recommendation to encourage private sector operators to establish more peer-to-peer connections with their ASEAN counterparts across borders. A feasibility study on establishing an ASEAN single telecommunications market is currently in process.

Despite steady progress, challenges including financial and implementation barriers still remain. For example, several sections of the Singapore-Kunming Rail Link (SKRL), such as the one from Cambodia to Viet Nam and those in Lao PDR, are still seeking funding for implementation, while resource constraints, bankability and technical and regulatory issues plague many projects under ASEAN Power Grid and Trans-ASEAN Gas Pipeline. Addressing these and other issues to facilitate the further development of infrastructure will have an impact on development across the region, particularly among some of its lower-income countries (Box 2.3).

Box 2.3. **The geographical simulation analysis for CADP 2.0**

The Institute of Developing Economies (IDE) and ERIA have recently assessed the future impact of infrastructure development by 2030 in quantitative terms using the IDE/ERIA–GSM (Geographical Simulation Model) for the Comprehensive Asian Development Plan 2.0 (CADP 2.0). This model highlights the long-term dynamics of populations and industries in different areas of East Asian countries. This model allowed for the examination of the effects of specific infrastructure projects on regional economies at a sub-national level in a way that few other studies have so far done. An objective evaluation tool was used to prioritise different infrastructure development projects in the region. The model follows the New Economic Geography (NEG) theory in estimating the multisector and country general equilibrium. The model includes agriculture, five manufacturing sectors (automotive, electric and electronics, textile and garment, food processing and other manufacturing) and the services sector.

A baseline scenario and other alternative development scenarios were constructed for the period 2021-30, with assumptions about migration, tariffs and NTBs, population growth, technological change and the completion of major near-term projects. The results of this analysis indicated that future infrastructure development would be beneficial for all ASEAN countries, with some of the region's lower-income countries seeing particularly large impacts. Myanmar, Lao PDR and Viet Nam are expected to have the highest impact density in the region (ERIA, 2015).

Source: ERIA (2015), *The Comprehensive Asia Development Plan 2.0 (CADP 2.0): Infrastructure for Connectivity and Innovation*, www.eria.org/ERIA-RPR-FY2014-04.pdf.

SMALL AND MEDIUM-SIZED ENTERPRISES

Assessment of progress in integration

- Key deliverables from the Strategic Action Plan 2010-2015 include the ASEAN SME Policy Index, the ASEAN Guidelines on One Village One Product and the ASEAN SME Online Academy.

Small and medium enterprises (SMEs) are very important to ASEAN countries because of the sector's presence in terms of its share of total establishments. Recent data show that between 88.8% and 99.9% of establishments fall into the SME category. Indonesia and Lao PDR have a particularly high concentration of SMEs: almost 100% of establishments (Table 2.5).

The competitiveness and robustness of ASEAN economies depends heavily on the competitiveness and robustness of the regions' SMEs, since they make up the majority of establishments in member countries. As shown in Table 2.6, SMEs contribute a 52-97% share of total employment. SMEs also contribute a 10-30% share of total exports in ASEAN. Even though total export shares differ across ASEAN member states, it remains very significant for most countries in ASEAN.

Table 2.5. **SME share of total establishments in ASEAN, 2014**

Countries	Share of total establishments (%)
Indonesia	99.9
Lao PDR	99.9
Thailand	99.8
Cambodia	99.8
Singapore	99.4
Philippines	99.6
Brunei Darussalam	98.2
Malaysia	97.3
Viet Nam	97.5
Myanmar	88.8

Source: National sources.

Table 2.6. **SME share of total employment in ASEAN, 2014**

Countries	Share of total employment (%)
Indonesia	97.2
Lao PDR	81.4
Thailand	76.7
Cambodia	72.9
Singapore	68
Philippines	61
Brunei Darussalam	58
Malaysia	57.4
Viet Nam	51.7
Myanmar	N.A

Source: ASEAN Strategic Action Plan 2016-2025.

Numerous challenges remain for the region's SMEs. The main difficulty is accessing financial assistance from the outset. Established SMEs in the region have a hard time in harnessing technology and new innovative methods to ensure that production costs are kept low at a high efficiency level. When these challenges are not solved, SMEs have difficulty in accessing competitive markets. Other challenges include lack of entrepreneurship skills, problems with compliance with standards and marketing and managerial issues (ERIA, 2014).

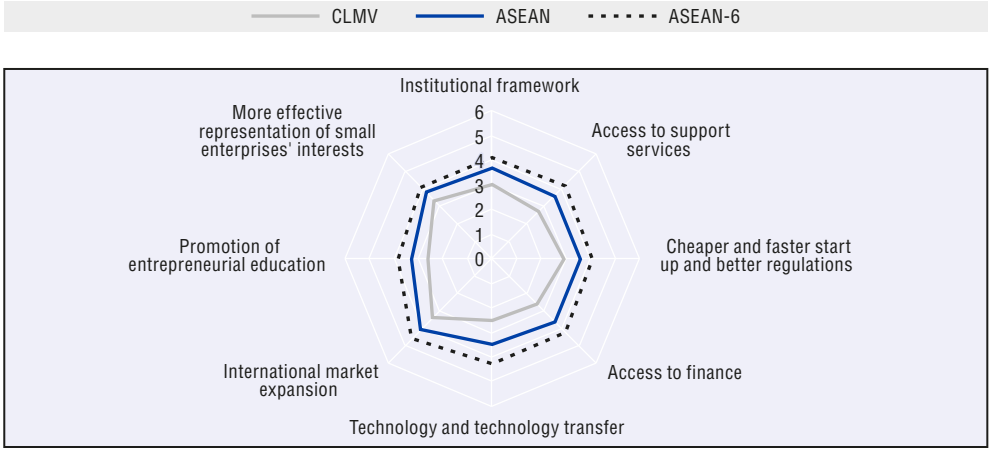
ASEAN's small and medium-sized enterprises need to become more competitive

The Strategic Action Plan for SME Development 2010-2015 focused on the issues of access to finance, technology development and human resource development. Progress is needed so that SMEs in the region can be more competitive and independent (ASEAN Secretariat, 2009).

The key deliverables from the previous plan are: *i*) the ASEAN SME Policy Index; *ii*) ASEAN Guidelines on One Village One Product; and *iii*) the ASEAN SME Online Academy.

- ASEAN SME Policy Index: The SME Policy Index was created to analyse policies related to SME development in emerging economies. It is also used as a tool to monitor the progress of policy implementation over time. For ASEAN, the OECD has applied the tool in co-operation with the Economic Research Institute for ASEAN and East Asia, using the ASEAN Policy Blueprint for SME Development as the reference point for assessment. The report highlighted that ASEAN countries have the smallest gap with one another when it comes to promoting an effective representation of the SMEs' interests. All countries have played an active role in creating a functional mechanism between industries, firms and government agencies to represent them domestically and internationally in this aspect. However, when it comes to policies related to access to finance and technology and technology transfer, the gaps are more pronounced between CLMV and ASEAN countries (Figure 2.4). In summary there is definitely room for improvement as most SMEs in ASEAN lack resources, the technical and research capacity to provide high quality services, and access to regional and global production networks.

Figure 2.4. **Comparison of scores for CLMV and ASEAN countries in eight policy areas, 2014**



Note: The index represents the 6 levels of policy reforms. 1 stands for no specific policy measure or institution (poor) and 6 stands for a well-functioning institution or effective implementation of each policy measure (good practice). ASEAN-6 includes Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, and Thailand.

Source: ERIA (2014), *ASEAN SME Policy Index 2014: Towards Competitive and Innovative ASEAN SMEs*, Economic Research Institute for ASEAN and East Asia, Jakarta.

StatLink http://dx.doi.org/10.1787/888933443557

- ASEAN Guidelines on One Village One Product: The ASEAN Guidelines on Improvement of Rural Living Conditions through the One Village One Product (OVOP) Movement was launched on 15 March 2016 in Yogyakarta, Indonesia. It emulates an OVOP movement that started in Oita Prefecture, Japan, in 1979 and was successful in improving the welfare of rural people, village economic dynamism, local income and social solidarity by creating unique and value-added products. ASEAN countries hope that this programme will enable villagers to promote local products and improve their livelihoods. It can be seen as a poverty alleviation tool for ASEAN rural areas.
- ASEAN SME Online Academy: The academy was launched on 31 May 2016 during the first meeting of the ASEAN Coordinating Committee on MSME, held in Singapore. It is a joint effort between the US-ASEAN Business Alliance for Competitive SMEs and the ASEAN Coordinating Committee on Micro, Small, and Medium Enterprises (ACCMSME). The Online Academy functions as a one-stop centre with an open-access gateway that provides information for businesses and training resources to support the development and internationalisation of the region's SMEs. It aims to strengthen business development services for SMEs by providing courses in accounting, management, marketing, operation, technology and logistics. It also aims to help SMEs network with one another and gain access to region-specific information in order to grow stronger and expand in the near future.

Empowering SMEs will contribute to regional inclusivity

The main focus of the new ASEAN Strategic Action Plan for SME Development 2016-2025 is to promote the growth of internationally competitive and innovative SMEs that are integrated into the ASEAN community as a whole. By strengthening and empowering these SMEs, it will indirectly contribute to the development of regional inclusivity (ASEAN Secretariat, 2015e).

The new Action Plan sets out five strategic goals for empowering SMEs in the region: *i)* promoting productivity, technology and innovation; *ii)* increasing access to finance; *iii)* enhancing market access and internationalisation; *iv)* enhancing the policy and regulatory environment; and *v)* promoting entrepreneurship and human capital development.

There are many similarities between the previous action plan and the new initiatives, as the issues plaguing SMEs ten years ago are still relevant today. What is unique in the new plan is that it sets out very specific action lines and targeted timelines for different initiatives championed by various countries. This is to ensure that each country is in charge of the different aspects of SME development given its own expertise and capabilities.

Short-term deliverables are mainly in the area of knowledge sharing and networking. To enhance productivity among SMEs in the region, the working group, led by Thailand and Viet Nam, is sharing best practices and standards on productivity and quality of successful micro-enterprises. These efforts help strengthen micro-enterprises across ASEAN. In the effort to enhance industry clusters within the region, the working group aims to promote technology and build capabilities by sharing best practices on appropriate technology adoption among ASEAN SMEs. The goal is to support higher production capability in selected industries. Both initiatives are to be completed in 2017.

Medium-term deliverables are mostly in the area of human capital development. As an example, the working group on promoting entrepreneurship and human capital development, led by Brunei Darussalam, the Philippines and Myanmar, has focused on human capital development as a long-term goal to be achieved by 2025. The working group

led by Singapore and Thailand, on enhancing market access and internationalisation, has focused on human capital development as a medium-term deliverable to be completed by 2020. This is to be achieved through capacity-building activities on international standards, in co-operation with the ASEAN Consultative Committee on Standards and Quality (ACCSQ), to promote the accreditation of SMEs in ASEAN countries.

Long-term deliverables are related to the development of infrastructure and the introduction of new laws and regulations. To promote key technology use and its application to business for innovation, the working group led by Thailand and Viet Nam aims to strengthen existing technology transfer centres so that new products can be commercialised effectively. This is expected to be achieved in 2025. The working group led by Malaysia and Lao PDR aims to improve the institutional framework for access to finance by developing policy options to improve the traditional financing of SMEs. New laws and regulations are to be introduced by 2025 for this purpose.

Regional initiatives seek to boost SMEs domestically and on the global market

In summary, there have been many initiatives to encourage the growth and performance of SMEs in the ASEAN region. The new AEC Blueprint emphasises the importance of SMEs in decreasing inequality and in employing the bulk of the labour force in many countries. However, challenges remain. Efforts should be increased on knowledge sharing of best practices in order to narrow the information gap between SMEs in more developed and less developed countries. Continuous skills upgrading and education initiatives must take centre stage as part of an effort to develop the region's human resource potential. Finally, national policies on SMEs must proceed in parallel with regional initiatives. Domestic policies are the key driver for achieving regional goals for strengthening SMEs in ASEAN.

Box 2.4. ASEAN-BAC as an important platform in promoting the region's SMEs

The ASEAN Business Advisory Council (ASEAN-BAC) is actively promoting the development of SMEs in the region. The Council was established in April 2003. Its function is to provide an appropriate platform for feedback from the private sector on policy implementation. The Council also provides guidance to boost ASEAN's economic integration efforts. More importantly, the Council is tasked with identifying priority areas for improvement for the consideration of ASEAN leaders. Council members are appointed by the ministers in-charge in ASEAN member countries, with a maximum of three prominent chief executive officers from each country, who represent the voice and interests of their country's SMEs. To provide policy recommendations to the ASEAN leaders, the Council organises an annual ASEAN Business & Investment Summit (ABIS) to coincide with the ASEAN Summits, the most recent of which were held in Lao PDR in September 2016.

The previous ABIS summit, held in Kuala Lumpur in November 2015, focused on how to advance the public-private partnership (PPP) agenda as a vehicle for sustainable growth in the region. The ABIS chairman, Munir Majid, named two major challenges: the first, to remove non-tariff barriers and measures by the end of 2016, and the second to create and nurture greater and smarter public-private sector collaboration. The Council is seeking the elimination of NTBs, deeper integration in the financial sector and the establishment of a sound financial infrastructure. Another important issue for the Council is the continued liberalisation of the movement of skilled labour in the region by enhancing existing efforts made under the ASEAN Framework Agreement on Services.

Box 2.4. **ASEAN-BAC as an important platform in promoting the region's SMEs** (*cont.*)

Apart from the ABIS, the Council also holds the ASEAN Business Awards (ABA) to serve as a platform for collaboration between ASEAN governments and the private sector. This event was established in 2007 to celebrate businesses that have contributed to the growth of the region. The event also aims to highlight new, promising SMEs as global players in different industries. In an important development for SMEs in the region, a memorandum of agreement was signed by the ASEAN Business Advisory Council and the SRW&Co. on 23 June 2016 at the ASEAN Secretariat in Jakarta, to establish a new kind of partnership. Scholarships were presented at ABA 2016 for the Young Entrepreneur of the Year, the Woman Entrepreneur of the Year and the Most Innovative SME. The winners may attend the ASEAN Global Leadership Programme (AGLP) in 2017 at a leading university or business school. The five-day scholarship programme aims to equip participants with skills in addressing the challenges and opportunities of the AEC. Winners are also provided with a platform for business networking with other participants for future collaboration.

Source: ASEAN Business Council website, http://asean-bac.org/asean-bac.html (accessed 2 December 2016).

FOOD, AGRICULTURE AND FORESTRY

Assessment of progress in integration

- Progress has been made in particular in information sharing, food safety testing and inspection. However, because of the high risk of exposure to foodborne disease and the complexity of regional food industry in the region, ensuring food safety in Southeast Asia remains a difficult task.

Efforts to enhance regional co-operation in food safety have intensified with the introduction of the ASEAN Food Safety Policy and ASEAN Risk Assessment Centre for Food Safety in 2016. Progress has been made in terms of food testing and food safety inspection, while challenges to reach harmonised food safety standards in ASEAN remain, owing to gaps in the legal framework among ASEAN member states and lack of institutional co-ordination. Regional initiatives are also being pursued to address concerns about food security (Box 2.5).

Box 2.5. **ASEAN initiatives on food security**

Food security has become a serious concern among ASEAN member states since 2007-08, when international food prices increased sharply owing to the rise of agricultural production costs, drop of yield and irregular climate patterns. In response, ASEAN countries sought to develop a regional policy framework both to resolve the short-term food crisis through emergency food distribution and to maintain long-term food security in the region. This led to the establishment of several initiatives including the ASEAN Integrated Food Security (AIFS) Framework and the Strategic Plan of Action on Food Security (SPA-FS). These initiatives focus on food shortage relief, food trade development, food security information systems and agricultural innovation in food production. The system has been largely successful at distributing food after natural disasters and contributes to enhancing food access and reducing malnourishment and undernourishment among ASEAN members (OECD, 2016).

Source: OECD (2016), *Economic Outlook for Southeast Asia, China and India 2016: Enhancing Regional Ties*, http://dx.doi.org/10.1787/saeo-2016-en.

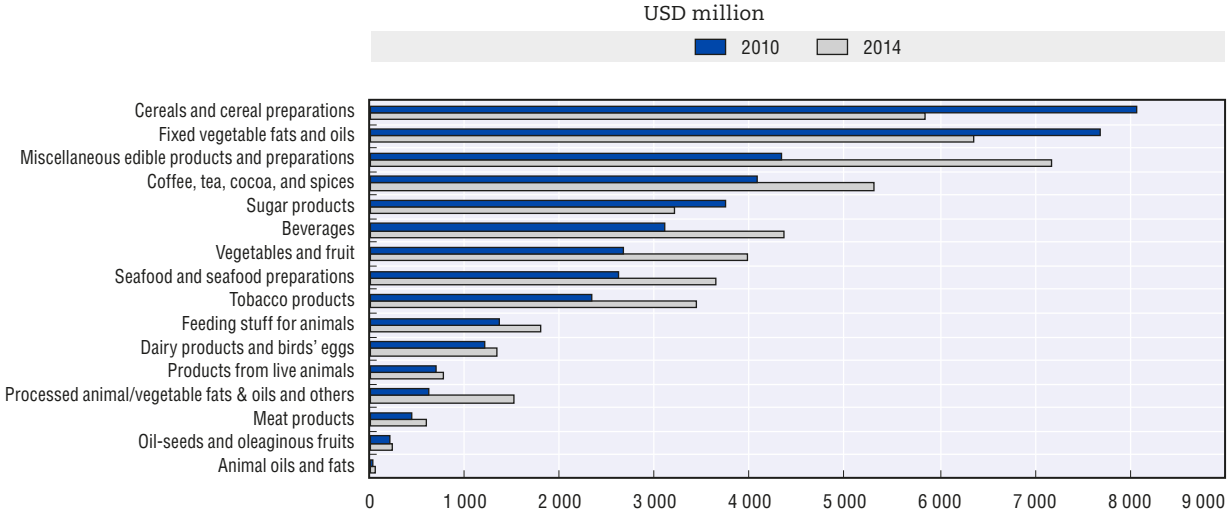
ASEAN countries are strengthening co-operation on food safety

In addition to the issues of food access and nutrition, food safety has become increasingly important recently owing to its impact on public health, which affects national productivity and economic development in the region. Food safety is generally defined as the assurance that food will not harm the consumer when it is prepared and eaten according to its intended use. According to the World Health Organization (WHO), more than 200 diseases, ranging from diarrhoea to cancer, can be caused by consuming unsafe food containing harmful bacteria, viruses, parasites or chemical substances. The incidence of foodborne disease is high among developing countries in Asia, second only to Africa, and in terms of absolute numbers there are more illnesses and deaths due to foodborne diseases in this region than in any other region in the world (WHO, 2016).

Ensuring food safety in Southeast Asia is difficult because of the complexity of the food industry. The region's food production, processing and marketing system counts numerous companies and factories of varying sizes, and food products usually have to go through multiple tiers of handlers and middlemen along the market chain. This

increases the risk of compromising food safety and creates difficulties for government monitoring and surveillance. In relatively less developed ASEAN countries, facilities and infrastructure related to food production and marketing are still inadequate and of poor quality. There is a lack of knowledge and expertise among workers in the industry on modern technologies and practices that could contribute to improving food safety. There is currently little appreciation among food producers and consumers for Good Agricultural Practices (GAP), Good Manufacturing Practices (GMP) and Good Hygienic Practices (GHP), and this could hamper implementation of food safety regulations (Othman, 2007). Small-scale food processors and providers such as street vendors are common in Southeast Asia. Although they offer easy access to food, generate employment for unskilled and semi-skilled labourers and can contribute to local tourism, problems related to hygiene and sanitation are a big challenge to local governments and city planners. Finally, food safety testing and inspection are increasingly important because of a rise in intra-ASEAN trade of most food products over the past five years (Figure 2.5).

Figure 2.5. **Intra-ASEAN food trade in 2010 and 2014**



Note: Food category is defined as SITC sections 0, 1, 4 and division 22.

Source: ASEAN (2016), *ASEAN Stats* (database), http://aseanstats.asean.org/.

StatLink http://dx.doi.org/10.1787/888933443565

Recognising the importance and complexity of the food safety issue, ASEAN countries have engaged in regional co-operation in this area since the early 2000s. The ASEAN Expert Group on Food Safety (AEGFS) is a platform specifically created to provide oversight and support to food safety activities in ASEAN. The ASEAN Food Safety Improvement Plan (AFSIP) is developed by AEGFS to address the activities necessary to improve food safety co-operatively within ASEAN and covers ten programme areas, five of which are identified as priority areas: legislation, laboratory, food inspection and certification, information sharing and consumer protection.

To strengthen the capacity of ASEAN countries in food safety inspection and laboratory testing, the Network of ASEAN Food Reference Laboratories (AFRLs) was established in 2004 under the EU-ASEAN Economic Co-operation Programme on Standards, Quality and Conformity Assessment. The network is led by regional testing laboratories competent in various areas of expertise such as microbiology, pesticide residues and genetically modified organisms (GMOs), and includes National Food Reference Laboratories (NFRLs) and Food Testing Laboratories (FTLs). Regular workshops

are held with participants from all organisations to exchange experience, conduct training and align the competencies of organisations from different ASEAN members.

The ASEAN Food Safety Network (AFSN) currently serves as a co-ordinating forum for information sharing on food safety, while the new ASEAN Risk Assessment Centre for Food Safety, launched in 2016, will focus on providing independent scientific opinion on food safety issues that are of regional concern, promoting the adoption of common positions on food safety measures and facilitating safe trade.

The ASEAN Food Safety Policy, introduced as a significant accomplishment towards fulfilling the AEC Blueprint 2025, provides a common basis for the efforts of ASEAN ministerial bodies responsible for health, agriculture and trade. It focuses on improving health protection, ensuring consumer rights and improving the quality of food products produced and traded within ASEAN. The policy also calls for stronger co-operation in the harmonisation of regional and national food control systems, including food safety standards, related legislation and food inspection and certification.

Beyond intra-regional co-operation, the EU-ASEAN Economic Co-operation Programme on Standards, Quality and Conformity Assessment advocates strengthening food testing laboratories' capacity, strengthening inspection capacity and capacities in food standardisation and food legislation, and promoting the application of Hazard Analysis and Critical Control Points (HACCP), Good Manufacturing Practices, and Good Hygienic Practices in small and medium food companies. This EU-ASEAN programme prompted the drafting of ASEAN Common Food Control Systems, ASEAN Common Principles and Requirements for Food Hygiene, and ASEAN Common Principles and Requirements for the Labelling of Pre-packaged Foods, and gave rise to the launch of other regional initiatives, especially the Network of ASEAN Food Reference Laboratories.

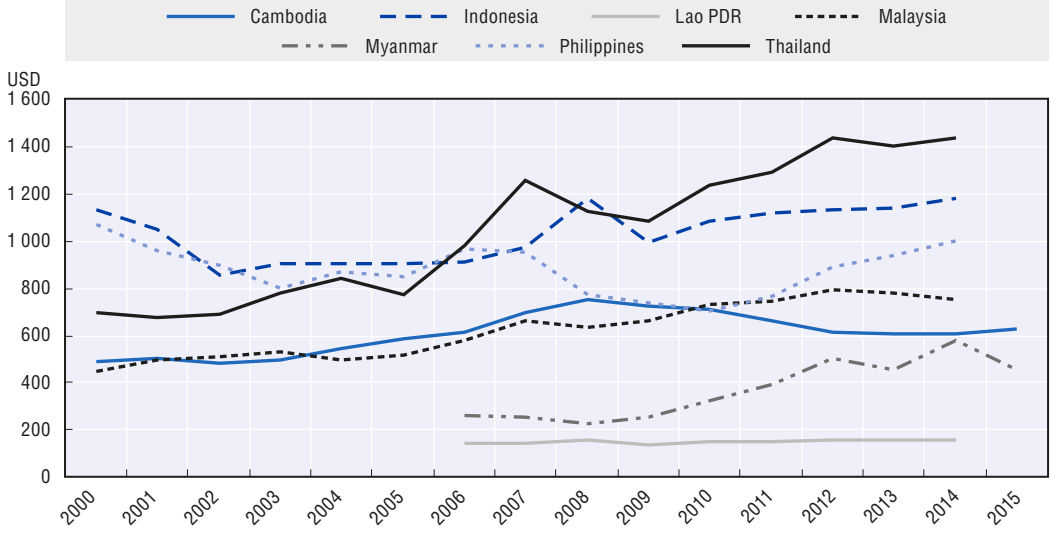
TOURISM

Assessment of progress in integration

- Integration in the tourism sector has received wide attention from policy makers in the region especially after the inception of AEC in 2015. The development of ecotourism will enhance connectivity of ecotourism sites among ASEAN countries and improve economic conditions of poor communities along the tourism corridors given that issues of hospitality standards and tourists' safety are addressed through regional co-operation.

Tourism is an important contributor to economic growth and job creation in many ASEAN countries. In Cambodia, tourism revenues accounted for about 16% of total GDP in 2014, while in Thailand, tourism growth was one of the two major drivers of the economy in 2015 (OECD, 2016). The tourism industry has experienced significant growth in the past decade in Southeast Asia. Total tourism revenues per visitor have increased by almost 50% in many ASEAN countries and have more than doubled in Thailand (Figure 2.6). In Indonesia, the Philippines and Thailand, each visitor on average spends more than USD 1 000 during his or her stay. As the average lengths of stay have remained largely unchanged, the rise of revenues indicates that visitors' spending power has improved over the years, mainly thanks to the effects of economic development in Asia, the major source region for ASEAN tourists (Figure 2.7). Despite the growing importance of the tourism sector, there is still a significant gap among ASEAN members with respect to the quality of tourist services. The World Economic Forum's Travel & Tourism Competitiveness Index shows that most ASEAN countries have below-average tourist service infrastructure among a total of 141 countries surveyed, with a few exceptions such as Thailand and Singapore (Figure 2.8). To support the sustainable development of the tourism sector and narrow the gap between ASEAN member states, regional integration and co-operation are necessary.

Figure 2.6. **Tourism revenues per visitor 2000-15**

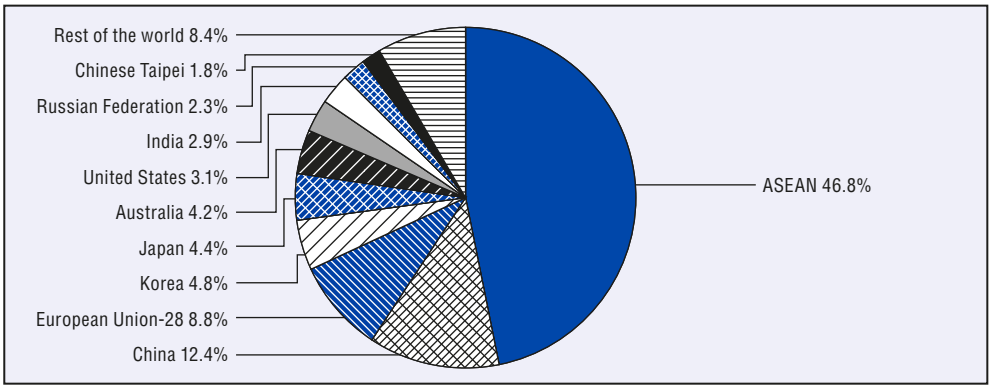


Source: CEIC.

StatLink http://dx.doi.org/10.1787/888933443572

Figure 2.7. **Top ten country/regional sources of ASEAN visitors in 2014**

Share of total visitors

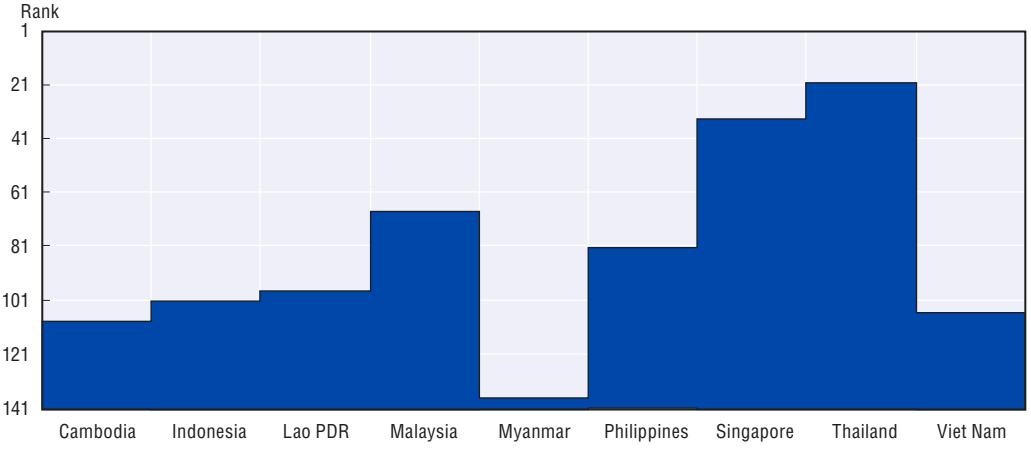


Source: ASEAN (2016), *ASEAN Stats* (database), http://aseanstats.asean.org/.

StatLink http://dx.doi.org/10.1787/888933443585

Figure 2.8. **Tourist service infrastructure in ASEAN, 2015**

Rank



Note: Ranking of the 141 participating countries.

Source: WEF (2015), *The Travel & Tourism Competitiveness Report 2015*, World Economic Forum, http://reports.weforum.org/travel-and-tourism-competitiveness-report-2015.

StatLink http://dx.doi.org/10.1787/888933443597

Regional initiatives are facilitating travel and promoting ASEAN tourism

Regional co-operation in tourism began in 1998 with the introduction of the Plan of Action for ASEAN Co-operation in Tourism, which advocated for the first time the marketing of the ASEAN region as a single tourist destination, and called for facilitating seamless intra-ASEAN travel. In 2002, the ASEAN Tourism Agreement emphasised the need to strengthen regional co-operation among governments and the private tourism sector, to make travel in ASEAN easier and to improve the competitiveness of ASEAN tourism services. To achieve these goals, the Roadmap for Integration of the Tourism Sector 2004-2010 laid out several initiatives to upgrade tourism infrastructure, enhance human capital development in tourism and encourage greater participation from the private sector. These regional initiatives have contributed to a boom in the number of tourists that positively affects local economies in terms of demand for goods, services, job creation and inter-cultural understanding. Other programmes have been adopted in subsequent years to address difficult issues such as the harmonisation of visa requirements within ASEAN, free movement of tourism professionals and standardisation of tourism-related services. However, implementation has been slow and uneven among ASEAN members, with some still lagging behind. For example, the CLMV countries have not fully implemented the

ASEAN Mutual Recognition Arrangement on Tourism. A common ASEAN visa similar to the Schengen visa in Europe is still under discussion by ASEAN policy makers.

Regional integration in tourism has received increasing attention in recent years and is recognised as one of the nine pillars for the establishment of the ASEAN Economic Community. The AEC Blueprint 2025 identifies a number of recent challenges facing the sustainable development of quality tourism and tourism integration within ASEAN. They include a better balance in the distribution of benefits of tourism among ASEAN members, reducing concern over safety and security, making cross-border formalities more convenient and less costly, and reducing transportation and destination infrastructure congestion. To address these challenges, co-operation is called for in enhancing the competitiveness of ASEAN as a single tourism destination and achieving tourism sustainability and inclusiveness.

Several regional programmes were launched in 2016 to meet these objectives. The "ASEAN for ASEAN" campaign, supported by ASEAN national tourism organisations (NTOs), aims to promote intra-regional travel by ASEAN citizens. The campaign has identified nine themes for promoting travel within the ASEAN region. Each NTO was to take on a specific task to drive internal regional tourism through 2016 and to generate awareness of the ASEAN tourism brand. Brunei Darussalam, for example, was to promote community-based tourism via trade shows, its official website and articles in the print media, while Malaysia was to promote ASEAN adventure travel via an e-book. The "Visit ASEAN@50" programme will celebrate the 50th anniversary of ASEAN in 2017 and present ASEAN as a single and united tourism destination. It will be aimed at external markets including Australia, Canada, China, Germany, India, Japan, Korea, Russia, United Arab Emirates, the United Kingdom and the United States.

A Regional Secretariat for Tourism is scheduled to be established in Jakarta to undertake a variety of tasks, including supporting implementation of the Mutual Recognition Arrangement on Tourism Professionals (MRA-TP), providing training programmes to develop human capital in tourism in ASEAN, conducting regional marketing and promotional activities, and assisting ASEAN tourism professionals in the labour market for work opportunities and job matching.

Ecotourism remains a promising area for further development in the future

Ecotourism refers to all nature-based forms of tourism in which the main motivation of visitors is the observation and appreciation of nature and the traditional cultures prevailing in natural areas. The idea of ecotourism combines nature-based tourism and community-based tourism to promote a sustainable tourism model that is not only environmentally friendly but will also benefit local communities. The potential benefits of developing ecotourism have been recognised by several ASEAN countries, including Cambodia, Lao PDR, Malaysia and Thailand, as ecotourism is included in the national plans of these countries as an important component of service sector development.

Despite the active promotion of ecotourism at the national level, regional co-operation on this issue has received strong emphasis only recently. The ASEAN Tourism Ministerial Roundtable Meeting (MRT) on Ecotourism, held in June 2016 in conjunction with the ASEAN Ecotourism Forum (AEF), aims to take advantage of the capacity, resources and experience of ASEAN partners and supporters to facilitate the transformation towards sustainable tourism in the region. With the release after the meeting of the Pakse Declaration on the ASEAN Roadmap for Strategic Development of Ecotourism Clusters and Tourism Corridors, ASEAN countries acknowledge the importance of an ASEAN co-ordinated roadmap to identify, plan and develop a trans-regional network of ecotourism sites (ecotourism clusters) that are linked to major intra-ASEAN transportation routes, including overland highways, waterways and inter-island connections (tourism corridors). The declaration also emphasises the need to create employment, uplift local communities and transform

impoverished rural areas along the tourism corridors and to enhance the marketing of the ASEAN region to the world by highlighting ASEAN contributions in protecting natural resources and local biodiversity. The development of ecotourism clusters is ASEAN's latest attempt at improving regional integration in the ecotourism sector. The Pakse Declaration was approved at the ASEAN Summits in Vientiane.

Integration on tourism safety can position ASEAN as a single global destination

Safety and security are essential components for the sustainable development of a quality and competitive tourism industry in Southeast Asia. Safety must be ensured in the use of tourism facilities and services, especially transportation, accommodation and tour operations services, while security against crime, terrorism and armed conflict must be provided. Although tourism safety and security is usually undertaken at the national level, the lack of a consistent policy approach and affirmative strategy may affect the ability to position the ASEAN region as a single global destination. The Declaration on Tourism Safety and Security by ASEAN tourism ministers in 2003 reiterated the commitment of ASEAN countries towards a united effort against terrorism after the 9/11 attacks. ASEAN tourism authorities agreed to co-operate with ASEAN bodies and law enforcement agencies to strengthen security at tourist destinations and transportation hubs such as airports, seaports and train stations; to review tourism policies; to adopt measures to prevent tourism-related threats; and to facilitate information sharing among ASEAN member states and between ASEAN and China, Japan, Korea and other countries. The ASEAN Tourism Agreement of 2012 asked member states to step up co-operation among law enforcement agencies in charge of tourist safety, to intensify information sharing between relevant agencies and to ensure the reliable operation of communications and assistance systems to deal with visitors' concerns. According to the World Economic Forum's report on travel and tourism competitiveness, tourists in general feel safe travelling in ASEAN.

Another tourism issue is health and safety. Emerging infectious diseases (EIDs) can have devastating effects on the tourism industry, as shown during the severe acute respiratory syndrome (SARS) epidemic in 2002-04. The ASEAN Plus Three Initiative for Healthy Tourism and Travel, proposed in 2009, aimed to promote protection of nationals and tourists from EID outbreaks and avoid the negative impact of diseases on the tourism industry. The initiative is an extension of the ASEAN Plus Three Emerging Infectious Diseases Programme, a regional initiative endorsed by ASEAN+3 countries to enhance regional preparedness and capacity through integrated approaches to prevention, surveillance and timely response to emerging infectious diseases. The initiative outlines its four objectives:

- To provide a forum for closer interaction and communication between the public health and tourism sectors;
- To identify action priorities to promote health and safety of travellers and host communities;
- To conduct research on the current needs and resources for promotion of Healthy Tourism;
- To develop guidelines on Healthy Tourism (vector control, sanitation and hygiene, prevention of zoonotic diseases).

The initiative produced an overarching framework that necessitates the establishment of dedicated governance systems both locally and nationally to support its implementation at tourism destinations such as Ha Long Bay in Viet Nam. Work plans were made to identify actions and responsible parties across all levels of governance. The initiative also provides training courses and introduced a Healthy Tourism accreditation system for tourism service providers, such as hotels and restaurants, to encourage the reduction of water pollution and enhance food safety and hygiene.

HUMAN AND SOCIAL DEVELOPMENT

Assessment of progress in integration

- Human and social development concerns are addressed in the ASEAN Socio-Cultural Community Blueprint and recent ASEAN sectoral plans.
- Co-operation through the East Asia Summit has tended to include a strong focus on issues of human and social development, particularly in education and health. Various regional frameworks have enabled productive co-operation on transborder issues, though gaps in national capacities can hinder these efforts.

Co-operation on human and social development is emphasised in the ASEAN Socio-Cultural Community Blueprint 2025, with five characteristics and elements: engagement and empowerment; inclusive growth; environmental sustainability; resiliency against disasters; and, for at-risk groups in particular, socio-cultural dynamism. The AEC Blueprint 2025 also touches on issues relevant to well-being, education, social development and environmental protection. One of the plan's five characteristics outlines the creation of a "resilient, people-oriented and people-centred ASEAN", through goals for strengthening MSMEs, developing the private sector, using PPPs, narrowing development gaps in the region and involving stakeholders in regional integration. Other human and social development themes are also touched upon in relation to education, financial literacy, consumer empowerment, research and development, ICT use, sustainable economic development, food security, and health care (ASEAN Secretariat, 2015f). New sectoral and issue-specific plans provide additional details on the proposed direction of regional co-operation in these areas (Box 2.6).

Box 2.6. Recent plans to shape ASEAN co-operation on human and social development

Disaster management

- The recently released ASEAN Vision 2025 on Disaster Management outlines actions to be taken in support of the ASEAN Agreement on Disaster Management and Emergency Response (AADMER), through three strategic elements: institutionalisation and communications, finance and resource mobilisation, and partners and innovations. Further details on disaster management are set out in the AADMER Work Programme 2016-2020. Its eight priority programmes focus on: improving risk awareness, building safe infrastructure and services, strengthening resiliency, implementing risk transfer and social protection measures, developing collective response mechanisms, building capacities, co-operating on recovery activities, and strengthening regional knowledge management and leadership. ASEAN member countries reaffirmed their commitment to responding jointly to disasters in the ASEAN Declaration on One ASEAN, One Response: ASEAN Responding to Disasters as One in the Region and Outside the Region, adopted at the 28th ASEAN Summit in Vientiane in September 2016.

Environment

- Environmental issues were addressed in the ASEAN Joint Statement on Biodiversity Conservation at the 13th Meeting of the Conference of Parties to the Convention on Biological Diversity (CBD COP-13) and the ASEAN Joint Statement on Climate Change at the 22nd Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP-22). Both were adopted at the Summit in Vientiane, though without including many specific new commitments.

Box 2.6. **Recent plans to shape ASEAN co-operation on human and social development** (*cont.*)

Education

- The ASEAN Work Plan on Education 2016-2020, which was adopted at the Ninth ASEAN Education Ministers meeting in Kuala Lumpur in May 2016, covers co-operation in areas including regional history and culture, education access, ICT in education, Technical and Vocational Education and Training (TVET) and lifelong learning, education for sustainable development, quality assurance, university-industry partnerships and capacity building in the education sector. Improving accessibility is a particular emphasis of the ASEAN Declaration on Strengthening Education for Out-of-School Children and Youth, adopted at the ASEAN Summit in September 2016.

Working conditions

- The ASEAN Occupational Safety and Health Network (ASEAN-OSHNET) Work Plan 2016-2020 was adopted at the 24th ASEAN Labour Ministers Meeting in Vientiane in May 2016. It includes projects under the thematic areas of strengthening labour inspection, occupational safety and health standards and capacity, and HIV prevention and control in the workplace. The Vientiane Declaration on Transition from Informal Employment to Formal Employment towards Decent Work Promotion in ASEAN, adopted at the Vientiane Summit, calls on countries in the region to co-operate in improving working conditions through reform in areas including employment promotion, skills development and labour protection.

Health

- Health issues were addressed at the ASEAN Summit in Vientiane through the ASEAN Declaration of Commitment on HIV and AIDS: Fast Tracking and Sustaining HIV and AIDS Response to End the AIDS Epidemic by 2030, which includes commitments to improve prevention, testing, treatment, care and support services and to co-operate in regional monitoring and in sharing experiences and best practices in responses.

Cultural heritage

- The Vientiane Declaration on Reinforcing Cultural Heritage Cooperation in ASEAN, adopted at the ASEAN Summit in September 2016, commits ASEAN member countries to co-operation in protecting, preserving and promoting tangible cultural heritage and to developing new ways of co-operating on issues related to intangible cultural heritage.

The East Asia Summit has addressed multiple aspects of social development co-operation

Human and social development topics are central to much of the work of the East Asia Summit (EAS), a gathering of 18 leaders from the Asia-Pacific region, including the ten ASEAN member states. The six priority areas of regional co-operation within the EAS framework are environment and energy, education, finance, global health issues and pandemic diseases, natural disaster management and ASEAN connectivity. Focus on these themes was reinforced through the priorities identified in the Phnom Penh Declaration on the East Asia Summit Development Initiative of 2012 and subsequent plans of action on its implementation in 2014 and 2015. Work on well-being and resilience is helping to address transborder issues and strengthen national capacities in education, public health and disaster preparedness.

The harmonisation of higher education can boost student mobility within the region

EAS co-operation on education has primarily been directed through the Education Ministers Meeting (EMM). At the second EMM, in Vientiane in September 2014, ministers outlined the objectives of EAS co-operation on education until 2015 as quality of education, harmonisation of education systems' goals and the promotion of student and teacher mobility. At the third EMM, in Selangor, Malaysia, in May 2016, it was agreed that future co-operation on education should be aligned with and complementary to the ASEAN Work Plan on Education 2016-2020.

International student mobility is an important element of co-operation in education, as recognised by the EMM and in other regional frameworks. One of the four priorities of the ASEAN Five-Year Work Plan on Education 2011-2015 was the strengthening of cross-border mobility and internationalisation of education. Enhanced mobility is an intended outcome of the European Union Support to Higher Education in the ASEAN Region (SHARE), an EU grant-funded programme of the EU and the ASEAN Secretariat focused on harmonising regional higher education. The ASEAN International Mobility for Students (AIMS) programme also supports student mobility for citizens of member countries of the Southeast Asian Ministers of Education Organisation (SEAMAO), which is composed of the ten ASEAN member countries and Timor-Leste.

Many Emerging Asian countries do not attract large numbers of international students and intra-regional flows have been small. Of the countries in the region for which recent data were available on tertiary students from the rest of the world, the most popular destinations for study have been Malaysia (35 592 students in 2014), India (34 419 students in 2013), Thailand (12 274 students in 2014) and Indonesia (6 058 students in 2010). These four countries tended not to attract many students from within the region, however, except for the relatively large share of Malaysian students in Indonesia (41.5% of the Indonesian total) and, in Thailand, of Chinese students (34.2% of the Thai total) and Vietnamese students (11.1% of the Thai total).

Table 2.7. **International tertiary students in Emerging Asian countries, by country of origin**

		Country of origin												
		Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam	China	India	Rest of the World
Country of destination	Brunei Darussalam (2014)	-	6	38	-	93	4	15	10	23	8	14	14	356
	Cambodia (2006)	-	-	-	15	-	-	-	-	-	51	-	-	68
	Indonesia (2010)	-	-	-	-	2 516	-	-	-	57	50	245	-	6 058
	Lao PDR (2014)	-	43	-	-	-	-	2	-	-	333	87	-	543
	Malaysia (2014)	367	222	2 688	-	-	280	299	397	704	569	3 259	1 397	35 592
	Myanmar (2011)	-	-	-	-	1	-	-	-	4	8	43	2	65
	Philippines (2008)	1	9	72	1	7	47	-	4	43	64	550	128	2 665
	Thailand (2014)	2	692	249	807	84	1 361	141	24	-	823	4 202	285	12 274
	Viet Nam (2014)	-	443	-	1 442	-	-	20	1	-	-	274	-	2 540
	India (2013)	-	55	91	14	1 874	189	19	100	279	99	694	-	34 419

Source: UIS (2016), *UIS Data Centre*, UNESCO Institute for Statistics, http://data.uis.unesco.org.

Globally, international mobility among tertiary students has increased significantly in the recent past as students have sought access to high-quality education and educational institutions and governments have sought to benefit from diverse student bodies, additional revenues from international students and other economic and

political considerations. Highly educated international students may be more likely to stay in their country of study after graduating and thus make a strong contribution to growth and innovation there. International students tend to make up a larger share of total students at higher levels of tertiary education: on average in 2013, international students made up 9% of enrolment in OECD countries at all levels of tertiary education, and 24% of enrolment in doctoral or equivalent programmes. Among OECD countries, students' choice of where to study abroad tends to be influenced by the familiarity of language of instruction, quality of programmes, tuition fees, immigration policies and other factors, such as the ease of credit transfer (OECD, 2015).

An increase in pandemic preparedness is needed

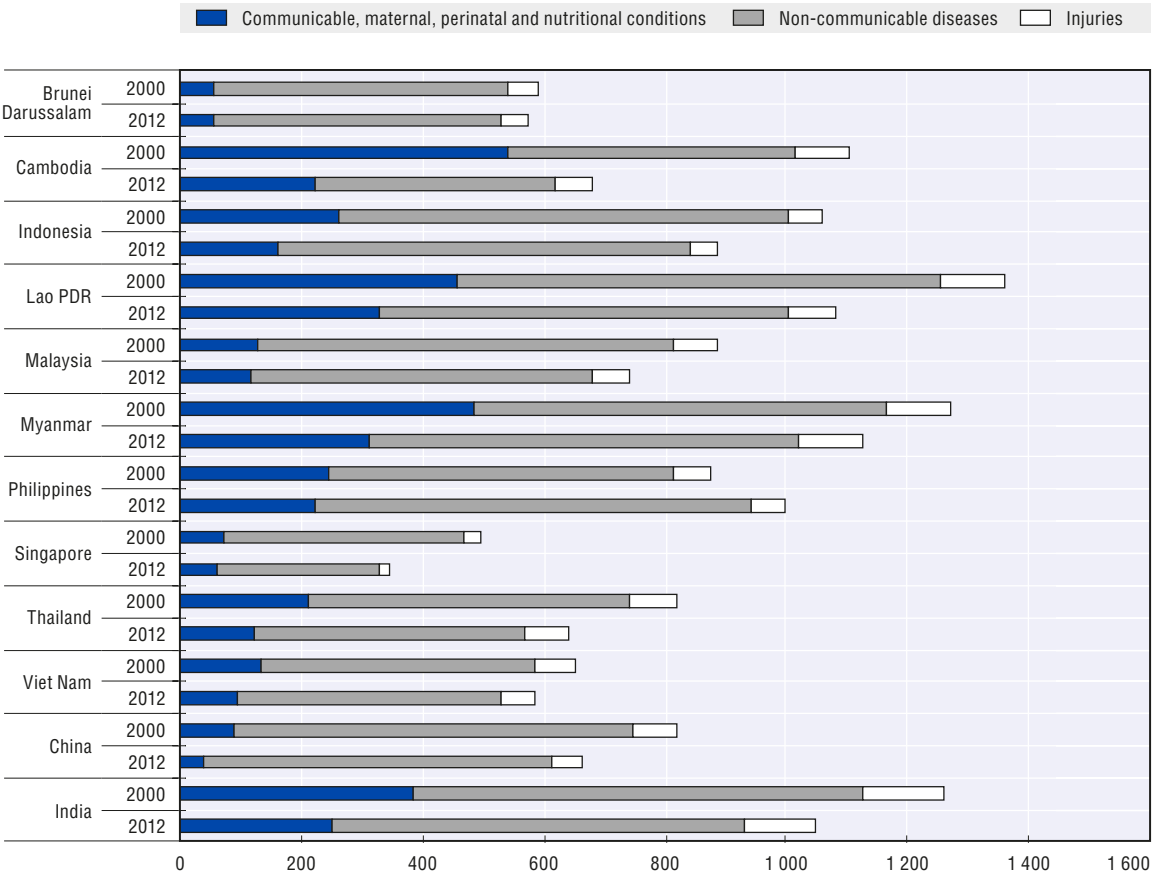
EAS co-operation on health has focused on the management of risks posed by infectious diseases, including responses to specific diseases and potential pandemics. Threats posed by outbreaks have been addressed by the East Asia Summit Declaration on Avian Influenza Prevention, Control and Response in 2005 and the Joint Statement/ Declaration of the Ninth East Asia Summit on Regional Response to Outbreak of Ebola Virus Disease in 2014. Addressing the spread of Middle East Respiratory Syndrome (MERS) was a topic of discussion during the Tenth East Asia Summit in November 2015.

At the 2013 EAS in Brunei Darussalam, the Asia Pacific Leaders Malaria Alliance (APLMA) was formed as a heads-of-government group to eliminate the disease from the region by 2030. Its secretariat opened in 2014. The APLMA Strategic Plan, Roadmap Phase 1 2016-2010, sets six priorities towards achieving this goal: regional action and co-ordination; mapping, prevention, testing and treatment; ensuring access to high-quality services and tools; improving targeting and efficiency to maximise impact; securing financing; and innovating to eliminate malaria.

Included in the Plan of Action to Implement the Phnom Penh Declaration on EAS Development Initiative (2015-2017) was a commitment to increase disease and pandemic preparedness through co-operation on prevention, control, care, management, surveillance and timely response. Following concerns about the socio-economic impacts of infectious disease outbreaks globally and in the region, including SARS in 2003, H5N1 in 2005, H1N1 in 2009, Ebola in 2014 and, recently, MERS, the EAS adopted the East Asia Summit Statement on Enhancing Regional Health Security Relating to Infectious Diseases with Epidemic and Pandemic Potential in 2015. This statement made broad declarations to promote information sharing for early detection of threatening infectious diseases, to strengthen national capacities in disease prevention and management, and to enhance regional technical and substantive co-operation.

Health is improving in much of the region and deaths from infectious diseases are declining. Between 2000 and 2012, the overall mortality rate declined in most of Emerging Asia, except for the Philippines, and there was a decline in the rate of deaths due to communicable, maternal, perinatal and nutritional conditions in all countries in the region, particularly Cambodia, China and Thailand, which had declines of 58.2%, 53.3% and 42.7%, respectively (Figure 2.9). As a share of total deaths, this category declined in all countries (particularly Cambodia and Myanmar, where it fell by 15.9 and 10.3 percentage points, respectively). In Malaysia and Singapore, other causes of mortality declined faster.

Figure 2.9. **Cause of death in Emerging Asia, 2000 and 2012**
Deaths per 100 000 people

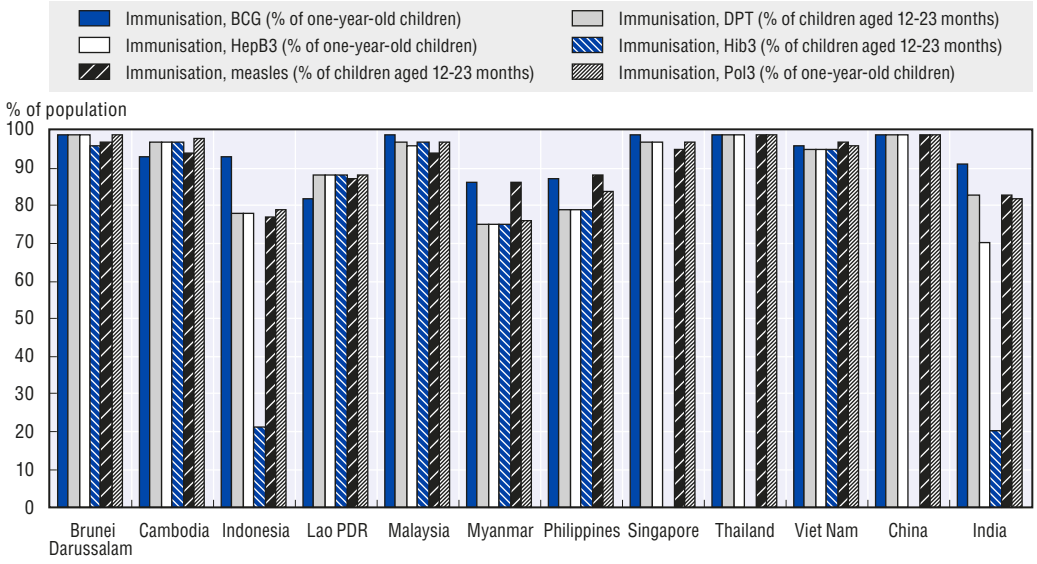


Source: World Health Organization (2016), *Global Health Observatory data repository*, World Health Organization, http://apps.who.int/gho/data.

StatLink http://dx.doi.org/10.1787/888933443602

Despite general improvements in public health, large gaps remain among Emerging Asian countries in national health systems and preparedness in managing infectious diseases. Immunisation rates for key vaccines are particularly low in Indonesia, Myanmar, the Philippines and India (Figure 2.10). In 2013, total health expenditure per capita varied from USD 2 752.3 in Singapore to USD 20.3 in Myanmar. The majority of health spending is public in Brunei Darussalam, Thailand, China, Malaysia, Viet Nam and Lao PDR, while private spending accounts for more than half of the total in the rest of the region. Such fundamental gaps in health sector capacities may need to be addressed for the region to benefit more fully from information sharing and other co-operative initiatives.

Figure 2.10. **Immunisation rates in Emerging Asia, 2013**
Percentage of population, by age group



Note: Bacillus Calmette-Guérin (BCG) vaccine, primarily used against tuberculosis; diphtheria, pertussis and tetanus (DPT); Hepatitis B (HepB3) vaccine; haemophilus influenza type B (Hib3) vaccine; and polio (Pol3) vaccine. Data are not available for Hib3 immunisation in Singapore, Thailand or Viet Nam.

Source: World Bank (2016), *Health and Nutrition and Population Statistics*.

StatLink http://dx.doi.org/10.1787/888933443615

ENERGY

Assessment of progress in integration

- Though the progress in developing the ASEAN Power Grid (APG) continues steadily, it has been slow owing to technical and financial challenges. Weak institutional support and limited market openness hamper the development of APG, while liquefied natural gas (LNG) terminals are out-pacing physical pipelines under TAGP.
- Under the Trans-ASEAN Gas Pipeline (TAGP), the development of liquefied natural gas (LNG) terminals is outpacing the expansion of physical gas pipelines.

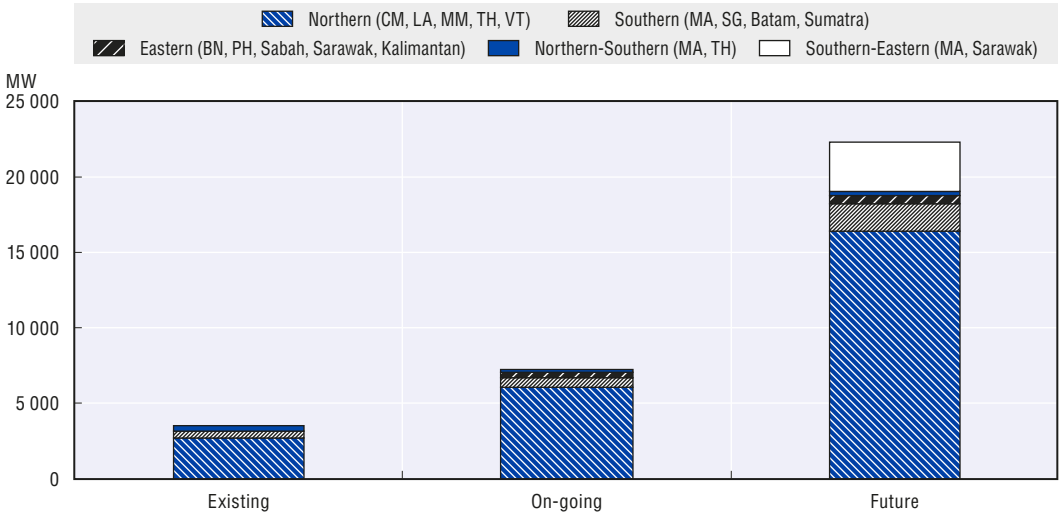
The first phase of the ASEAN Plan of Action for Energy Cooperation (APAEC) outlines key strategies for energy sector integration in the region spanning multiple programme areas (ASEAN Centre for Energy, 2015). Improved connectivity, however, remains fundamental to these efforts to deepen market connections and improve security and efficiency. Key connectivity projects have been grouped together under the ASEAN Power Grid (APG) and Trans-ASEAN Gas Pipeline (TAGP) initiatives.

The development of the APG is progressing gradually, but remains constrained by institutional barriers

As of March 2016, the capacity of completed APG projects totalled 5 212 MW, with an additional 3 300 MW planned to be added to become operational between 2018 and 2021. The progress made in the APG has above all been driven by the countries in the Northern System region, which includes Cambodia, Lao PDR, Myanmar, Thailand and Viet Nam, while most major projects in other system regions have yet to be commissioned (Figure 2.11). Since the progress has primarily been driven by bilateral action and national interests, rather than by regional institutions, policies and regulations that would facilitate the development of APG in the region as a whole have lagged behind. Consequently, the APG projects have faced numerous delays due to technical and financial constraints, which emphasises the need for regional governance mechanisms and co-ordinated energy policies. In particular, this is needed in order to standardise practices on issues including taxes, tariffs, third-party access, and power purchase and pricing agreements. While the harmonisation of legal, regulatory and technical standards is in the preparation phase for study, implementation has yet to be planned. Weak institutional support, on both national and regional levels, thus hampers the development of APG. The establishment of the APG Transmission System Operator Institution (ATSO) and the APG Generation and System Planning Group Institution (AGTP) would help to facilitate the harmonisation of technical aspects that are needed for the APG to operate seamlessly. Stronger regional intuitions may also support the implementation of commitments on integration, through a greater role for the ASEAN Power Grid Consultative Committee (APGCC), for example, and greater co-ordination through the ASEAN Energy Regulators' Network (AERN) or a new organisation.

Furthermore, targeting energy security on a regional level rather than a national level would support the development of APG, calling for an ease of restrictions on electricity imports and other national self-sufficiency policies that hamper cross-border trade of electricity. In addition, a favourable investment environment would be essential to realise the future projects envisioned under the APG, as massive investments are needed. Consequently, issues such as fossil fuel subsidies, anti-competitive practices from state-owned companies and risks of expropriation should be addressed, in order to attract investments in APG.

Figure 2.11. **Transmission capacity in the ASEAN Power Grid by system region**



Source: *HAPUA Secretariat (2014), ASEAN Power Grids Interconnection Projects for Energy Efficiency and Security of Supply*, http://www.carecprogram.org/uploads/events/2014/Regional-Energy-Trade-Workshop/Presentation-Materials/009_104_209_Session3-3.pdf.

StatLink http://dx.doi.org/10.1787/888933443628

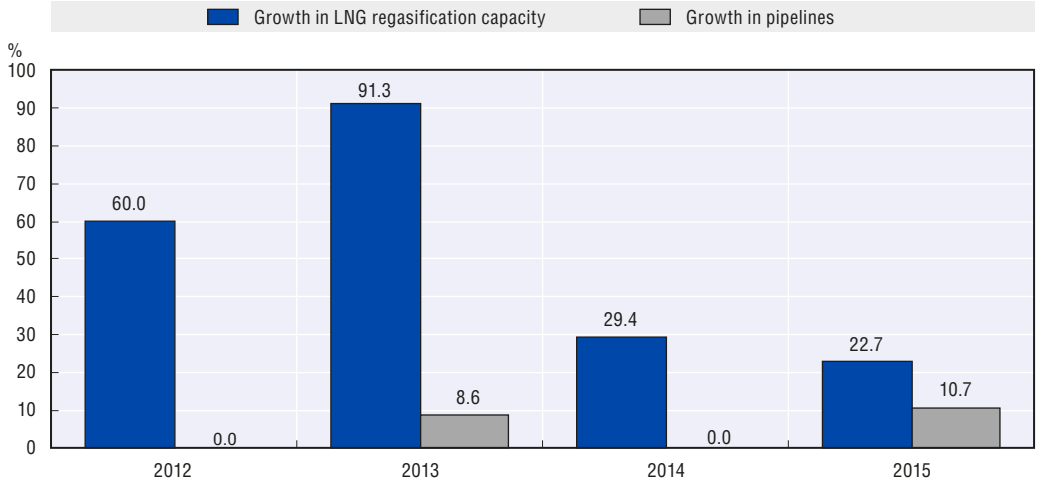
In addition to expanding the physical interconnectors, the APG also aims to advance electricity trading between the ASEAN member states, which is currently limited to bilateral trading. Recent progress towards multilateral electricity trading includes the power integration project between Lao PDR, Thailand and Malaysia. While the project will utilise existing interconnectors, it will still serve as an important pilot test of the institutional and contractual agreements necessary for multilateral trade in ASEAN, including third-party access policies. In parallel to the APG initiative, increased electricity is also approached in the Greater Mekong Subregion Regional Power Trade (GMS RPT) that includes Cambodia, China`s Yunnan and Guangxi provinces, Lao PDR, Myanmar, Thailand and Viet Nam. Similar to the APG, the GMS RPT faces institutional, regulatory and financial challenges; the Regional Power Co-ordination Centre (RPCC), which would synchronise operations across the national power markets, has not yet been established, and there is a lack of open third-party access, in addition to common transmission pricing policies and cost recovery tariffs.

Cross-border interconnectors and a greater degree of electricity trading could reduce the dependence on fossil fuel imports as well as reduce the impact of electricity shortages rising from fossil fuel price fluctuations in thermal-dominated systems and dry periods in hydro-dominated systems. It could also lead to lower prices and facilitate the increased use of intermittent renewable sources of power. In the long term, it could be possible to create a power pool based on voluntary participation in the region, which would serve to facilitate electricity trading significantly. This would provide an organised platform for electricity trade, while allowing for countries with differing national energy policies to choose their degree of participation. In the medium term, however, ASEAN should focus its efforts on facilitating and increasing cross-country electricity trading through stronger regional co-operation.

National-level initiatives have directed TAGP development

The TAGP was originally envisioned as a regional gas pipeline network, to be established by 2020. However, as individual member states started to develop liquefied natural gas (LNG) terminals in parallel to the slow expansion of the physical gas pipelines, LNG was incorporated into the TAGP strategy in 2012. As the latter can be constructed without the same need for regional co-operation, the creation of LNG terminals has outpaced the expansion of physical gas in recent years (Figure 2.12). The increase in LNG imports from outside the region and inclusion in the TAGP of virtual pipelines through regasification terminals (RGTs) have also changed the initiative and further illustrated the dominance of national over regional approaches to energy security.

Figure 2.12. **Progress made in TAGP projects, 2012-15**



Source: ASEAN Centre for Energy (2015), "Phase 1: 2016-2020" in *ASEAN Plan of Action for Energy Cooperation (APAEC) 2016-2025*.

StatLink http://dx.doi.org/10.1787/888933443638

While the construction of LNG terminals can be managed at a national level, regional co-operation is needed in establishing a standard clause for LNG cargo diversion and destination flexibility for ASEAN contracts, and to allow third-party access to terminals. A unified strategy in the sector would also strengthen the region's bargaining power in a global LNG market where Asian importers are subject to high prices with the Asian premium. An ASEAN LNG trading hub could also reduce prices by improving price setting and transparency, such as through the establishment of an LNG pricing index as an alternative to the oil-indexed contracts that have proved expensive in recent years. Singapore and Malaysia are both considering the opportunities for creating a competitive trading hub for gas that could serve as an LNG price marker in the region, though low volumes and a lack of regional involvement complicate the realisation of this plan. Energy integration depends, however, on national-level reform as well. Reductions in fossil-fuel subsidies and allowing third-party access would improve competition and support clear market signals that could facilitate investment in infrastructure and the development of cross-border trade.

INITIATIVE FOR ASEAN INTEGRATION

Assessment of progress in integration

- The Initiative for ASEAN Integration (IAI) Work Plan II ended in 2015 and was replaced by Work Plan III, covering 2016-20. The new plan provides greater detail on intended support for improving the implementation of IAI actions.

The Initiative for ASEAN Integration was launched at the ASEAN Heads of State Summit in November 2000 to co-ordinate action in narrowing development gaps among and within ASEAN member states. Actions under the initiative are defined in six-year IAI Work Plans (IAI-WP). The first, IAI-WP I, covered the years 2002-08 and set goals for assisting CLMV development in infrastructure, human resource development and ICT, as well as supporting regional economic integration more generally. IAI-WP II, which covered 2009-15, outlined plans to narrow development gaps among ASEAN members and between members and the rest of the world; the plans also focused on assisting the CLMV countries in meeting regional integration targets. IAI-WP III was adopted by regional leaders at the 28th ASEAN Summit in Vientiane in September 2016.

New work plan shifts emphasis to economic growth

The focus of IAI under the new Blueprint has shifted somewhat (Table 2.8). The actions outlined in AEC Blueprint 2015, launched in 2008, covered capacity building for the development of production and distribution networks, the support of the ASEAN-6 countries, international co-operation, capacity building for integration and monitoring and analysis of the integration process. Of these, only international co-operation and capacity building for integration are also addressed in AEC Blueprint 2025, launched in 2015. The current blueprint covers new areas, with a particular focus on fostering improved economic growth and competitiveness through sustaining economic growth; the reform of business regulation, business development and access to finance; competitiveness in rural economies; and the development of MSMEs. Further details on the future of the IAI were to be outlined in the third Work Plan. It was agreed during an April 2016 meeting of the ASEAN Integration Task Force in Jakarta that the association would focus on addressing development gaps in food and agriculture, trade facilitation, development of MSMEs, education, health and social welfare.

IAI Work Plan III, which covers 2016-20, follows the priorities outlined in AEC Blueprint 2025 with a strategic framework of actions in five areas: food and agriculture; trade facilitation; MSMEs; education; and health and well-being. The plan document highlights its "strong focus" on AEC Blueprint goals in the first three of these areas, and "some focus" on food and agriculture actions of ASEAN Socio-Cultural Community (ASCC) and on AEC goals in the last two areas (which also have a "strong focus" on ASCC targets) (ASEAN Secretariat, 2015g).

Table 2.8. **Comparison of IAI priorities in Blueprint 2015 and Blueprint 2025**

	Blueprint 2015	Blueprint 2025
Capacity building for the development of regional production and distribution networks	Enhance the IAI to serve as the platform for identifying and implementing technical assistance and capacity-building programmes for both public and private sectors in ASEAN member countries, in particular, CLMV and the other sub-regional arrangements such as the IMT-GT and the BIMP-EAGA within ASEAN to allow them to be equal partners in the development of regional production and distribution networks	
ASEAN-6 support	ASEAN-6 to continue its support for IAI programmes	
International co-operation	Garner sufficient support from dialogue partners and international organisations such as the Asian Development Bank and the World Bank for effective implementation of the IAI programmes	Identify development donors to provide technical and financial assistance for the MSMEs to focus on potential sectors, allowing them to participate effectively in regional and global value chain activities
Capacity building for economic integration	Build/strengthen capacity of government officials to develop/implement economic and social policies that would mitigate the effects of economic integration	Strengthen the capacity building in newer ASEAN member states to implement regional commitments towards ASEAN economic integration
Monitoring and analysis	Conduct periodic socio-economic studies to monitor/evaluate the impact of economic integration	
Economic growth		Sustain the pace of economic growth among ASEAN Member States
Regulatory reform/ stream-lining		Reduce the burden placed by business regulations on the creation and successful operation of formal enterprises
Business development and access to finance		Building business opportunities for growth and employment, and increasing access to financial services
Rural development		Enhance productivity and competitiveness of rural economies, especially in the newer ASEAN member states
MSMEs		Emphasise the development of MSMEs of ASEAN member states

Source: OECD Development Centre's compilation based on ASEAN Secretariat (2008), *ASEAN Economic Community Blueprint*, www.asean.org/wp-content/uploads/imagesarchive/5187-10.pdf; ASEAN Secretariat (2015a), *ASEAN Economic Community Blueprint 2025*, www.asean.org/storage/images/2015/November/aec-page/AEC-Blueprint-2025-FINAL.pdf.

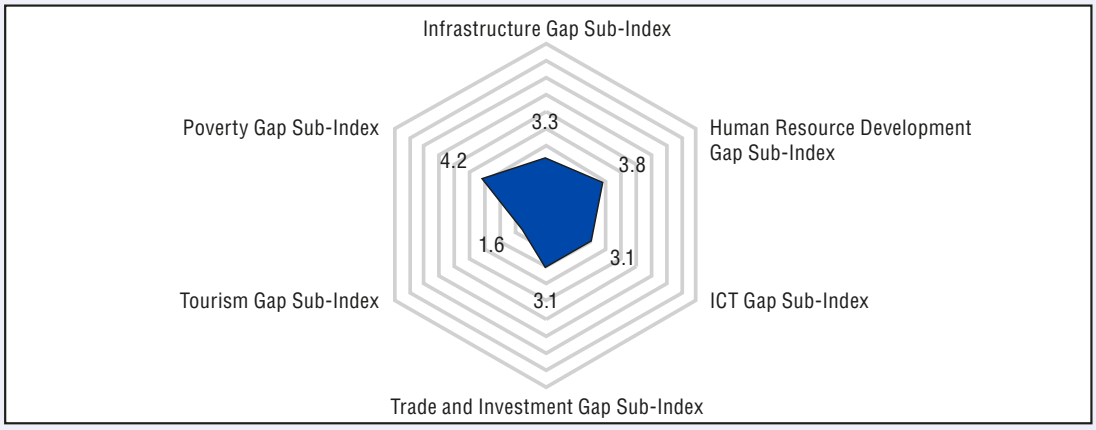
The new plan maintains the vision of Work Plan II but takes a different approach towards achieving it. Work Plan III's five policy areas represent a narrower scope than those of Work Plan II, which included actions in most areas covered by the AEC and ASCC blueprints, as well as some ASEAN Political-Security Community (APSC) Blueprint goals. There are also important differences in the approaches to be taken in implementing the two plans. Work Plan II had four enabling actions, relating to training and co-operation with CLMV officials, as well as the development of indicators for measuring development gaps. The Work Plan III document outlines more detailed commitments to strengthening implementation capacities, through six enabling actions related to training, capacity development and efficiency improvements, and four overarching dimensions for effective and efficient implementation: clear governance and ownership; presence of core skills and finance; proactive stakeholder engagement; and robust performance management.

The usefulness of the IAI in supporting ASEAN development and integration depends on the relevance of its actions in addressing inequalities within the region. The CLMV countries have been the primary focus of the IAI. These countries are the specific focus of 109 of Work Plan II's 182 action lines, and would be the primary beneficiaries of initiatives taken under the 26 actions defined in Work Plan III. The focus on addressing these areas has not always been proportionate to the degree of inequalities, though greater attention is being paid to some important areas (Box 2.7).

Box 2.7. **ASEAN development gaps and IAI-WP II coverage**

According to the Narrowing Development Gap Indicators (NDGI) developed by the OECD Development Centre and ASEAN Secretariat using data from 2012, development gaps between the ASEAN-6 and CLMV countries are largest in poverty and smallest in tourism (Figure 2.13). While the actions set in recent IAI work plans cover a broad range of policy areas, including the six sectors covered by the NDGI (poverty, human resource development, infrastructure, ICT, trade and investment, and tourism), the number of separate actions is uneven. Most actions in Work Plan II were directly related to infrastructure, ICT, and trade and investment. Work Plan III places relatively more emphasis on human resource development and trade facilitation, and also pays additional attention to poverty, an area with a significant development gap.

Figure 2.13. **Narrowing Development Gap Indicators, 2012**



Note: Each sub-index of the NDGI, whose value ranges from 0 to 10 base points – where 0 denotes no gap and 10 the widest gap – is built from multiple variables within six key policy areas shown above. For more detailed information, see www.oecd.org/dev/asiapacific.

Source: OECD (2013), *Economic Outlook for Southeast Asia, China and India 2014: Beyond the Middle-Income Trap*, http://dx.doi.org/10.1787/saeo-2014-en.

StatLink http://dx.doi.org/10.1787/888933443640

Poverty is the area with the largest gap, at 4.2 points, and is receiving increased attention through the IAI. Few action lines in Work Plan II directly addressed this topic; three were described relating to poverty alleviation through assessments, the implementation of projects targeting rural poverty and workshops on grassroots economic development. Poverty is addressed in Work Plan III indirectly through seven actions on food and agriculture, particularly on food security and diversification, and through three actions on health and well-being.

The human resource development gap is fairly large, at 3.8 points. Two actions in Work Plan II, on planning skills and training strategies, are directly related to human resource development, and several more address this issue regarding specific sectors and the development of education systems and labour markets. Human resource development initiatives feature prominently in Work Plan III, in five actions on education and in capacity-building actions in food and agriculture, trade facilitation, MSMEs and health and well-being.

The infrastructure gap is 3.3 points, and was a large focus in Work Plan II but largely left out of Work Plan III. The infrastructure development section of Work Plan II includes 21 actions spanning the expansion of infrastructure, technical assistance programmes and capacity-building programmes. Infrastructure issues relating to ICT and other sectors are also addressed. While Work Plan III notes progress in infrastructure development in the CLMV countries, its actions do not directly cover infrastructure.

Box 2.7. **ASEAN development gaps and IAI-WP II coverage** (*cont.*)

The gap in ICT is a moderate 3.1 points. Considerable attention was paid to the issue in Work Plan II, which includes six actions directly related to the sector, including in training and support programmes, and in the development of accessible infrastructure and education. ICT was also addressed in three of the plan's action lines under infrastructure development. ICT development is not explicitly included among the actions set in Work Plan III, however.

A significant share of IAI actions in Work Plan II and Work Plan III are related to trade and investment, where the NDGI is also 3.1 points. Work Plan II included 19 actions under the free flow of goods and goods, four actions under the free flow of services, six actions under the free flow of investment and five actions under the free flow of capital. These actions include study of the benefits of regional integration, capacity building for trade facilitation, and technical assistance and training programmes. Work Plan III includes six actions on trade facilitation, addressing capacity building, standards and other important issues.

At 1.6 points, the gap in the development of the tourism sector is relatively small in comparison with the other sectors studied. Work Plan II included three tourism-related actions, pertaining to technical assistance in the free flow of services and training for the sector, and promoting the development of ecotourism as a means of sustainable development. Work Plan III does not include actions directly related to tourism development.

References

ASEAN (2016a), *ASEAN Stats* (database), http://aseanstats.asean.org/.

ASEAN (2016b), *Master Plan on ASEAN Connectivity 2025*, ASEAN, Jakarta, http://asean.org/storage/2016/09/Master-Plan-on-ASEAN-Connectivity-20251.pdf.

ASEAN Centre for Energy (2015), *ASEAN Plan of Action for Energy Cooperation (APAEC) 2016-2025, Phase I: 2016-2020*, ASEAN Secretariat, Jakarta, www.aseanenergy.org/wp-content/uploads/2015/12/HighRes-APAEC-online-version-final.pdf.

ASEAN Secretariat (2015a), *ASEAN Economic Community Blueprint 2025*, ASEAN Secretariat, Jakarta, www.asean.org/storage/images/2015/November/aec-page/AEC-Blueprint-2025-FINAL.pdf.

ASEAN Secretariat (2015b), *ASEAN Integration in Services Report*, ASEAN Secretariat, Jakarta, www.miti.gov.my/miti/resources/ASEAN_Integration_Report_20151.pdf.

ASEAN Secretariat (2015c), *The ASEAN Strategic Action Plan for Consumer Protection (ASAPCP) 2016-2025: Meeting the Challenges of a People-Centred ASEAN Beyond 2015*, ASEAN Secretariat, Jakarta, http://asean.org/storage/2012/05/ASAPCP-UPLOADING-11Nov16-Final.pdf.

ASEAN Secretariat (2015d), *Master Plan on ASEAN Connectivity 2025*, ASEAN Secretariat, Jakarta, http://asean.org/storage/2016/09/Master-Plan-on-ASEAN-Connectivity-20251.pdf.

ASEAN Secretariat (2015e), *ASEAN Strategic Action Plan for SME Development 2016-2025*, ASEAN Secretariat, Jakarta, www.asean.org/storage/images/2015/November/ASEAN-SAP-SMED-2016-2025/SAP%20SMED%20-%20Final.pdf.

ASEAN Secretariat (2015f), *ASEAN 2025: Forging Ahead Together*, ASEAN Secretariat, Jakarta, www.asean.org/storage/2015/12/ASEAN-2025-Forging-Ahead-Together-final.pdf.

ASEAN Secretariat (2015g), *ASEAN Integration Work Plan III*, ASEAN Secretariat, Jakarta, http://asean.org/storage/2016/09/09rev2Content-IAI-Work-Plan-III.pdf.

ASEAN Secretariat (2010a), *Intellectual Property Rights Action Plan of 2011-2015*, ASEAN Secretariat, Jakarta, www.ecap-project.org/sites/default/files/IP_resources/ASEAN%20IPR%20Action%20Plan%202011-2015.pdf.

ASEAN Secretariat (2010b), *Master Plan on ASEAN Connectivity*, ASEAN Secretariat, Jakarta, www.asean.org/storage/images/ASEAN_RTK_2014/4_Master_Plan_on_ASEAN_Connectivity.pdf.

ASEAN Secretariat (2009), *ASEAN Strategic Action Plan 2010-2015*, ASEAN Secretariat, Jakarta, www.asean.org/storage/images/archive/SME/SPOA-SME.pdf.

ASEAN Secretariat (2008), *ASEAN Economic Community Blueprint (2008-2015)*, ASEAN Secretariat, Jakarta, www.asean.org/wp-content/uploads/images/archive/5187-10.pdf.

ERIA (2015), *The Comprehensive Asia Development Plan 2.0 (CADP 2.0): Infrastructure for Connectivity and Innovation*, Economic Research Institute for ASEAN and East Asia, Jakarta. Available at www.eria.org/ERIA-RPR-FY2014-04.pdf.

ERIA (2014), *ASEAN SME Policy Index 2014: Towards Competitive and Innovative ASEAN SMEs*, Economic Research Institute for ASEAN and East Asia, Jakarta.

ERIA-UNCTAD (2016), *Non-Tariff Measures in ASEAN*, Economic Research Institute for ASEAN and East Asia, Jakarta, and United Nations Conference on Trade and Development, http://unctad.org/en/PublicationsLibrary/ERIA-UNCTAD_Non-Tariff_Measures_in_ASEAN_en.pdf.

Fukunaga, Y. (2015), *Assessing the Progress of ASEAN MRAs on Professional Services*, Economic Research Institute for ASEAN and East Asia, Jakarta. Available at www.eria.org/ERIA-DP-2015-21.pdf.

HAPUA Secretariat (2014), ASEAN Power Grids Interconnection Projects for Energy Efficiency and Security of Supply, Heads of ASEAN Power Utilities/Authorities, Jakarta, www.carecprogram.org/uploads/events/2014/Regional-Energy-Trade-Workshop/Presentation-Materials/009_104_209_Session3-3.pdf.

IMF (2016), *Direction of Trade Statistics* (database), International Monetary Fund, Washington DC, http://data.imf.org/?sk=9D6028D4-F14A-464C-A2F2-59B2CD424B85.

OECD (2016), *Economic Outlook for Southeast Asia, China and India 2016: Enhancing Regional Ties*, OECD Publishing, Paris, http://dx.doi.org/10.1787/saeo-2016-en.

OECD (2015), *Education at a Glance 2015: OECD Indicators*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eag-2015-en.

OECD (2013), *Economic Outlook for Southeast Asia, China and India 2014: Beyond the Middle-Income Trap*, OECD Publishing, Paris, http://dx.doi.org/10.1787/saeo-2014-en.

Othman (2007), *Asian Journal of Agriculture and Development*, Vol. 4, Issue 2, pp. 83-92.

UIS (2016), *UIS Data Centre*, UNESCO Institute for Statistics, Paris, http://data.uis.unesco.org.

WEF (2015), *Travel & Tourism Competitiveness Report 2015*, World Economic Forum, Geneva, http://reports. orum.org/travel-and-tourism-competitiveness-report-2015.

WHO (2016), *Global Health Observatory data repository*, World Health Organization, Geneva, http://apps.who.int/gho/data.

World Bank (2016), *Health and Nutrition and Population Statistics*, World Bank, Washington, DC.

Chapter 3

Developing renewable energy in Emerging Asia

While Emerging Asia is blessed with vast potential for renewable energy, additional efforts are needed for the countries to achieve their respective targets for renewable energy. Economic support for renewable energy has in many cases proven too low to provide cost recovery for project developers, which partly reflects the challenge of securing sufficient funding. The current subsidies for renewable energy should be considered as temporary measures to accelerate the declining cost of these technologies, in order for them to become competitive with conventional energy sources (i.e. reach grid parity). Hence, the policy mechanisms for renewable energy should be designed to incentivise cost-efficiency and deployment effectiveness at the same time. Obstacles such as grid issues, distorted energy pricing and administrative hurdles must also be overcome in order to maximise the potential of renewables. In this context, renewable energy could play a significant role in supplying the rapidly growing energy demand in Emerging Asia while limiting greenhouse gas emissions from the energy sector.

Introduction

Emerging Asia is facing a rapid increase in energy demand in coming decades, which is driven by a variety of socio-economic factors, including rapid population growth, sustained economic growth and increased access to electricity. This poses major challenges to achieving and balancing energy policy objectives in the region, including energy security, sustainable development, energy access and affordability. Energy affects all aspects of the production process and transportation of goods and services, as well as the delivery of public services.

The development of renewable energy sources is therefore critical for sustainable growth in the region. China and India are already major drivers for the development of renewable energy on a global scale. After increasing the installed capacity of solar power with 15.2 GW in 2015 alone, China has surpassed Germany and become the top country for total solar photovoltaic (PV) capacity, with approximately 19% of the global capacity (REN21, 2016). India is also taking leadership in renewable energy development, ranking fifth globally for additions of both solar power and wind power in 2015. The massive deployment of renewable energy in these two countries has had powerful impacts on driving down costs for renewables, reducing greenhouse gas (GHG) emissions and creating green jobs. Furthermore, the Association of Southeast Asian Nations (ASEAN) has a vast potential for renewable energy sources (RES), which is largely untapped with the exception of large-scale hydropower. While the region is expected to see a steady rise in hydropower and rapid expansion of other renewables, the International Energy Agency (IEA) still projects the share of fossil fuels in the total primary energy supply (TPES) to increase to 78% by 2040.

As a measure to combat this trend, ASEAN's energy ministers collectively agreed to set an aspirational target for the share of renewable energy in the region during the 33rd ASEAN Ministers on Energy Meeting (AMEM) in October 2015. The target is to increase the share of renewables (including large-scale hydropower but not traditional uses of biomass) in the TPES to 23% by 2025. In emerging Asia as a whole, coal and gas are expected to prevail as the dominant source of energy towards 2040. However, the projected growth in energy demand provides great opportunities for emerging Asia to exploit its largely untapped potential of renewable energy sources.

In order to facilitate the development of renewable energy in the region, obstacles such as grid issues, distorted energy pricing and administrative hurdles must be overcome. Although energy efficiency measures could help to slow the growth of fossil fuel consumption, large-scale investment in renewable energy development would still be needed to make a significant difference. Consequently, it is essential to develop a stable policy landscape that provides economic and regulatory support for renewable energy development.

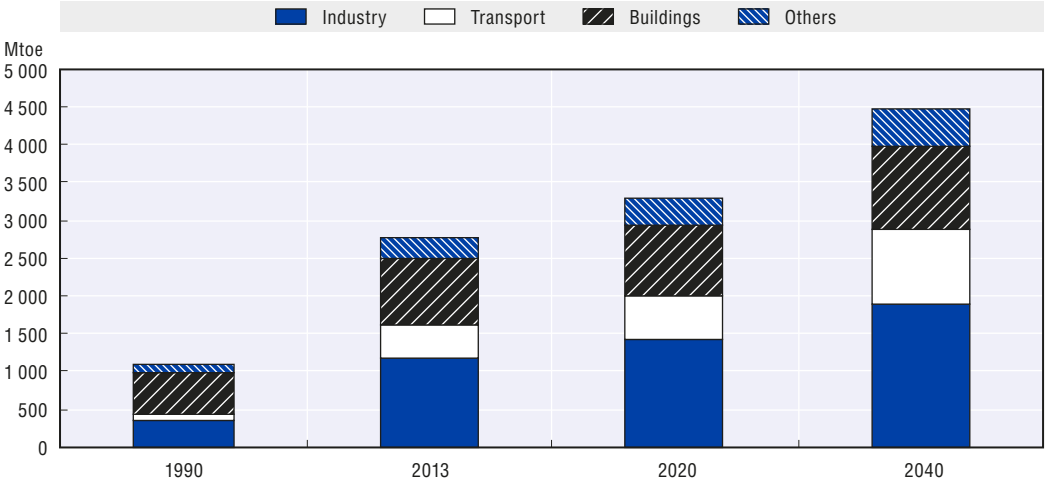
Energy outlook for Emerging Asia towards 2040

Growth in energy consumption is particularly strong in industry and transportation

Under the New Policies Scenario developed by IEA (2015a; 2015b), the total final energy consumption (TFC) in Emerging Asia is projected to rise from 2 768 million tonnes of oil equivalent (Mtoe) in 2013 to 4 483 Mtoe in 2040 (Figure 3.1). Throughout the period, industry accounts for the largest share of TFC in ASEAN, China and India, and its share of TFC in the region as a whole decreases negligibly from 43% in 2013 to 42% in 2040. The annual energy consumption from the industry is expected to increase to 1 887 Mtoe in Emerging Asia in 2040, up from 1 186 Mtoe in 2013. So far, energy consumption in the region has largely been driven by China's industry, which alone consumed 881 Mtoe in 2013. This corresponded to 32% of the total final energy consumption in the entire region.

Although China's industry will be a key driver for the increase in energy consumption in Emerging Asia towards 2040, its relative share of TFC in the region is expected to decrease to 24%. In parallel, India's industry will play an increasingly important role as a driver for energy consumption in the region. While India's industry accounted for 7% of the TFC in emerging Asia in 2013, this share is expected to increase to 13% by 2040. Within India, the industry's share of TFC will develop from 19% in 2013 to 28% in 2040. Although industry will be the sector with the largest increase in annual consumption in Emerging Asia in absolute values, the transport sector will have the highest growth rates in annual energy consumption. As the disposable income increases for the population in emerging Asia, the increase in personal vehicles will contribute to more than doubling the annual energy consumption of the transportation sector, from 437 Mtoe in 2013 to 981 Mtoe in 2040. While India accounts for an increasing share of TFC in emerging Asia, and ASEAN's share remains relatively stable, China's share decreases from 66% in 2013 to 56% in 2040 (Figure 3.2).

Figure 3.1. **Emerging Asia's total final energy consumption by sector, 1990-2040**

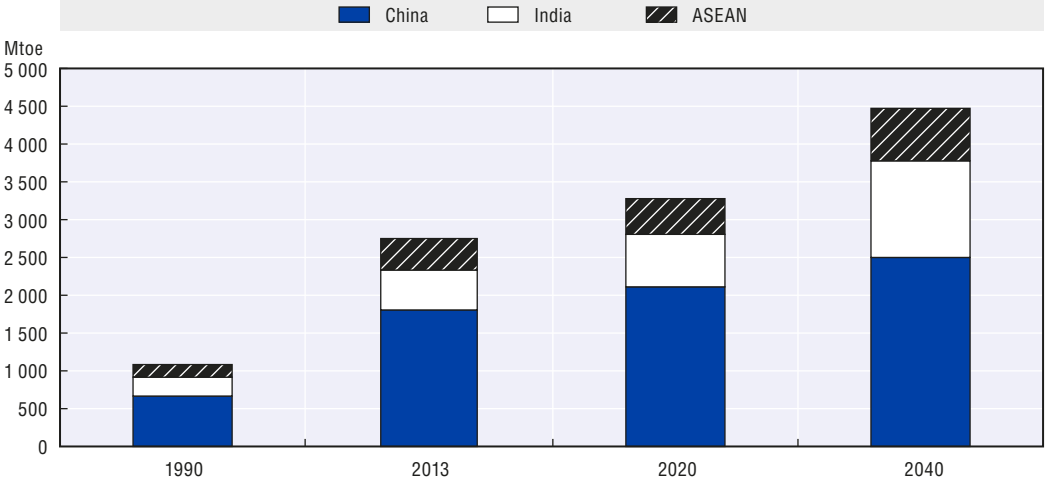


Note: Others include the commercial and residential sector. Calculations are based on IEA's New Policy Scenario.

Source: OECD Development Centre, based on IEA (2015a), *World Energy Outlook 2015*; IEA (2015b), *World Energy Outlook 2015: Special Report on Southeast Asia*.

StatLink http://dx.doi.org/10.1787/888933443657

Figure 3.2. **Emerging Asia's total final energy consumption by country grouping, 1990-2040**



Note: Calculations are based on IEA's New Policy Scenario.

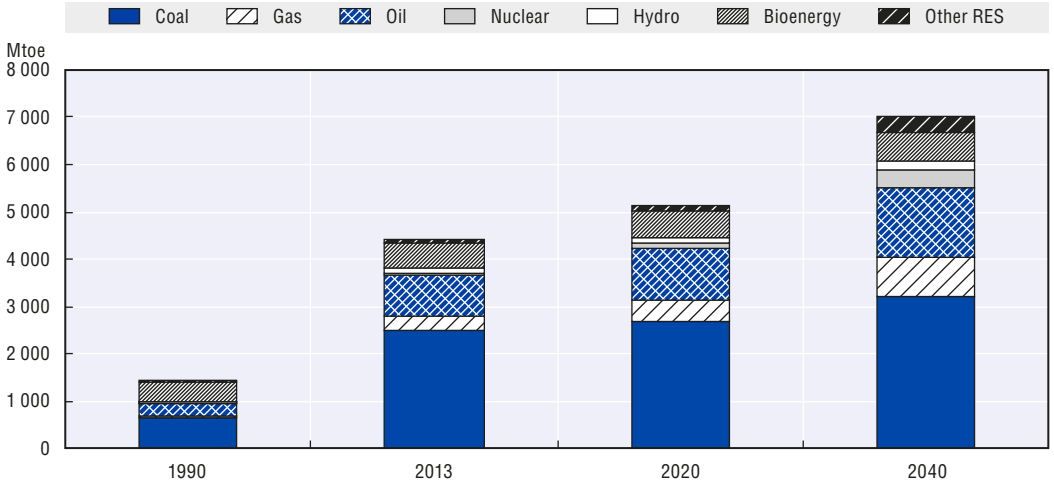
Source: OECD Development Centre, based on IEA (2015a), *World Energy Outlook 2015*; IEA (2015b), *World Energy Outlook 2015: Special Report on Southeast Asia*.

StatLink http://dx.doi.org/10.1787/888933443666

Emerging Asia's energy supply continues to be dominated by fossil fuels towards 2040

According to the IEA's New Policy Scenario, Emerging Asia will experience a significant growth in TPES, which increases from 4 406 Mtoe in 2013 to 6 998 Mtoe in 2040 (Figure 3.3). By definition, TPES is equal to Total Primary Energy Demand (TPED), and includes power generation, other energy sector and total final energy consumption (IEA, 2015a). China will continue to account for the largest share of the energy demand in Emerging Asia, even though its share of the region's TPES decreases from 69% in 2013 to 57% in 2040 owing to the strong growth in energy demand from ASEAN and India. While China's growth in TPES is expected to average 1% per year from 2013 to 2040, ASEAN and India are projected to see annual average growth rates in TPES of 2.2% and 3.4% respectively. Fossil fuels are expected to remain the main energy sources in the region throughout the period, although the share of fossil fuels in TPES decreases slightly from 83% in 2013 to 79% in 2040. Coal retains its status as the most important energy source in Emerging Asia, although China's efforts to reduce dependence on coal contribute to reducing the share of coal in the region's TPES from 56% in 2013 to 46% in 2040. The relative decrease of coal use in the region's energy mix is compensated for by increased use of nuclear energy, particularly in China and India, which leads to an increase in the share of nuclear energy in TPES from 1% in 2013 to 5% in 2040 in Emerging Asia. Furthermore, IEA (2015a) expects a rapid deployment of solar power and wind power in the region, with China and India accounting for a significant share of the global installed capacity. However, the overall share of renewable energy is expected to remain unchanged between 2013 and 2040, accounting for 16% of TPES in Emerging Asia. In the World Economic Outlook, the renewable energy share includes large-scale hydropower and all other renewable energy sources, with the exception of traditional use of solid biomass (IEA, 2015a).

Figure 3.3. **Emerging Asia's total primary energy supply by source, 1990-2040**



Note: Other RES include wind, solar PV, and geothermal. Calculations are based on IEA's New Policy Scenario.
Source: OECD Development Centre, based on IEA (2015a), *World Energy Outlook 2015*; IEA (2015b), *World Energy Outlook 2015: Special Report on Southeast Asia*.
StatLink http://dx.doi.org/10.1787/888933443673

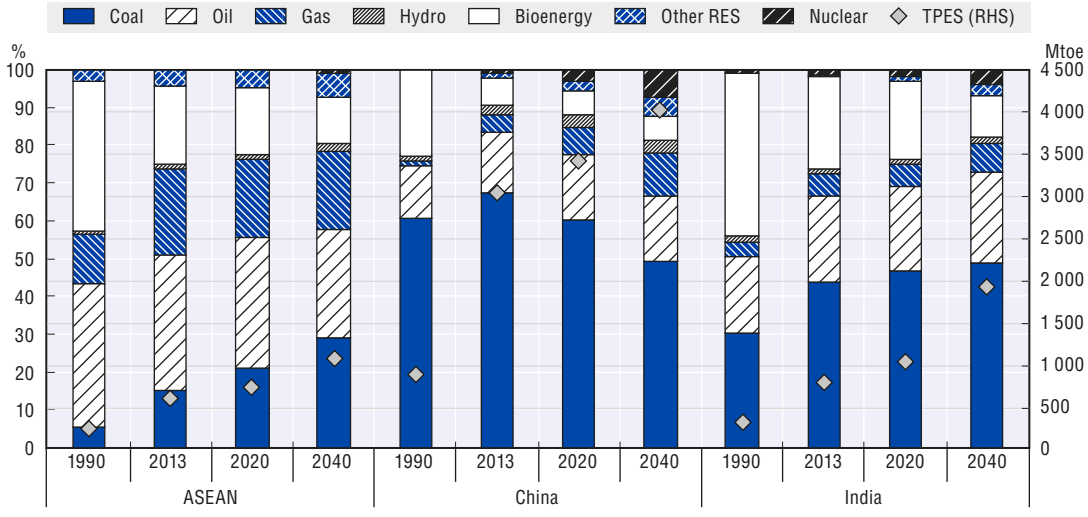
The IEA (2015a; 2015b) forecasts the fuel compositions in TPES to develop in different directions for ASEAN, India and China under the New Policies Scenario (Figure 3.4). ASEAN's TPES is projected to rise significantly from 594 Mtoe in 2013 to 1 070 Mtoe in 2040. At an annual growth rate of 4.6%, the supply of coal increases rapidly from 2013 to reach the same share of TPES as oil by 2040, with each accounting for 29% of ASEAN's

TPES by the end of the period. Natural gas is projected to grow at 1.9% per year over the period, although its share of TPES decreases slightly from 22% in 2013 to 21% in 2040. After coal, RES, which include solar, wind and geothermal energy, are projected to have the highest annual growth rate from 2013 to 2040 in ASEAN. With an annual growth rate of 3.8% per year in the period, the share of other renewable energy sources in TPES increases from 4% in 2013 to 6% in 2040. Meanwhile the share of hydropower in TPES increases slightly from 1.5% in 2013 to 2% in 2040, while the share of bioenergy decreases from 21% to 13%.

China's TPES is projected to grow at a slower pace, increasing from 3 037 Mtoe in 2013 to 4 020 Mtoe in 2040. Coal will still constitute the largest share of China's TPES in 2040, although the supply of coal is expected to decrease on average by 0.1% per year from 2013 as a result of policy measures to promote a cleaner energy mix. Consequently, the share of coal in TPES is projected to decline from 68% in 2013 to 49% in 2040. Nuclear energy is projected to exhibit the fastest growth between 2013 and 2040, increasing at an annual average rate of 8.9%, followed by other renewables growing at 6.4% per year. Oil and hydro are projected to grow at a slower pace, with the annual growth rates averaging 1.4% and 2.0% respectively. Hence, the share of oil is projected to increase from 16% in 2013 to 18% in 2040, while the share of hydro remains unchanged at 3% of TPES. The share of natural gas is projected to increase from 5% in 2013 to 11% in 2040, whereas the share of nuclear will increase from 1% to 7%.

India's TPES is expected to increase at an average annual rate of 3.4% from 775 Mtoe in 2013 to 1 908 Mtoe in 2040. Coal consumption, driven by power generation demand, will grow at 3.8% per year and reach 934 Mtoe in 2040, up from 341 Mtoe in 2013. Coal thus maintains the largest share of TPES in 2040 at 49%, compared with 44% in 2013. Owing to rapid motorisation, oil demand will increase to 468 Mtoe and represent the second largest energy source in 2040, at 24% of TPES. The average annual growth rate for oil demand over the period is projected at 3.6%. Natural gas consumption is expected to increase by 4.6% per year, with its share rising to 8% in 2040, up from 6% in 2013. Nuclear energy is expected to grow the fastest, at an average annual rate of 7.9%, with its share increasing from 1% in 2013 to 4% in 2040. In terms of other renewables, solar and wind will increase significantly.

Figure 3.4. **Total primary energy supply in ASEAN, China and India, 1990-2040**



Note: Other RES include wind, solar PV, and geothermal. Calculations are based on IEA's New Policy Scenario.
Source: OECD Development Centre, based on IEA (2015a), *World Energy Outlook 2015*; IEA (2015b), *World Energy Outlook 2015: Special Report on Southeast Asia*.
StatLink http://dx.doi.org/10.1787/888933443239

Potential and targets for renewable energy in Emerging Asia

The region possesses a vast and largely untapped potential for renewable energy

Emerging Asia has significant potential for renewable energy development. China has taken world leadership in the development of renewable energy and India has significantly increased its installed capacity of renewable energy sources, while ASEAN possesses a largely untapped potential. According to the IEA (2015c), the unexploited potential for hydropower in Southeast Asia is particularly substantial. For instance, Lao PDR alone has an estimated hydropower potential of 23 GW, while the current installed capacity stood at a mere 3.2 GW in 2012. Furthermore, Indonesia plans to realise its estimated 29 GW of geothermal potential, from the installed capacity of 1.3 GW in 2013. Indonesia has considerable further potential for biomass amounting to 13 GW of electrical output, of which less than 0.08 GW had been exploited in 2012. Because of their geographical constraints, Singapore's and Brunei Darussalam's technical potential for renewable energy is more limited, although Singapore is targeting a rapid development of solar PV.

Box 3.1. Climate change risks to Emerging Asia

Under the adopted version of the Paris Agreement, the parties are to "pursue efforts" to limit the temperature increase to 1.5°C, which would require zero emissions some time between 2030 and 2050, according to the scientists. While limiting global warming to 1.5-2° C requires significant efforts in all regions of the world, regional measures to reduce greenhouse gas emissions relative to a business-as-usual trajectory in Emerging Asia would mark an essential step to mitigating climate change risks to the region. Emerging Asia possesses a high degree of vulnerability to climate change owing to numerous factors, including the high concentration of settlements and economic activity along the coastlines and the high dependence on natural resources, agriculture and forestry in some countries. According to Ifad (n.d.) projected sea-level rise could threaten the livelihood of millions of poor rural people living in low-lying areas, while temperature increases and extreme events such as flood and drought could lead to reduced crop yields. Furthermore, climate change is expected to aggregate water shortages, which is especially a concern for the poor rural population. Measures to enhance energy efficiency and increase the share of renewable energy in the TPES would thus be important steps to mitigate climate change risks in Emerging Asia, in addition to yielding benefits such as improved air quality and enhanced energy security through reduced fossil fuel dependence.

Source: Ifad (n.d.), *Climate Change Impacts – Southeast Asia*, https://www.ifad.org/documents/10180/41587621-d96e-4aed-8b22-e714bcecd58e.

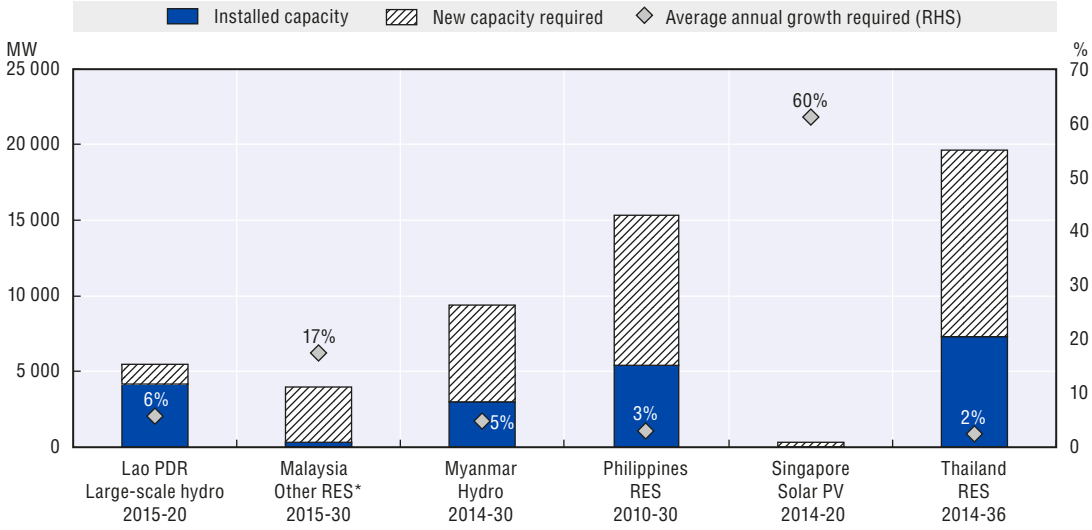
Renewable energy targets have been adopted by China, India and nine ASEAN member states

Renewable energy targets send important signals for long-term investments and of political will to act, albeit to various degrees depending on the credibility and effectiveness of the target. In Emerging Asia there has been a widespread adoption of targets for renewable energy, with particularly ambitious targets in China and India, in terms of absolute scale. The Indian government has announced a target of increasing the solar capacity from 3 GW to 100 GW by 2022, while increasing the overall capacity of renewable energy to 175 GW (Goswami, 2016). Furthermore, China plans to increase its installed capacity of solar power, wind power and biomass to 100 GW, 200 GW and 30 GW respectively by 2020 (The Climate Group, 2015a). In the 13th Five Year Plan, China aims to increase the share of non-fossil energy, including renewable energy and nuclear, to at least 15% by 2020 and 20% by 2030. Meanwhile, ASEAN's energy ministers have set an aspirational target to increase the share of renewables in TPES to 23% by 2025. By ASEAN's definition, this share includes large-scale hydropower and all other sources of renewable energy, with the exception of traditional uses of biomass.

In addition to the region-wide target, all ASEAN member states except Cambodia have implemented some renewable energy targets, although the targets vary greatly in terms of technology, time horizon, measurement unit and level of ambition. As ASEAN's regional target is not translated into national targets for the ASEAN member states (AMSs), there are few mechanisms for incentivising, governance and monitoring on a regional level. While imposing legally binding national targets top-down may not be compatible with the ASEAN way, national measures could still be complemented by regional efforts to reach the ASEAN-wide 2025 target. These efforts may include the establishment of roadmaps and national action plans for the different member states. In addition, energy statistics reporting should be co-ordinated and enhanced in different member states, in order to improve the measurability of the target.

Lao PDR, Malaysia, Myanmar, the Philippines, Singapore and Thailand have all set targets for increasing the installed capacity of renewable energy (Figure 3.5). The targets range from indicative targets of increasing the large-scale hydropower capacity, in the case of Myanmar and Lao PDR, to targets specifically aimed at boosting technologies that are only commercially viable with additional support. While Cambodia has no specific renewable energy target, the country aims to supply 2 241 MW of hydropower by 2020 under the Power Development Plan (ASEAN Centre for Energy, 2016). In 2010, the Malaysian Cabinet approved the target of increasing the installed capacity of biogas, biomass, small-scale hydropower and solar PV to 4 000 MW in total by 2030. While the 2011 Renewable Energy Act established that this target were to be achieved through the feed-in tariff system, Malaysia also expects the installed capacity of large-scale hydropower to increase further, which is not reflected in Figure 3.5. However, the Sustainable Energy Development Authority Malaysia (2016) notes that under the current trajectory the installed capacity of renewable energy will fall short of the target for 2030. Singapore's solar PV target stands out as the most ambitious RES target in terms of the annual growth in capacity required to achieve it within the given time period (Figure 3.5). With the installed capacity reaching 100 Megawatt peak (MWp) in Q2 2016, Singapore is on track to reaching its target of increasing the installed capacity of solar power to 350 MWp by 2020, up from 19 MWp in 2014.

Figure 3.5. **Targets for installed capacity in renewable energy in ASEAN member states**



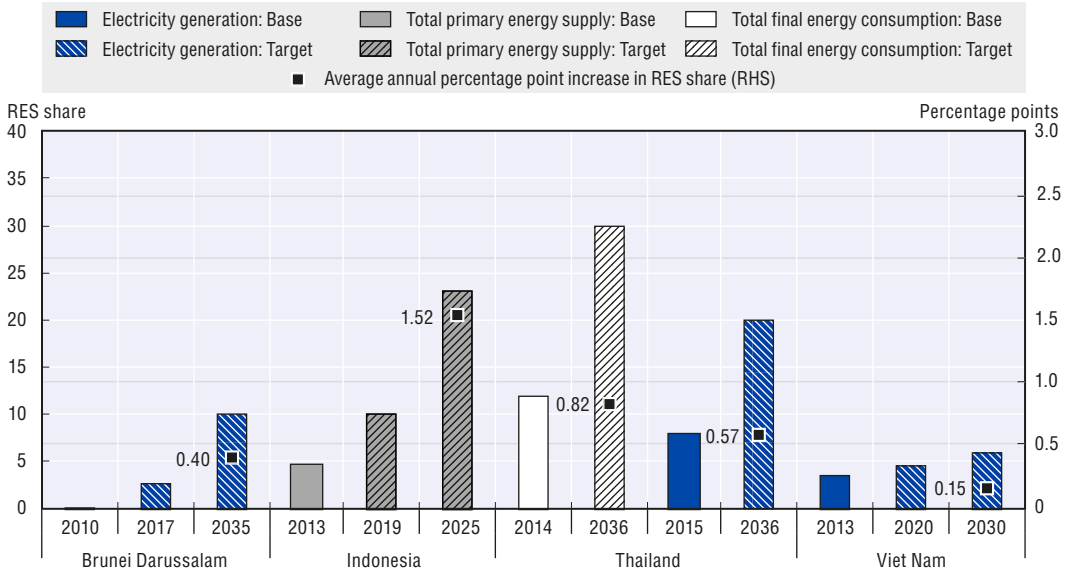
Note: *Other RES include biogas, biomass, small-scale hydropower and solar PV. The average annual percentage point increase was calculated from the initial year to the end of the period.

Source: OECD Development Centre, based on national energy plans and Intended National Determined Contributions (INDCs).

StatLink http://dx.doi.org/10.1787/888933443680

In terms of absolute values, Thailand stands out as the biggest driver of renewable energy deployment in ASEAN, targeting 19 635 MW of installed capacity by 2036. This target is supplemented by ambitious targets for the energy mix and electricity mix that are defined as a share of different metrics. In particular, Thailand aims to increase the share of renewable energy to 20% of electricity capacity by 2036, while the share of large-scale hydropower is expected to be 15-20% in addition. Other AMSs that have set renewable targets in percentage shares include Brunei Darussalam, Indonesia and Viet Nam. Given the rapid increase of energy supply in the region, RES targets that are set as a share, either of TPES or of the electricity mix, are translated into additional commitment through the expected overall increase in energy supply. Indonesia's target stands out as the RES share target that requires the highest annual percentage point increase for the target to be met in time. For the country to meet its target of increasing the share of RES in TPES to 23% by 2025, the RES share must increase by 1.52 percentage points per year on average from the 2013 base share of 5%. Viet Nam has set a target of increasing the share of electricity generation from renewable energy to 4.5% in 2020 and 6% in 2030, which is predominantly going to be achieved through hydropower. For 2020, Viet Nam expects to increase the installed capacity of hydropower to 17 400 MW, pumped storage hydropower to 1 800 MW, wind power to 1 000 MW and biomass to 500 MW.

Figure 3.6. **Targets for renewable energy shares in ASEAN member states**



Note: The RES share includes all renewable energy sources, except for in Thailand and Viet Nam's targets, where the development of large-scale hydropower and hydropower respectively are not included. The average annual percentage point increase was calculated from the initial year to the end of the period.

Source: OECD Development Centre, based on national energy plans and Intended National Determined Contributions (INDCs).

StatLink http://dx.doi.org/10.1787/888933443699

While renewable energy targets are important for signalling political commitment, indicating long-term investment and innovation trends and motivating stakeholders to act, targets alone are not sufficient to drive the necessary investments in renewables (IRENA, 2015). A combination of economic and regulatory support is therefore necessary in order to boost deployment of renewable energy and make the renewable energy targets effective and credible.

Providing support for renewable energy development in Emerging Asia

Feed-in tariffs (FITs) are the most common RES policy mechanism in Emerging Asia

The development of renewable energy is encouraged through various forms of economic, fiscal, and regulatory support in ASEAN Member States, India and China (Table 3.1). As in the rest of the world, feed-in tariffs (FIT) are the most common policy mechanism to support renewable energy in Emerging Asia. FIT systems have been introduced for various technologies in China, Indonesia, Malaysia, the Philippines, Thailand and Viet Nam, in addition to several Indian states. Furthermore, tax relief programmes have been widely applied in the region, often in the form of tax holidays for renewable energy producers. Renewable energy laws, which have been established in China, Indonesia, Malaysia and the Philippines, are an important measure to enhance the investment environment and strengthen the commitment to renewable energy development. Fundamental economic and regulatory policy support frameworks still need to be developed in Brunei Darussalam, Cambodia and Myanmar in order to realise their renewable energy potential.

Table 3.1. **Renewable energy policy support in ASEAN, China and India**

Country	Economic support policies and fiscal incentives								Regulatory support	
	Feed-in tariff	Capital subsidy, grant or rebate	Public investment, loans or grants	Tax relief	Net metering	Auction schemes	Carbon pricing	Renewable Portfolio Standard	RE Act/Law (REA)/(REL)	RE Action Plan / Roadmap
ASEAN										
Brunei Darussalam										
Cambodia										
Indonesia	✓	✓	✓	✓		✓			2014 Geothermal	Roadmap NRE 2015-25
Lao PDR				✓						
Malaysia	✓	✓	✓	✓		✓			2011 REA	2010 FIT RE Action Plan
Myanmar				✓						
Philippines	✓	✓	✓	✓	✓			✓	2008 REA	NREP 2011-30
Singapore		✓		✓						
Thailand	✓	✓	✓	✓	✓					AEDP 2015-36
Viet Nam	✓	✓		✓						REDS 2015-30
China and India										
China	✓	✓	✓	✓		✓	✓		2005 REL	13th FYP 2016-20
India	✓	✓	✓	✓	✓	✓	✓			

Source: OECD Development Centre, based on ASEAN Centre for Energy (2016), *ASEAN: Renewable Energy Policies;* REN21 (2016), *Renewables 2016 Global Status Report.*

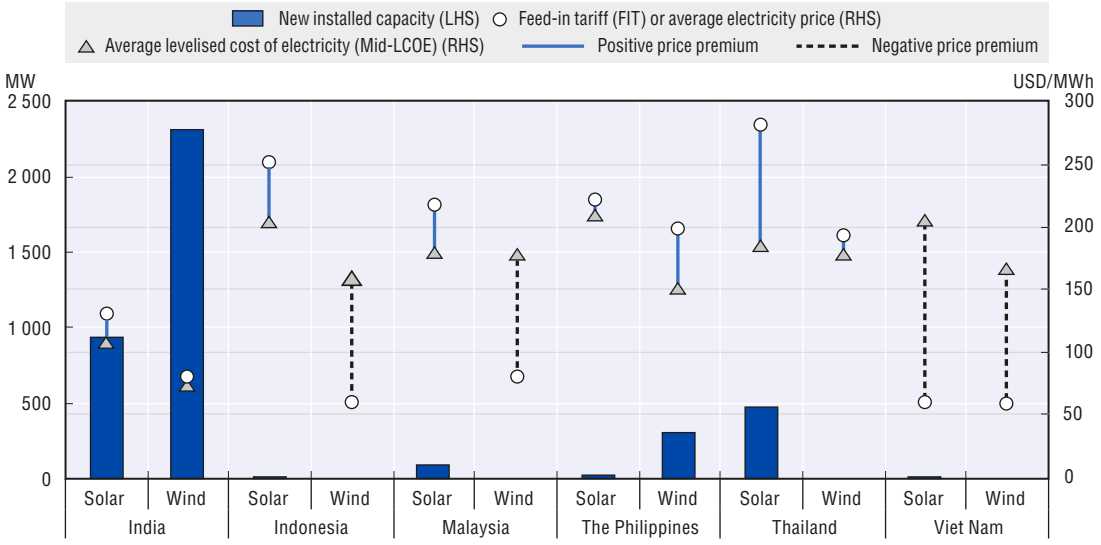
A feed-in tariff is a price-driven policy mechanism that offers long-term purchase agreements to power producers for given renewable energy technologies. In addition to providing subsidies to renewable energy, FIT systems also protect project developers from price risks to various degrees. Feed-in tariffs have proved to be effective in deploying renewable energy through providing long-term revenue guarantees for project developers. They are often combined with guaranteed access to the grid and priority dispatch, which increases investment security and aims to ensure that all electricity generated from renewable energy is sold. Several of the FIT systems in Asia, including those in China, India, Malaysia and the Philippines, provide guaranteed grid access, which theoretically reduces the volume risk. However, grid issues remain a key barrier to development and generation of renewable energy in the region, even in countries where guaranteed grid access is backed by the national renewable energy laws.

The price risk to project developers under an FIT system depends on the payment design and to what degree the government provides a stable investment environment. The payment can be set either as a fixed tariff that is independent of market prices, or as a fixed or floating premium that is added on top of electricity prices. All of the ASEAN-5 countries are currently operating FIT systems with fixed tariffs. Although Thailand first introduced a feed-in premium through the Adder programme in 2007, the country replaced it with a new feed-in tariff scheme in 2015 (Watson Farley & Williams, 2015). As Thailand differentiates electricity prices between off-peak and peak hours, the fixed FIT will reduce the price risk and potentially increase revenues for renewable energy (RE) power plants that generate during off-peak hours. Indonesia, Malaysia, the Philippines and Viet Nam have been using fixed tariffs since they first introduced their respective FIT systems in the early 2010s. Similarly, China and India have typically used feed-in tariffs to procure wind power, although tenders have been the most common way to procure solar power.

Setting accurate feed-in tariff rates remains challenging

The cost-efficiency of FITs depends on how accurately the tariff levels are reflecting the true production cost for renewable energy and how projects are selected. Since the real cost of production is unknown, governments risk setting a feed-in tariff that is either too high or too low. While a too high tariff makes the system costlier than anticipated, a too low tariff will not provide sufficient incentives to achieve the targeted quantity of renewable energy. Hence, setting the payment level is one of the most complex parts of an FIT system, as it should provide cost recovery for producers without overcompensating them through windfall profits. While the tariffs levels are often set administratively in the region, China, India and Indonesia have used competitive bidding (i.e. auctions and tenders) to determine the feed-in tariffs. The remuneration for electricity generated from solar and wind power (either in the form of FITs or average electricity prices) has not necessarily been high enough to provide cost recovery for generators in all cases (Figure 3.7). The average electricity price, and in some cases even the feed-in tariff, were often lower than the average levelised cost of electricity (LCOE), as calculated from a sample of power plants in each country (Bloomberg New Energy Finance, 2014). The LCOE is a ratio between the total costs of the plant (USD) and its total electricity production (MWh over its economic lifetime (Wirth, 2016). Most of the projects in the sample would thus not be profitable under the assumptions used for estimating the LCOE, as electricity prices did not provide a sufficient price premium to boost investments in new capacity. While other factors such as grid access and regulatory support also affect the degree to which renewable energy is deployed, the average project profitability implied by the difference between remuneration and LCOE nonetheless serves as an important indication for the attractiveness of investing in renewable energy projects. LCOE therefore represents the long-term off-take price required to achieve a required equity hurdle rate for the project (Bloomberg New Energy Finance, 2014). Over time, the LCOE of renewable energy will decrease as increased renewable energy deployment causes the system costs to fall and lower FIT rates or electricity prices will then be needed to make investments in renewable energy sources profitable (Bloomberg New Energy Finance, 2014).

Figure 3.7. **New installed capacity, feed-in tariffs (FIT) and average levelised costs of electricity (LCOE) for solar and wind power in ASEAN-5 and India, 2014**



Note: Average electricity prices are illustrated in the case of wind in Malaysia, wind in Indonesia and solar in Viet Nam, as these countries did not have FITs for the respective technologies in 2014. Indonesia's solar FIT is a ceiling price and is de facto lower owing to competitive bidding.

Source: OECD Development Centre, based on Bloomberg New Energy Finance (2014), *H2 2014 APAC LCOE Update: A Race Between Renewable Penetration and Fuel Prices*, http://first.bloomberglp.com/documents/93517_LevelisedCostofElectricityUpdate.pdf; IRENA (2016), *Renewable Capacity Statistics 2016*.

StatLink http://dx.doi.org/10.1787/888933443702

In the case of Viet Nam and Malaysia, the feed-in tariffs for wind power have been lower than the average levelised cost of electricity and consequently have not attracted substantial investments in renewables. In contrast, India has been able to increase the installed capacity of renewable energy significantly, even with the feed-in tariffs being only slightly above the average LCOE of wind and solar. Thailand's Adder scheme provided the highest price premium in the sample, and contributed to significant deployment, with 475 MW of new solar power capacity being installed in 2014, according to IRENA (2016). Thailand's generous price premium for solar power has, however, been accompanied by a stop-and-go process in order to contain the costs of the system, and was phased out in the end of 2015. With 722 MW of solar power being added in 2015, and 732 MW installed in the first three quarters of 2016, Thailand has become ASEAN's leading solar market with a cumulative capacity 2.75 GW (Publicover, 2016). The price premium provided by the wind power feed-in tariff in the Philippines also proved sufficient to spur investments, with the installed capacity of wind power increasing from 33 MW in 2013 to 283 MW in 2014 (IRENA, 2016). With the cumulative capacity of wind power reaching approximately 400 MW in 2016, the Philippines has become the largest market for wind power in ASEAN.

In Indonesia, the installed capacity of solar power increased negligibly in 2014, while no new wind capacity was added. In Figure 3.7, the tariff for solar power in Indonesia illustrates the ceiling price in the solar reverse auction, which was set at USD 250/MWh. However, this level would only be receivable in the unlikely event that all project developers bid above the ceiling price (Bloomberg New Energy Finance, 2014). The price premium was therefore de facto lower owing to competitive bidding, and insufficient to spur significant growth in solar power deployment.

Although low FIT rates can partly be explained by the challenge of estimating appropriate tariff rates in general, the low FIT rates also reflect insufficient cost control mechanisms and issues related to securing enough funding for FIT systems. Feed-in tariffs can be financed either through government budgets or end-consumers of electricity. In Malaysia, the FIT system is financed ex-ante through electricity end-consumers, who pay 1.6% of their electricity bills to an RE Fund. While this provides increased control of the system cost, the funding has been limited and as a result only a small quota has been released. The FIT rates have also been too low to make most renewable energy projects commercially viable, with the exception of solar PV. Consequently, Malaysia has decided to phase out the FIT system gradually in favour of other support mechanisms. In Viet Nam, the electricity buyer, i.e. Electricity of Viet Nam (EVN), pays USD 78/MWh in feed-in tariffs to wind power projects under the FIT system, of which USD 10/MWh is provided by the Viet Nam Environmental Protection Fund (ASEAN Centre for Energy, 2016). However, the World Bank Group (2015) argues that it is unclear whether the Vietnam Environmental Protection Fund (VEPF) has a sustainable source of funding for providing one cent/kWh of the wind tariff as it is supposed to under the proposed scheme. In order to control the overall system costs without harming the tariff level, the governments could introduce caps to the FIT system.

Potential for cost-efficiency improvements of FIT systems

Globally, governments have recently been shifting from administratively set feed-in tariffs to tariffs determined through competitive bidding (i.e. auctions and tenders), in pursuit of increasing the cost-efficiency of RE support mechanisms (REN21, 2016). In the European Union, for instance, Member States have been required by the European Commission to introduce competitive bidding by 2017 (Irena, 2015). According to Kreycik, Couture and Cory (2011), the potential for auctions to discover the real production cost of RE, and hence the adequate feed-in tariffs, depends on a large market size that makes the bids competitive. India provides an example of such a large market that has significantly benefited from introducing competitive bidding to achieve cost-effectiveness. According to an analysis by Climate Policy Initiative and the Indian School of Business (2015), the auctions for wind power resulted in tariff reductions of up to 30% in India. By comparing 20 auctions around the world, the study also found that auctions in the majority of cases were cost-effective compared with a baseline feed-in tariff. However, the deployment effectiveness is a bigger challenge related to competitive bidding according to the study, as 15 of the 20 auctions studied deployed less than 25% of the intended capacity of renewable energy. One of the main risks to deployment effectiveness is underbidding, which may drive the tariff below levels that are necessary for project development. This challenge arose when competitive bidding was implemented for solar power in China and geothermal electricity in the Philippines as producers placed bids that were too low to be economically sustainable. Climate Policy Initiative/The Indian School of Business (2015) found that this risk could be best managed by imposing strong penalties for not commissioning the projects. If measures are taken to ensure the deployment effectiveness, competitive bidding can be preferable because of its ability to drive down the costs of renewables.

When the feed-in tariff is determined by the government, projects are generally granted access either through an all-served or first-come, first-served basis. Without cost-control mechanisms, there is a risk that the FIT system becomes costlier than anticipated under an all-served allocation. On the other hand, granting FITs on a first-come, first-served basis do not provide incentives for developing the projects with the lowest costs. Since the transaction costs are lower on a first-come, first-served basis than under competitive bidding, this approach is still widely applied, including in Viet Nam and in the Philippines (ADB, 2015). Under this scheme, RE project developers

have been racing to become operational first in the Philippines, leaving many solar projects without support. By including more criteria for selecting the projects, such as financial viability, environmental impact and grid connection access, the government could create a more stable investment environment while incentivising cost-efficiency. Another option is to combine a fixed tariff with a competitive bidding process. Under Thailand's new FIT system, fixed tariffs will be granted based on competitive bidding (OECD, 2016). After comparing marginal costs through the merit order, the winning bidder will be the project that offers the highest discount from the announced FIT, e.g. a 4% discount on FIT.

One of the most complex parts of an FIT system is setting the payment level, as it should provide cost recovery for producers without overcompensating them through windfall profits. In order to reflect the actual production costs and the policy objectives more accurately, the rates should be differentiated by various factors. The countries in Emerging Asia have introduced a variety of differentiating factors for their feed-in tariffs; including technology type, project size, location, grid voltage and peak/off-peak hours (Table 3.2). For instance, China's FIT policies provide different rates depending on the project location, in order to account for differences in solar radiation intensities and wind conditions between sub-regions. Furthermore, Indonesia provides a strong example of how an FIT system can be designed to account for both cost differences between regions and local goals to increase electrification rates. The FIT rates in Indonesia vary, based on project location, with the FITs in areas where it is least expensive to generate electricity, such as Java and Bali, being approximately 50% lower than in more remote locations such as Papua (NREL, 2016). Indonesia further differentiates between projects depending on the voltage level of their grid connection, where those connected to low voltage grids receive higher support. In the Philippines on the other hand, the tariffs are only categorised by the type of technology used. Increasing the use of differentiating factors in determining the feed-in tariffs could thus make the policy more cost-efficient.

Table 3.2. **Comparison of FIT systems in ASEAN-5, China and India**

Country	Technology						Tariff differentiation					Funding			Design features		
	Bioenergy	Geothermal	Hydropower	Municipal waste	Solar PV	Wind power	Capacity size	Location	Technology	Voltage of grid	Peak/Off-peak	Rate payer	Tax payer	State electricity board	Duration (years)	Guaranteed grid access	Degression rates
ASEAN-5																	
Indonesia	✓	✓	✓	✓	✓		✓	✓	✓	✓			✓		20		
Malaysia	✓	✓	✓		✓		✓		✓			✓			16-21	✓	✓
Philippines	✓		✓		✓	✓			✓			✓			12-20	✓	✓
Thailand	✓		✓	✓	✓	✓	✓	✓	✓			✓			10-20		
Viet Nam						✓					✓	✓			20		
China and India																	
China	✓		✓		✓	✓		✓	✓			✓			20	✓	
India*	✓		✓	✓	✓	✓	✓	✓	✓					✓	13-35	✓	

Recent policy highlights:
- **Indonesia: New government decree on solar FITs in July 2016**
- **Thailand: Replaced Adder programme with FiT PPAs in 2015**

Note: *FIT systems have been introduced on a state-level in India.
Source: OECD Development Centre, based on ASEAN Centre for Energy (2016), *ASEAN: Renewable Energy Policies*; Federal Ministry for Economic Affairs and Energy (2015), *Wind Energy in Viet Nam: Potential, Opportunities and Challenges*; Government of India Ministry of New and Renewable Energy (2015), *Augmentation and Maintenance of the Indian Renewable Energy and Energy Efficiency Policy Database (IREEED): March 2015 Summary Sheet – Policies and Regulation*; The Climate Group (2015b), *RE100 China Analysis: April*.

Another design option that can enhance the cost efficiency of FIT systems is degression rates, which can either be periodic or take the shape of capacity corridors. This measure allows for adjusting tariffs for cost declines in renewable energy installations as the technologies mature. Notably, the unit costs of these technologies will decline as the cumulative capacity increases, owing to economies of scale and innovations. China and India have already experienced remarkable cost declines in recent years, and reached very competitive cost structures for solar power and onshore wind. For instance, the levelised costs of electricity (LCOE) of utility-scale solar PV in China declined from an average of USD 0.24/kWh in 2010 to USD 0.11/kWh in 2014, according to IRENA (2015). The rapid cost declines have allowed China to reduce the annual FIT rates for new projects. Projects that have already been granted support under the system, however, are not affected by the revision of tariffs, which provides for a stable investment environment. While the FIT rates have been revised periodically in China, it is also possible to include degression rates directly in the design of the FIT system. Furthermore, deployment can be kept under control by imposing limitations of the yearly new commitments under the FIT system, either in terms of capacity or in financial support volume. The IEA (2014) recommends that FITs have degressive rates and limitations in financial support volume, in order to keep deployment, and thus costs, under control. Measures to control the costs of the FIT system should be taken into consideration when designing the FIT system, in order to avoid retroactive tariff cuts for projects that have already been granted support. International experiences, such as the retroactive cuts in FIT levels in Spain and Italy, have illustrated how unforeseen cuts in the tariffs can hamper the investment environment and pose legal challenges.

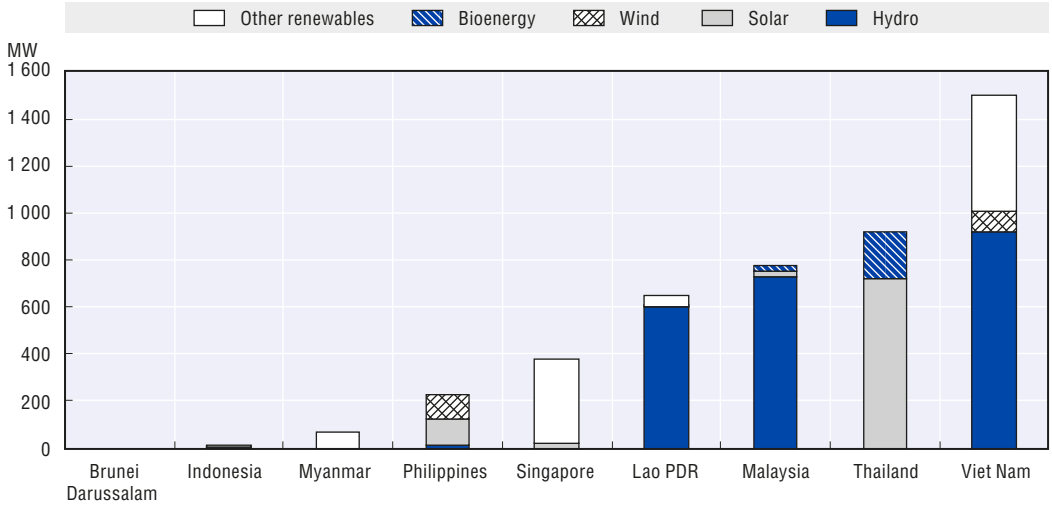
In addition to introducing feed-in tariffs on a state-level, India has further incentivised the development of renewable energy through the Renewable Energy Certificate (REC) mechanism that was introduced in 2010. The aim of the REC mechanism is to enable inter-state sale and purchase of renewable energy, since the renewable energy sources are unevenly spread across the country. The REC mechanism supports the renewable purchase obligation (RPO) for various obligated entities, including power distribution companies, in 27 states and 7 union territories in India (ERIA, 2015). After the REC process is completed with buy bids and sell bids on power exchanges, the trading price and volume is determined by the market. The REC market has, however, remained sluggish with low prices and many unsold certificates owing to an overall low demand for RECs caused by the lack of compliance of RPO by the obligated entities (Mediratta, 2015). In order to correct for the market imbalance, the State Electricity Regulatory Commissions (SERCs) should enhance the compliance of RPO. Currently, the REC mechanism is operating in coexistence with the FIT system.

Investments in renewable energy[1]

In 2015, China invested USD 102.9 billion in renewables (excluding large-scale hydro), which accounted for 36% of global renewables investments (REN21, 2016). The majority of China's investments were in asset finance (USD 95.7 billion), while USD 5.5 billion were invested in small-scale projects. With investments in renewables totalling USD 10.2 billion in 2015, India was the second largest investor in Emerging Asia, and the fifth largest in the world. Of this, USD 4.6 billion were invested in utility-scale solar power, while USD 4.1 billion of asset finance were invested in wind power. Following China and India, Thailand was the only other country in Emerging Asia to reach USD 1 billion in asset finance for renewable energy in 2015.

According to IRENA (2016), China was the global leader in terms of net capacity additions in 2015 of hydropower, solar PV, wind power and solar water heating, whereas India was among the top five countries in the world for these four technologies. While China by far led the net additions of hydropower capacity in 2015 with its 16 GW of new hydropower capacity, the net additional capacity of hydropower in India, Viet Nam, Malaysia and Lao PDR were also significant on a global scale. Large-scale hydropower made up the vast share of new installed capacity of renewable energy in ASEAN in 2015 (Figure 3.8). If large-scale hydropower is excluded, on the other hand, Thailand led the new capacity of renewable energy in ASEAN in 2015 through its solar power deployment. In contrast, wind was the major source of new installed renewable energy capacity in China and India.

Figure 3.8. **New installed capacity of renewable energy by energy source in ASEAN in 2015**



Note: Other renewables includes waste, solid, other biofuels, biogas, geothermal.

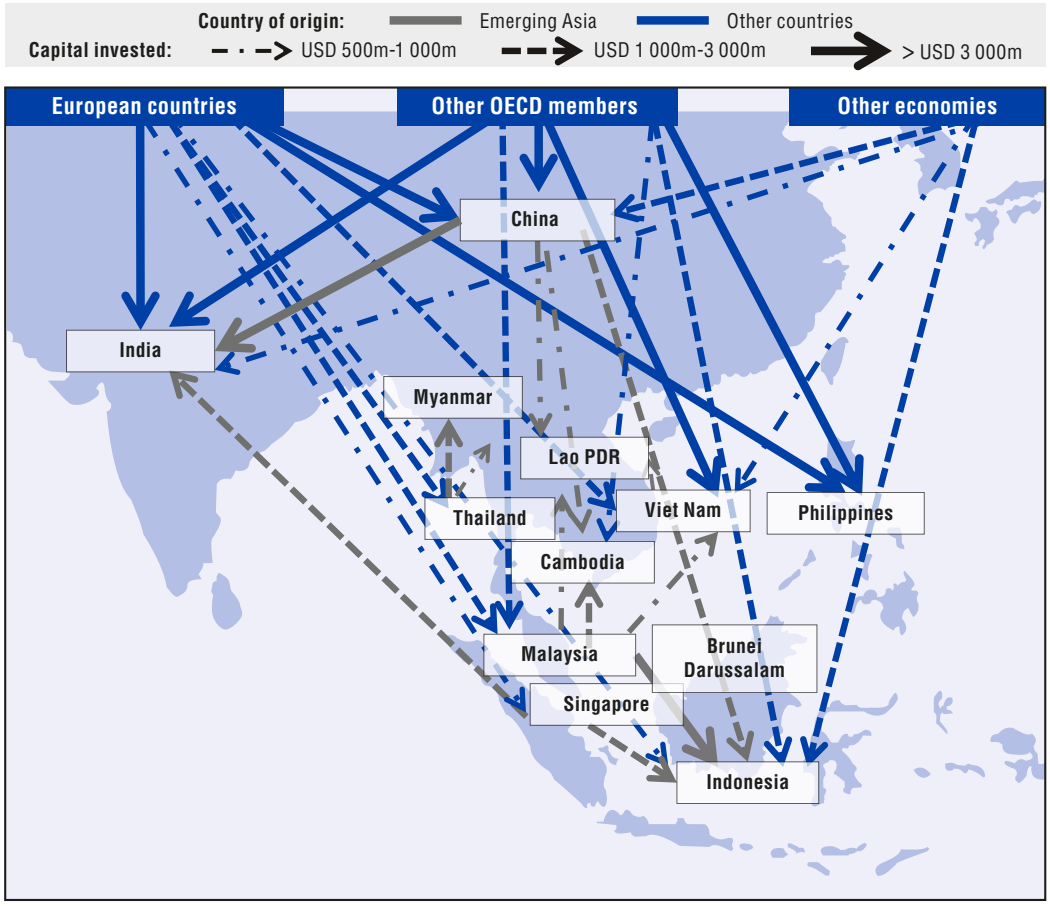
Source: OECD Development Centre, based on IRENA (2016), *Renewable Capacity Statistics 2016*, and Federal Ministry for Economic Affairs and Energy (2016), *Thailand Solar PV Policy Update 05/2016*.

StatLink http://dx.doi.org/10.1787/888933443248

India, China and Indonesia are the major recipients of foreign direct investment in renewable energy in Emerging Asia

Foreign direct investment (FDI) is one of the practical ways to develop the efficient energy sector as it enables the transfer of capital, technology and expertise from home countries to host countries; in other words, it allows both multinationals and local companies to engage in such transfers through trade and investment for climate smart goods and technologies (United Nations ESCAP, 2012; Kalirajan, 2012). From 2003 to 2016, the largest recipients of greenfield FDI[2] for renewable energy projects in Emerging Asia were India (USD 24 688 million), China (USD 13 555 million) and Indonesia (USD 11 930 million). These three countries accounted for more than 60% of the total greenfield FDI received in the region in the renewable energy sector. Brunei Darussalam and Singapore are two of the least attractive markets for the renewable energy sector (USD 409 million and USD 946 million, respectively). ASEAN countries (USD 24 347 million) receive together about the same amount as India but Indonesia alone welcomes almost half of this.

Figure 3.9. **Greenfield FDI inflows in Emerging Asia's renewable energy sector**
January 2003 to August 2016



Note: European countries: OECD member countries which are members of the European Union; Norway and Switzerland. Other OECD members: Australia; Canada; Israel; Japan; Mexico; New Zealand; Korea; Turkey and the United States. Other economies: Argentina; Chinese Taipei; Hong Kong, China; Russian Federation; and Saudi Arabia.

Source: OECD Development Centre, based on the dataset of the FDI Markets (2016), https://www.fdimarkets.com.

Regarding the investors of origin, the European countries are the main investors with 28.7% of the total capital invested. It is, however, important to note that the United Kingdom represents by itself one third of the investments from European countries and more than 17% of India's FDI in this sector. China and the United States, followed by Japan, Malaysia and the Republic of Korea, are the next main investors in the region, particularly in India, which welcomes more than half of their FDI. Among the ASEAN countries, Brunei Darussalam, Cambodia, Lao PDR and Myanmar do not make any outward investment to other countries in emerging Asia, while they received 12.6% of the capital invested in the region. India is the largest recipient for FDI in renewable energy; however, it is among the less investing countries. The inverse trend is observed for Singapore, which is the eighth largest investor in the world in the renewable energy sector whereas it is one of the bottom two recipient countries in the region, with Brunei Darussalam. ASEAN countries invest more among themselves than toward India and China.

Renewable energy projects are contributing to job creation in the region

Green jobs have been growing rapidly in the Asia-Pacific region, with the total number employed in the sector reaching 4.3 million people in China, India and Japan in 2015 (IRENA, 2016). The trend of renewable energy employment indicates that solar and wind are among the most dominant and fast-growing renewable energy subsectors in both

the world and the Asia-Pacific region (IRENA, 2015; 2016). While domestic investments in renewable energy have been a major driver for green job creation in China and India, greenfield FDI in the renewable energy sector has also been expanding in Emerging Asia, which has had both direct and indirect influences on job creation. It is worth noting that, in the case of FDI, jobs are created principally in the recipient, or host, country, where a new power facility is set up or a project is developed (IRENA, 2013). Indirect influence of FDI to employment in the renewable energy sector may also include new jobs attributable to the knowledge acquisition and economic activity of foreign firms, or to increase local spending by direct FDI-induced employees. The number of jobs created through FDI in the renewable energy sector in Emerging Asia has been gradually growing for the last five years, albeit from low levels. Meanwhile, job creation through greenfield FDI projects in the traditional fossil fuel energy sector has fallen dramatically in ASEAN, India and China. Consequently, the gap between job creation from FDI projects in the conventional energy sector and the renewable energy sector is narrowing.

While job creation from FDI projects in renewable energy a decade ago was dominated by jobs in the biomass power sector, in 2015 it came from a more diversified combination of renewable energy subsectors, both in the Asia-Pacific region and in ASEAN. This trend is present in China and India as well, although biomass power-related FDI still created the largest number of jobs in China in 2015. At the same time, the total number of jobs created from 2011 to 2015 in China through solar power-related FDI increased significantly compared to those created between 2006 and 2010.

Favourable and systematic policy frameworks are likely to accelerate investment in the use of renewable energy sources, and its impact on creating green jobs has significant implications not only on energy, infrastructure or transport policy, but also on labour and social welfare policy in Emerging Asia. Added to direct job creation, increased FDI in the renewable energy industry can contribute to consolidating the foundation of multiplier effects that ripple through indirect and induced employment. Moreover, it is plausible to assume that those green jobs tend to create good-quality jobs, with higher wages and employment stability (Javorcik, 2014), which may exert a positive influence on domestic working environment and labour policy.

The trade and investment of renewable energy products and technologies must also be promoted among the countries of emerging Asia (ADB-ADBI, 2013; OECD, 2016). Governments can facilitate the trade and investment in renewable energy technologies through the reduction of non-tariff barriers, tradeable renewable energy certificates and FDI promotion. By reducing or eliminating import tariffs and non-tariff barriers for renewable goods, services and technologies, the sector can avoid bureaucratic redundancy and reduce the transactional costs of renewable energy to be deployed throughout the country. At the same time, major obstacles still remain to be overcome in order to boost investments in renewable energy further in emerging Asia.

Challenges to renewable energy development in Emerging Asia

Grid issues are a key barrier to the development of renewable energy

Grid access is a key requirement in order for the development of renewables to be realised, whether it is under an FIT system or another economic support mechanism. In ASEAN, China and India, grid issues are a key barrier to renewable energy generation, albeit in various ways. First, physical issues stemming from underdeveloped grid infrastructure and the lack of investment in grid upgrades are restraining investors from developing renewable energy projects. Since renewable energy sources often are located far from the demand centres, the underdeveloped transmission and distribution grids in the region hamper the development of renewable energy sources of electricity. In addition to technical issues such as voltage rise and lack of local load due to distant locations of

renewable energy plants, there are also issues with delays and utility connection at local levels. In Viet Nam, a lack of grid upgrades and unclear technical regulations for grid connections have particularly hindered wind power deployment under the FIT system (*Wind Power Monthly*, 2015). In addition to discouraging investments in new projects, the lack of grid connections also affects renewable energy plants that have already been developed and increases the risk of stranded assets. For instance, estimates for Thailand suggest that only half of the renewable energy capacity is connected to the grid (DLA Piper, 2014). Grid issues are also prevailing in China, where government estimates showed that 15% of the total wind power generation was curtailed in 2015, according to Liu (2016). Despite having the best wind conditions, the curtailment rates have surpassed 30% in some of the northern regions, where the grid issues are considered larger than in other regions. This has led the government to order six northern regions to suspend the approval of new wind projects in 2016 (Liu, 2016). Grid development and upgrades should thus be a key priority to facilitate further development of renewable energy. In addition, improved planning is essential to ensure that new renewable energy capacity is installed in locations that are suitable in terms of demand centres and grid connections. While infrastructure development is a prerequisite to facilitate renewable energy development, the investment environment can also be enhanced by incorporating guaranteed grid access into renewable energy laws, which have been implemented in the Philippines and China. It is however essential that the grid access is *de facto* guaranteed.

Box 3.2. **Using decentralised energy systems to provide energy access to the rural population**

While large-scale, centralised energy systems will undoubtedly be necessary to meet Emerging Asia's rapidly growing energy demand, decentralised solutions such as off-grids, micro-grids and mini-grids can be used as a supplementary measure to increase the energy access in the region. With decentralised energy systems the energy generation can be located closer to the consumers, which is particularly advantageous for reaching the population of rural and remote areas. While the core component of a decentralised energy system is distributed generation, the system can be further combined with various energy storage and demand response solutions.

Distributed energy systems (DES) make use of small-scale renewable energy sources such as biomass, wind power, small-scale hydropower, solar power, biogas and geothermal power, in addition to other thermal plants with small capacities. While heat cannot be transported over long distances, distributed generation that is located closer to the consumers can allow for co-ordination between heat and electricity generation through combined heat and power plants (CHPs). Since heat is often a by-product of electricity generation, the use of CHP increases the system's efficiency and can thus reduce the environmental impact by limiting greenhouse gas emissions.

The global DES systems market is categorised into off-grid and on-grid segments. Populations in small rural villages that are too small or too dispersed for on-grid electrification can take advantage of off-grid distributed generation solutions. In Malaysian Borneo, for instance, PV-diesel hybrid systems have been developed for 63 schools that are not grid-connected. Another advantage of DES is that the construction of the system can take place in a couple of months, whereas expansions of the centralised grids to remote areas may take years and even decades. Since DES may be more economically feasible than expansion of the centralised grid to remote areas, it can contribute to achieving rural electrification faster in the region. Furthermore, by combining distributed generation with energy storage solutions such as batteries, decentralised solutions can accommodate generation from variable renewable energy sources such as wind and solar. Moreover, DES provides potential for minimising transmission losses, reducing pollution and strengthening energy security.

Source: United Nations ESCAP (2012), "Decentralized energy system", *Fact Sheet*, www.unescap.org/sites/default/files/14.%20FS-Decentralized-energy-system.pdf.

Furthermore, an increasing share of intermittent renewable energy in the electricity mix will create new challenges to the grid owing to their relatively unpredictable nature. Integrating electricity markets over a larger area would however smooth the intermittency issues as different technologies and demand patterns could complement the generation from renewable energy sources. Consequently, a further development of the ASEAN Power Grid could be a key facilitator for deploying renewable energy sources in Southeast Asia. In particular, more cross-border electricity flows could help smooth the intermittency issues related to wind and solar power, as well as the seasonal and annual variability associated with hydropower. While hydropower-reliant countries, such as Myanmar, Viet Nam and Lao PDR, today struggle with electricity outages in dry years, increased interconnectivity could serve to diversify their electricity mix and thus make them less exposed to annual inflow variations.

Administrative hurdles and restrictions on foreign ownership continue to hamper RES investments

A prerequisite for the RES policy support mechanisms to be effective is that non-economic barriers are solved, in particular in countries with non-liberalised energy markets. In addition to grid issues and policy uncertainty, administrative hurdles and restrictions on foreign investments represent the main barriers to the deployment of renewables in the region (OECD, 2010). Administrative hurdles are a prevailing issue in several ASEAN member states. In Viet Nam, investors are required to negotiate individual power purchasing agreements (PPA) with EVN, which has proved to be time consuming. Furthermore, the overlap of government bodies regulating the renewables industry and the lack of legislative guidance are hampering renewable energy investment in Viet Nam. Similarly, investors in the Philippines are struggling with a slow regulatory approval process. This does not only restrict project developers of renewable energy, but potential investors in any type of power plant, who are requested to sign a large number of permits from multiple government agencies before becoming operational (Pangalangan, 2016). With the Philippines suffering from frequent electricity outages and some of the highest electricity prices in Asia, there are multiple economic benefits to be reaped by simplifying permit procedures and easing restrictions on foreign investments. Administrative hurdles are also suspending development in Indonesia, where project delays are attributed to the long process and difficulties in obtaining permits. According to Yuliani (2016), investors in Indonesia convey that the many additional costs and delays incurred by the various permits that must be obtained before they become operational are eroding the profitability of renewable energy projects. It is therefore essential to simplify the licence procedures and co-ordinate the responsibilities among different institutions in order to enhance the effectiveness of the renewable energy policies. Following a limited deployment of utility scale solar in Indonesia, with only a handful of the more than 70 planned locations actually completing the tender process, the pace is now expected to pick up after the government introduced a new decree on solar FITs in July 2016 (Susanto, 2016). The deployment of renewables could further be facilitated by establishing a central co-ordinating authority for renewable energy projects.

The development of renewable energy in Southeast Asia is further delayed by restrictions on foreign ownership in several ASEAN member states (Ölz and Beerepoot, 2010). In Malaysia, foreign ownership is limited to 49% for a company to be eligible for the FIT system, while projects in the Philippines can only have 40% foreign equity. In Indonesia, foreign entities are ineligible to participate in the FIT bidding process as bidders must submit an Indonesian tax registration, and they must therefore partner with local firms in order to be applicable for the support mechanism. Although partnerships facilitate foreign ownership for small-scale power plants in Indonesia, there are further limits on

foreign ownership for larger renewable energy projects (DLA Piper, 2014). Loosening the restrictions on foreign ownership would be key to facilitating development of renewable energy in the region, especially taking into account the lack of local expertise on renewable energy in some countries. In that regard, Myanmar has made a crucial step towards its strategy to attract foreign investment by introducing a new law on foreign investments. While the 2012 law strengthens the investment environment through tax exemptions and protection against the government nationalising enterprises, Myanmar still needs to strengthen the physical and regulatory infrastructure in order to attract foreign investments in renewable energy. Like several other ASEAN member states, Myanmar is challenged by the lack of a renewables regulatory regime, subsidised cost of electricity that discourages power investments and underdeveloped transmission and distribution infrastructure (DLA Piper, 2014). Moving forward, it is therefore essential that these non-economic barriers are overcome for ASEAN to meet its target on renewable energy development. In contrast, the Indian government permitted renewable energy projects to receive up to 100% funding from foreign investment as part of the 12th five-year plan (2012-17), in order to accommodate private sector investment in renewable energy (The Climate Group, 2015b).

Another issue related to FITs and other renewable energy policies in the region is the political uncertainty surrounding policies that results in a lack of predictability for investors. This issue could be dealt with by creating an independent body that is provided with the mandate to decide various aspects related to the FIT system including tariff levels, contract formulations and permit process (Yuliani, 2016). In Viet Nam, for instance, Article 23.5 of the Electricity Law (No. 28/2004/Qh1) increases uncertainty in the investment environment as it provides the electricity purchaser with the right to re-negotiate the electricity price of the PPA after the PPA has been signed (Massmann and Cooper, 2013). In contrast, Thailand, India and Malaysia support renewable energy development through standard PPAs, as well as preferential arrangements for small generators and information support. This helps independent power producers (IPP) enter the market more easily.

Appropriate energy pricing should be a long-term objective

In the long term, the development of renewable energy could be further supported by creating more competitive electricity markets and introducing more appropriate energy pricing mechanisms. In a competitive wholesale electricity market, where the market price is determined by demand and the marginal costs of electricity generation, increased renewable energy capacity can lead to decreased wholesale electricity prices. Since most renewable energy sources have low marginal costs, electricity wholesale prices will then decline if there is more renewable energy capacity, which is known as the merit order effect. This effect has been evident in the Philippines, where electricity is traded in a competitive wholesale electricity market. A recent study by the Philippine Electricity Market Corporation found that the net effect of the FIT system had been a reduction in electricity prices for end-consumers, as the merit order effect on wholesale prices outweighed the FIT surcharge levied on electricity bills (Rivera, 2016). However, when electricity prices are not subject to market signals, this effect will fail to materialise. At the same time, since feed-in tariffs for renewable energy are set above tariffs for conventional power generation, they may be wrongly perceived as being expensive to generate. In the absence of competitive pricing, renewable energy should still be dispatched before conventional energy generation as most renewable energy sources, with the exception of bioenergy, have negligible variable costs and thus are cheaper to operate than fossil-fired power generation. Furthermore, when prices for electricity, coal and gas are kept artificially below market prices, which is the case in

Viet Nam, for instance, there are few incentives to build new power plants (Center for Strategic & International Studies, 2012). Finally, a competitive wholesale market would also incentivise project developers to allocate more investments to power plants that generate electricity during peak hours.

Moving forward, appropriate energy pricing is essential in order to support renewable energy development. This calls for phasing out fossil-fuel subsidies and introducing carbon prices (IEA, 2015a). Owing to the negative externalities related to fossil-fuelled power generation, the full cost to society is not reflected in the power plants' marginal costs of production. On top of this, the energy market is distorted even further as long as fossil fuel subsidies prevail. A window of opportunity is opening to proceed with the efforts to remove fossil fuel subsidies while the oil prices are low, and this should be grasped to continue with the reforms. The extensive use of fossil fuels in the energy sectors has further driven a massive increase in greenhouse gas emissions in Emerging Asia. In particular, China has experienced the most rapid increase in GHG emissions in the world, surpassing the United States to become the largest emitter of GHG emissions. Furthermore, the level of GHG emissions in India has tripled since 1970 and is at present equivalent to that of the entire ASEAN region. China is however taking measures to reduce the emissions and has committed to peak emissions before 2030 (Meyer, 2015). The country has been developing carbon trading since 2008 and is due to launch its national cap-and-trade programme in 2017. The programme, which will involve six of the country's largest carbon-emitting industrial sectors, is built on experiences from the seven pilot programmes on emission trading that are currently in operation. In 2011, India introduced a levy of INR 50 (Indian rupees) per tonne of both domestically produced and imported coal, which was doubled in 2014. Although the tax was primarily introduced to raise revenues for the National Clean Energy Fund, it nonetheless serves as an initial step in putting a price on carbon (Ramesh, 2015).

Conclusion

Emerging Asia is blessed with an enormous potential for renewable energy that provides numerous opportunities including enhanced energy security, job creation and reduced air pollution, as well as reductions in greenhouse gas emissions from the region that is particularly vulnerable to climate change. Energy policies in Emerging Asia will not only have great impact on the region's growing population, but the world as a whole, with the region's share of global energy demand estimated to increase from 32% in 2013 to 39% in 2040 (IEA, 2015b). Regional co-operation should aid Emerging Asia in developing renewable energy projects and interconnectors that ensure that the installed capacity can operate at its full potential. Since the costs of unconventional renewable energy projects will continue to decline as the cumulative capacity increases, grid access will become an increasingly important factor for development and generation of renewable energy. The development of renewable energy must therefore be supported by upgrades and expansions of interconnectors in the region, which will provide Emerging Asia with great opportunities to realise its potential of renewable energy in the region, in particular once renewable energy sources approach grid parity.

In the medium term it is essential for the countries in Emerging Asia to provide a stable policy landscape that provides appropriate economic and regulatory support for the development of renewable energy. By taking measures to improve the investment environment, such as simplifying permit procedures and combatting other administrative hurdles, the government can boost the deployment of renewables while limiting the costs of RES support mechanisms, as investors would require a lower risk premium. The cost efficiency of policy mechanisms for renewable energy should

further be improved by establishing selection criteria that prioritise the best projects and differentiation factors that bring feed-in tariffs closer to the real cost of production. In the long term, appropriate energy pricing should be established in the region, as fossil fuel subsidies and lack of carbon pricing distort the energy market. China is already making progress towards this with its planned cap-and-trade system that is due to be launched in 2017. Once renewable energy sources reach grid parity in specific countries, national subsidies for renewable energy will also be redundant if appropriate policies and infrastructure have been established. Finally, establishing fully competitive wholesale markets for electricity would allow energy players to respond to market signals and thus encourage a more cost-optimal development of renewable energy in the region.

Notes

1. This section is based on Abe, M., C. L. M. Branchoux and J. Kim (2016), "Renewable Energy Sector in Emerging Asia: Development and Policies", TIID Working Paper, ESCAP Trade, Investment and Innovation Division, Bangkok, December.
2. As defined by UNCTAD (2007), greenfield FDI is one of the three components of FDI. The other two components are mergers and acquisitions (M&A) and intercompany loans. Of the three types, greenfield investment, i.e. investment for new facilities and operations, is arguably of most importance to development.

References

ADB (2015), *Tariff Support for Wind Power and Rooftop Solar PV in Indonesia,* Asian Development Bank, Manila.

ADB-ADBI (2013), *Low-Carbon Green Growth in Asia: Policies and Practices*, Asian Development Bank and Asian Development Bank Institute.

ASEAN Centre for Energy (2016), *ASEAN – Renewable Energy Policies*, ASEAN Centre for Energy, Indonesia.

Bloomberg New Energy Finance (2014), *H2 2014 APAC LCOE Update: A Race Between Renewable Penetration and Fuel Prices,* http://first.bloomberglp.com/documents/93517_LevelisedCostofElectricityUpdate.pdf.

Center For Strategic & International Studies (2012), *Sustainable Energy Futures in Southeast Asia: A Report of the CSIS Chair for Southeast Asia Studies and the Energy and National Security Program,* Washington DC, https://csis-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/121227_Bower_SustainableEnergy_book.pdf.

Climate Policy Initiative/The Indian School of Business (2015), *Reaching India's Renewable Energy Targets: Effective Project Allocation Mechanisms*. Retrieved from: http://climatepolicyinitiative.org/wp-content/uploads/2015/05/150512_Auctions_FINAL.pdf.

DLA Piper (2014), *Renewable Energy in the Asia Pacific – A Legal Overview: 3rd edition*. Retrieved from: https://www.dlapiper.com/~/media/Files/Insights/Publications/2015/04/Renewable_energy_in_the_Asia_Pac.pdf.

ERIA (2015), *Low Carbon Green Growth in Asia: What is the Scope for Regional Cooperation?* Economic Research Institute for ASEAN and East Asia, Jakarta.

Frankfurt School – UNEP Centre/BNEF (2016), *Global Trends in Renewable Energy Investment 2016*. Retrieved from: http://fs-unep-centre.org/sites/default/files/publications/globaltrendsinrenewableenergyinvestment2016lowres_0.pdf.

Federal Ministry for Economic Affairs and Energy (2016), *Thailand Solar PV Policy Update 05/2016*.

Federal Ministry for Economic Affairs and Energy (2015), *Wind Energy in Viet Nam: Potential, Opportunities and Challenges*, Federal Ministry for Economic Affairs and Energy (BMWi) Public Relations, Berlin.

Goswami, U. (2016), "India's renewable energy targets catch the attention of global investors, still need ground work", *The Economic Times*. Retrieved from: http://economictimes.indiatimes.com/news/politics-and-nation/indias-renewable-energy-targets-catch-the-attention-of-global-investors-still-need-ground-work/articleshow/53015707.cms.

Government of India, Ministry of New and Renewable Energy (2015), *Augmentation and Maintenance of the Indian Renewable Energy and Energy Efficiency Policy Database (IREEED): March 2015 Summary Sheet – Policies and Regulation*. Retrieved from: ireeed.gov.in/summarysheet.

IEA (2015a), *World Energy Outlook 2015*, OECD Publishing, Paris, http://dx.doi.org/10.1787/weo-2015-en.

IEA (2015b), *World Energy Outlook 2015: Special Report on Southeast Asia*, OECD Publishing, Paris, https://www.iea.org/publications/freepublications/publication/weo2015_southeastasia.pdf.

IEA (2015c), *Development Prospects of the ASEAN Power Sector*, OECD Publishing, Paris, https://www.iea.org/publications/freepublications/publication/Partnercountry_DevelopmentProspectsoftheASEANPowerSector.pdf.

IEA (2014), *Technology Roadmap: Solar Photovoltaic Energy*, 2014 edition, International Energy Agency, https://www.iea.org/publications/freepublications/publication/TechnologyRoadmapSolarPhotovoltaicEnergy_2014edition.pdf.

Ifad (n.d.), *Climate Change Impacts – Southeast Asia*, International Fund for Agricultural Development, https://www.ifad.org/documents/10180/41587621-d96e-4aed-8b22-e714bcecd58e.

IRENA (2016), *Renewable Capacity Statistics 2016*, International Renewable Energy Agency, Abu Dhabi.

IRENA (2015), *Renewable Energy Policies and Auctions: A Guide to Design*, International Renewable Energy Agency. Retrieved from: http://www.irena.org/DocumentDownloads/Publications/IRENA_RE_Auctions_Guide_2015_2_policies.pdf.

IRENA (2013), *Renewable Energy and Jobs*, International Renewable Energy Agency, Abu Dhabi.

Kreycik, C., T. Couture and K. Cory (2011), "Procurement options for new renewable electricity supply", *NREL Technical Report* 6A20–52983. Retrieved from: http://www.nrel.gov/docs/fy12osti/52983.pdf.

Liu, C. (2016), *Facing Grid Constraints, China Puts a Chill on New Wind Energy Projects*. Retrieved from: https://insideclimatenews.org/news/28032016/china-wind-energy-projects-suspends-clean-energy-climate-change.

Massmann, O. and G. Cooper (2013), "Feed-in-tariff regulations and getting wind power projects done", *Duan Morris Vietnam LLC*. Retrieved from: http://www.slideshare.net/olmas66/feed-intariff-regulations-and-getting-wind-power-projects-done-en.

Mediratta, R. (2015), "Over 1 crore renewable energy certificates unsold at IEX", *The Economic Times*. Retrieved from: http://economictimes.indiatimes.com/industry/energy/power/over-1-crore-renewable-energy-certificates-unsold-at-iex/articleshow/46812493.cms.

Meyer, R. (2015), "China, the world's biggest polluter, commits to cap-and-trade carbon emissions", *The Atlantic*. Retrieved from: http://www.theatlantic.com/science/archive/2015/09/the-worlds-largest-cap-and-trade-program/407371/ .

NREL (2016), *Feed-in Tariffs: Good Practices and Design Considerations: A Clean Energy Regulators Initiative Report,* National Renewable Energy Laboratory. Retrieved from: http://www.nrel.gov/docs/fy16osti/65503.pdf .

OECD (2016), *Thailand Electricity Security Assessment 2016,* OECD Publishing, Paris.

Ölz, S. and M. Beerepoot (2010), "Deploying Renewables in Southeast Asia: Trends and potentials", *IEA Energy Papers*, No. 2010/06, OECD Publishing, Paris, http://dx.doi.org/10.1787/5kmd4xs1jtmr-en.

Pangalangan, F. (2016), "Yellow alerts: A sign of worse things to come?" *The Philippine Star*. Retrieved from: http://www.philstar.com/headlines/2016/09/13/1623383/yellow-alerts-sign-worse-things-come.

Publicover, B. (2016), "Thailand offers long-term PV promise, but uncertainty over short term", *Solar Plaza*. Retrieved from: http://www.solarplaza.com/channels/markets/11624/thailand-offers-long-term-pv-promise-uncertainty-over-short-term/ .

Ramesh, J. (2015), "Carbon tax to meet climate concerns", *The Hindu*. Retrieved from: http://www.thehindu.com/opinion/op-ed/comment-carbon-tax-to-meet-climate-concerns/article6815835.ece.

REN21 (2016), *Renewables 2016 Global Status Report,* Paris, REN21 Secretariat.

Rivera, D. (2016), "Renewable energy, feed-in tariff temper higher costs", *The Philippine Star*. Retrieved from: http://www.philstar.com/business/2016/01/20/1544252/renewable-energy-feed-tariff-temper-higher-costs.

Sustainable Energy Development Authority Malaysia (2016), *Renewable Energy: Current Status and Further Development*, www.nedo.go.jp/content/100778184.pdf.

Susanto, A. (2016), "New government decree to accelerate the Indonesian solar market", *Solar Plaza,* http://www.solarplaza.com/channels/markets/11591/new-government-decree-accelerate-indonesian-solar-market/?utm_campaign=SUN+Newsletter&utm_source=hs_email&utm_medium=email&utm_content=32030453&_hsenc=p2ANqtz-_EPw2pUpUMPw8nOzLq_Ny52dd9vkzcemQL27ycBPg3S_4dSXHBXftSio2NBhHmRguK-t6N65Iqtl4cu3MHG9bTTdeUp_S90XPGNPlemOwyXqyE8P8&_hsmi=32030453

The Climate Group (2015a), *RE100: India: Understanding Market Conditions for Business to go 100% Renewable*, https://www.theclimategroup.org/sites/default/files/archive/files/Re100-India-briefing-v8.pdf.

The Climate Group (2015b), *RE100: China Analysis: China's Fast Track to a Renewable Future,* April. Retrieved from: https://www.theclimategroup.org/sites/default/files/archive/files/RE100-China-analysis.pdf .

Tongsopit, S. (2016), *Thailand's Renewable Development Status and Recommendations. Workshop on Electricity Security in Thailand, A Joint Workshop by IEA, MOE, and ERI* (PPT Slides). Retrieved from: http://www.eri.chula.ac.th/eri-main/wp-content/uploads/2016/01/Thailand-Renewable-Development-Status-and-Recommendations_Tongsopit.pdf.

UNCTAD (2007), *World Investment Report 2007: Transnational Corporations, Extractive Industries and Development*, United Nations Conference on Trade and Development, Geneva.

United Nations ESCAP (2012), "Decentralized energy system", *Fact Sheet*, United Nations Economic and Social Commission for Asia and the Pacific, http://www.unescap.org/sites/default/files/14.%20FS-Decentralized-energy-system.pdf .

Watson Farley & Williams (2015), *Briefing: Thailand Shifts from Renewable Energy Adder Rates to Feed-in Tariffs for VSPPs*, March. Retrieved from: http://www.wfw.com/wp-content/uploads/2015/03/WFW-Energy-ThailandFiTs-March2015.pdf.

Wind Power Monthly (2016), "Market Status: Asia-Pacific". Retrieved from: http://www.windpowermonthly.com/article/1389248/market-status-asia-pacific

Wind Power Monthly (2015), "Market status: Philippines best performer in Southeast Asia". Retrieved from: http://www.windpowermonthly.com/article/1340355/market-status-philippines-best-performer-south-east-asia.

Wirth, H. (2016), *Recent Facts about Photovoltaics in Germany*, Fraunhofer ISE, www.ise.fraunhofer.de/en/publications/veroeffentlichungen-pdf-dateien-en/studien-und-konzeptpapiere/recent-facts-about-photovoltaics-in-germany.pdf.

World Bank Group (2015), *The Design and Sustainability of Renewable Energy Incentives – An Economic Analysis*, World Bank, Washington, DC.

Yuliani, D. (2016), "Is feed-in-tariff policy effective for increasing deployment of renewable energy in Indonesia?" *WIDER Working Paper* 2016/59. Retrieved from: https://www.wider.unu.edu/sites/default/files/wp2016-59.pdf.

Chapter 4

Structural policy country notes

Domestic structural reform is critical for long-term sustainable growth and further regional integration in Emerging Asia. To sustain the robust economic growth, countries in the region need to cope with several structural policy issues. These structural policy country notes highlight several key areas for reform in each of the ASEAN member countries, China and India. Some common priority areas for reform in the region include infrastructure, education and skill development, tourism, FDI, and energy, though the challenges faced in each country are unique and varied. These notes discuss current policy environments and include recommendations for achieving development goals. Where relevant as examples for Emerging Asian policy makers, the experiences of OECD member countries are also shared.

ASEAN-5

Indonesia

A. Medium-term economic outlook (forecast, 2017-21 average)

GDP growth (percentage change):	5.4
Current account balance (% of GDP):	-1.6
Fiscal balance (% of GDP) (central government):	-2.2

B. Medium-term plan

Period: 2015-19

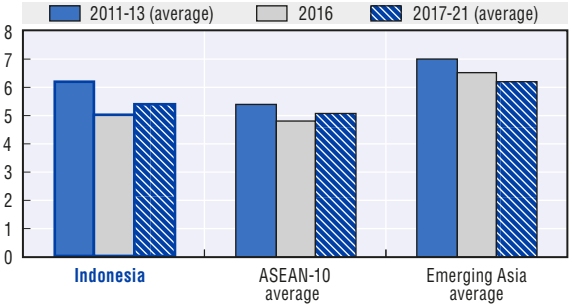
Theme: Strengthen security to maintain territorial sovereignty, support self-reliance in economy and establish community based on national personality and culture.

C. Basic data (in 2015)

Total population:	255.50 million*
Population of DKI Jakarta:	10.18 million*
Nominal GDP (US dollar):	858.95 billion
GDP per capita at PPP:	11 148.54 (current International Dollar)
Exchange rate in the first half of 2016 (period average):	13 425.41 (IDR/USD)

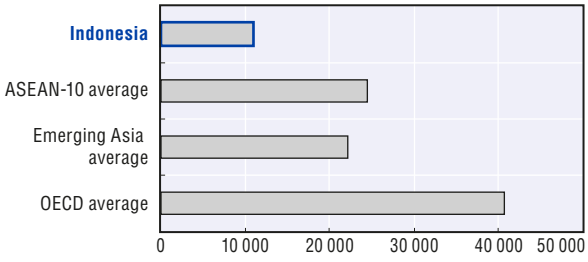
Note: * Population data are government estimates.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage change)



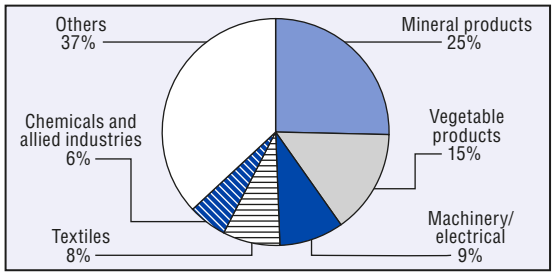
Source: OECD Development Centre, MPF-2017.

GDP per capita, 2015
(PPP, current international dollar)



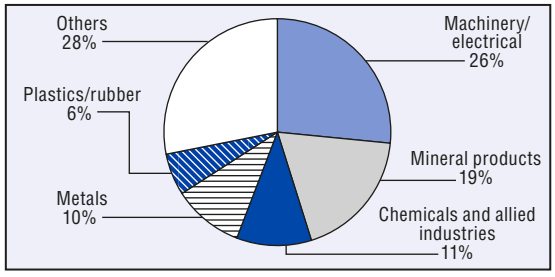
Source: IMF.

Composition of exports, 2015
(percentage of total exports)



Source: Trademap.

Composition of imports, 2015
(percentage of total imports)



Source: Trademap.

Indonesia has kept up a relatively strong record of growth in recent years, with robust domestic demand. A series of economic policy packages has been introduced by the government beginning in September 2015, outlining changes affecting regulation, the tax system, financial accessibility and a range of other issues. Many of the policies proposed would benefit the economy, and demonstrate a commitment to fostering improved growth through reform. Among the important priority policy areas to be addressed are investment in tourism, connectivity and infrastructure development, and rural energy access.

Indonesia: Medium-term policy challenges and responses

- Strengthen investment in tourism
- Improve connectivity and infrastructure development
- Reduce urban-rural gaps in energy access

POLICY FOCUS

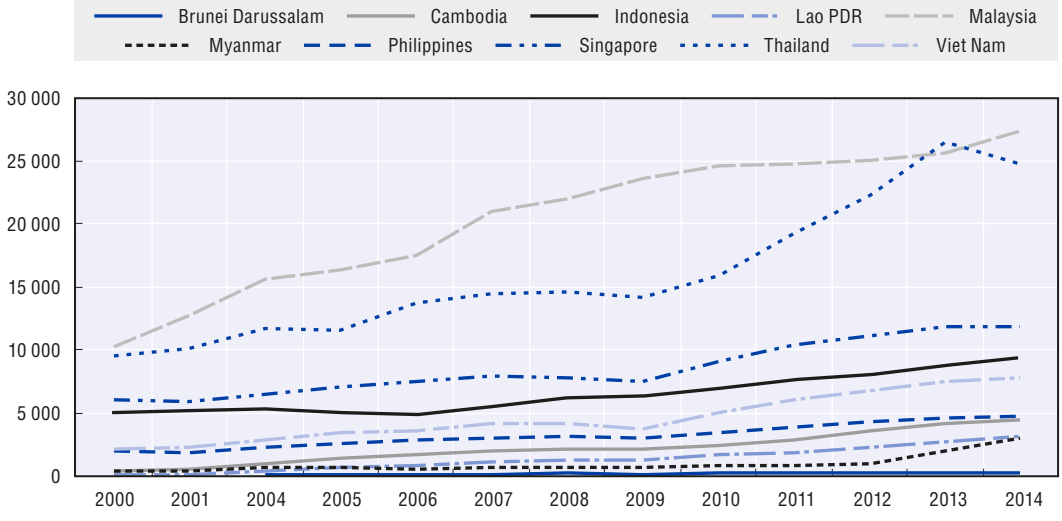
Strengthen investment in tourism

Tourism has significant potential for the Indonesian economy

Although Indonesia achieved its 2015 target, tourist arrivals are still much lower than in neighbouring Malaysia, Thailand and Singapore (Figure 4.1.1). Indonesia attracted approximately 9.4 million overseas visitors in 2014 compared with 27 million in Malaysia and 24 million in Thailand.

Figure 4.1.1. **International tourism in ASEAN by number of arrivals, 2000-14**

Thousand persons



Source: World Bank, *World Development Indicators* (database), available at http://data.worldbank.org/data-catalog/world-development-indicators.

StatLink http://dx.doi.org/10.1787/888933443717

Indonesia aims to attract 12 million foreign tourists and realise IDR 172 trillion (Indonesian rupiah) in foreign exchange revenue in 2016, along with 260 million domestic tourists valued at approximately IDR 223 trillion. The tourism sector's 2016 contribution to gross domestic product (GDP) is targeted at 5%, with 11.7 million jobs created. The country expects to increase the economic contribution to 8% of GDP by 2019, targeting 20 million foreign tourists, 275 million domestic tourists, foreign exchange revenue of IDR 240 trillion, 13 million jobs created, and a rise in the country's world tourism competitiveness index rating to 30.

The Government of Indonesia implemented several measures to achieve the 2019 targets, including adding countries eligible for free tourist visas, deregulating the Clearance Approval for Indonesian Territory for yachts entering the country's territory, and launching the ten priority tourism destinations programme for the year 2016.

This programme will accelerate the development of the ten destinations: Lake Toba in North Sumatra, Tanjung Kelayang beach in Belitung Island, Tanjung Lesung beach in Banten, Thousand Islands in Jakarta, Borobudur temple in Central Java, Mount Bromo, Tengger and Semeru in East Java, Mandalika beach in West Nusa Tenggara, Labuan Bajo in East Nusa Tenggara, Wakatobi in Southeast Sulawesi and Morotai Island in North Maluku. The programme is designed to diversify tourism destinations in the country by shifting focus from Bali. It aims to increase especially foreign tourist arrivals, generate revenue and increase employment opportunities for local communities.

The government is targeting promotion of the programme in some countries in particular, notably China and under the "Beyond Bali" programme in South Korea. However, it is desirable to expand its promotion to a wider target, including tourists from Association of Southeast Asian Nations (ASEAN) and other neighbouring countries.

Co-ordination among authorities and partnering with the private sector will expedite the expansion of tourism

The government has allocated a large portion of its budget to building infrastructure in these destinations, including roads, airports and seaports. However, the ambitious programme still needs significant funding, not only to develop infrastructure and connectivity, but also to upgrade other tourism services and facilities, and for promotion. To achieve the tourist arrivals target, all stakeholders, including the government, private-sector tourism businesses and local communities, must contribute and work together to develop the destinations. As several government ministries are implicated (e.g. Public Works and Public Housing, State-owned Enterprises and Transportation), good co-ordination among different government institutions and between national and sub-national levels of government is required. Moreover, a new tourism authority will be set up for each destination.

Development of tourist destinations depends on an increased role for hotel and restaurant businesses especially. In an effort to attract more investment, the government has revised the negative investment list, opening up a number of business sectors which were previously closed to 100% foreign ownership, including tourism-related businesses such as restaurants, cafes and bars. The role of the private sector could be expanded and maximised further still, not only in the development of tourism facilities, including hotels and restaurants, but in the maintenance of tourist sites and surrounding areas.

The government is also planning to develop all priority destinations into special economic zones to facilitate investment. Already, among the ten destinations, Mandalika, Tanjung Lesung, Morotai Island and Tanjung Kelayang are classified as special tourism economic zones as of March 2016, while the others are classified as national strategic tourism areas.

Improving the capacity and market readiness of destination communities is equally necessary in order to attract internationally reputable tourism operators and investors. A comprehensive tourism improvement strategy is required and should encompass development of both hard infrastructure and connectivity and soft infrastructure, such as human capital development. Local workforces and local firms will require tourism-related skills training to operate as tour guides, travel operators and cultural experts. Local government capacity must also be improved and regulations clarified and

simplified. To further improve the investment climate and attract investors, the central government should maximise implementation of its investment incentive programmes, including the 12 economic policy packages giving permitting concessions, tax incentives and deregulation; the one-stop investment service centre, Pelayanan Terpadu Satu Pintu, facilitating licensing in all fields of business; and the three-hour investment licensing service available to large foreign investors.

Indonesia can also boost tourism by developing new tourism strategies, for instance maximising the potential of halal tourism,[1] as neighbouring country Malaysia has been doing more actively. Similarly, Brazil, Japan and the Philippines have started offering Muslim-friendly options for tourists, such as prayer rooms at major airports and increased restaurants offering halal food (Battour and Ismail, 2015). As the largest Muslim country in the world in terms of population, Indonesia has significant potential to develop this market both domestically and internationally. Indonesian could also enhance tourism offerings to the ASEAN Economic Community, which would also encourage cross-country investment in the tourism sector among ASEAN countries.

POLICY FOCUS

Improve connectivity and infrastructure development

Indonesia needs improved marine and other infrastructure

Indonesia's maritime territory is four times that of its land area. The current government is focusing on developing maritime infrastructure and connectivity, and emphasising the need for maritime facilities throughout the archipelago, including seaports and ships. However, further work is needed in maritime infrastructure development. Most priority projects for 2016-19 concern land infrastructure: toll roads, railways and mass rapid transit. Examples include the Trans Sumatra toll road, Balikpapan-Samarinda toll road, East Kalimantan railway, Jakarta Mass Rapid Transit, Jakarta Light Rail Transit, along with energy and electricity infrastructure. Only a few maritime infrastructure projects are included, such as Kuala Tanjung port, Bitung port, West Java port and inland waterways project. In addition, development of maritime infrastructure requires the development of supporting, efficient public service and administration facilities, including customs and immigration at seaports.

Indonesia needs improved intra- and inter-island connectivity. Developing maritime infrastructure could help to link the country's islands; ensuring connection within each island is equally crucial. Integration between different types of infrastructure, notably sea, air and land transport, will be needed to improve connectivity. Indeed, a comprehensive plan for reliable public transport that is integrated not only among different means of transport but also with the area's spatial planning is necessary to avoid sporadic, incoherent infrastructure development. The consistency and continuation of government infrastructure programmes and priorities could also be improved, especially as many infrastructure projects are long-term investment projects vulnerable to the different focus and priorities of successive governments.

It is vital to keep infrastructure financing flowing

The Government of Indonesia finances infrastructure development projects via several sources: financing from foreign countries, public-private partnership, state-owned enterprises and public financing through the state budget.

To avoid a budget shortfall due to low revenues, including tax revenue, resulting from the economic slowdown, the government is taking austerity measures, including reducing ministry and agency spending and regional transfer funds. Despite this, a large portion of budget is still allocated to major infrastructure projects, including the development of roads, railways and sea tolls. Indeed, the Ministry of Public Works and Public Housing has been the biggest recipient of budget capital in the last few years; approximately 6% of the budget in 2015 and 5% in 2016 (Negara, 2016).

In the midst of fiscal austerity measures, securing financing for infrastructure is crucial. Tax revenue will need to be maximised. The government is already making efforts to increase tax revenue, including improving compliance and implementing the new tax amnesty policy. Nevertheless, considering the large amount of infrastructure financing needed, exploring other financing options, especially public finance, will be necessary. Maximising the use of municipal bonds to finance infrastructure is one option. The country has the regulatory and legal instrument for municipal bonds in place; however, this tool is underutilised to finance infrastructure, the province of West Java being the first to start using it recently. As important as finding funds in the budget is ensuring their smooth and timely transfer throughout the year, including early disbursement.

Even given funding, infrastructure improvements may be challenged by the varying capacity of local governments to implement projects. Differences in capacity could lead to persisting gaps in infrastructure among the regions. This is particularly significant where, under a decentralisation system, regional governments are responsible for city development. Local governments receive budget transfers from the central government, including the Special Allocation Fund. Empowering local governments is therefore crucial to the effective use of infrastructure funding.

POLICY FOCUS

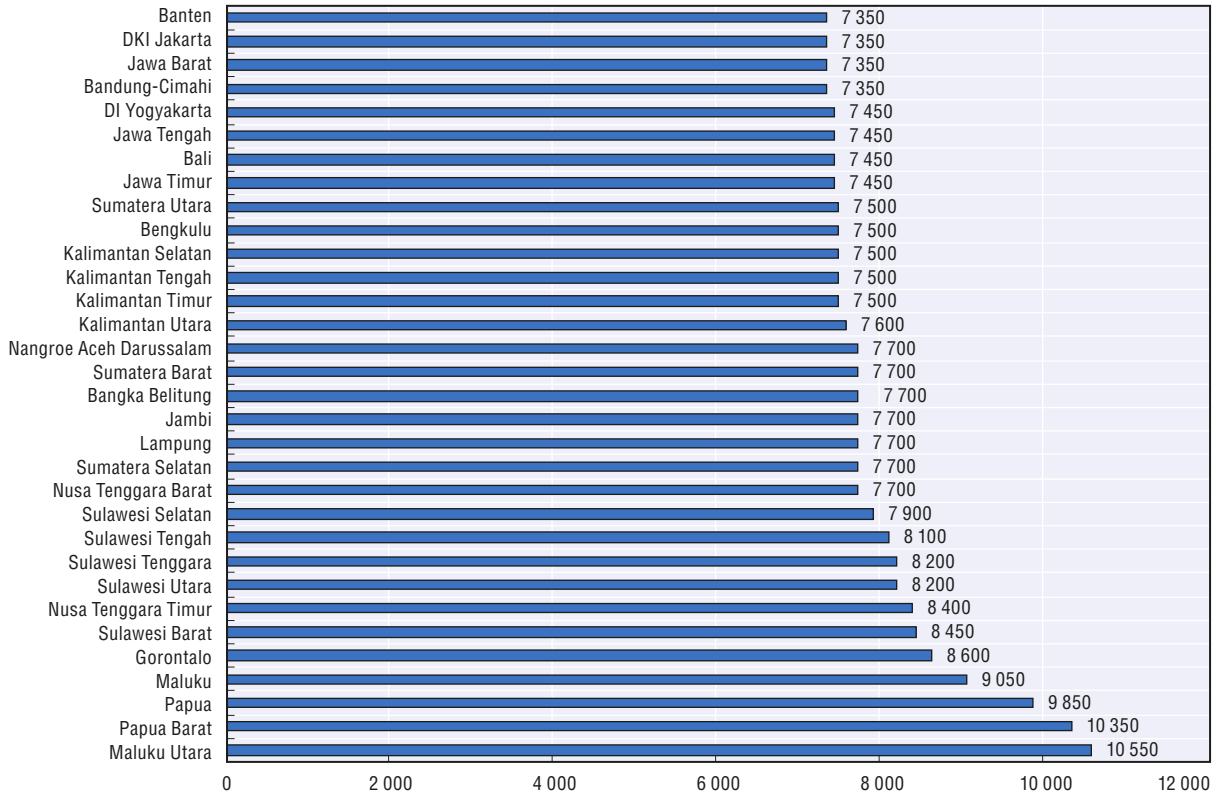
Reduce urban-rural gaps in energy access

Insufficient and unequal access to energy poses a major challenge to well-being and economic growth in Indonesia

The government has a target of 97% electrification ratio – the percentage of Indonesian households connected to the grid – by the end of 2019, up from 84.35% in 2014 (Ministry of Energy and Mineral Resources [MEMR], 2015). However, an urban-rural divide in energy access and infrastructure persists and remains challenging to address. Indonesia has a large gap in urban versus rural access to electricity. Data from the MEMR show 12 659 out of 74 754 villages in Indonesia still have no access to electricity.

Discrepancies in access also exist between regions. Eastern Indonesia has lower electrification ratios than western Indonesia. Sixty-five percent of villages without electricity are located in eastern parts of the country, including Maluku, East Nusa Tenggara, West Nusa Tenggara, Papua and West Papua (MEMR, 2015). West Java province has almost as many households without access as all of eastern Indonesia combined (ADB, 2016). Energy prices, including for fuel, also vary widely between regions. Fuel costs much more in regions other than Java, especially in eastern parts of the country (Figure 4.1.2). Pertamax fuel might be IDR 7 350 in Jakarta and IDR 10 550 in North Maluku, IDR 10 350 in West Papua.

Figure 4.1.2. **Fuel price by province in Indonesia**
IDR per litre, as of 1 September 2016



Source: Pertamina (2016), State Oil and Natural Gas Mining Company, www.pertamina.com/en/.
StatLink http://dx.doi.org/10.1787/888933443720

To expand access to electricity in rural areas, the government launched the Rural Electrification Program in 1976, funded by the state budget and executed by the state-owned electricity company, Perusahaan Listrik Negara. In the 2015 budget, this programme funded medium- and low-voltage distribution lines and medium-voltage/low-voltage transformers. Yet the programme is largely considered cumbersome and inefficient (ADB, 2016). The MEMR recently launched the Bright Indonesia Program (PIT) to build 35 000 MW-capacity power plants, primarily in eastern Indonesia. However, the new programme faces challenges attracting investors. Developing rural electricity infrastructure, especially in outer regions, borderline and remote areas, and on small islands is seen as not commercially feasible. Moreover, the geography, human resources and financing conditions in some rural areas make implementation of the PIT programme challenging.

The renewable energy sector, including geothermal, solar, wind and hydropower, has large development potential and could play an important role in increasing access to energy, particularly in rural and remote areas. However, it is considered an expensive option owing to the high level of initial investment, especially given the current low price of oil. In the National Energy Plan released in February 2014, the Government of Indonesia set an ambitious target of 23% renewable energy in the national energy mix by 2025, with 30% still coming from coal, 25% from natural gas and 22% from oil.

To achieve the ambitious renewables target, the country is actively encouraging private sector investment. In the 9th Economic Stimulus Package, the government committed itself to providing facilities for the development of renewable energy sources. Fully implementing the stimulus package and providing other attractive incentives could encourage development of renewable energy and attract private sector involvement.

Key government ministries in Indonesia

President	Joko Widodo
Co-ordinating Minister for human development and culture	Puan Maharani
Co-ordinating Minister for maritime affairs	Luhut B. Pandjaitan
Co-ordinating Minister for political, legal, and security affairs	Wiranto
Co-ordinating Minister for economic affairs	Darmin Nasution
Administrative and bureaucratic reform	Asman Abnur
Agrarian affairs and spatial planning (National Land Agency)	Sofyan A. Djalil
Agriculture	Andi Amran Sulaiman
Communication and informatics	Rudiantara
Co-operatives and SMEs	Anak Agung Gede Ngurah Puspayoga
Defence	Ryamizard Ryacudu
Education and Culture	Muhadjir Effendy
Energy and mineral resources	Ignasius Jonan
Environment and forestry	Siti Nurbaya Bakar
Finance	Sri Mulyani Indrawati
Foreign affairs	Retno L.P. Marsudi
Health	Nila Farid Moeloek
Home affairs	Tjahjo Kumolo
Industry	Airlangga Hartarto
Law and human rights	Yasonna H. Laoly
Manpower	Hanif Dhakiri
Marine affairs and fisheries	Susi Pudjiastuti
National development planning	Bambang Brodjonegoro
Public works and public housing	Basoeki Hadimoeljono
Religious affairs	Lukman Hakim Saifuddin
Research, technology and higher education	Mohamad Nasir
Social affairs	Khofifah Indar Parawansa
State secretariat	Pratikno
State-owned enterprises	Rini M. Soemarno
Tourism	Arief Yahya
Trade	Enggartiasto Lukita
Transport	Budi Karya Sumadi
Villages, disadvantaged regions and transmigration	Eko Putro Sandjojo
Women empowerment and child protection	Yohana Susana Yembise
Youth and sports affairs	Imam Nahrawi
Central Bank Governor	Agus Martowardojo

Note: Valid as of 7 December 2016

Note

1. Halal tourism can be summarised as any tourism industry object or action which it is permissible to use or engage in according to Islamic teachings (Battour and Ismail, 2015).

References

ADB (2016), *Achieving Universal Electricity Access in Indonesia*, Asian Development Bank, Mandaluyong City, www.adb.org/sites/default/files/publication/182314/achieving-electricity-access-ino.pdf.

Battour, M. and M.N. Ismail (2015), "Halal tourism: Concepts, practices, challenges and future", *Tourism Management Perspectives*, Vol. 19, No. B, pp. 150-154, http://dx.doi.org/10.1016/j.tmp.2015.12.008.

MEMR (2015), *Handbook of Energy & Economic Statistics of Indonesia 2016*, Ministry of Energy and Mineral Resources of Republic of Indonesia, Jakarta, www.esdm.go.id/publikasi/statistik/handbook.html.

Negara, S.D. (2016), "Indonesia's 2016 budget: Optimism amidst global uncertainties", *ISEAS-Yusof Ishak Institute Perspective*, Issue: 2016, No. 3, Southeast Asian Studies-Yusof Ishak Institute, Singapore, www.iseas.edu.sg/images/pdf/ISEAS_Perspective_2016_3.pdf.

Pertamina (2016), "State Oil and Natural Gas Mining Company", www.pertamina.com/en/.

World Bank, *World Development Indicators* (database), World Bank, Washington DC, http://data.worldbank.org/data-catalog/world-development-indicators.

Malaysia

A. Medium-term economic outlook (forecast, 2017-21 average)

GDP growth (percentage change):	4.7
Current account balance (% of GDP):	2.6
Fiscal balance (% of GDP) (central government):	-3.5

B. Medium-term plan

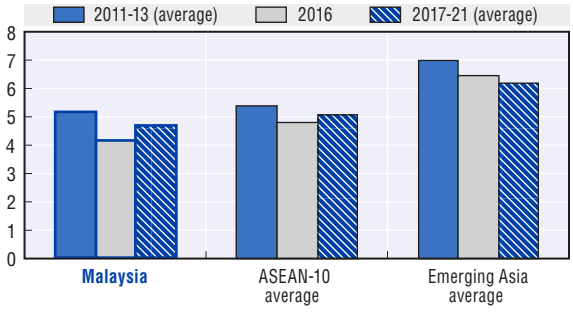
Period: 2016-20
Theme: Anchoring growth on people.

C. Basic data (in 2015)

Total population:	31.00 million*
Population of Kuala Lumpur	1.73 million*
Nominal GDP (US dollar):	296.28 billion
GDP per capita at PPP:	26 211.19 (current International Dollar)
Exchange rate in the first half of 2016 (period average):	4.09 (MYR/USD)

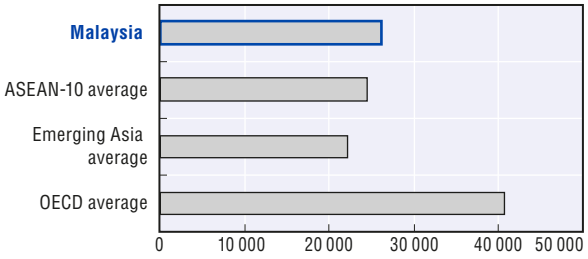
Note: * Population data are government estimates.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage change)



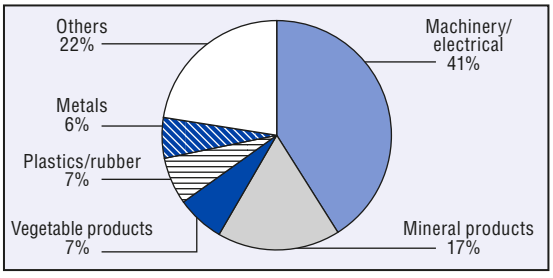
Source: OECD Development Centre, MPF-2017.

GDP per capita, 2015
(PPP, current international dollar)



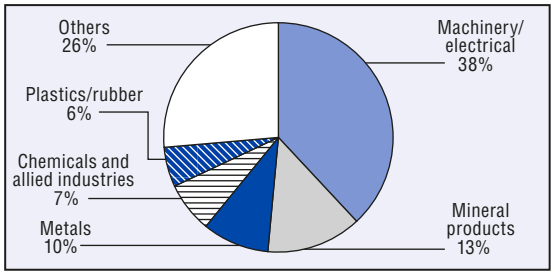
Source: IMF.

Composition of exports, 2015
(percentage of total exports)



Source: Trademap.

Composition of imports, 2015
(percentage of total imports)



Source: Trademap.

Malaysia's economic growth rate has been relatively steady in the past years, despite lower oil prices. The country's growth rate decreased from 6% in 2014 to 5% in 2015. As Malaysia is an oil producer, the falling oil prices pushed down the value of the ringgit. Yet, despite lower prices for exported goods due to the depreciation, Malaysia's exports also decreased from USD 234.1 billion in 2014 to USD 200.2 billion in 2015. Moreover, although economic growth has slowed globally and locally, unemployment has been kept low at 3.1% in the previous year, and the 2016 budget places more emphasis on inclusivity, particularly around affordable housing and financial and other assistance to the needy (Federal Government of Malaysia, 2015).

Malaysia: Medium-term policy challenges and responses

- Keep housing affordable and ensure the supply of affordable housing
- Enhance the social safety net to ensure the well-being and participation of citizens

POLICY FOCUS

Keep housing affordable and ensure the supply of affordable housing

Affordable home ownership across all regions and populations is a vital effect and cause of Malaysia's economic growth

Based on the latest data released by the Department of Statistics, the rate of home ownership in Malaysia is at 72.5%. Compared with other developed and neighbouring countries, this rate is relatively high as highlighted in Table 4.2.1 below.

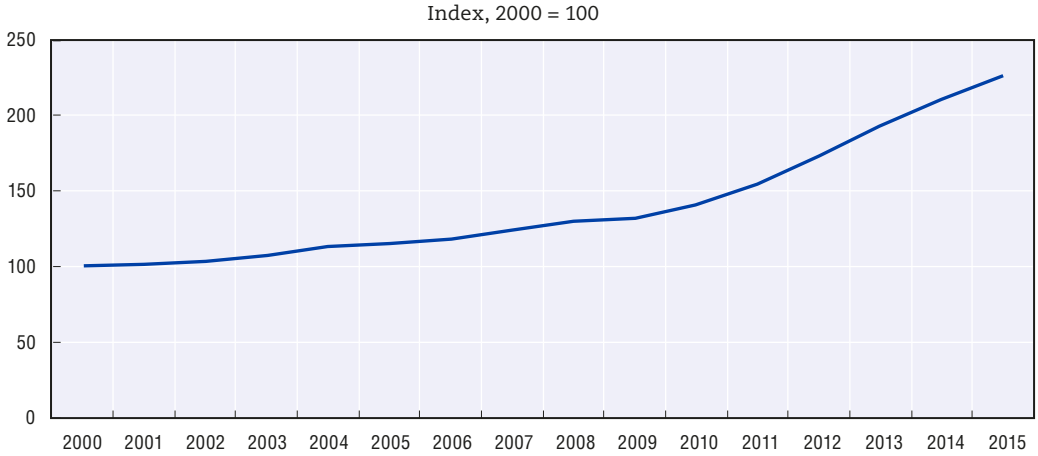
Table 4.2.1. **Percentage of home ownership as of 2010 for selected economies**

Country	Rate of homeownership (%)
Singapore	87.2
Malaysia	72.5
Australia	68.1
United Kingdom	67.4
United States	66.6

Source: National sources.

Over the past 13 years, household incomes have grown alongside housing prices. However, data also show that increased income does not necessarily translate into increased purchasing power for home buyers. While housing prices differ according to the size, type, location and output available, according to the Malaysian Housing Index, housing prices have increased drastically since 2000. Over 15 years, house prices increased by around 127 points (Figure 4.2.1).

Figure 4.2.1. **Increase of Malaysia's House Price Index from 2000 to 2015**



Source: NAPIC (2016), *The Malaysian House Price Index 2016*, National Property Information Centre, Putrajaya.

StatLink http://dx.doi.org/10.1787/888933443736

Rising household income has not been commensurate with the rise in housing prices and its inputs, especially in urban areas. The Housing Buyers' Association and the 11th Malaysian Plan use the three-times median multiple (national median house price being three times national median income) as the threshold for housing affordability. A Khazanah Research Institute (2015) study found that the median house price in Malaysia exceeds the threshold. In 2014, it reached 4.4 times the median income and stayed above 4 times higher from 2002 to 2014.

Since 1976 Malaysia has adopted a three-level housing administration system consisting of federal, state and local levels of governments. Federal and state governments, along with housing developers, are important players in Malaysia's housing industry, and their duties and authorities are outlined in the country's constitution. The federal government has authority over the dissemination of licences to developers and housing regulations. State governments retain the power to control and authorise actions over land issues such as land use, land ownership and housing matters. Local government agencies have the authority to approve plans for buildings and authorise development orders as well. In different states, different entities will head the development of the housing projects, e.g. the Penang Development Corporation, the Selangor State Development Corporation and the Negeri Sembilan State Development Corporation.

The power of the federal government is exercised by various agencies, including the Ministry of Urban Wellbeing, Housing and Local Government (MHLG); the Ministry of Rural and Regional Development and the Regional Development Authorities; the Ministry of Federal Territories; and the Ministry of Agriculture. The Prime Minister's Department is also involved in housing through programmes such as the 1Malaysia People's Housing programme or *Perumahan Rakyat 1Malaysia* (PR1MA) and the 1Malaysia Civil Servant Housing or *Perumahan Penjawat Awam 1Malaysia* (PPA1M). The Ministry of Finance (MoF) is involved through the state-owned enterprise (SOE), Syarikat Perumahan Negara Berhad. Syarikat Perumahan Negara Berhad was established on 21 August 1997, with the goal of providing and building affordable houses for Malaysians through the Rumah Mampu Milik (Affordable Houses) and Rumah Mesra Rakyat (People-Friendly Houses) programmes. Apart from the PR1MA project, the MoF also provides financial services to eligible applicants through its SOE, Cagamas Berhad (2015), for *Skim Rumah Pertamaku* (My First Home Scheme) and the *Lembaga Pembiayaan Perumahan Sektor Awam*, formerly known as the Housing Loan Division for civil servants.

Historically, the federal government has implemented policy to ensure housing affordability. In 1972, Prime Minister Tun Abdul Razak Hussein introduced a "home-owning democracy" policy, enabling home owners to buy homes at a discount through heavy government subsidies. In 1981, Prime Minister Tun Mahathir Mohamad adjusted the policy as demand increasingly outstripped supply. In 2011, the National Housing Policy (NHP) was established to provide guidance for the planning and development of the housing sector at all the three levels of government authority. The NHP's mandate is to "provide adequate, comfortable, quality and affordable houses to improve the well-being of the people". These goals are divided into 6 different thrusts with 20 accompanying policy statements.

The government is continuing efforts to make housing affordable for low-income citizens. Before the establishment of the NHP, the quota for low-cost housing for mixed developments was set at 30% for most states for housing projects exceeding a certain size. In rural areas, the quota resulted in incidences of over-supply and empty units. In 2011, an NHP policy statement granted state governments authority to set low-cost housing quotas for such developments according to demand and location of the projects.

This new flexibility means quotas more accurately reflect housing demand and supply in different states. The MHLG also intends to set the rental rate for low-cost housing units, as the present rate of MYR 124 (Malaysian Ringgits) per month has not been adjusted in ten years.

Another NHP policy strengthens the role of state government agencies in providing affordable housing for both rent and sale, with the collaboration of the federal government and the private sector. This effectively gives state governments and their agencies greater scope to achieve that goal. The MHLC is granted authority to determine the price of affordable housing units, especially for projects subsidised by the government. The ministry also has the mandate to control the ownership and sale of units to avoid speculation buying. The policy also encourages private developers to build medium-cost homes as well to meet the demand of the growing middle-income group with monthly household incomes of between MYR 3 000 and MYR 8 000.

To ensure home ownership is affordable for even the low-income group, the government continues to provide assistance. For those whom the 10% down payment and financing are a challenge, financial support is vital to make home ownership a reality. The extension of the Rent to Own (RTO) Program, announced in July 2016, is one such effort. While details will be forthcoming, it aims to lessen considerably the burden of home buyers financing their first home. In the past the RTO Program has been implemented only for the PR1MA housing candidates whose housing loan applications were rejected. Under this scheme renters of PR1MA homes can rent for up to ten years before opting to buy their homes at the end of their fifth or tenth year of tenancy at a pre-determined price.

Demand for different types of housing varies by states and locations. In the past, many projects saw their low-cost housing units and Bumiputera-allocated units left unsold. Quotas for these units differ in different states. In general, housing developers allocate 30% of the units in a project to low- and low/medium-cost housing to cater for those in the low-income group. A minimum 30% quota needs to be allocated to Bumiputeras, with discounts from 5% to 15%, according to the state, location and type of housing. In recent years many of these units were left unsold because of the location and pricing of the houses, affordability levels or the preferred type of housing of potential homeowners. In 2014 and 2015, for instance, the numbers of launches were 86 997 units and 70 273 units respectively. In 2014, 54.6% of the residential units were unsold. In 2015, however, the percentage rose to 58.60% of units unsold, based on the National Property Information Center 2015 Report.

The government's efforts, regulations and programmes that are geared to assist buyers to afford homes, such as the subsidised PR1MA housing projects, do not themselves address the rising costs of construction. These are very much related to the supply of skilled labour and the price of housing materials available in the market. Scarcity of these inputs will only drive up home prices in the near future.

Along with revised quotas to reduce the mismatch in supply and demand and the instance of vacant units, a streamlined online application procedure for all developers is needed to reduce application time and processing delays between departments responsible for a given project.

POLICY FOCUS

Enhance the social safety net to ensure the well-being and participation of citizens

Expanding and mainstreaming existing social safety net programmes stands to boost shared economic prosperity

Malaysia's remarkable record of combating poverty dates to the late 1960s. In 1970, 49% of the population lived in poverty (Department of Statistics, Malaysia, 2014). By 2000 the figure was 5.5%, and in 2009 it stood at 3.8%. Those living in "hardcore" poverty (monthly income below the food poverty line) is also down from 1.2% in 2014 to 0.7% in 2015. In Peninsula Malaysia the "hardcore" poor are households that live under MYR 580 per month, while in Sabah and Sarawak the thresholds are MYR 710 and MYR 660, respectively.

The Government of Malaysia has set up myriad subsidies and financial and non-financial assistance programmes to help those living in poverty and hardcore poverty. Currently, 7 ministries oversee 39 social safety net programmes. Prompted by the New Economic Policy established in 1971, the government took an inclusive approach in developing poverty alleviation programmes, with the twin goals of ensuring equal opportunities are accessible and achievable by all. As general subsidies, such as the petrol and cooking oil subsidies, are being eliminated in Malaysia, there is an urgent need for a more targeted form of government assistance so that vulnerable groups receive the right kind of support in a timely manner.

One vulnerable group is the Bottom 40 (bottom 40% [B40]) group, with household incomes of less than MYR 2 500 per month. In 2015, 2.7 million households fell into this group, 63% residing in urban areas, the rest in rural areas. The average monthly income of these households is MYR 2 500 or below. Concern for the group has taken centre stage in policy making in recent years. Lifting the B40 households into the middle-income group has been the government's main target towards achieving a more prosperous and equal society in the near future.

The main social safety nets are delivered as unconditional cash transfers, school food programmes, unconditional in-kind transfers and indirect fee waiver programmes. Bantuan Rakyat 1Malaysia is an example of an unconditional cash transfer programme, with approximately 15 million beneficiaries in 2015. The programme started in 2012 to assist not only the B40 but the low-income group as a whole. The assistance is given as a one-time cash transfer of MYR 500 to eligible applicants. The threshold for eligibility increased from MYR 3 000 to MYR 4 000 per household in 2016. From this year, the assistance will be divided into four groups. Households with income under MYR 3 000 per month receive MYR 1 000; households with income between MYR 3 000 and MYR 4 000 per month receive MYR 800; single individuals of 21 years or more with an income of under MYR 2 000 per month receive MYR 400; and households registered with E-Kaseh database (families in need with income under MYR 1 000 per month) receive MYR 1 050. Applications can be done both on line and manually. In the past, applicants would need to apply every year. This has since changed as records can be updated. Those eligible will be automatically targeted as recipients for the financial support.

The Supplementary Food Programme is a school programme established in 1976 by the Prime Minister's Department. It is a conditional non-cash transfer programme aimed at improving nutrition to help recipient students learn better at school. The programme fosters their physical growth and physical and mental health by providing a balanced meal on a daily basis on school days. The programme was launched as part of the Food and Nutrition Practice Plan. In its early phase, it targeted primary school students in rural areas. From the early 1980s, the coverage was expanded to urban and rural primary school students under the jurisdiction of the Ministry of Education. In the 1990s, the eligibility of the recipients was based on the socio-economic variables of the family. Currently, primary school students with household incomes of RM 400 or less are

eligible. It is one of the longest-running non-financial assistances given to date. Similar assistance given to eligible school students includes the School Milk Programme, the Textbook Loan Scheme, the Poor Students' Trust Fund, the Tuition Aid Scheme and the 3K (Safety, Healthy and Beautification) Programme.

School fees in Malaysia have been kept low to encourage enrolment in primary and secondary schools. In 2011, fees for primary and secondary were MYR 24.50 and MYR 33.50, respectively. As of 2012, all fees were eliminated. Prior to 2012, although fees were not waived for students from poor households, financial assistance was given on a monthly basis to cover tuition and school supplies for as long as they attended school. The Tuition Aid Scheme and the Poor Students' Trust Fund are two indirect fee waiver schemes aimed at encouraging student participation and enrolment in school. Moreover, the Tuition Aid Scheme, launched in 2004, enables targeted parents to send their primary school children for extra classes to improve their Malay, English, maths and science subjects.

In March 2016, The Selangor State in Malaysia allocated MYR 3 million in food stamps to aid 5 000 households earning less than MYR 1 500 per month. The food stamps can be used for basic food items, such as oil and rice, at designated shops, which are then reimbursed by the state government. This form of assistance is an example of unconditional in-kind transfer.

The 1AZAM programme, which is headed by the Ministry of Women, Family and Community Development (MWFCD), is a new form of non-cash employment assistance launched in 2010. One of their schemes, the AZAM Niaga (for business), provides micro credit and training to the poor and extreme poor to help them open their own businesses producing hand crafts, food and beverages, and basic items as a source of livelihood. The AZAM scheme extends to the agriculture, services and formal employment sectors in Malaysia, giving the poor employment opportunities as unskilled workers. Between January 2011 and July 2015, 195 953 individuals enrolled in the programme, and MYR 455 million has been allocated to the programme up to 2015.

The MWFCD has also introduced social safety net programmes for target groups under their purview in the forms of financial assistance as well as providing institutional care to meet the needs of the poor. Additionally, the MWFCD has introduced a productive welfare approach as a method to ensure the recipients of financial assistance do not continue relying and depending on the financial assistance. The recipients have access to economic empowerment programmes, among others 1AZAM Launching Grant and Mamacare, in order to assist them in raising their income and improving their lives.

The many types of assistance for the poor and extreme poor are subject to monitoring systems that track the number and types of beneficiaries covered by the programmes. However, there is room to improve monitoring. Data on how the assistance is actually being used by households and feedback from recipients on the effectiveness of the programmes could be collected to augment the government's monitoring and assessment of programmes' success, thereby potentially leading to more effective targeting of support to those in need, and bolstering the success of the programmes and, ultimately, the achievement of their stated objectives.

The budgets of individual programmes are available annually, but the breakdown of how these allocations are used needs to be clearly outlined in publicly accessible channels. Transparency of allocation is vital to ensure that the programmes are continuously improved with minimal leakages or without any misappropriation of funds. To improve the transparency and efficiency of aid programmes and their coverage, many developed countries have moved towards mainstreaming their social safety net programmes; that

is, by evolving a comprehensive, stand-alone social protection plan that covers social safety net programmes, and labour and pension programmes. High-income nations are characterised by a strong and effective social safety net system for their people. A move towards such a system in Malaysia will call for institutional reform among different government agencies in various sectors.

Key government ministries in Malaysia

Prime Minister	Najib Razak
Deputy Prime Minister	Ahmad Zahid Hamidi
Agriculture and Agro-based Industries	Ahmad Shabery Cheek
Communication and Multimedia	Salleh Said Keruak
Defence	Hishammuddin Hussein
Domestic Trade, Cooperatives and Consumerism	Hamzah Zainudin
Education	Mahdzir Khalid
Energy, Green technology and Water	Maximus Johnity Ongkili
Federal Territories	Tengku Adnan Tengku Mansor
Finance I	Najib Razak
Finance II	Johari Abdul Ghani
Foreign Affairs	Anifah Aman
Health	Subramaniam Sathasivam
Higher Education	Idris Jusoh
Home Affairs	Ahmad Zahid Hamidi
Human Resources	Richard Riot Jaem
International Trade and Industry I	Mustapa Mohamed
International Trade and Industry II	Ong Ka Chuan
Natural Resources and Environment	Wan Junaidi Tuanku Jaafar
Plantation Industries and Commodities	Mah Siew Keong
Prime Minister's Department (Economic Planning Unit)	Abdul Rahman Dahlan
Rural and Regional Development	Ismail Sabri Yaakob
Science, Technology and Innovation	Wilfred Madius Tangau
Tourism and Culture	Mohamed Nazri Abdul Aziz
Transport	Liow Tiong Lai
Urban Wellbeing, Housing and Local Government	Noh Omar
Women, Family and Community Development	Rohani Abdul Karim
Works	Fadillah Yusof
Youth and Sports	Khairy Jamaluddin Abu Bakar
Central Bank Governor	Muhammad Ibrahim

Note: Valid as of 7 December 2016

References

Cagamas Berhad (2015), *Housing the Nation: Policies, Issues and Prospects*, Cagamas Holdings Berhad, Kuala Lumpur, www.cagamas.com.my/sites/default/files/publications/Housing%20the%20Nation%20-%20Policies,%20Issues%20and%20Prospects.pdf.

Department of Statistics, Malaysia (2011), *Report of Household Income and Basic Amenities Survey* website, Office of Chief Statistician, Putrajaya, https://www.statistics.gov.my/index.php?r=column/cthemeByCat&cat=120&bul_id=aHhtTHVWNVYzTFBua2dSUlBRL1Rjdz09&menu_id=amVoWU54UTl0a21NWmdhMjFMMWcyZz09.

Federal Government of Malaysia (2015), *2016 Budget: Prospering the Rakyat*, Putrajaya, www.bajet.com.my/2016-budget-speech/.

Khazanah Research Institute (2015), "Making Housing Affordable", Kuala Lumpur: Khazanah Research Institute, www.krinstitute.org/Publications-@-Making_Housing_Affordable.

NAPIC (2016), *The Malaysian House Price Index 2016*, National Property Information Centre, Putrajaya.

Philippines

A. Medium-term economic outlook (forecast, 2017-21 average)

GDP growth (percentage change):	6.1
Current account balance (% of GDP):	2.5
Fiscal balance (% of GDP) (central government):	-2.1

B. Medium-term plan

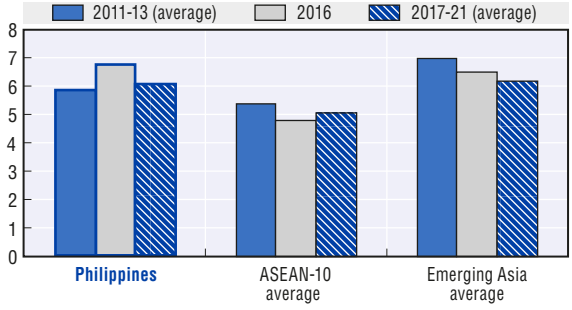
Period: 2011-16
Theme: In pursuit of inclusive growth.

C. Basic data (in 2015)

Total population:	100.98 million
Population of Metro Manila (NCR):	12.88 million
Nominal GDP (US dollar):	292.45 billion
GDP per capita at PPP:	7282.27 (current International Dollar)
Exchange rate in the first half of 2016 (period average):	46.90 (PHP/USD)

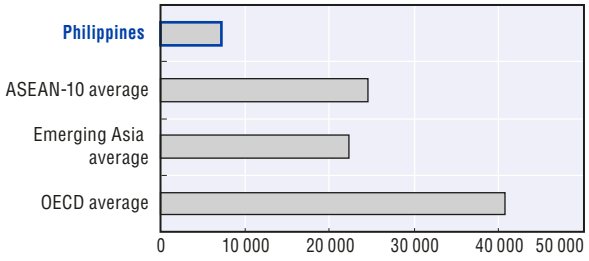
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage change)



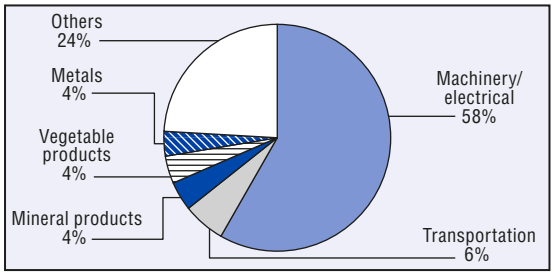
Source: OECD Development Centre, MPF-2017.

GDP per capita, 2015
(PPP, current international dollar)



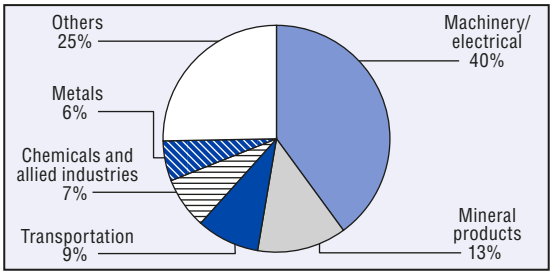
Source: IMF.

Composition of exports, 2015
(percentage of total exports)



Source: Trademap.

Composition of imports, 2015
(percentage of total imports)



Source: Trademap.

In recent years, the rate of economic growth in the Philippines has led, or been close to leading, the large ASEAN-5 group of economies. Strong domestic demand, including an increasing role for investment, has been supported in part by large inflows of remittances. In the general election of May 2016, Rodrigo Duterte of the Partido Demokratiko Pilipino–Lakas ng Bayan (PDP-Laban) won the country's presidency. Shortly after the election, the president-elect's transition team announced an eight-point economic agenda to promote inclusive growth, and said that it would maintain existing macroeconomic policies. Duterte assumed office on 30 June 2016. The new government's commitment to reforms that develop the country's infrastructure, boost job creation, and attract foreign direct investment (FDI), will be necessary to make sure that strong growth continues.

Philippines: Medium-term policy challenges and responses

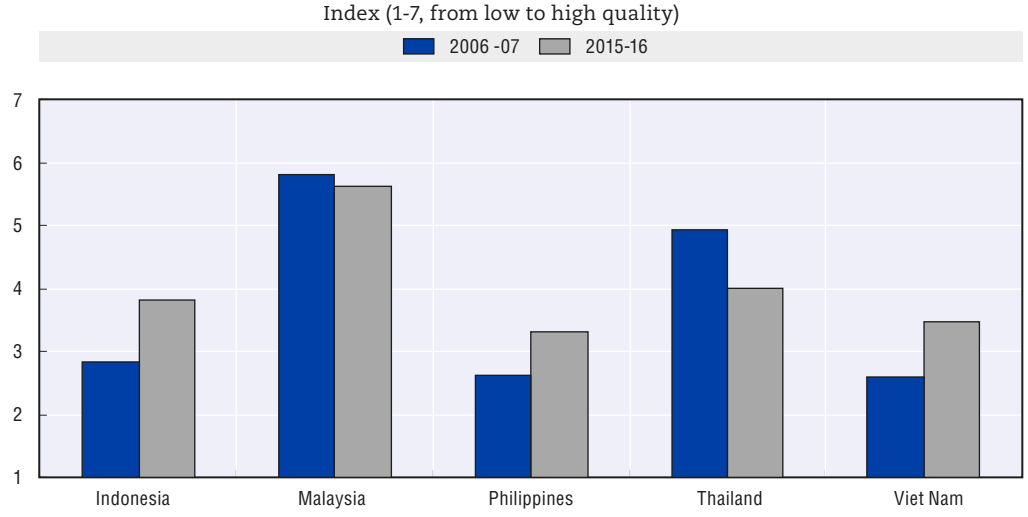
- Invest in infrastructure improvements
- Foster growth in the services sector to create new jobs
- Eliminate hurdles to attract more FDI

POLICY FOCUS

Invest in infrastructure improvements

Inadequate infrastructure has long been a serious concern for the Philippines, with its overall quality ranked lower than many of its neighbours. According to the World Economic Forum's Global Competitiveness Index, the state of infrastructure in the Philippines is lower than that in other ASEAN-5 countries (Figure 4.3.1). Although the country's infrastructure score improved slightly between the 2006-07 and 2015-16 reports, it fell in the global ranking from the 27th percentile (89th out of 122 countries) to the 24th percentile (106th out of 140 countries). In recognition of the need to invest in improving the country's infrastructure, the government set out plans in August 2016 to increase total infrastructure spending from 5.1% of GDP in 2016 to 5.4% of GDP in 2017.

Figure 4.3.1. **Overall infrastructure quality in ASEAN-5 countries**



Source: WEF (2015), *The Global Competitiveness Index Historical Dataset*.
StatLink http://dx.doi.org/10.1787/888933443749

There are major challenges to address in country's transport infrastructure. Compared with other ASEAN-5 countries, the Philippines has a relatively large road network. Nevertheless, the network is among the smallest in the group in relation to the population it serves, particularly as far as paved roads are concerned. Only 26.9% of roads are paved, leaving many routes, particularly in rural areas, vulnerable to damage or destruction from heavy rain. Still, there has been considerable new investment in maritime transportation infrastructure, including the construction of 128 new domestic ports and 16 international ports between 2010 and 2012, and an upgrading of other facilities. Meanwhile, growing demand for air transport both for passengers and for cargo is putting airports under increased strain, requiring the construction of new terminals.

The quality of utility infrastructure has improved, as has its accessibility, but further challenges still remain. Of late, coal has accounted for a larger share of electricity generation in the Philippines than it used to, rising in 2015 to a 45% share of the Philippines' power-generation mix. Heavy reliance on coal raises environmental concerns. On the other hand, renewable sources of energy – mostly geothermal and hydroelectric – accounted for 25% of power generated in 2015, and the legislative framework supporting the use of renewables has improved. Even so, the Philippines may need to take further action to reach its development-plan goals of using more renewable resources and technologies, and boosting the use of alternative fuels. Meanwhile, access to energy is relatively poor, particularly in rural areas. In 2012, 87.5% of the population of the Philippines had access to electricity and 45.9% had access to non-solid fuel for cooking and heating. Both of these rates fell below those of the other large ASEAN-5 economies. Access to drinking water, sanitation and sewerage has improved, but the gaps that remain are tough to address owing to a fragmented management of the sector.

Led by the private sector, there has been significant progress in developing information and communications technology (ICT) infrastructure, although some gaps remain to be addressed. While the cellular telephone network has been expanded to reach all municipalities in the Philippines since 2012, data services are still lacking in rural and remote parts of the country.

Investment in social infrastructure has also been increasing, and rapid progress has been made in delivering the housing units called for in the country's 2011-16 development plan. Nevertheless, there is still a significant need for housing, particularly in regions that are regularly affected by natural disasters. Public-private partnerships (PPPs) are being used to expand education and health infrastructure. An example of this is the PPP school infrastructure project (PSIP), a build-and-transfer (BT) PPP project to deliver new school facilities. The total cost of this project, over its two phases, is PHP 13.75 billion (Philippine pesos). A total of 9 296 classrooms benefitting over 400 000 students in three regions were constructed in the first phase of the project, which ran until December 2015. By the end of the October 2016, 1 690 classrooms had been completed under the project's second phase. The plan, by the end of this second phase, is to deliver a total of 10 679 classrooms in six new regions. PPPs in the pipeline also include projects for health centres, such as the rehabilitation of the National Centre for Mental Health.

In addition to boosting spending on infrastructure, PPPs have the potential to bring in additional financing and external expertise. The Philippines is well positioned to take advantage of the opportunities available through PPPs, thanks to a strong legal and regulatory framework. At the end of August 2016, the Public-Private Partnership Center listed 53 PPP projects in the pipeline at national government level, as well as two local government projects. These projects cover a range of sectors, including transport, energy, health and education. The implementation of PPP projects has often been slow, however. The Public Partnership Act passed by the House of Representatives in February 2016 may help to clarify and improve their implementation.

The Philippines would also stand to benefit from reforming the process of implementing infrastructure projects. Political influence, which affects the efficiency of spending, may be increased through policies that allow congressional representatives discretionary funds. The relatively short time span of infrastructure planning, compared with other sectors such as energy, can also create openings for additional political pressure. There is also scope to keep the planning process for infrastructure projects relatively short, as compared to other sectors, such as energy. Reform may also be needed to clarify the conflicting roles of the Philippine Ports Authority (PPA), which acts as the industry regulator, a builder of ports and as a competitor in the shipping market. Other potential reforms include improving competition in shipping and electricity generation.

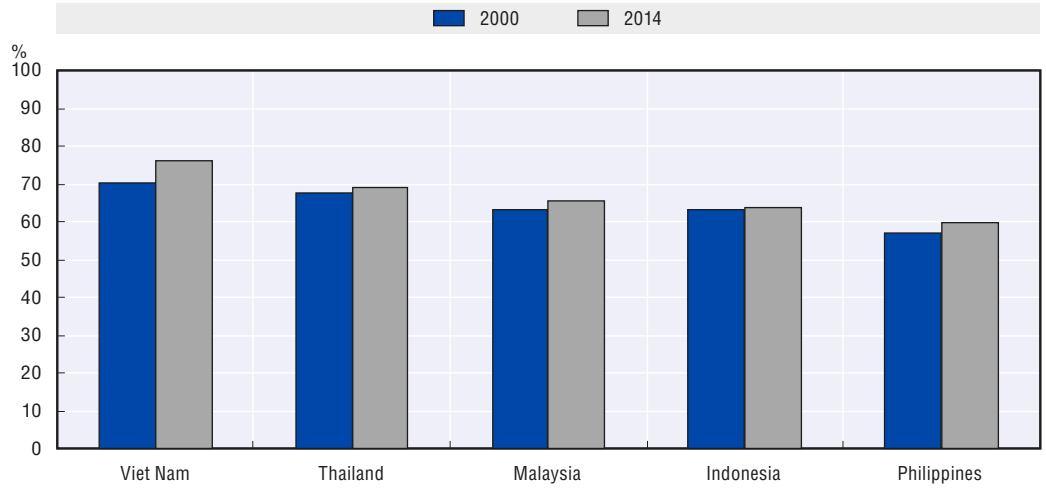
POLICY FOCUS

Foster growth in the services sector to create new jobs

Even as the country has achieved impressive rates of income growth, the rate of job creation in the Philippines has often been disappointing. The working-age population continues to increase, but new employment opportunities are not being generated quickly enough. Strong flows of remittances are not a complete substitute for domestic employment. Faster rates of job creation are needed to enable sustained, inclusive growth in the Philippines. The development of new sectors of the economy should facilitate this process.

Unemployment tends to be higher in the Philippines than in peer countries and in 2014 stood at 6.8%. Although the unemployment rate witnessed a sustained decline for several years before 2014, this figure was still the highest rate among the ASEAN-5 countries. At the same time, a large share of the Philippines' population does not take part in the labour force. The labour-force participation rate among those 15 years old and above has slipped slightly in recent decades, from a recent high of 67.5% in 2001 to 64.4% in 2014. As a result, the employment situation is not improving significantly. Between 2000 and 2014, the number of Filipinos aged 15 years and older and in employment increased from 57.1% to 60%. Still, the country continued to underperform in this area compared with the other ASEAN-5 countries (Figure 4.3.2). This is in spite of the Philippines' young population. The median age of the population is around 23 years, lower than in any other country in this group.

Figure 4.3.2. **Employment to population ratio, 15+, 2000 and 2014**



Source: World Bank (2016), *World Development Indicators* (database), http://data.worldbank.org/data-catalog/world-development-indicators.

StatLink http://dx.doi.org/10.1787/888933443750

Among those who are in work, underemployment is also quite common. Visible underemployment – the share of total workers who work fewer than 40 hours per week but would prefer to work more – accounted for 11.3% of total employment in 2013. While unemployment tends to be more common among the young and well educated, underemployment is most common among those working in family-owned farms or businesses, the self-employed, and those employed by private households.

The services sector now accounts for a large share of economic activity in the Philippines. Services-led growth in the Philippines has not always been particularly successful at creating productive jobs. If the country were to develop its activities in industries with higher productivity, this might help to create new jobs. The business process outsourcing (BPO) industry is a possible example. BPO took off in the early 2000s and grew to make the Philippines the third largest BPO destination in the world. The IT and Business Process Association of the Philippines estimated that employment in the sector surpassed 1 million in 2014. These jobs do, however, tend to go to more educated workers.

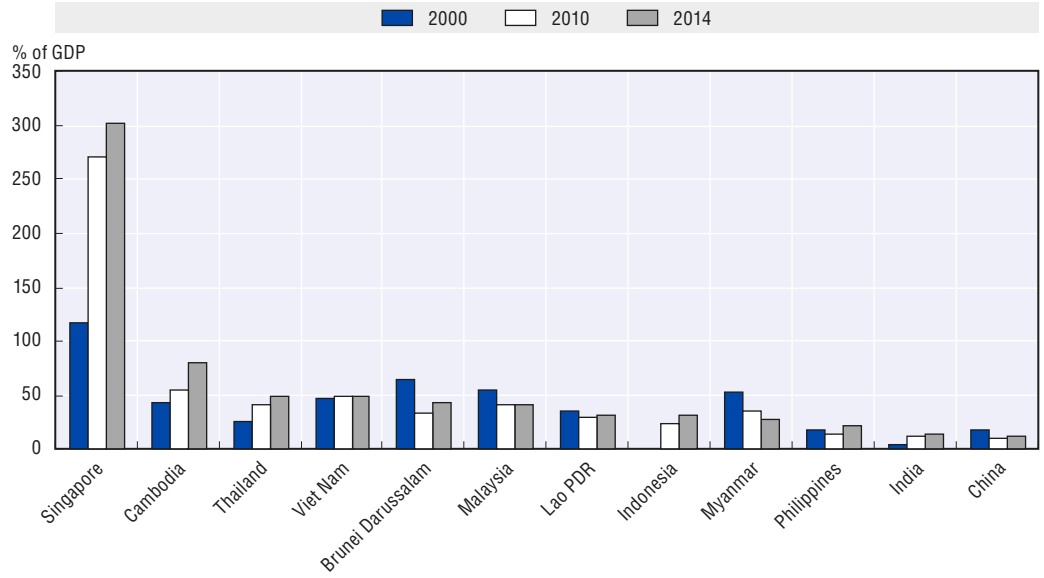
Tourism is a promising sector that is likely to support inclusive growth. As one of the most labour-intensive sectors (after agriculture), tourism is a segment of the services sector that could potentially absorb a large number of workers in the Philippines. It can also offer relatively high pay for less-educated workers. The expansion of the tourism industry in the Philippines has been constrained, however, by difficulties in starting businesses, by safety and security concerns, by inadequate standards of health and hygiene, and by underdeveloped infrastructure. Moreover, there would need to be investment in improving the quality of human resources, alongside the creation of new jobs. Expectations of continued investment and infrastructure development mean that construction should also provide a larger number of employment opportunities, if the necessary skills can be developed.

POLICY FOCUS

Eliminate hurdles to attract more FDI

Although it has not yet taken full advantage of its strengths, the Philippines is well positioned to benefit from large FDI inflows. The country has abundant natural resources, a growing working-age population with a large number of English speakers, and a large domestic market. In the UNCTAD business survey (outlined in the *World Investment Report 2016*), the Philippines was ranked by multinational enterprises as the 11th most promising prospective host country in the world for investment for the period 2016-18 (UNCTAD, 2016a). The stock of FDI in the Philippines has increased in recent years, to 20% of GDP in 2014. This is still relatively small in comparison with the rest of the ASEAN countries, but it is above the levels of China and India (Figure 4.3.3).

Figure 4.3.3. **FDI stocks in Emerging Asia, 2000-14**

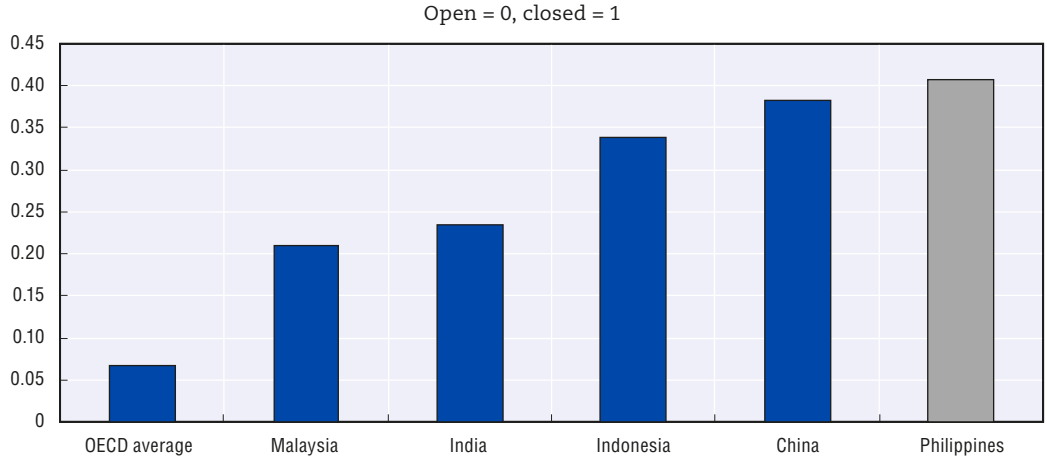


Note: FDI stock data for 2000 not available for Indonesia.
Source: UNCTAD (2016b), *UNCTADSTAT* (database), http://unctadstat.unctad.org/EN/.
StatLink http://dx.doi.org/10.1787/888933443761

The Philippines is a weak performer in terms of the regulatory environment for FDI, according to the OECD's FDI Regulatory Restrictiveness Index (Figure 4.3.4). The index examines 22 sectors and attributes scores based on the level of foreign equity permitted, screening and approval procedures, restrictions on foreign personnel, and other restrictions in areas such as land ownership and corporate organisation. At 0.410 on a 0 to 1 scale of restrictiveness, the Philippines is more restrictive than other Emerging Asian counties included in the 2015 index, and well above the OECD average of 0.068 (Figure 4.3.4). Still, it is an improvement from a score of 0.501 in 1997. The extent of openness also varies greatly by sector. Indeed, some sectors are quite open, with a 0.070 score. This is the case for the following sectors: insurance, oil refining and chemicals, transport equipment, wholesale trade; and electric, electronics and other instruments. Other sectors, however, are entirely closed, with a score of 1. These sectors are: accounting and audit, architectural, business services, engineering, legal, and other media.

The Foreign Investments Act of 1991 liberalised inflows of foreign investment into the Philippines, but restricted access in a number of sectors. In most industries, foreign ownership is allowed up to 100%, except for the sectors under the Foreign Investment Negative List (FINL), which has two components. List A includes sectors in which foreign ownership is limited under the country's constitution, or under specific laws. List B includes sectors where foreign ownership is limited owing to security or defence concerns, for reasons of health and morality, or to protect SMEs. The activities on the FINL list have to be at least 40-60% domestically owned. Firms with more than 40% of foreign ownership are also prevented from owning land directly, as mandated by the country's 1987 constitution.

Figure 4.3.4. **FDI Regulatory Restrictiveness Index scores in selected economies, 2015**



Source: OECD (2016), *FDI Regulatory Restrictiveness Index* (database), www.oecd.org/investment/fdiindex.htm.
StatLink http://dx.doi.org/10.1787/888933443778

A limited wave of liberalisation was forthcoming with the Special Economic Zone Act of 1995, which paved the way for the establishment of special economic zones (SEZs) under the Philippine Economic Zone Authority (PEZA). As of the end of April 2016, PEZA was administering: 232 information technology parks or centres (with 96 more being developed); 71 manufacturing economic zones (with 27 more being developed); 21 agro-industrial economic zones (with 6 more being developed); 19 tourism economic zones (with 6 more being developed); and two medical tourism parks/centres.

Further liberalisation may be needed to encourage additional FDI inflows. OECD member countries have had success in using reforms to attract foreign investment, when these reforms have been a part of broader strategies. Rapid and far-reaching reforms in Korea in the 1990s opened the country to investment. These successful initiatives were accompanied by improvements to the business environment, as well as by measures to promote and facilitate investment. Mexico opened itself up to FDI by amending its foreign investment law in 1996 to allow foreigners to own property, for non-residential purposes, in zones that previously had been restricted. This reform accompanied a number of other decisions that dealt with the privatisation of communications, railways and airports, or allowed greater flexibility for investment in the financial sector.

Investment, particularly FDI, can bring positive spillovers to domestic firms in the host country both by transferring technology and knowledge, and by helping them to increase their productivity. Firms in the Philippines have not always benefitted from FDI inflows in this way, however. The absorptive capacity of domestic firms must, therefore, be strengthened. Initiatives such as the Small Enterprise Technology Upgrading Program (SETUP), managed by the government's science and technology department, may be helpful in this regard. This initiative helps micro, small and medium enterprises to adopt technology and innovations.

Key government ministries in the Philippines

President	Rodrigo Duterte
Agrarian Reform	Rafael Mariano
Agriculture	Emmanuel F. Piñol
Budget and Management	Benjamin Diokno
Education	Leonor Briones
Energy	Alfonso Cusi
Environment and Natural Resources	Gina Lopez
Finance	Carlos Dominguez III
Foreign Affairs	Perfecto Yasay, Jr.
Health	Paulyn Ubial
Higher Education	Patricia Licuanan
Information and Communications Technology	Rodolfo Salalima
Interior and Local Government	Ismael Sueno
Justice	Vitaliano Aguirre II
Labour and Employment	Silvestre Bello III
National Defence	Delfin Lorenzana
Public Works and Highways	Mark Villar
Science and Technology	Fortunato de la Peña
Social Welfare and Development	Judy Taguiwalo
Tourism	Wanda Corazon Tulfo-Teo
Trade and Industry	Ramón López
Transportation	Arthur Tugade
Central Bank Governor	Amando M. Tetangco, Jr.

Note: Valid as of 7 December 2016

References

OECD (2016), *FDI Regulatory Restrictiveness Index* (database), OECD Publishing, Paris, www.oecd.org/investment/fdiindex.htm.

UNCTAD (2016a), *World Investment Report 2016: Investor Nationality: Policy Challenges*, United Nations Conference on Trade and Development, Geneva, http://unctad.org/en/PublicationsLibrary/wir2016_en.pdf.

UNCTAD (2016b), *UNCTADSTAT* (database), United Nations Conference on Trade and Development, Geneva, http://unctadstat.unctad.org/EN/.

WEF (2015), *The Global Competitiveness Index Historical Dataset*, World Economic Forum, Geneva, http://reports.weforum.org/global-competitiveness-report-2015-2016/.

World Bank (2016), *World Development Indicators* (database), World Bank, Washington, DC, http://data.worldbank.org/data-catalog/world-development-indicators.

Thailand

A. Medium-term economic outlook (forecast, 2017-21 average)

GDP growth (percentage change):	3.6
Current account balance (% of GDP):	3.2
Fiscal balance (% of GDP) (central government):	-2.8

B. Medium-term plan

Period: 2012-16

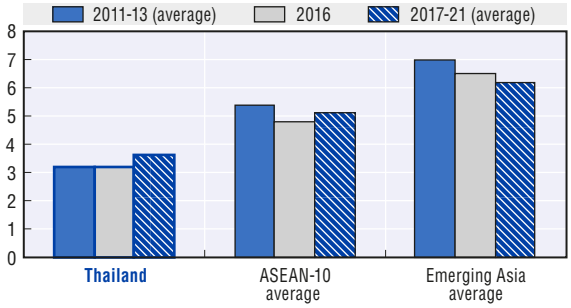
Theme: A happy society with equity, fairness and resilience under the philosophy of a sufficiency economy

C. Basic data (in 2015)

Total population:	65.73 million*
Population of Bangkok:	5.69 million*
Nominal GDP (US dollar):	395.29 billion
GDP per capita at PPP:	16 130.09 (current International Dollar) **
Exchange rate in the first half of 2016 (period average):	35.44 (THB/USD)

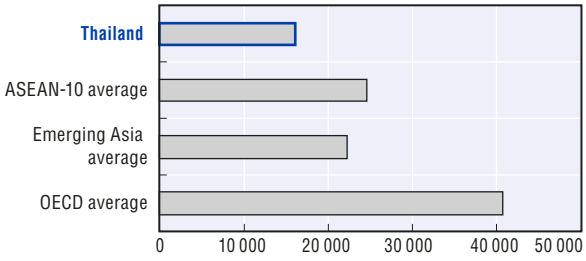
Note: * Population data are government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage change)



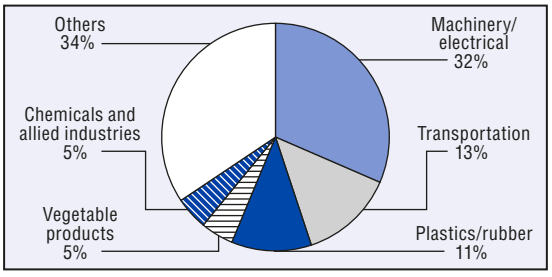
Source: OECD Development Centre, MPF-2017.

GDP per capita, 2015
(PPP, current international dollar)



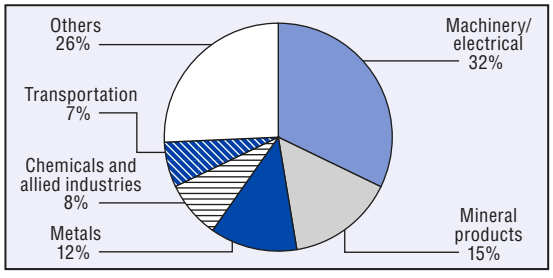
Source: IMF.

Composition of exports, 2015
(percentage of total exports)



Source: Trademap.

Composition of imports, 2015
(percentage of total imports)



Source: Trademap.

In 2015 the Thai economy gained momentum and expanded by 2.8% despite slower GDP growth in the last quarter of the year. For the next two years the economy is forecast to grow by more than 3% (3.3% in 2016 and 3.6% in 2017) (OECD, 2016). The main components of exports and imports are machinery and electrical products. For Thailand to boost economic activity further, it will be essential to enhance the business environment for all firms and to develop technologically advanced and high value-added industries through skill development, entrepreneurship and innovation. Thailand can lay solid foundations for its transition towards being a digital economy, and a developed country, by reviewing its education system, enhancing labour mobility, and adopting effective regulation that favours competition, in particular in the information and communications technology (ICT) sector.

Thailand: Medium-term policy challenges and responses

- Develop the digital economy as a new engine of growth
- Develop human capital through education to make the most of the country's economic potential

POLICY FOCUS

Develop the digital economy as a new engine of growth

Thailand is transforming itself into a digital economy. The country has a vision of maximising digital technologies in all areas of its society and economy and of developing its infrastructure in terms of innovation, data, human capital, and other digital resources (Digital Thailand, 2016). Thailand's long-term goal is to occupy a position of global leadership in digital technology and innovation. To support this vision, Thailand has set concrete goals with a ten-year time frame. These include achieving full digital literacy across the country, and increasing the digital sectors' share of GDP to at least 25%. With the increasing popularity of online transactions among enterprises and consumers, the value of the digital economy has exploded over the past decade, reaching USD 16.1 trillion in 2013. Indeed, it is becoming a key driver of economic growth in the world (ADB, 2016). A digital economy provides multiple benefits as it facilitates trade, creates jobs, and empowers both women and young entrepreneurs. It enhances the scope for people and companies to participate in global value chains and to gain access to markets. In particular, it allows local businesses to reach foreign customers and suppliers, and to access new know-how and technology (ADB, 2016).

In the first phase, which is called Digital Foundation, Thailand's priority is to set up a Digital Thailand Infrastructure Fund, and to deploy broadband to all villages. The government intends to bring high-speed broadband to 70 000 villages by 2017. It also plans to build 10 000 Wi-Fi hot spots in rural areas and to expand 4G services across the country. Thailand's National Broadcasting and Telecommunications Commission (NBTC) expects 4G services to boost the Thai economy by THB 1 trillion (Thai baht), or USD 28 billion, over the next five years (Tao, 2016). Several organisational changes are under way, including the establishment of a new Digital Economy Policy Committee that will oversee the NBTC, Thailand's formerly independent telecoms regulator (The Economist Intelligence Unit, 2015). It is essential, given the role that state-owned companies play in the mobile market, to continue to ensure effective regulation and fair competition in wholesale markets and retail services. In particular, the development of the mobile sector should be supported by transparent legal, fiscal and regulatory frameworks that encourage investment. This will promote a fully competitive and dynamic market.

The present framework for promoting a digital economy in Thailand consists of four key fields: e-commerce, high-tech entrepreneurs, ICT innovations and digital content. In the context of this framework, the strategic investments that have been proposed include developing hard and soft infrastructure, promoting of the use of ICTs in both public and private sectors, and developing ICT literacy among workers. There are also plans to support entrepreneurs, investors and innovators in the ICT and e-commerce sectors, which can be an engine of growth for Thailand's digital economy. In September 2016, the government established the new Ministry of Digital Economy and Society (MDES) as a focal point within the administration. It did so by transforming the former Ministry of Information and Communication Technology (MICT). Part of the plan in

creating the new MDES has been to work towards amending and adopting legislation to support the digital economy, and to restructure and upgrade the state-controlled telecom and postal sectors.

Even as the digital economy gradually spreads out across Emerging Asia, it still faces some physical and institutional barriers in Thailand. Indeed, Thailand has the scope to remove several obstacles in order to boost its participation in the digital economy. First, the country should take further steps to address inadequate ICT use, an unreliable and expensive power supply, and underdeveloped financial transaction systems. Second, the country needs to develop and implement a proper regulatory framework to facilitate the development of cost-competitive ICT infrastructure and services. Third, there is scope to use ICT to simplify and harmonise both border clearance procedures and transport and customs requirements between states. Fourth, proper budgeting and spending, with transparent and inclusive monitoring and evaluation systems, will be essential for the successful implementation of the country's digital economy strategies. Fifth, Thailand needs to promote private investment as it seeks to boost its Internet capability and capacity. The country should do so without posing a threat to existing firms, and in co-operation with various business associations as well as with both domestic and foreign investors. Finally, there is still room to improve Thai people's ICT literacy and their knowledge of the digital economy (ADB, 2016).

It is essential to invest in developing foundational ICT skills in the labour market in order to help SMEs to prosper and grow, and to enhance their productivity. Beyond this objective, however, more specialised skills are also needed to support the kind of technologically advanced industries that produce higher value goods and services. In addition to ensuring the quality of higher and vocational education, it is essential, therefore, for the government to encourage students to major in the subjects that the digital sectors require. Indeed, there is currently a shortage of candidates with the necessary skills to support Thailand's transition to a digital economy. Despite relatively high salaries in the digital sector, not enough Thai students are choosing relevant specialisations in their studies. This is contributing to a severe shortage of IT staff, engineers, technicians, and, above all, digital marketers (Parpart, 2016). As a first step, the government should collect more accurate information about conditions and trends in the labour market and make this easily available to students, educators and parents (OECD, 2008). The government should also remove barriers to labour mobility, and should provide tax incentives to facilitate the movement of specialists from abroad who could transfer skills and knowledge to Thailand (Parpart, 2016). Moreover, it is essential to protect Thailand's tax base in the digital economy, as the country's current tax laws do not provide clear rules and regulations regarding tax compliance for digitised transactions (PwC, 2016). The government should, therefore, review current tax policy, and amend laws, guidelines and regulations, so as to facilitate the taxation of the digital economy.

POLICY FOCUS

Develop human capital through education to make the most of the country's economic potential

Human capital development is a key driver of greater productivity as it makes countries better able to produce, and to adopt, technological innovations (World Bank, 2000). In particular, investment in education is an essential prerequisite for accumulating human capital. A policy framework able to develop human capital maximises a country's potential to surpass and outgrow its current level of economic and social development.

Despite rapid improvements in access to education at all levels, fostering high-skilled human capital still presents a critical obstacle for Thailand (Japan External Trade Organization, 2015). Indeed, an insufficient capability to develop skills through learning, and to deploy a skilled labour force effectively, could be among the reasons for Thailand's recent run of sluggish economic growth. Skill shortages in the workplace in Thailand, and indeed skill mismatches, have widely been recognised as a challenging issue (Bank of Thailand, 2006; Jimenez, Nguyen and Patrinos, 2012). Moreover, investment in higher education and vocational training still has much scope for improvement, both in quantity and quality.

To boost economic growth, Thailand must foster skilled human capital through education, while creating quality jobs and moving workers from low-productivity activities to higher-value segments. In 2014, 28% of the total labour force in Thailand had stopped their studies at secondary school, while a tertiary-level education was the highest level of education for 20% of people (ADB, 2015). According to the World Economic Forum (WEF, 2015), Thailand was ranked 74th out of 140 countries in 2015 in terms of the quality of its higher education and training system. Regional peers such as the Philippines and Indonesia were ranked 31st and 41st, respectively. The quality of mathematics and science education in Thailand fell from 60th in 2011 to 79th in 2015. Moreover, the availability of specialised training services has shown scant improvement, from 74th to 70th. This sluggish improvement in particular has contributed to the country's continuing difficulty in building up a pool of human capital with the right technical skills for technology and innovation. At lower levels of education, meanwhile, the potential to improve quality is even greater.

Within this context, the Thai government has continuously invested in improving the education system (World Bank, 2016). Since the late 1990s, it has done so with the aim of achieving universal primary education, and of providing equal access to secondary and higher education. These aims correspond to an education agenda that is shared around the world (Jimenez, Nguyen and Patrinos, 2012). Thailand's education ministry has, in its 2013-16 implementation plan, specifically set out to attain universal financial support for students in basic education, an increase in the number of years of education that Thais complete, and an increase in the number of workers who have completed at least the upper secondary level of the education system (Ministry of Education of Thailand [MOE], 2015). Despite these efforts, many critical issues continue to undermine the development of human capital within the Thai education system.

One severe issue is the quality of teachers, curricula and textbooks, which is evident from the results of both national and international tests at primary and secondary levels (OECD, 2012). The quality of education is hampered by chronic teacher shortages that persist despite Thailand's relatively low student-teacher ratios. This indicates inefficiencies in resource allocation and government spending (World Bank, 2015). In small schools, teachers must often perform administrative tasks that exacerbate the workload at the cost of teaching quality (UNESCO, 2011). The teacher shortage issue is further exacerbated by a mismatch between supply and demand for teacher specialisations. At the same time, Thailand has a large and underutilised pool of people who would like to be teachers. This can be attributed, in part, to the government's downsizing policy, and to the lack of mechanisms to co-ordinate and anticipate demand for, and supply of teachers in, specific subjects (UNESCO, 2011).

Furthermore, access to education is another major issue in Thailand. According to UNESCO, Thailand has the second highest number of children and youths out of school in the whole of ASEAN. Indeed, 586 000 children lacked access to basic primary education in 2015. Although the Thai government has provided universal basic education, and

increased the number of higher education institutions, government intervention is still necessary to allow all children, including those from disadvantaged backgrounds, to access education (MOE, 2015). The quality of education, and access to it, are particularly weak in remote and rural areas. The latest PISA reading assessment from the OECD found that 47% of 15-year-old students in villages were functionally illiterate in 2012. The grade averages in primary schools from Thailand's national assessments in 2012 reveal that students in private schools outperform students in government schools by at least 10 percentage points in core subjects such as Thai, English and mathematics (Maxwell, 2015). While the disparities between urban and rural schools are particularly severe, other disparities are also deeply embedded in the Thai education system, such as those between communities, social segments, education levels and education streams (e.g. formal and non-formal education) (MOE, 2015; ONEC, 2008).

In order to reduce the disparities between urban and rural schools, the government could develop monetary incentives that attract more quality teachers to remote schools. It could also offer a distance learning programme to train the teachers who are already present in remote areas (UNESCO, 2011). Furthermore, small schools in villages that are close to each other should be reorganised into larger schools that can use existing resources more effectively (World Bank, 2015). This would free up funds for other aspects of government education spending. Indeed, the excessive number of extremely small village schools is one of the reasons why half of the Thai education budget goes to pre-primary and primary schools (UNESCO, 2011). As well as reorganising schools, the government could find a way to allocate teachers and educational resources in line with the number of students enrolled. This would provide incentives to increase cost-effectiveness and quality. The current methods of deploying resources to the education system should be revised to enhance efficiency and fairness, and to respond better to local needs. To enhance the quality of teachers overall, the government could develop the current teacher licensing system further to include specialisation licences. Finally, the teachers' high level of administrative duties, particularly the paperwork related with school assessments, should be reduced in order to allow them to focus on their primary task of providing good quality education (OECD/UNESCO, 2016). This could be achieved by reducing paperwork requirements, or by adding support staff to handle administrative tasks.

The multiple issues that Thailand must overcome to improve its education system call for the development of a master plan on how to expand the system's capacity to develop human capital. This plan should lay the foundation for an overhaul of the education system. Given Thailand's vision of transitioning towards being a digital economy and a developed country, it is imperative that measures are taken to enhance the quality of education, and that the current curriculum is updated to reflect the key competencies needed in the 21st century, including ICT skills. Thailand should, indeed, establish a coherent national strategy for integrating ICT into all levels of the education system. Notably, the government should ensure that digital learning materials are developed and made easily available to teachers. Moreover, it should put ICT to use in support of educational administration, and it should make sure that the ICT infrastructure helps students to develop their ICT competencies in all areas of the country. Along with updating the current curriculum, common student performance standards should also be developed to yield comparable data that can be used to assess teaching strategies, policies and programmes (OECD/UNESCO, 2016). In addition, Thailand should establish a clear strategic vision for the education system, with the aim of enhancing co-ordination between central and local government. In sum, Thailand should aim to enhance the quality and efficiency of its education system, while also reducing the prevailing disparities.

Box 4.4.1. **Thailand's roadmap to democracy**

The Roadmap for Reconciliation, Reform and Elections, which Thailand's military-led administration initially released in 2014, is progressing towards its third and final phase, which foresees the formation of a new government, under a new constitution. On 29 January 2016, the administration disseminated the first draft of Thailand's 20th constitution nationwide, seeking comments and recommendations from the public. After several amendments, the Constitution Drafting Commission revealed the final draft of the constitution on 29 March 2016. This comprised 279 sections, including temporary transitory provisions to a full democratic system. On 7 April 2016, the National Legislative Assembly passed a law regulating the organisation of a national referendum on the draft constitution. Thailand's election commission successfully held this referendum on 7 August 2016, with a turnout of almost 60% of eligible voters. The referendum vote approved the draft constitution, with a vote of 61% in favour. This majority verdict paved the way for the military-led administration to complete the remaining parts of the roadmap to democracy, and to take Thailand back to democracy within a foreseeable timeframe. According to the roadmap, general elections are due at the end of 2017, after which a new government will assume office. Four organic laws must be drafted in order for the general election to be held, and the government expects to complete this process by mid-2017.

Source: Government sources.

Key government ministries in Thailand

Prime Minister	Prayut Chan-o-cha
Agriculture and Co-operatives	Chatchai Sarikulya
Commerce	Apiradi Tantraporn
Culture	Vira Rojpojchanarat
Defence	Prawit Wongsuwon
Education	Dapong Ratanasuwan
Energy	Anantaporn Kanjanarat
Finance	Apisak Tantivorawong
Foreign Affairs	Don Pramudwinai
Industry	Atchaka Sibunruang
Information and Communication Technology	Uttama Savanayana
Interior	Anupong Paochinda
Justice	Paiboon Koomchaya
Labour	Sirichai Distakul
National Economic and Social Development Board	Porametee Vimolsiri
Natural Resources and Environment	Surasak Karnjanarat
Public Health	Piyasakol Sakolsatayadorn
Science and Technology	Pichet Durongkaveroj
Social Development and Human Security	Adul Sangsingkeo
Tourism and Sports	Kobkarn Wattanavrangkul
Transport	Arkhom Termpittayapaisith
Central Bank Governor	Veerathai Santiprabhob

Note: Valid as of 7 December 2016

References

ADB (2016), *The Development Dimension of E-Commerce in Asia: Opportunities and Challenges*, Asian Development Bank, Manila.

ADB (2015), *Thailand Industrialization and Economic Catch-Up*, Asian Development Bank, Manila.

Bank of Thailand (2006), *Human Capital Policy: Building a Competitive Workforce for 21st Century Thailand*, Bangkok.

Digital Thailand (2016), *Thailand Digital Economy and Society Plan*, Ministry of Information and Communication Technology, Bangkok, https://www.itu.int/en/ITU-D/Regional-Presence/AsiaPacific/Documents/Events/2016/Apr-Digital2016/S2_Present_Pansak_Siriruchatapong.pdf.

Japan External Trade Organization (2015), *3rd Survey on Mekong Business Needs and Strategies in Mekong sub-region,* Japan External Trade Organization, Bangkok.

Jimenez, E., V. Nguyen and H.A. Patrinos (2012), "Stuck in the middle? Human capital development and economic growth in Malaysia and Thailand", *World Bank Policy Research Working Paper* No. 6283. World Bank, Washington, DC.

Maxwell, D. (2015), "Educational inequality remains rife in Thailand despite promised reforms", in *Asian Correspondent*, Bristol, https://asiancorrespondent.com/2015/03/educational-inequality-thailand/.

MOE (Ministry of Education of Thailand) (2015), *Education for All 2015 National Review Report: Thailand*. A report prepared for the World Education Forum of UNESCO, Incheon, Korea, 19-22 May.

OECD (2016), *Update June 2016: Economic Outlook for Southeast Asia, China and India 2016,* OECD Publishing, Paris, http://dx.doi.org/10.1787/saeo-2016-25-en.

OECD (2012), *OECD Programme for International Student Assessment (PISA)* (database), OECD, Paris, https://www.oecd.org/pisa/pisaproducts/pisa2012database-downloadabledata.htm.

OECD (2008), *Encouraging Student Interest in Science and Technology Studies*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264040892-en.

OECD/UNESCO (2016), *Education in Thailand: An OECD-UNESCO Perspective*, OECD and United Nations Educational, Scientific and Cultural Organization, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264259119-en.

ONEC (2008), *The National Education Act B.E. 2542 (Amendments B.E. 2545)* (in Thai and English), Office of the National Education Commission, Bangkok.

Parpart, E. (2016), "Skill Shortage", in *Bangkok Post*, Bangkok, www.bangkokpost.com/business/news/1101001/skill-shortage.

PwC (2016), "How the digital economy is affecting tax compliance", in *Bangkok Post*, Bangkok, www.bangkokpost.com/tech/local-news/1084812/how-the-digital-economy-is-affecting-tax-compliance.

Tao, A. (2016), "Thailand to strengthen broadband backbone", in *Computer Weekly*, London, www.computerweekly.com/news/450280056/Thailand-to-strengthen-broadband-backbone.

The Economist Intelligence Unit (2015), "Telecommunications: Thailand's new digital economy", *The Economist*, London, www.eiu.com/industry/article/2002656584/thailands-new-digital-economy/2015-01-13.

UNESCO (2011), *Secondary Teacher Policy Research in Asia*, United Nations Educational, Scientific and Cultural Organization, Bangkok.

World Bank (2016), *World Development Indicators*, World Bank, Washington, DC. Retrieved in September 2016 from http://data.worldbank.org/indicator/NY.GDP.PCAP.KD.ZG.

World Bank (2015), *Thailand. Wanted: A Quality Education,* World Bank, Washington, DC.

World Bank (2000), *Beyond Economic Growth,* World Bank, Washington, DC.

WEF (2015), *The Global Competitiveness Report 2015-2016*.World Economic Forum, Geneva.

Viet Nam

A. Medium-term economic outlook (forecast, 2017-21 average)

GDP growth (percentage change):	6.2
Current account balance (% of GDP):	3.0
Fiscal balance (% of GDP) (central government):	-5.0

B. Medium-term plan

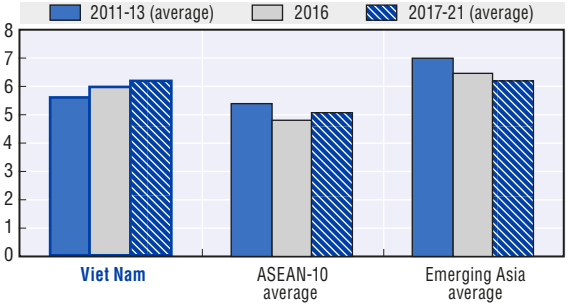
Period: 2011-20
Theme: A modern, industrialised country by 2020.

C. Basic data (in 2015)

Total population:	91.71 million*
Population of Hanoi:	7.21 million*
Nominal GDP (US dollar):	191.45 billion
GDP per capita at PPP:	6 036.60 (current International Dollar)**
Exchange rate in the first half of 2016 (period average):	21 882.20 (VND/USD)

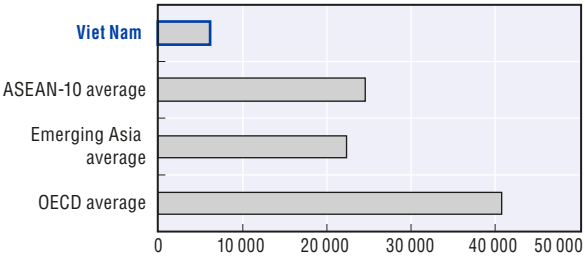
Note: * Population data are government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage change)



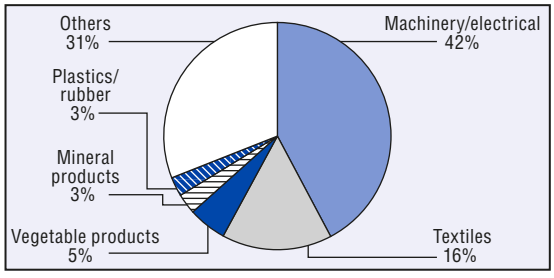
Source: OECD Development Centre, MPF-2017.

GDP per capita, 2015
(PPP, current international dollar)



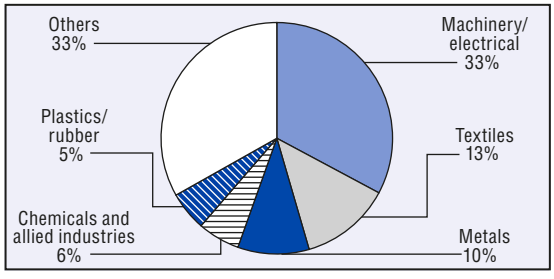
Source: IMF.

Composition of exports, 2015
(percentage of total exports)



Source: Trademap.

Composition of imports, 2015
(percentage of total imports)



Source: Trademap.

The coming wave of industrial manufacturing has been called the fourth industrial revolution, and Viet Nam is looking to harness its economic strengths to play a prominent part. Given its ample manufacturing workforce and relatively low production costs, Viet Nam is confident this new industrial era will boost the local information technology (IT) industry alongside related manufacturing industries. With the huge growth potential of its IT sector, Viet Nam aims not only to be a main player in the global supply chain but a regional hub for Internet of Things (IoT) start-ups. To take part in the fourth revolution successfully, Viet Nam needs to address two main issues: shortage of talent – particularly skilled workers – and inadequate transport and electricity infrastructure.

Viet Nam: Medium-term policy challenges and responses

- Train a skilled workforce to supply high-tech manufacturing
- Build hard and soft infrastructure to support participation in the fourth industrial revolution

POLICY FOCUS

Train a skilled workforce to supply high-tech manufacturing

Skilled workforce is needed for high-tech manufacturing

IoT refers to the increasing digital connectedness of equipment or devices with mechanical and biological objects via special identifiers. It will allow networked data to be transferred efficiently without conventional human-to-human and/or human-to-computer instruction. Connected devices are expected to increase five-fold in the next five years. Big data and the robotics sector will develop apace. By 2025, this sector alone is projected to contribute approximately USD 11 trillion to the global economy. Productivity has always been a major concern in Viet Nam. In 2010, the government released its 2011-20 long-term Socio-Economic Development Strategy (SEDS), setting an ambitious economic growth target of 7-8% per year in the period of ten years. The government is looking to capitalise on manufacturing technologically advanced machinery and gadgets for the workplace, increasing and sustaining productivity in the medium-to-long term.

The government seeks to tap into the 1.4 million people entering the labour market each year to get a foothold in this fourth industrial revolution. As part of its economic growth goals, the government has set targets of 55% skilled workers and 33% with intermediate or advanced vocational training in the workforce by 2020. Currently, only 27% of workers have training matching their job needs, and only 15% have formal vocational training. Technical and vocational education and training (TVET) programmes have been introduced to address the shortage of skilled workers and technicians with adequate practical training.

A study of 350 manufacturing and service sector firms in Hanoi and Ho Chi Minh City found that most employers were not satisfied with the quality of education and skills of the existing workforce, especially for engineers and technicians. Apart from technical skills, the report also emphasised on the need to develop cognitive, social and behavioural competences among the local workers (OECD, 2016).

To develop its labour market, the government has tasked the Viet Nam Ministry of Labour, Invalids and Social Affairs and Viet Nam General Directorate of Vocational Training to produce the Vocational Training Development Strategy of Viet Nam for the period 2011-20. The main focus of this strategy is to fulfil the demands of the labour market by 2020 to produce more workers with appropriate qualifications, while developing timely vocational structures locally.

Viet Nam's Law on Vocational Training of 2015 highlights that business associations, social organisations and professional organisations are responsible for participating in the design and development of training and the appraisal of vocational training curricula.

Unfortunately, in practice employers are not actively engaged in TVET activities because TVET institutions fail in pin-pointing solutions and building relationships with companies to improve the quality of training of the local workers (OECD, 2016).

More skilled workers will improve national competitiveness, both indirectly increasing the income of the poor in a sustainable manner and ensuring social security. Nine measures will be taken to produce more skilled workers by 2020:

1. Renovate governmental management for vocational training.
2. Develop the vocational teacher staff and managers in the field of vocational education.
3. Build a National Vocational Qualification Framework.
4. Develop the curriculum, syllabus and learning materials.
5. Develop the facilities and equipment in the field of vocational education.
6. Control and ensure the quality of vocational training.
7. Link vocational training with labour markets, developing the participation of enterprises in the field of TVET.
8. Raise the awareness of vocational training development.
9. Promote international co-operation in the field of vocational training.

International partners are helping to develop the TVET programme. The Vietnamese-German Development Cooperation in Technical and Vocational Education and Training partnership is ongoing. With the support of the German Federal Ministry for Economic Cooperation and Development, they seek to improve TVET in Viet Nam in many ways, including devising sound policies with local government. The joint Programme Reform of Technical and Vocational Education and Training in Viet Nam enables both countries to provide policy recommendations and advice to targeted TVET centres to improve the quality of the training being offered. To further strengthen co-operation in advancing workforce training in Viet Nam, in June 2015 the Government of Viet Nam and the German organisation for international development, Deutsche Gesellschaft für Internationale Zusammenarbeit, signed an agreement to implement several instruments of quality management that was being used in the programme and incorporate them into quality assurance for TVET.

In addition, from 2017 the Asian Development Bank will support the government's Skills and Knowledge for Inclusive Economic Growth Programme to develop the content, mechanisms and policies of the TVET sector towards its industrialisation and the achievement of its agenda in the next ten years (2016-25). In 2016, the government also opened several social infrastructure projects to foreign investment. Four listed projects aimed at developing vocational and technical training centres in Viet Nam will need to attract foreign investments of approximately USD 200 million to succeed.

The role of multinationals is critical in producing skilled workers

As highlighted in the nine measures of TVET development, enterprises – especially multinational companies – have a greater role to play in supporting government efforts to train the country's workforce to supply and benefit from the fourth revolution. As multinational companies bring in advanced production technologies, workers will benefit from knowledge spillover through on-the-job training, and retraining and skills upgrading. For this to happen, appropriate incentives should be offered to both the firms, as knowledge distributors, and the employees, as increasingly skilled, valued and remunerated workers in their companies and in the job market. Policies should

incentivise firms to disseminate new know-how and retain their increasingly skilled workers in the long run to capitalise on such investment in their workers.

POLICY FOCUS

Build hard and soft infrastructure to support participation in the fourth industrial revolution

Infrastructure upgrading is needed to improve connectivity

To benefit from the fourth industrial revolution Viet Nam must improve its inadequate infrastructure, with priority for expanding transport and electricity systems. While aware of the need to improve transport and power projects in industrial zones to maintain, let alone advance the country's status as a manufacturing centre, frequent blackouts and traffic congestion remain significant challenges for the government.

In late 2015 the government estimated the cost of improving the country's weak transportation infrastructure at USD 48 billion for 2016-20. The government has planned large-scale highway, seaport, airport and railway projects to support the high economic growth target set in its 2010-20 long-term development plan. In recent years, there have been significant improvements to Highway 1 and Highway 5 and expansion of roads at Hai Phong Port. According to a 2015 report by the Bank for Investment and Development of Vietnam, only 32% of the roads in Viet Nam are in good condition, while the remaining 68% are substandard and need to be rebuilt or upgraded. Ports still lack efficient highways and freight rail systems to support trade activities, contributing to the rising costs of inland transport, which affects trade activities directly. Viet Nam's electricity infrastructure also requires improvement. According to Electricity of Vietnam, during peak hours the capacity shortfall is 1 500-2 000 MW, necessitating repeated power outages.

Nevertheless, to curb corruption and leakages the government plans to increase the efficiency and scope of infrastructure projects tendered through foreign and private investment through the public-private partnerships and equitisation mechanism. In 2016 the government opened a group of Technical Infrastructures Projects to foreign investment in four main infrastructure areas: transport, power, urban and industrial parks. Projects include constructing and upgrading roads, bridges and railways; expanding the capacity and reliability of the power grid in Hanoi and Ho Chi Minh City; constructing and developing industrial parks and complexes; and expanding the capabilities of existing ports. The three power infrastructure projects open to foreign investment are the Binh Dinh power centre, Dung Quat coal-fired thermal plants; and factories to produce new and renewable energy equipment. These three projects will require foreign investment of approximately USD 4.2 billion to be realised by 2020.

To facilitate Viet Nam's accession into the supply chain of the fourth revolution, software infrastructure must be made equally robust. A proper channel to support the growth of IT start-ups is vital, from conception, to funding and facilitating research and development, to commercialisation, to bringing innovative new products to markets and investors.

One means to this seamless growth would be a single portal for the IoT industry, aggregating all information and resources for start-ups and producers. Different government agencies would need to work together to eliminate red tape and other barriers. The endeavour will not be new to Viet Nam, given it has the same requirements and commitments under the Trans-Pacific Partnership (TPP) agreement. For the TPP, the

website will be for all types of non-tariff measures to be announced and monitored by the government. The TPP portal thereof would serve as a one-stop-shop for importers and exporters to access information on procedures and regulations in getting different products to market. Hence, this endeavour would be a short-to-medium-term deliverable.

Key government ministries in Viet Nam

Prime Minister	Nguyen Xuan Phuc
Agriculture and Rural Development	Nguyen Xuan Cuong
Construction	Pham Hong Ha
Culture, Sports and Tourism	Nguyen Ngoc Thien
Education and Training	Phung Xuan Nha
Ethnic Minority Affairs	Do Van Chien
Finance	Dinh Tien Dung
Foreign Affairs	Pham Binh Minh
Health	Nguyen Thi Kim Tien
Home Affairs	Le Vinh Tan
Industry and Trade	Tran Tuan Anh
Information and Communications	Truong Minh Tuan
Justice	Le Thanh Long
Labour, War Invalids and Social Affairs	Dao Ngoc Dung
National Defence	Ngo Xuan Lich
Natural Resources and Environment	Tran Hong Ha
Planning and Investment	Nguyen Chi Dung
Public Security	To Lam
Science and Technology	Chu Ngoc Anh
Transport	Truong Quang Nghia
Central Bank Governor	Le Minh Hung

Note: Valid as of 7 December 2016

References

OECD (2016), "Building demand-driven TVET systems across Southeast Asia: The role of employers", *Working Paper*, OECD Southeast Asian Regional Policy Network on Education and Skills (SEARPN), Paris.

Vietnamese-German Development Cooperation in Technical and Vocational Education and Training, *Trained in Viet Nam* (website), www.tvet-vietnam.org/en/article/1099.vietnamese-german-programme-reform-of-tvet-in-viet-nam-supported-the-central-committee-of-propaganda-molisa-and-moet-in-the-workshop-reform-the-training-of-manpower-for-industrial-zones-and-economic-zones-in-viet-nam.html?sstr=Vietnamese-German|Development|Cooperation|in|Technical|and|Vocational|Education|and|Training (accessed 30 September 2016).

BRUNEI DARUSSALAM AND SINGAPORE

Brunei Darussalam

A. Medium-term economic outlook (forecast, 2017-21 average):

GDP growth (percentage change):	1.8
Current account balance (% of GDP):	10.0

B. Medium-term plan

Period: 2012-17

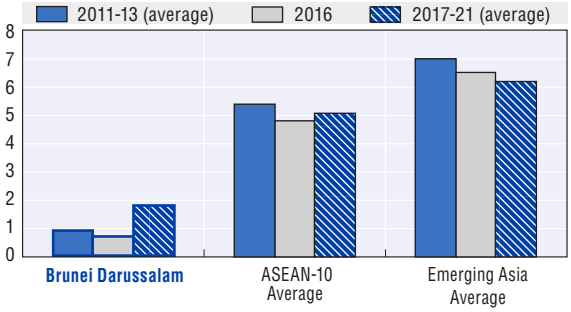
Theme: Knowledge and innovation to enhance productivity and economic growth.

C. Basic data (in 2015)

Total population:	0.41 million*
Population of Brunei/Muara:	0.29 million*
Nominal GDP (US dollar):	12.93 billion
GDP per capita at PPP:	79 507.61 (current International Dollar)
Exchange rate in the first half of 2016 (period average):	1.37 (BND/USD)

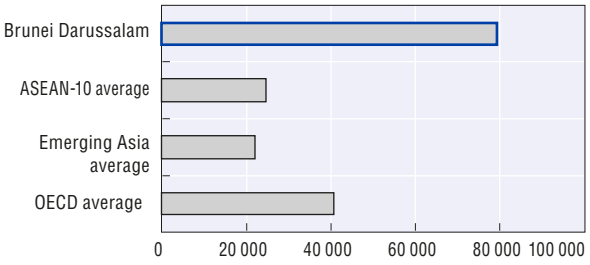
Note: * Population data are government estimates.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage change)



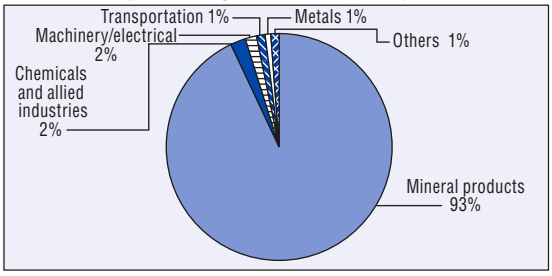
Source: OECD Development Centre, MPF-2017.

GDP per capita, 2015
(PPP, current international dollar)



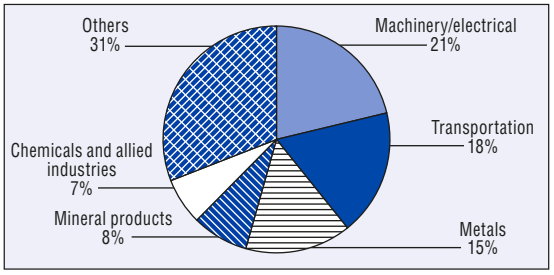
Source: I MF.

Composition of exports, 2015
(percentage of total exports)



Source: Trademap.

Composition of imports, 2015
(percentage of total imports)



Source: Trademap.

Brunei Darussalam's rich oil and gas resources have put the country among the top nations in terms of gross domestic product (GDP) per capita, but the over-reliance on oil exports, which account for over 90% of the country's total exports and contribute to more than 60% of GDP, has also been a major concern for its economic sustainability. The fall in global oil prices since late 2014 is a strong reminder of the urgency of dealing with this structural weakness, as the country has struggled with consecutive years of growth contraction from falling oil revenues. The government of Brunei Darussalam is not unaware of this challenge. In the first long-term development plan, Wawasan Brunei 2035 or Brunei Vision 2035, the government vows to accelerate economic growth and support a dynamic and sustainable economy by promoting investment from both foreign and domestic sources in a variety of industries not limited to oil and gas. The Tenth National Development Plan 2012-17 was formulated in line with the objectives of Wawasan Brunei 2035. Enhancing productivity and generating sustainable high growth

are the main themes of this development plan. A challenge Brunei Darussalam shares with other resource-rich countries is that, to create a sustainable economy, the country needs to reduce dependence on resource revenues and diversify its economy, but to achieve this objective the country inevitably has to leverage more resource revenues to cover the costs of economic transformation and reforms.

Brunei Darussalam: Medium-term policy challenges and responses

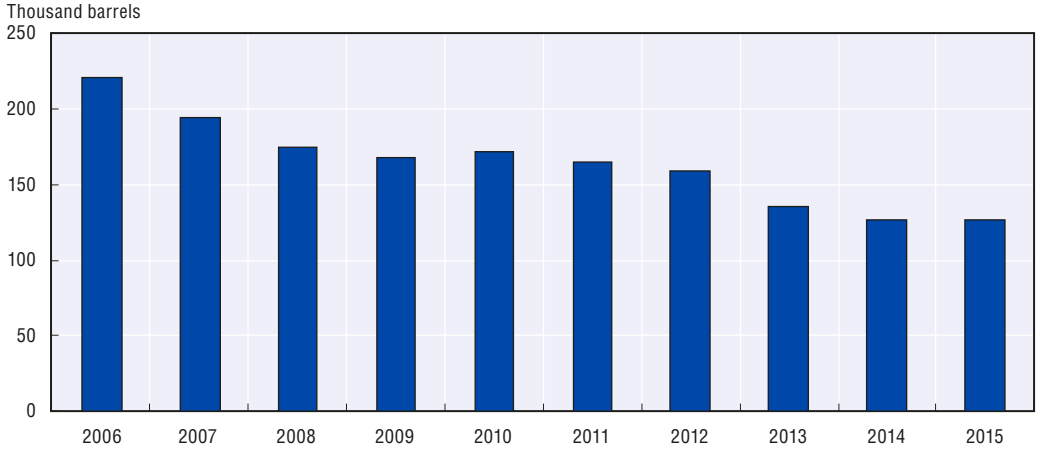
- Promote economic diversification by inviting foreign investment and supporting the private sector
- Improve legislation on business competition

POLICY FOCUS

Promote economic diversification by inviting foreign investment and supporting the private sector

Brunei Darussalam, as the small oil-exporting country of less than half a million people, is frequently among the wealthiest nations in the world, with a GDP per capita of international dollar 79 508 (IMF, 2016). Brunei Darussalam citizens also enjoy no sales or personal income tax, as well as high social welfare on par with, if not better than, many developed countries. However, record low oil prices in the past two years have exposed the weakness of a resource-dependent economy. Brunei Darussalam's GDP contracted in both 2014 and 2015, despite the government's best efforts to mitigate the impact of falling oil revenues. Although economic growth is projected to increase next year as oil prices slowly recover, the challenge should not be overlooked, as non-renewable resources can be exhausted (Figure 4.6.1). Thus, diversifying the economy is key to achieving the objective of building the sustainable economy outlined in Wawasan Brunei 2035.

Figure 4.6.1. **Daily crude oil production in Brunei Darussalam, 2006-15**



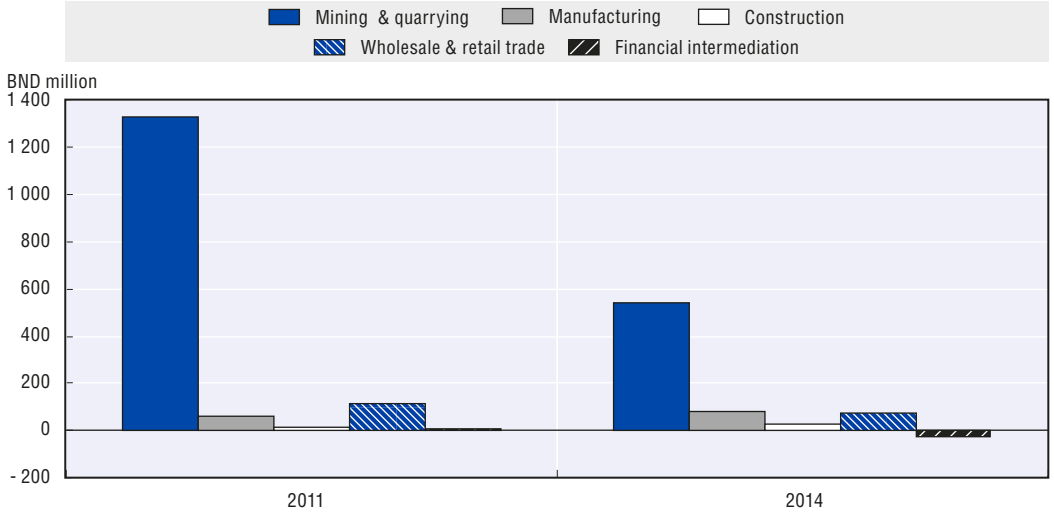
Source: BP Global (2015), *BP Statistical Review of World Energy 2015*, www.bp.com/content/dam/bp/en/corporate/pdf/bp-statistical-review-of-world-energy-2015-full-report.pdf.

StatLink http://dx.doi.org/10.1787/888933443785

Utilising foreign investments to help diversify economy

Resource-rich countries often face the dilemma of having to leverage more resource revenues to support their efforts towards economic diversification, as resource income still funds the majority of their government budget. Effectively, countries must rely more on resources in order to reduce reliance on resources. One way to avoid the conflict is to utilise foreign investments, which have already been identified as a key driver of economic growth in Wawasan Brunei 2035. In 2014, Brunei Darussalam received a total of BND 720 million (Brunei dollar) in foreign direct investments (FDIs). Although the majority of FDIs still flow to the resource sector, the share in mining and quarrying has largely decreased in comparison to 2011, while FDI shares in other sectors have increased, especially FDI inflows to manufacturing and construction (Figure 4.6.2).

Figure 4.6.2. **FDI inflows to Brunei Darussalam by sector, 2011 and 2014**



Source: CEIC.

StatLink http://dx.doi.org/10.1787/888933443794

Brunei Darussalam has already taken several measures to encourage FDI inflows, including various incentives offered by the Energy and Industry Department of the Prime Minister's Office and supportive activities by both the Ministry of Foreign Affairs and Trade and the Brunei Economic Development Board (BEDB). Foreign investment incentives are provided for a list of pioneer industries, mostly from non-oil sectors, such as fertilisers and pesticides, construction, chemicals, education, finance, information and communications technology (ICT), etc. Any company granted a pioneer certificate can benefit from incentives, which include a five-year exemption from the 18.5% corporate income tax if the company's fixed capital expenditure is between BND 500 000 and BND 2.5 million. The exemption period is raised to 8 years if the expenditure is more than BND 2.5 million and 11 years for projects located in a designated high-tech industrial park. Companies are also eligible for exemptions from import duties on machinery, equipment, component parts, accessories and building structures, as well as taxes on imported raw materials not produced in Brunei Darussalam (Oxford Business Group, 2016).

The BEDB was set up in 2003, following the introduction of the Brunei Economic Development Act, and aims to promote Brunei Darussalam as a preferred investment destination in four priority business segments: life sciences, agri-business, ICT and services. The board assists potential investors in navigating regulations and provides

information on development requirements, the cost of doing business and project-specific information. Working in partnership with the Invest in Brunei Darussalam FDI Action and Support Center, the BEDB uses an FDI fast-track system to streamline the process of obtaining permits, licences and approvals, including construction permits and foreign labour recruitment.

Starting a business in Brunei Darussalam has been made easier through the passage of the Miscellaneous Licence Act (Amendment) in January 2015, which aims to foster a pro-business environment in the sultanate by reducing wait times for new business registrants to start operations. Under the new law, some low-risk businesses, such as eateries and shops, will be able to start operations immediately. The new Business Licence Act (Amendment) 2016 further exempts several low-risk businesses, such as eateries, from needing a business licence at all. These pro-business measures have helped Brunei Darussalam rise in the World Bank's *Doing Business Report* ranking from 97 in 2015 to 72 in 2016 (World Bank, 2016).

In recent years, the government has put in place a number of policies and initiatives to attract FDI to help with diversification efforts in particular. In March 2015, Brunei Darussalam invited international investors to take part in a USD 300 million halal industry park located northwest of the capital, Bandar Seri Begawan. Among them were many investors from mainland China as Brunei Darussalam tries to tap into the large Chinese market where the demand for higher-quality halal products is growing. The halal industry park is only part of the wider government diversification strategy concentrated on halal, the Bio-Innovation Corridor (BIC). Led by the Ministry of Industry and Primary Resources, this initiative aims to promote the development of the halal industry in Brunei Darussalam and attract foreign investors who will produce and export certified Brunei Darussalam halal products to overseas markets, such as China and other Association of Southeast Asian Nations (ASEAN) countries. The BIC will offer a significant boost to the domestic halal industry, which can generate additional revenues and is also expected to create up to 28 000 jobs after the three-phase halal industry park is completed, with approximately 9 500 of the jobs related to food processing (Table 4.6.1). In January 2016, the Sultan of Brunei Darussalam announced a number of economic reforms that are expected to further boost FDI inflows, including a plan to create a Foreign Direct Investment and Downstream Industry Committee tasked with implementing reforms to improve Brunei Darussalam's competitiveness in attracting foreign investors, although further details have yet to be revealed.

Table 4.6.1. **Employment opportunities generated by the Bio-Innovation Corridor in Brunei Darussalam**

		Gross floor area mix (m^2)			Population	
Zone	Zone area (ha)	Residential	Commercial	Total	Residential	Employment
Enterprises and industrial manufacturing	195.83	5 720	649 850	655 570	0	9 295
Commercial	77.57	0	624 540	624 540	343	16 207
Mixed use	13.16	197 400	65 800	263 200	3 948	1 880
Urban living	10.49	220 932	24 548	245 480	4 419	701
Parkland	154.01	0	15 115	15 115	0	15
Research and development	103.38	0	28 078	28 078	0	621
Total	629.58	424 052	1 407 932	1 834 384	8 710	28 719

Source: Haris, N. (2014), "Brunei Agro-Technology Park now renamed as Bio-Innovation Corridor", http://sqwchinagroup.com/brunei-agro-technology-park-now-renamed-as-bio-innovation-corridor/

Support diversification through private sector and small and medium-sized enterprise policies

Domestically, one notable initiative that can help diversify Brunei Darussalam's economy is the One Village One Product (OVOP) programme. The OVOP is a community-centred and demand-driven local economic development strategy, initiated in Japan in the 1970s, with the objective of increasing the self-reliance of local communities and encouraging creativity among the local population. Brunei Darussalam started the OVOP programme in 2002 to encourage entrepreneurship at the village level, improve standards of living, generate employment opportunities and alleviate poverty. There are a number of supporting initiatives in relation to OVOP, such as the Village Enterprise Financial Grant, which will provide assistance to the development and commercialisation of village products to a maximum of BND 50 000 per recipient village. Villages that have outstanding performance in terms of development and supporting the OVOP programme can earn the Excellent Village Awards, which come with a financial reward to fund future development projects. Despite the programme's certain success, challenges remain at the local implementation level, and more help from the government is needed. For example, some residents participating in OVOP still face difficulties in getting financing from banks, and their production and sales are relatively small scale. On the other hand, although the quality of OVOP products is generally good, the packaging of these products is done poorly, which affects marketing. In addition, many residents do not know how to export their products and are limited to local markets.

POLICY FOCUS

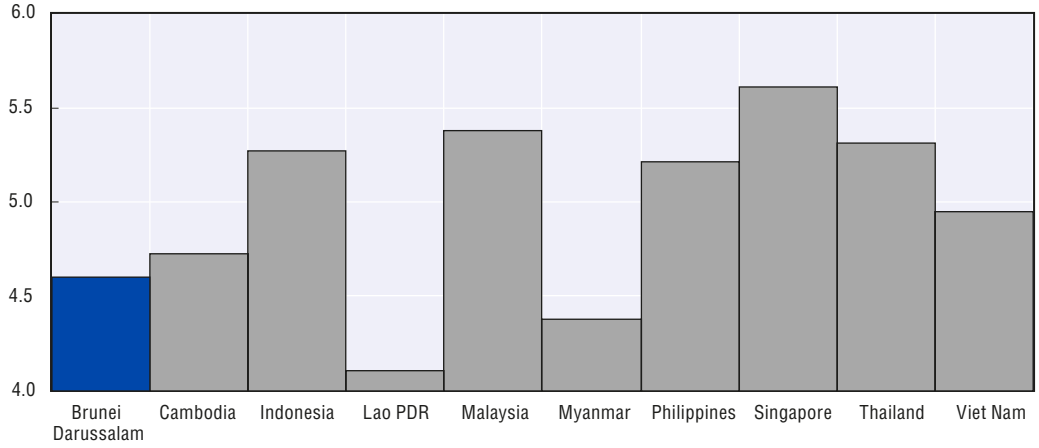
Improve legislation on business competition

A competitive business environment is crucial for the development of the private sector and increased productivity.. To foster this environment, the government needs to have a sound and comprehensive legislative framework with institutional support. In the case of Brunei Darussalam, strengthening business competition can also help efforts towards business diversification. Despite improvements over the years, local competition in Brunei Darussalam remains relatively weak compared to other ASEAN-6 countries, such as Malaysia, the Philippines, Singapore, Thailand and Viet Nam (Figure 4.6.3). The government has taken measures to address some of the major obstacles to fostering a competitive business environment in Brunei Darussalam, including lack of a comprehensive national competition law and weak competition in the banking and telecommunication sectors.

In January 2015, Brunei Darussalam passed its first national competition law, fulfilling the requirement in the ASEAN Economic Community Blueprint that stipulates the creation of a national competition policy and law by 2015. The new Brunei Competition Order 2015 is the first nationwide competition-related legislation in the country since the passage of the Monopolies Act in 1932. With the approval of this law, Brunei Darussalam has joined the ranks of other ASEAN countries with national competition policies. The objectives of the order are to enhance economic efficiency and to improve consumer welfare through fostering an economy that is free from unfair and unhealthy competition. The order was introduced as part of the country's wider efforts to liberalise

the economy, as the government recognised the crucial role competition policy played in facilitating investments and businesses in other countries. The order is modelled after equivalent laws in Singapore and the United Kingdom and will prevent "collusion and abuse of dominance" in the market in order to promote a strong competitive culture and environment throughout the economy.

Figure 4.6.3. **Intensity of local competition in ASEAN countries, 2016**
Index (1-7 from low to high intensity)



Note: Myanmar data refer to 2015.
Source: WEF (2016), *The Global Competitiveness Report 2016-2017*, https://www.weforum.org/reports/the-global-competitiveness-report-2016-2017-1/.
StatLink http://dx.doi.org/10.1787/888933443800

The order will focus on three main areas of anti-competitive conduct, including anti-competitive agreements, abuse of dominant position and anti-competitive mergers. The Brunei Competition Commission (BCC) will be created as the authority to oversee investigation and enforcement, as well as the appeal process. Implementation of the order is expected to take place in four phases in late 2016: 1) establishment of the BCC and the enforcement infrastructure, 2) provision on anti-competitive agreements, 3) provision on unilateral conduct prohibitions and 4) provision on merger control. Maximum financial penalty under the order will be 10% of the undertaking's turnover in Brunei Darussalam for each year of the infringement, up to a maximum of three years. Private follow-on actions are also permitted. At time of writing the order is not yet in force, and the Competition Commission and the Competition Appeal Tribunal still need to be appointed.

Competition in the banking sector has traditionally been less vigorous in Brunei Darussalam than in the more developed Southeast Asian countries. In recent years, the Monetary Authority of Brunei Darussalam has introduced a number of policies in order to create a sound banking environment, some of which aim to boost competition in the banking sector. For example, a policy was introduced in November 2015 to delink salaries from credit cards, which have made local banks more competitive. In the past, credit card holders assigned their salary to the credit card-issuing bank. The removal of this precondition gives people more options for different kinds of credit cards, instead of just using the cards linked to their salaries.

Key government ministries in Brunei Darussalam

Sultan and Prime Minister	Sultan Hassanal Bolkiah
Senior Minister of the Prime Minister's Office	Prince Al-Muhtadee Billah Bolkiah
Communications	Mustappa Sirat
Culture, Youth and Sports	Halbi Mohd Yussof
Defence	Sultan Hassanal Bolkiah
Development	Bahrin Abdullah
Economic Planning and Development	Prince Al-Muhtadee Billah Bolkiah
Education	Suyoi Osman
Energy and Industry	Mohammad Yasmin Umar
Finance	Sultan Hassanal Bolkiah
Finance (second minister)	Abd Rahman Ibrahim
Foreign affairs and trade	Sultan Hassanal Bolkiah
Foreign Affairs and Trade (second minister)	Lim Jock Seng
Health	Zulkarnain Hanafi
Home Affairs	Abu Bakar Apong
Primary Resources and Tourism	Ali Apong
Religious Affairs	Badaruddin Othman
Chairman of Monetary Authority (AMBD)	Prince Al-Muhtadee Billah Bolkiah

Note: Valid as of 7 December 2016

References

BP Global (2015), *BP Statistical Review of World Energy 2015*, British Petroleum, London, www.bp.com/content/dam/bp/en/corporate/pdf/bp-statistical-review-of-world-energy-2015-full-report.pdf.

Haris, N. (2014), "Brunei Agro-Technology Park now renamed as Bio-Innovation Corridor", *The Brunei Times*, publisher, Bandar Seri Begawan, http://sqwchinagroup.com/brunei-agro-technology-park-now-renamed-as-bio-innovation-corridor/.

IMF (2016), *World Economic Outlook Database*, International Monetary Fund, Washington, DC, www.imf.org/external/pubs/ft/weo/2016/01/weodata/index.aspx.

Oxford Business Group (2016), "Brunei Darussalam reforms regulations to attract foreign investment in key industries", https://www.oxfordbusinessgroup.com/overview/targeted-approach-regulator-reforms-are-under-way-attract-foreign-investment-key-industries-while.

WEF (2016), *The Global Competitiveness Report 2016-2017*, World Economic Forum, Geneva, www.weforum.org/reports/the-global-competitiveness-report-2016-2017-1/.

World Bank (2016), *Doing Business Report,* World Bank, Washington, DC.

Singapore

A. Medium-term economic outlook (forecast, 2017-21 average)

GDP growth (percentage change):	1.8
Current account balance (% of GDP):	17.2

B. Medium-term plan

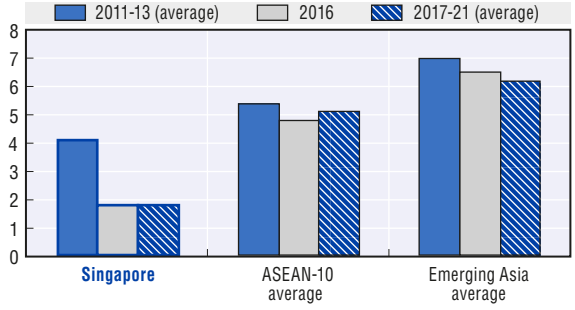
Period: 2010-20
Theme: High skilled people, innovative economy and distinctive global city.

C. Basic data (in 2015)

Total population:	5.53 million*
Nominal GDP (US dollar):	292.73 billion
GDP per capita at PPP:	85 382.00 (current International Dollar)**
Exchange rate in the first half of 2016 (period average):	1.37 (SGD/USD)

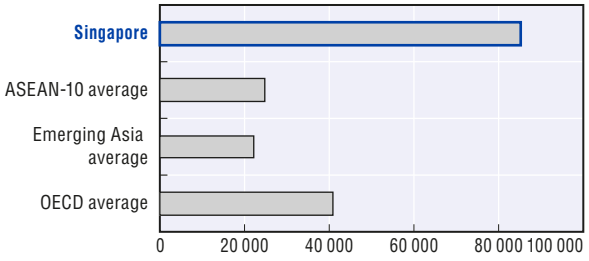
Note: * Population data are government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage change)



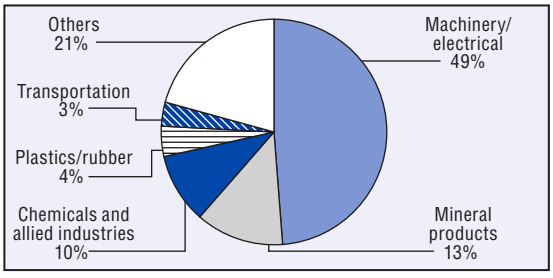
Source: OECD Development Centre, MPF-2017.

GDP per capita, 2015
(PPP, current international dollar)



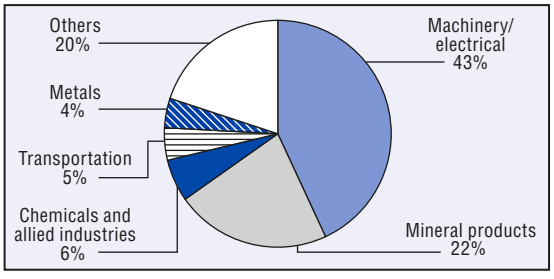
Source: IMF.

Composition of exports, 2015
(percentage of total exports)



Source: Trademap.

Composition of imports, 2015
(percentage of total imports)



Source: Trademap.

Human capital has been among the most important factors behind Singapore's rapid development and high income level. In the past 50 years, with support from its citizens under a harmonious multi-racial society, Singapore has achieved significant success compared with its regional peers, despite being a city state with limited resources. Singapore's gross domestic product per capita has increased from the level of Mexico and South Africa in the 1960s to on par with some of the most developed countries in the world, such as Germany. However, Singapore also suffers many problems that plague other developed economies as well as some unique issues of its own, including the declining birth rate, aging population and limited land available for use.

Singapore: Medium-term policy challenges and responses

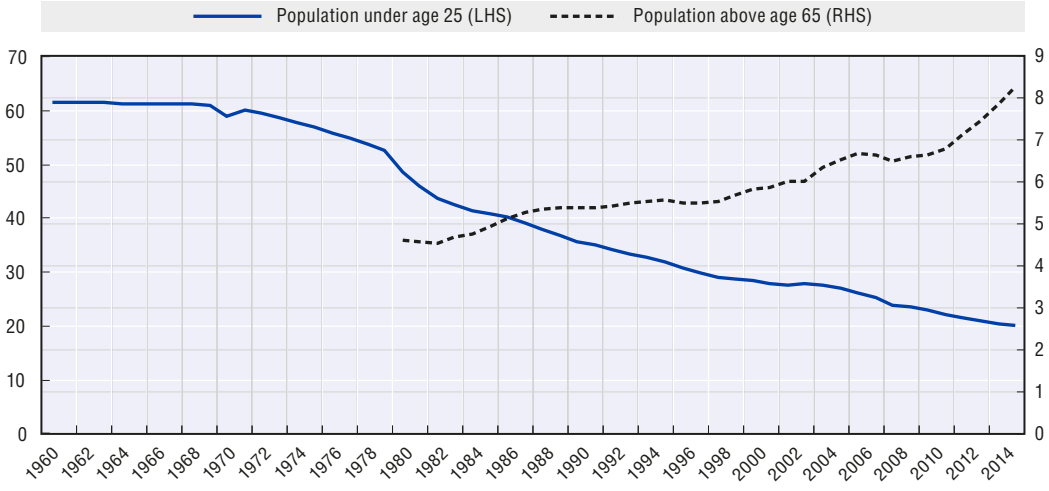
- Support the older population in the labour market and strengthen their social safety net
- Pursue efficient urban planning and optimise land use

POLICY FOCUS

Support the older population in the labour market and strengthen their social safety net

Like other developed countries, Singapore is facing a rapidly aging population and falling birth rate. In Singapore, the percentage of the population aged 25 and below has dropped from its highest at 60% in 1960 to approximately 20% in 2015, while the percentage of elderly aged 65 and above has almost doubled since 1980, when the data were first recorded (Figure 4.7.1). The birth rate has also drastically declined, from close to 6 children per woman in 1960 to 1.2 in 2015. At the same time, the average life expectancy of Singaporeans has risen steadily, from 63 in 1976 to 83 in 2015 (Figure 4.7.2).

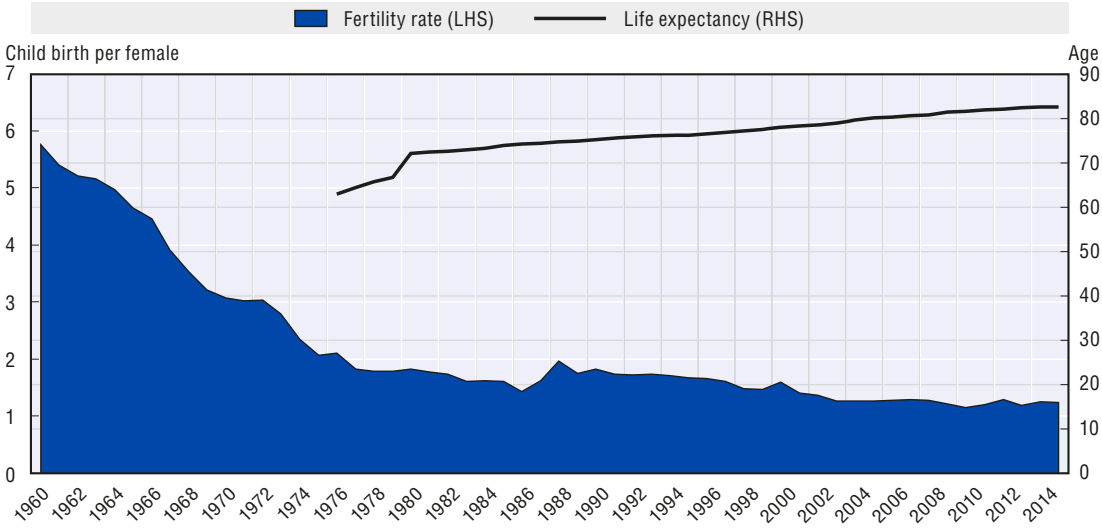
Figure 4.7.1. **Evolution of age structure in Singapore, 1960-2015**
Percentage of total population



Source: CEIC.
StatLink http://dx.doi.org/10.1787/888933443816

All of these statistics indicate that Singapore is becoming an aging society, characterised by low labour force growth, slower economic growth and an increased burden on social security and health-care services. Although Singapore's elderly population currently accounts for a relatively small share of the population at 8% compared with other notable aging countries, such as Japan (26% in 2014), Italy (22% in 2015) and Uruguay (14% in 2015), the Singapore government is well aware of the risk of not addressing this issue and has actively pursued policies to mitigate the negative impacts by raising the retirement age, encouraging re-employment of older workers, providing support to elderly people with financial difficulties and improving health-care coverage for seniors.

Figure 4.7.2. **Birth rate and life expectancy in Singapore, 1960-2015**



Source: CEIC.

StatLink http://dx.doi.org/10.1787/888933443822

Retirement and re-employment ages have been extended, but challenges remain in encouraging low-skilled older workers to participate in skills training

One of the biggest challenges brought on by an aging population consists of how it affects the labour market and how the change in the labour market spills over into other aspects of the economy. As population growth slows owing to the lower birth rate and people live longer thanks to improved health care, the current pension scheme will become difficult to sustain, given the declining numbers of working-age people to support the increasing numbers of elderly and retired. The labour force participation rate will decrease, and the resulting labour shortage will also slow down economic growth in general. As a common approach to address this issue, the government has implemented measures to encourage the participation of an older workforce by raising the retirement age, providing financial incentives to employers for hiring older workers and strengthening lifelong learning to better equip elderly people for re-employment.

In 1993 the government introduced the Retirement Age Act, which raised the retirement age from 55 to 60. The subsequent Retirement and Re-employment Act, introduced in 2012, increased the retirement age again to 62, while also requesting employers to re-employ eligible older workers up to the age of 65. This re-employment age will be extended to 67 by 2017, according to the Prime Minister, owing to demands from unions and workers in 2015. For older workers aged 65 and above, the law also provides the option of "voluntary re-employment" through the Special Employment Credit (SEC). SEC was first introduced in 2011, providing financial incentives to encourage employers to offer re-employment to older workers. If an employer hires a Singaporean aged 50 and above, the employer is eligible for a SEC of up to 8.5% of the employee's monthly wages, which is not to exceed SGD 4 000 (Singapore dollar). If the employee is aged 65 and above, the employer is eligible to receive an additional 3% of the employee's monthly wage as a SEC, making it more affordable to re-employ older workers. This additional offset will be in effect until the new re-employment age of 67 is implemented in 2017.

The willingness of older Singaporeans to continue working or return to work should not be taken for granted, and the challenge should be addressed from both supply side and demand side. It is important not only to keep older workers in the labour market but to ensure that they have real employment prospects and that the jobs they are re-

employed for are of sufficient quality and remuneration. According to the Ministry of Manpower (MoM), approximately 35 000 older workers – more than 30% of the older workforce – received less than the minimum wage of SGD 1 000 per month in 2014. The government has acknowledged the need to support lifelong learning to enhance older workers' competitiveness and eligibility for higher-quality jobs by setting up a wide range of government co-financed training programmes to facilitate adult learning. One of the most prominent training schemes is the Workfare Training Support (WTS) scheme under the Singapore Workforce Development Agency (WDA) for Singaporean citizens aged 35 and above with monthly earnings less than SGD 1 900. Older workers largely benefited from this scheme because of their relatively lower incomes. WTS offers a variety of benefits, including 1) lower training costs and more training choices, 2) a training allowance for trainees who take up training without employer support, 3) more support for basic skills training, and 4) rewards for completing training. The trainee can be refunded by the government for up to 95% of the course fee when choosing from a list of designated training programmes.

While employers and trainees generally reported a positive impact of training on performance, there is less consensus in terms of other benefits, such as wage increase, promotion opportunities and deployment flexibility, according to a survey conducted by the WDA in 2011 (OECD, 2013). In addition, across occupations, those employed in higher-skill, higher-pay jobs (professionals, managers, executives and technicians [PMETs]) were more likely to participate in training (45% participation rate) compared with lower-income employees: clerical, sales and service workers (24% participation rate) and production and transport operators, and cleaners and labourers (21% participation rate). This is despite additional government benefits given to low-income trainees and applicants for basic skills training programmes. Among those who participate in training, non-PMETs also spend less time in training with a lower training intensity (MoM, 2016). How to encourage low-skilled workers, especially low-skilled older workers, to participate in vocational training and lifelong learning programmes remains a significant challenge.

More social security programmes dedicated to elderly Singaporeans have been rolled out in recent years

In addition to addressing the impact of an aging population on the labour market, the government continues to strengthen the social safety net to support elderly Singaporeans in their daily needs, especially medical needs, and alleviate the burden on the younger generation. The Pioneer Generation Package (PGP) is one of the social programmes dedicated to this purpose. Launched in 2014, PGP aims to honour elderly Singaporeans for their contributions to Singapore during its early development years by providing a total of SGD 8 billion to support extra benefits to those born before 1949 and who obtained their citizenship before 1986. The number of eligible elderly people, also called the Pioneer Generation, is estimated at over 450 000, or approximately 8% of the total population, which covers almost all elderly Singaporeans aged 65 and above. The benefits include outpatient care, Medisave Top-ups, and Medishield Life (Table 4.7.1).

The Silver Support Scheme, introduced in early 2016, is the most recent effort by government to support elderly people. The initiative aims to help cash-strapped retirees cope with living expenses. The target of this new social security programme is the bottom-earning 20% of Singaporeans aged 65 and above, with a smaller degree of support extended to cover up to 30% of the elderly. Eligibility will be determined based on a combination of three criteria: lifetime wages, housing type and level of household support. It is estimated that more than 140 000 seniors will receive quarterly payments of SGD 300 to SGD 750 this year, delivered automatically without application, with the first pay-out made at the end of July 2016.

Table 4.7.1. **Benefits to elderly Singaporeans in the Pioneer Generation Package**

Support categories	Detailed measures
Outpatient care	• 50% discount off the net bill for subsidised services at specialist outpatient clinics and polyclinics. • Eligibility for the Community Health Assist Scheme (CHAS) and additional subsidies to those already in CHAS • Annual SGD 1 200 cash assistance to those with moderate to severe functional disabilities under the Pioneer Generation Disability Assistance Scheme.
Medisave Top-ups	• The government will provide annual Medisave Top-ups of SGD 200 to SGD 800 to the Pioneer Generation, depending on birth cohorts. Those who are older will receive more. The Pioneer Generation Medisave Top-ups are in addition to the Medisave Top-ups already in place for Singaporeans aged 65 and above under the Goods and Services Tax Voucher Scheme, a social welfare programme introduced in 2012 to help lower-income Singaporeans.
Medishield Life	• The Pioneer Generation will receive a special subsidy for their Medishield Life basic health insurance plan, administered by the Central Provident Fund: premiums starting from 40% of their premium at age 65, rising to 60% of their premium at age 90. The Pioneer Generation can expect an average of at least 50% subsidy over their lifetime.

Source: MoF (2014), "Annex B-1", *Singapore Budget 2014*, Ministry of Finance, Government of Singapore, www.singaporebudget.gov.sg/data/budget_2014/download/annexb1.pdf.

In order to support elderly citizens not only financially but with emotional care, the government laid out a plan in its 2016 budget to build community networks for seniors. The networks will comprise local stakeholders, such as voluntary welfare organisations, community volunteers, schools and businesses. At the core, the networks will have a small team of full-time officers who will study the health and social needs of seniors and draw together stakeholders to provide co-ordinated support. This initiative will also be supported by the Pioneer Generation Ambassadors, a group of volunteers who carry out personalised outreach to elderly citizens to explain the benefits of various government support schemes for seniors.

Another social security programme tailored to elderly Singaporeans is the ElderShield Insurance Scheme, created in 2002. ElderShield is a severe disability insurance scheme that distributes a monthly cash pay-out of SGD 300 to SGD 400 for up to six years to those insured in the event of severe disability. All Singapore citizens and permanent residents with Medisave accounts are automatically enrolled in ElderShield at the age of 40, unless they opt out of the scheme. During the 2016 National Day Rally, the Prime Minister acknowledged that there are still areas for improvement in the ElderShield programme, such as expanding coverage to include more seniors and increasing the pay-out period to more than six years. Citing the disability insurance scheme as "one remaining piece to strengthen", the Prime Minister intends to form a committee to review the scheme so that it provides more protection at a more affordable cost.

POLICY FOCUS

Pursue efficient urban planning and optimise land use

As a city state with limited resources, Singapore has long faced the challenge of managing land use. For land-scarce Singapore, how to support a growing population with limited land resources and how to allocate land optimally for different usages (such as housing, transport, industrial and commercial use, community space and environmental needs) is a question that the government has to address, even during the early days of development. The Urban Redevelopment Authority (URA) is currently Singapore's national land use planning authority, responsible for preparing both long-term strategic plans and specific local plans for urban development. Started as the Urban Renewal Unit in 1964 under the Housing Development Board, the URA is instrumental for many strategic policies, such as the Master Plan and the Concept Plan that transformed Singapore from an overcrowded country with a severe lack of housing to its current status of over 90% home ownership, one of the highest rates in the world.

The Concept Plan is a strategic land use and transport plan which outlines the direction of Singapore's development in the next 40 to 50 years. Reviewed every ten years, it takes into account all major land use demands, including housing and commercial use, and aims to make the best use of the country's limited land resources for long-term population and economic growth needs, while satisfying contemporary demands by citizens for a quality living environment. The first Concept Plan, formulated in 1971, played a defining role in shaping the Singapore we see today by implementing the ring layout, where a ring of new, high-density satellite towns surround the central water catchment area, while green spaces, parks and open spaces separate towns. It also laid the foundation for Singapore's public transport system. Later Concept Plans were responsible for many notable land features in the country, such as the new towns, Changi Airport, Pasir Panjang Port, etc. The Master Plan is the statutory land use plan which guides Singapore's development in the medium term over the next 10 to 15 years. It is reviewed every five years and translates the broad long-term strategies of the Concept Plan into detailed plans to guide the development of land and property.

Singapore has prepared a comprehensive land use plan for sustainable development

In addition to the Concept Plan and Master Plan for land use planning, the Ministry of National Development released a Land Use Plan for the first time in 2013. The plan outlined the strategies to sustain a high-quality living environment for a possible population range of 6.5 million to 6.9 million by 2030. It also sets aside land to provide extra flexibility to respond to unexpected development needs beyond 2030. The Land Use Plan includes five focuses:

- **Housing:** Providing good and affordable housing is one of the top priorities set by the plan. Approximately 700 000 new homes are planned to be built by 2030, of which 200 000 are already in the pipeline. These houses will be built across the country, both on the fringe of the city centre and in and around the Central Region, depending on the needs of people. The government also plans to rejuvenate older towns by initiating various government-funded development programmes.
- **Green cities:** The government intends to build more parks and have at least 85% of households living within 400 m of a park. The popular Park Connector Network will be extended, and a 150 km Round Island Route will be constructed to provide an accessible leisure corridor around the island.
- **Public transport:** Because of limited land, Singapore will continue to restrict private transport tools but, as a substitute, will dedicate more investment to improving and expanding the public transport system. The rail network in Singapore will be doubled to 360 km by 2030 so that 80% of households can be within a 10-minute walk to the nearest mass rapid transit station. New rail lines are planned as well, while bus services will be made more frequent and reliable.
- **Economic growth:** To support Singapore's economic growth, the government will build more urban centres in various parts of Singapore, while also setting aside enough land for future economic opportunities.
- **Technology and innovation:** To mitigate the disadvantage of limited land resources, Singapore will increase investment in technology and innovation aimed at creating new land capacity and raising land productivity without sacrificing the liveability of the current environment. Researchers are also funded through the Land and Liveability National Innovation Challenge to explore the possibilities of creating new space and optimising the use of existing space in Singapore.

Key government ministries in Singapore

Prime Minister	Lee Hsien Loong
Deputy Prime Minister & Coordinating Minister for National Security	Teo Chee Hean
Deputy Prime Minister & Coordinating Minister for Economic and Social Policies	Tharman Shanmugaratnam
Coordinating Minister for Infrastructure & Minister for Transport	Khaw Boon Wan
Communications and Information	Yaacob Ibrahim
Culture, Community and Youth	Grace Fu Hai Yien
Defence	Ng Eng Hen
Defence II	Ong Ye Kung
Education (Higher Education and Skills)	Ong Ye Kung
Education (Schools)	Ng Chee Meng
Environment and Water Resources	Masagos Zulkifli
Finance	Heng Swee Keat
Finance II	Lawrence Wong
Foreign Affairs	Vivian Balakrishnan
Health	Gan Kim Yong
Home Affairs & Law	K Shanmugam
Manpower	Lim Swee Say
National Development	Lawrence Wong
Prime Minister's Office	Chan Chun Sing
Social and Family Development	Tan Chuan-Jin
Trade and Industry (Industry)	S Iswaran
Trade and Industry (Trade)	Lim Hng Kiang
Transport II	Ng Chee Meng
Chairman of Monetary Authority of Singapore	Tharman Shanmugaratnam

Note: Valid as of 7 December 2016

References

MoF (2014), "Annex B-1", *Singapore Budget 2014*, Ministry of Finance, Singapore Government, Singapore, www.singaporebudget.gov.sg/data/budget_2014/download/annexb1.pdf.

MoM (2016), *Labour Force in Singapore 2015*, Research and Statistics Department, Ministry of Manpower, Singapore Government, Singapore, available at http://stats.mom.gov.sg/Pages/Labour-Force-In-Singapore-2015.aspx.

OECD (2013), *Economic Outlook for Southeast Asia, China and India 2014: Beyond the Middle-Income Trap*, OECD Publishing, Paris, http://dx.doi.org/10.1787/saeo-2014-en.

CLM

Cambodia

A. Medium-term economic outlook (forecast, 2017-21 average)

GDP growth (percentage change)	7.3
Current account balance (% of GDP):	-9.5

B. Medium-term plan

Period: 2014-18

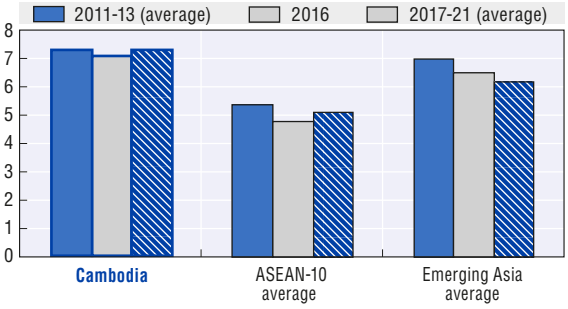
Theme: To gain high benefits from ASEAN Economic Integration in 2015 and to become an upper middle-income country by 2030.

C. Basic data (in 2015)

Total population:	15.18 million* (in 2014)
Population of Phnom Penh:	1.79 million* (in 2014)
Nominal GDP (US dollar):	17.79 billion**
GDP per capita at PPP:	3 498.26 (current International Dollar)**
Exchange rate in the first half of 2016 (period average):	4 043.75 (KHR/USD)

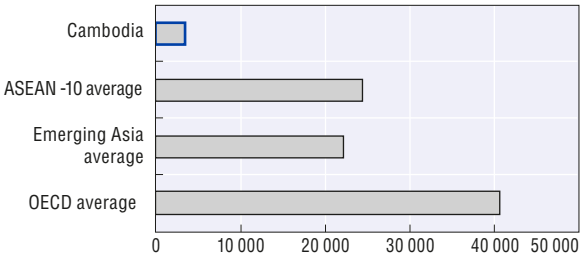
Note: * Population data are government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage changes)



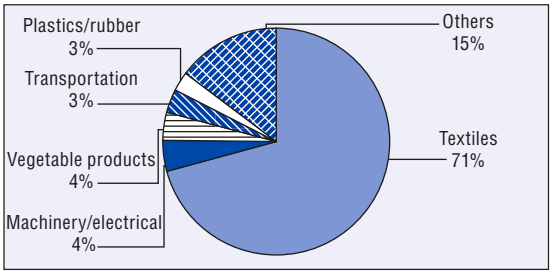
Source: OECD Development Centre, MPF-2017.

GDP per capita, 2015
(PPP, current international dollar)



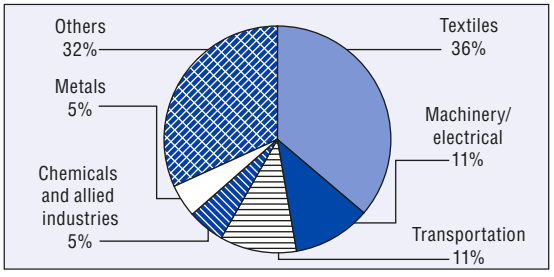
Source: IMF.

Composition of exports, 2015
(percentage share of total exports)



Source: Trademap.

Composition of imports, 2015
(percentage share of total imports)



Source: Trademap.

Growth rates in Cambodia – as in the other CLM countries (Lao PDR and Myanmar) – continue to be among the highest in Emerging Asia. Investment and exports, particularly from the garment/footwear and tourism sectors, have made significant contributions to growth. Agriculture still plays an important role in the economy, though productivity is often low in the sector. Modernisation and investment are therefore needed to raise rural incomes and promote development across the economy. The services sector is expected to continue to expand, and tourism is likely to play a large role in this process, though a broad strategy including infrastructure development, skills upgrading, promotion and preservation will be needed to realise the sector's potential.

Cambodia: Medium-term policy challenges and responses

- Advance the agricultural sector

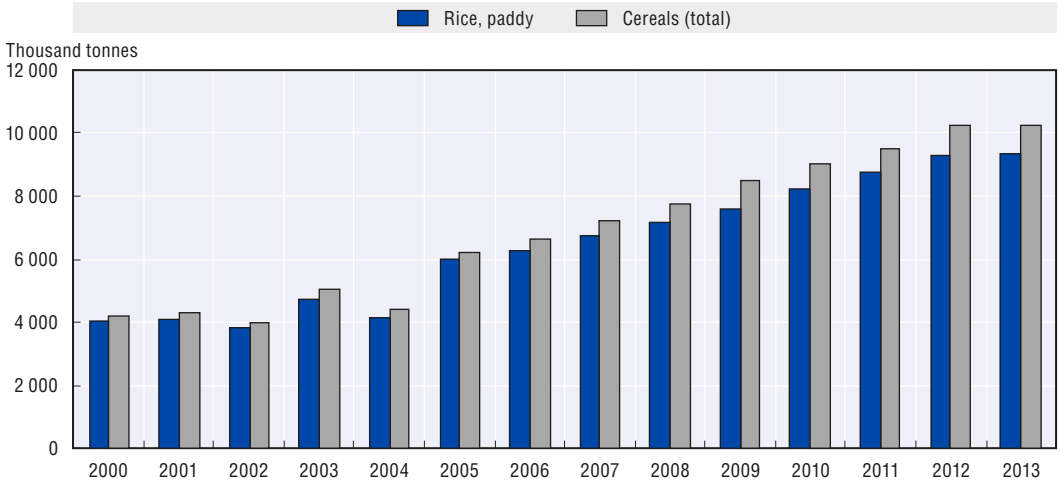
POLICY FOCUS

Advance the agricultural sector

Priorities include modernising agriculture, diversifying crops, investing in infrastructure and developing skills

Agriculture is one of the important sectors in Cambodia's economy because it employs almost 70% of the workforce. Paddy rice is the major agricultural product at 91% of total production in 2013 (Figure 4.8.1). Cambodia benefited from the commodity super cycle in the 2000s and the large external demand (e.g. from the United States, euro area and China) before the global financial crisis. The dramatic expansion in cereal production without a similar expansion in the area cultivated resulted in rapid growth in agricultural yield between 2004 and 2012. However, in 2013-14, cereal production and yield declined without a large change in its land area. Growth in agriculture also declined, especially since 2013. This is owing to severe flooding in 2013, which destroyed large farming areas and triggered a decrease in agricultural production. The end of the commodity super cycle and the drastic decline in agricultural commodity prices in 2014 also led to lower agricultural income. In addition, recent lower external demand has delivered another blow to the sector. Relatively cheaper rice from Viet Nam and Thailand has damaged Cambodia's rice exports. Moreover, Cambodian farmers faced a drought in early 2016, depressing rice production. Consequently, paddy rice exports have declined.

Figure 4.8.1. **Crop production in Cambodia, 2000-13**

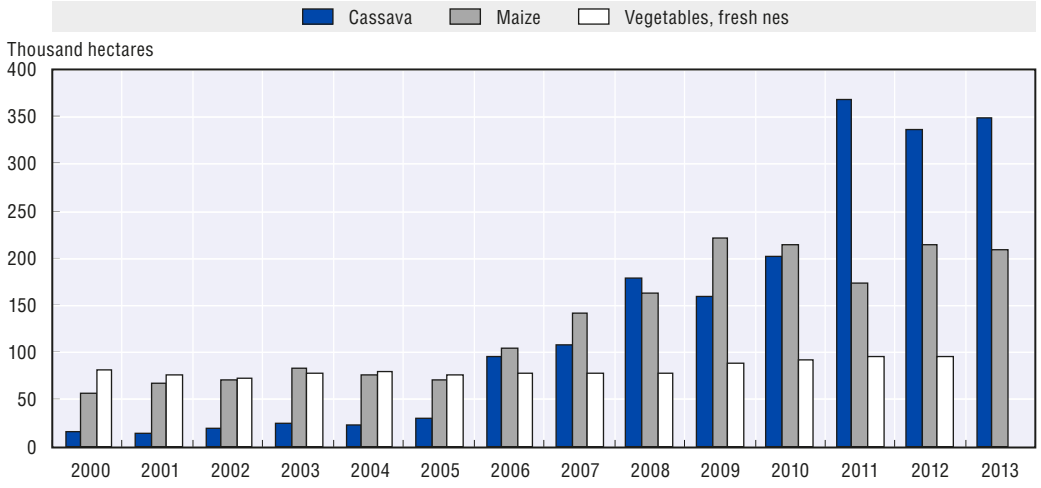


Source: FAO (2016), *FAOSTAT* (database), http://faostat.fao.org/.

StatLink http://dx.doi.org/10.1787/888933443833

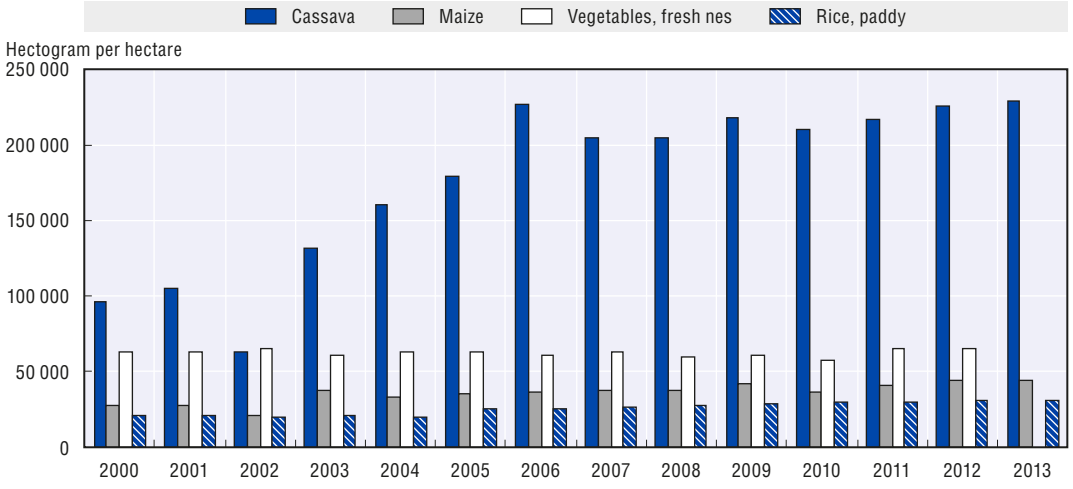
The share of paddy rice production in total agricultural production has also mildly decreased, from 96% in 2000 to 91% in 2013. This could be due to the recent diversification of agricultural crops. For instance, Cambodian farmers are starting agricultural side businesses to minimise risks and shocks (economic and weather-related) by diversifying with more profitable crops, such as vegetables, cassava and maize. The area harvested for cassava and maize has started to increase since 2006, and the area for cassava has jumped since 2011 (Figure 4.8.2). By weight, cassava yields are higher compared to other products (Figure 4.8.3), while paddy rice, Cambodia's major crop, has the lowest yield. Diversification towards more profitable crops with higher yield would be one of the strongest policy recommendations. Modernising agriculture, investing in infrastructure and increasing the level of education of agricultural labour with training would also improve the agricultural sector, foster growth in agriculture and contribute to overall economic growth, thereby reducing poverty.

Figure 4.8.2. **Area harvested in Cambodia by crop, 2000-13**



Source: FAO (2016), *FAOSTAT* (database), http://faostat.fao.org/.
StatLink http://dx.doi.org/10.1787/888933443847

Figure 4.8.3. **Yields in Cambodia by crop, 2000-13**



Source: FAO (2016), *FAOSTAT* (database), http://faostat.fao.org/.
StatLink http://dx.doi.org/10.1787/888933443854

There are three main tasks that need to be taken to strengthen the agriculture sector in Cambodia. First, shifting from traditional inputs to modern ones would make the work more efficient and productive. For instance, replacing traditional agricultural equipment (e.g. ox and walk-behind tractors) with modern equipment (e.g. tractors) could shorten work time and improve efficiency and productivity. Agricultural products could be increased by adopting modern inputs, such as the use of quality seeds, fertilisers and irrigation, which would improve crop productivity and hence yields. However, the comparative cost of inputs could rise, as improved seeds, etc. are relatively expensive. Therefore, increased access to financial markets for farmers is necessary. Second, development and improvement of outlying infrastructure is a significant factor; poor infrastructure could limit needed irrigation and rural road capacity. Better infrastructure also brings farmers better access to domestic and international markets. For instance, the government could foster agricultural public-good investment in areas such as transportation, roads and irrigation infrastructure. The strategy on agriculture and water 2006-10 and the 2010-13 version by the Ministry of Agriculture, Forestry and Fisheries and the Ministry of Water Resources and Meteorology provides a policy framework to supportthe upgrading and construction of physical infrastructure to improve crop productivity (FAO, 2014). Third, improving the level of agricultural labour productivity is important. The agricultural extension policy of the Ministry of Agriculture, Forestry and Fisheries supports human resource development through measures such as pre-service training at the Royal University of Agriculture and other technical agriculture schools and colleges with new and innovative programmes (Ministry of Agriculture, Forestry and Fisheries, 2015).

Key government ministries in Cambodia

Prime Minister	Hun Sen
Agriculture, forestry and fisheries	Veng Sakhon
Commerce	Pan Sorasak
Cults and Religion	Him Chhem
Culture and fine arts	Phoeung Sakona
Economy and finance	Aun Porn Moniroth
Education, youth and sport	Hang Chuon Naron
Environment	Say SamAl
Foreign affairs and international co-operation	Prak Sokhon
Health	Mam Bun Heng
Industry and handicrafts	Cham Prasidh
Information	Khieu Kanharith
Interior	Sar Kheng
Justice	Ang Vong Vattana
Labour and vocational training	Ith Sam Heng
Land management, urbanisation, and construction	Chea Sophara
Mines and energy	Suy Sem
National defence	Tea Banh
Planning	Chhay Than
Posts and telecommunications	Tram Iv Tek
Public Affairs	Pich Bun Thin
Public works and transportation	Sun Chanthol
Rural development	Ouk Rabun
Social affairs, war veterans, and youth rehabilitation	Vong Soth
Tourism	Thong Khon
Water resources and meteorology	Lim Kean Hor
Women's affairs	Ing Kantha Phavi
Chairman of National Bank of Cambodia	Chea Chanto

Note: Valid as of 7 December 2016

References

FAO (2016), *FAOSTAT* (database), Food and Agriculture Organization, Rome, http://faostat.fao.org/.

FAO (2014), "Country fact sheet on food and agriculture policy trends: Cambodia", Food and Agriculture Organization, Rome, www.fao.org/docrep/field/009/i3761e/i3761e.pdf.

Ministry of Agriculture, Forestry and Fisheries (2015), "Agricultural extension policy in Cambodia", http://faolex.fao.org/docs/pdf/cam152453.pdf.

Lao PDR

A. Medium-term economic outlook (forecast, 2017-21 average)

GDP growth (percentage change):	7.5
Current account balance (% of GDP):	-17.0

B. Medium-term plan

Period: 2016-20

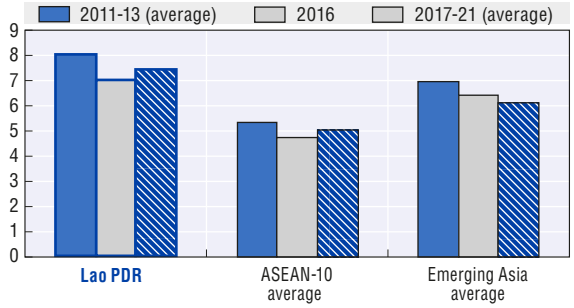
Theme: Continued poverty reduction, graduation from Least Developed Country status through realisation of national development potential and comparative advantages, effective management and utilisation of natural resources and strong regional and international integration.

C. Basic data (in 2015)

Total population:	6.81 million (in 2014)*
Population of Vientiane:	0.83 million (in 2014)*
Nominal GDP (US dollar):	12.56 billion **
GDP per capita at PPP:	5 351.46 (current International Dollar)**
Exchange rate in the first half of 2016 (period average):	8 123.51 (LAK/USD)

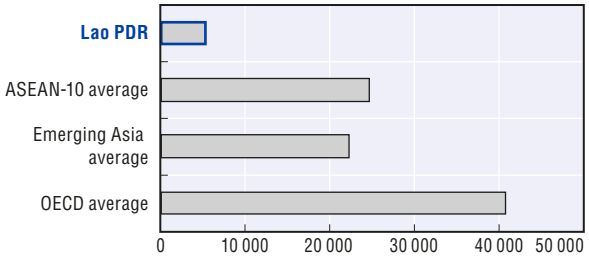
Note: * Population data are government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources and IMF.

GDP growth rates (percentage changes)



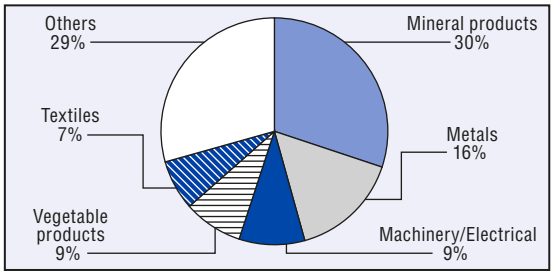
Source: OECD Development Centre, MPF-2017.

GDP per capita, 2015
(PPP, current international dollar)



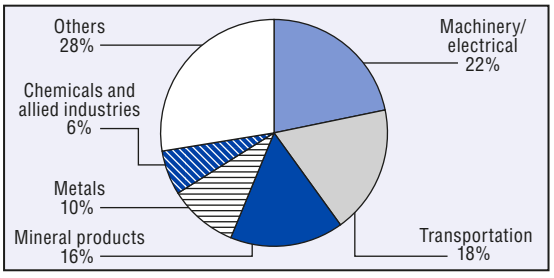
Source: IMF.

Composition of exports, 2015
(percentage of total exports)



Source: Trademap.

Composition of imports, 2015
(percentage of total imports)



Source: Trademap.

Lao PDR is among the small economies in Southeast Asia that have seen rapid economic growth of around 7-8% annually. Its abundance of natural resources has been the driver of its rapid economic growth, and hydropower has been one of the biggest contributors to the Lao economy. However, the country needs to address a number of challenges. More attention will need to be given to small hydropower projects, which have the potential to boost rural development. The development of small and medium-sized enterprises (SMEs) could also be strengthened further by using Special Economic Zones (SEZs) to the full. The tourism sector still has a great deal of potential for improvement. The performance of this sector could be enhanced by seeking the greatest possible benefit of Lao PDR's membership of the Association of Southeast Asian Nations (ASEAN) Economic Community (AEC).

Lao PDR: Medium-term policy challenges and responses

- Promote small hydropower projects
- Strengthen skills to make the most of Special Economic Zones
- Boost tourism by fully exploring opportunities in the ASEAN Economic Community

POLICY FOCUS

Promote small hydropower projects

Hydropower plays a key role in the Lao economy

Hydropower is the most abundant energy resource in Lao PDR, and it makes a significant contribution to the country's economy. Over 99% of total electricity generation in Lao PDR is contributed by hydropower while other energy sources such as solar energy and diesel account for negligible shares. There is a lot of potential for the further development of hydropower, which offers affordable and reliable access to electricity. Moreover, it is a renewable source of energy, and a driver of green growth. The Lao government recognises this potential, and plans to expand hydropower. According to a government estimate, the country could potentially generate around 26 000 MW of hydropower (Vongchanh, 2012). The government estimates that the country will generate 10 000 MW of hydropower by 2020, and 20 000 MW by 2030. Although large hydropower projects account for a significant share of the country's electricity exports, small projects with a capacity of 15 MW or less also have an important role to play in contributing to the Lao economy. Small projects have the potential to make a greater contribution to rural development, employment and access to electricity.

Renewable energy development has continued to be one of the Lao government's main priorities. The development of renewable energy resources including biofuels, biomass and biogas, small-scale power plants, solar power, wind power, and other alternative sources of energy for transportation, is one of the Lao government's targets for 2025. The aim is to increase the share of renewable energies to 30% of total energy consumption by 2025. The government is also aiming to increase household electrification coverage to 70% in 2010, and to 90% in 2020, while at the same time reducing poverty in rural areas. Small hydropower projects could contribute to achieving these targets. In fact, the Lao PDR government has classified small hydropower plants with a capacity of less than 15 MW as sources of renewable energy that play an important role in rural development (Vongsay and Bounsou, 2014).

Improving small hydropower projects

Lao PDR has made good progress in national electrification, as part of a broader strategy of national and rural development. Electricity access increased from about 15% in 1995 to 69% in 2009. This expansion of access to electricity has helped increase household connections from about 120 000 households connected in 1995, to over 700 000 by the end of 2009 (World Bank, 2012). Revenues from exports of hydropower have played an important role in financing the early-stage growth of the national electrification programme. However, the contribution from small hydropower projects can make is necessary to achieve the government's target, particularly to expand electrification in rural and remote areas.

Lao PDR has a significant amount of, and large potential for, small hydropower projects. Developing such projects has the potential to deliver a variety of benefits with a minimal impact on the environment. They are a clean source of energy and do not require complex management structures or big budgets. Moreover, the majority of the electricity generated by large hydropower projects in Lao PDR is more focused on the export market. The development of large hydropower projects, therefore, has very few links with rural electrification (Smits, 2012). The country needs to focus more on smaller-scale hydropower projects to help increase access to electricity, especially in rural areas, and to strengthen rural development. In order to provide a boost to the small hydropower sector, some challenges will need to be addressed, especially when it comes to access to finance, employment and implementation.

Increasing access to financing for small hydropower projects

Although the Lao government backs measures to boost the small hydropower sector by addressing technical, financial, procedural and institutional barriers to its development (Vongchanh, 2012), the full potential of small hydropower is not yet realised. In many rural areas of Lao PDR, access to electricity is still low, despite the potential for hydroelectric development.

In Lao PDR, many small hydropower projects are not able to secure loans from domestic banks, and only a few projects have been able to do so. A lack of understanding of the possibilities and financing options is one of the issues. Efforts to increase small hydropower developers' awareness and understanding of the different forms of financing available for their projects should be encouraged to a greater extent. At the same time, it is also necessary to increase awareness of small hydropower, and to improve the expertise of local banking and micro-finance institutions in technical and risk assessment.

Pico hydropower, which refers to installations with a production capacity of up to 5 KW, could be one option to help increase access to electricity in rural communities with minimum cost. Pico hydropower is, in fact, considered to be the lowest-cost technology for generating electricity. In remote areas in Lao PDR the demand for pico hydropower technology as a source of power generation is quite high. An estimated 60 000 pico hydropower units are installed all over the country, providing electricity for about 90 000 households, especially in the country's mountainous areas (ESMAP, 2010). Further attention, however, will need to be given to improving the development of pico hydropower by addressing many remaining challenges, such as poor quality, damaged installations and limited maintenance, as mentioned in the ESMAP report. Regular maintenance and clear safety standards are necessary to guarantee the quality of pico hydropower.

Improving domestic workers' skills in the hydropower sector

Employment is another issue facing the hydropower sector in Lao PDR. Large hydropower has to contend with a skilled labour shortage in the country. Indeed, large projects require a large number of skilled workers, and domestic workers are not, on the whole, adequately trained for these roles. As a result, many companies, including those in the hydropower sector, hire in extra workers from abroad, or bring workers from their home countries to meet the skills needed. Lao PDR currently has around 20 000 foreign workers, and the number is set to rise still further in the near future, to meet the 90 000 that the Lao Ministry of Labour believes the country's businesses need to operate.

The labour law of 2006 allowed foreign employees to constitute up to 10% of the workforce for manual labour, and up to 15% for skilled employees. The Lao government amended the law in 2013, increasing the ratio of foreign employees to 20% for manual labour and 25% for skilled employees, and changing the calculation method from total employees to total number of Lao employees. Because of the high number of foreign workers in the industrial sector, increased foreign investment does not necessarily translate into new employment opportunities for domestic workers.

Adequate training programmes are needed to improve the skills of domestic workers. Indeed, the Lao government has implemented a system of certification for national technical vocational education and training, in order to boost labour skills. However, the programmes are often judged to be insufficient to meet the country's needs. It is crucial to provide a wider range of training courses, and to ensure that they are well targeted. But while workers' skills do require improvement, small hydropower projects could boost employment opportunities in rural areas.

Ensuring the smooth implementation of hydropower projects

Aside from meeting domestic demand for electricity, Lao PDR also needs to cope with increasing demand from Thailand, Viet Nam, and other neighbouring countries. Projects of various sizes are being developed to meet these demands. Lao exports of electricity have been increasing over the years. Electricity exports reached USD 113.18 million in 2010, and increased to USD 589.81 million in 2013 (Bank of Lao PDR, 2014). The country has now agreed to supply electricity to several neighbouring countries: 7 000 MW to Thailand, 5 000 MW to Viet Nam, and 1 500 MW to Cambodia by 2020. Exports of electricity to Myanmar are also due to start in the near future. Small projects, as well as large ones, make a contribution. A total of 10.5 MW of small-scale hydropower installations are operating in Lao PDR, not including pico projects. Projects with a total capacity of 16.2 MW are under construction, and projects with a further capacity of 23.5 MW are at the feasibility-study stage (UNIDO and ICSHP, 2013). Large projects help to meet increasing demand from export markets, while small projects have the potential to help more in supplying domestic demand, especially in rural areas.

A number of different institutions and stakeholders including the Ministry of Energy and Mines and other ministries, as well as different levels of government, are involved in the implementation of projects of all sizes. Each institution has its own roles and responsibilities. The Ministry of Energy and Mines, for example, is responsible for developing human-resources capacities for the development of renewable energies, and for strengthening the capacities of other government agencies. To help with the implementation of projects in the provinces, the central government also provides support, including deploying its human resources from the capital to the provinces when needed.

It is, moreover, important to improve institutional capacity in order to ensure the smooth implementation of the projects. While key legal institutions and frameworks are in place in the hydropower sector in Lao PDR, they tend to be constrained by low capacity and weak implementation (Jusi, 2011). Besides improving the capacities of key agencies at the level of human resources, better institutional co-ordination among government agencies, both horizontally and vertically, also merits more attention, in order to eliminate overlapping institutional mandates.

POLICY FOCUS

Strengthen skills to make the most of Special Economic Zones

Strengthening SMEs through Special Economic Zones (SEZs)

As part of the efforts to create favourable conditions for attracting foreign investment to Lao PDR, the Lao government has developed special economic zones (SEZs). There are two types of economic zones in Lao PDR: Special Economic Zones and Specific Economic Zones. Currently there are 13 Special and Specific Economic Zones in the country. The investment opportunities in Special and Specific Economic Zones are divided into three categories:

- Industrial zones, which include the Savan-Seno SEZ, the Vientiane Industrial and Trade Area, the Saysettha Development Zone, the Phoukhyo Specific Economic Zone and the Champasak SEZ.
- Tourism and new urban centres, including the Golden Triangle SEZ, the That Luang Lake Specific Economic Zone, the Long Thanh Specific Economic Zone, and the Luang Prabang SEZ.
- Trade and logistics areas, including the Boten Specific Economic Zone, the Dongphosy Specific Economic Zone, the Thakhek Specific Economic Zone, and the Dongphosy 2 Specific Economic Zone.

SEZs are among the tools used by governments to attract foreign direct investment, and they could, moreover, be used to help SMEs to develop. Indeed, SEZs can benefit the country both by attracting investments and boosting business opportunities. It would be desirable to develop strategies to create business networks, and to link SMEs, especially local ones, to large enterprises operating in the zones. Comprehensive strategies should also include providing support to SMEs, helping them, for example, to gain access to capital and infrastructure. Still, in order to improve SEZs, and to make full use of them, some challenges must first be addressed. Economic zones in Lao PDR are still at an early stage of development. The number of companies investing in the zones has been increasing, but there is still ample scope for improvement.

Coping with increased demand from neighbouring countries

Thailand has been one of the most important trade partners and markets for Lao PDR. To further boost trade, Lao PDR has been co-operating with Thailand in the creation of SEZs. The Lao National Committee for Special Economic Zones (NCSEZ) has prepared a memorandum of understanding for bilateral co-operation with Thailand's policy committee on the development of SEZs. This co-operation will increase investment opportunities for the two countries. However, there is potential to increase opportunities not only in Thailand, but also in other neighbouring countries, such as Viet Nam, Cambodia and Myanmar.

Improving skills in the SEZs, especially in the service sector

The Lao government has been making an effort to attract and promote investment through the SEZs. The country's inexpensive labour and cheap raw material inputs have been attracting investment, yet reliance on low-cost labour is often considered unsustainable. Therefore, the country will, at some stage, need to shift the focus of SEZs to higher value-added sectors. However, insufficient supply of high quality labour continues to pose a challenge. The Lao government has developed plans, such as

training courses, which aim is to improve the skills of the workforce and to supply more skilled workers for the Special, and Specific Economic Zones. Fostering the development of better skills, and providing training to the local workforce, could help to diversify the economy, and to shift the type of investment inflows to the country from those that rely on unskilled labour, and from activities that make intensive use of natural resources, to those that use skilled labour and capital-intensive production processes. It also has the potential to concentrate production on higher value-added service-sector activities in areas such as information and communications technology (ICT), business support services, knowledge-based activities, and research and development (R&D) (Lord, 2012). The service sector already accounts for a significant share of SEZs in Lao PDR (Table 4.9.1). Further improvements to the skills and capacity of the local labour force will still be needed, however, not only to strengthen the SEZ firms themselves, but also to increase employment opportunities for local workers.

Table 4.9.1. **SEZ investment by sector**

Sector	Number of enterprises	Percentage
Industry	74	29
Trade	69	27
Service	113	44
Total	256	100
Sector	**Number of small shops**	**Percentage**
Trade	105	47
Service	120	53
Total	225	100

Source: Lao National Committee for Special Economic Zones (2016).

Box 4.9.1. Savan-Seno Special Economic Zone

The Savan-Seno Special Economic Zone (SSEZ) is one of the oldest and most active special zones in Lao PDR. It was established in 2003, with a concession period of 75 years. The Savan-Seno SEZ is located in Savannakhet province, a central point of the East-West Economic Corridor, which cuts across the Mekong region. The strategic location is one of the major factors in attracting investors. At the end of 2015 it had attracted 65 companies.

The zone is promoting investment in several different sectors, including:

In the industrial sector: electrical appliance manufacturing, food-processing, wood product processing, fabric manufacturing, garments and textiles, shoe and bag manufacturing, automobile assembly and the assembly of electronic parts;

In the sector of distribution logistics: transportation services, cargo delivery services, freight forwarding, warehouses and cool storage; and

In the service sector: banking, financial institutions and insurance companies, tourism services, hotels, restaurants, amusement parks, entertainment and sports centres, seminar centres, convention centres, vocational training centres, real estate, schools and hospitals.

Depending on the sector, investors can expect to enjoy benefits, including tax exemptions on their profits. Service-sector investors will get profit-tax exemption for between two and ten years, after which time profit tax will be charged at 8% or 10%, in accordance with investment costs. Trade-sector investors can expect profit-tax exemption for two to five years, after which time they will pay a 10% tax on profits. Investors in the industrial sector can expect to be exempted from taxation on their profits for five to ten years, after which point they will pay a tax of 8% on their profit.

POLICY FOCUS

Boost tourism by fully exploring opportunities in the ASEAN Economic Community

Enhancing the tourism sector by making the most of the ASEAN Economic Community

Tourism is one of the sectors that have been growing rapidly in the ASEAN region, and Lao PDR has significant potential in this area. In 2013, Lao PDR was recognised as the world's best tourist destination by the European Council on Tourism and Trade (ECTT), thanks to its initiatives at preserving its culture and history, and at raising the quality of tourism services by developing the concept of community-based tourism. This award is offered to countries that comply with United Nations Tourism Division, UNESCO, and ECTT principles on fair tourism, the historic preservation of cultural sites, and ethical tourism and safety standards.

In terms of the number of tourist arrivals, ASEAN is the biggest source of tourists coming to Lao PDR (Table 4.9.2). However, there is still plenty of room for improvement. The majority of ASEAN tourists come from neighbouring Thailand and Viet Nam. However, the number of tourists from some other countries in the region is much lower than those coming from some much further-flung countries in Europe and the Americas. In 2015, for instance, Lao PDR received 24 095 tourists from Malaysia, 16 709 tourists from the Philippines, 8 258 from Singapore, and 6 019 from Indonesia. These numbers fall far short of the numbers for some non-ASEAN countries, including China, Korea, Japan, and even the United States, as well as European countries such as France, the United Kingdom and Germany. This means that there is still significant potential for Lao PDR to attract more tourists from its own region.

The ASEAN Economic Community (AEC), launched at the end of 2015, heralds an opportunity to boost tourism within the bloc. Many initiatives have been taken at the regional level to boost the tourism sector, including the agreement on visa exemption among member countries to facilitate easy movement, and the ASEAN Single Aviation Market open skies policy. ASEAN countries, including Lao PDR, should use this opportunity to further enhance their tourism sectors, and to attract more tourists from the local region.

Table 4.9.2. **Tourist arrivals to Lao PDR by nationality**

Number of tourists, 2009-15	2009	2010	2011	2012	2013	2014	2015
ASEAN	1 611 009	1 990 932	2 191 224	2 712 478	3 041 233	3 224 080	3 588 538
China	128 226	161 854	150 791	199 857	245 033	422 440	511 436
Japan	28 081	34 076	37 883	42 026	48 644	44 877	43 826
Korea	17 876	27 312	34 707	53 829	81 799	96 085	165 328
France	31 775	44 844	44 399	46 903	52 411	52 146	55 151
Germany	17 710	22 583	21 280	23 417	29 250	29 800	31 897
United Kingdom	27 044	37 272	35 622	35 694	41 741	39 061	41 508
United States	39 339	49 782	50 092	53 380	61 608	61 460	63 058
Total	**2 008 363**	**2 513 028**	**2 723 564**	**3 330 072**	**3 779 490**	**4 158 719**	**4 684 429**

Source: Ministry of Information, Culture and Tourism (2014), *Lao PDR Tourist Guidebook 2014*.

Using the AEC to improve tourism quality

Besides attracting more intra-ASEAN tourists, the advent of the AEC is a good potential vector for improving the quality of the tourism sector in each of the member countries, including Lao PDR. In fact, quality tourism is one of the key areas of focus of the

ASEAN Tourism Strategic Plan 2016-25. In particular, this strategic plan highlighted that the biggest challenge in achieving high quality standards is related to the development and implementation of certification processes. ASEAN countries have different systems of certification. Moreover, they accord different levels of priority to delivering effective certification systems, owing to the different levels of resources, both financial and human, that they have at their disposal. In some countries, for instance, certification is mandatory, while in others it is voluntary.

At the regional level, ASEAN operates the ASEAN Tourism Standard, which includes major criteria and requirements in many areas of tourism, including ecotourism. In ecotourism, the document covers criteria and requirements regarding the potential of this kind of tourism, its accessibility, the activities it may encompass, environmental management, site management, safety and security, and interpretation and educational programmes. In order to improve the quality of the sector in the country, Lao PDR should make use of regional initiatives, and ensure their implementation at a national level, including developing measurable and transparent quality standards and indicators.

Improving the quality of ecotourism

Lao PDR possesses an abundance of natural tourist areas, which, combined with historical and cultural features, have constituted the country's appeal as a tourist destination. The Nam Ha project in a protected area in Luang Namtha province is one of the successful ecotourism projects in Lao PDR. The Nam Ha National Protected Area is located in the remote northern province of Luang Namtha, on the border between Lao PDR and China. The project, launched in 1999, has won several international awards, including the United Nations Development Award in 2001, as a model project contributing to the reduction of poverty, and the British Airways Tourism for Tomorrow Award. In 2003, Nam Ha was also designated as an ASEAN Heritage Site because of its regional significance in terms of habitat and diversity of species.

The project helps to conserve natural resources and preserve the customs of the local people. Moreover, it promotes the village economy and creates employment opportunities for people in rural and remote areas. Community members are trained as eco-guides and operate village-based lodges and forest camps, as well as monitoring threats to biodiversity in the protected area. More than 21 000 people in 57 villages benefit from this project (UNDP, 2012). According to the UNDP report, community eco-guides and associated service providers in this area have received more than USD 600 000 since 1999 from the eco-guide treks alone, which represents an income boost for the province. In terms of job creation, the accommodation sector employs over 300 people in Luang Namtha, while there are 172 full and part-time guides active in the province. Part-time employment from community-based tourism activities, such as providing food and accommodation, also brings benefits to community members.

The Nam Ha National Protected Area is now widely recognised as one of the leading sustainable tourism destinations in Lao PDR, and is also recognised internationally for its achievements in the fight against poverty. It has become the standard against which other national ecotourism development initiatives are measured. Indeed, the community-based model of the Nam Ha Ecotourism project has been widely replicated for national tourism development initiatives in Lao PDR. The lessons from this model project in Luang Namtha have been applied by other provinces in Lao PDR, including Phongsaly, Luang Prabang, Xiengkhuang, Vientiane, Bolikhamxay, Khammouane, Savannakhet and Champassack, and could also be implemented in other provinces and areas.

Expanding tourism areas

The Lao PDR system of 20 National Protected Areas covers nearly 14% of the country (Ministry of Information, Culture and Tourism, 2014). Considering the sector's great potential, the country could expand tourism sites and cover more areas. Initiatives to expand touristic areas are already undertaken, especially at the level of local government. For example, Bolikhamsai province has, since 2015, been looking to improve its eco-tourism sites, and to link them with other destinations in Lao PDR. Four ecotourism sites are planned: Kaengsaitean area in Khamkuet district, Meuangmoun Choumthong in Viengthong district, the Nam Tone waterfall in Pakkading district, and Thamphasing cave in Bolikhanh district.

The province itself has great potential to attract more tourists, not only from nearby provinces, but also from neighbouring Thailand and Viet Nam. Indeed, it is located in the middle of Lao PDR, and borders Xiangkhouang province to the northwest, Khammouan province to the south, Viet Nam to the east, and Thailand to the west. However, in developing new areas for tourism it is crucial to pay attention to some issues that could impede development, such as a lack of adequate transport between the destinations, or the availability and quality of other infrastructure.

Key government ministries in Lao PDR

President	Bounnhang Vorachith
Prime Minister	Thongloun Sisoulith
Agriculture and forestry	Lien Thikeo
Defence	Chansamone Chanyalath
Education and sports	Sengduan Lachanthaboun
Energy and mines	Khammany Inthirath
Finance	Somdy Douangdy
Foreign affairs	Saleumxay Kommasith
Home affairs	Khammanh Sounvileuth
Industry and commerce	Khemmani Pholsena
Information, culture and tourism	Bosengkham Vongdara
Justice	Xaysy Santivong
Labour and social welfare	Khampheng Saysompheng
Natural resources and environment	Sommad Pholsena
Planning and investment	Souphanh Keomisay
Post, telecommunications and communications	Thansamay Kommasith
Public health	Bounkong Sihavong
Public security	Somkeo Silavong
Public works and transport	Bounchanh Sinthavong
Science and technology	Boviengkham Vongdara
Central Bank Governor	Somphao Phaysith

Note: Valid as of 7 December 2016

References

Bank of Lao PDR (2014), *Annual Economic Report 2014*, www.bol.gov.la/together_use/Annual%20Report%202014_ENG.pdf.

ESMAP (2010), *Fighting Poverty Through Decentralized Renewable Energy*, Energy Sector Management Assistance Program, World Bank, Washington, DC, https://openknowledge.worldbank.org/bitstream/handle/10986/17522/774320WP0ESMAP00PUBLIC00PROCEEDINGS.pdf?sequence=1&isAllowed=y.

Jusi, S. (2011), "Challenges in developing sustainable hydropower in Lao PDR", *International Journal of Development Issues*, Vol. 10 (3), September.

Lord, M.J. (2012), *Evaluation of Support to Lao PDR's Special Economic Zones (SEZs)*, report presented to Asian Development Bank, Manila, February.

Ministry of Information, Culture and Tourism (2014), *Lao PDR Tourist Guidebook 2014,* Vientiane.

Smits, M. (2012), "Hydropower and the Green Economy in Lao PDR: Sustainable Developments?", in Hezri, A., W. Hofmeister (Eds.), *Towards a Green Economy: In Search of Sustainable Energy Policies for the Future*. Konrad Adenauer Stiftung, Singapore.

UNDP (2012), *Nam Ha Ecotourism Project, Lao PDR*, Equator Initiative Case Study Series, United Nations Development Programme, New York.

UNIDO and ICSHP (2013), "Lao People's Democratic Republic" in *World Small Hydropower Development Report 2013*, United Nations Industrial Development Organization and International Center on Small Hydro Power, www.smallhydroworld.org/fileadmin/user_upload/pdf/Asia_South_Eastern/WSHPDR_2013_Lao_PDR.pdf .

Vongchanh, K. (2012), "The Need for Sustainable Renewable Energy in Lao PDR" *Lao PDR Country Report*, SEE Forum, www.seeforum.net/countryreport/laopdr.html .

Vongsay, A. and X. Bounsou (2014), "Sustainable management of small hydropower for rural electrification in Lao PDR by economic, social and environment blueprint perspective", in *Journal of Automation and Control Engineering*, Vol. 2, No. 2, June.

World Bank (2012), *Lao PDR Power to People: Twenty Years of National Electrification*, World Bank, Washington, DC.

Myanmar

A. Medium-term economic outlook (forecast, 2017-21 average)

GDP growth (percentage change):	8.5
Current account balance (% of GDP):	-6.5

B. Medium-term plan

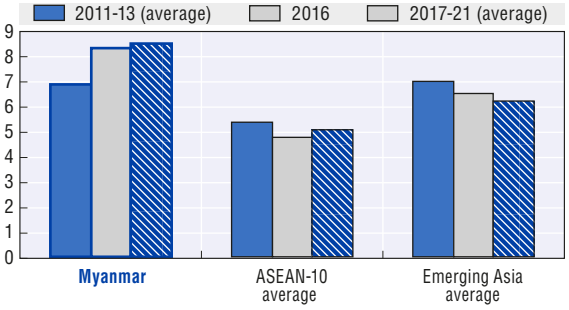
Period:	2012-16
Theme:	Development of industry, balanced development, improvements in education, health, living standards and statistical capacities

C. Basic data (in 2015)

Total population:	50.28 million* (in2014)
Population of Nay Pyi Taw:	1.16 million* (in2014)
Nominal GDP (US dollar):	62.87 billion
GDP per capita at PPP:	5 479.88 (current International Dollar)
Exchange rate in the first half of 2016 (period average):	1 215 (MMK/USD)

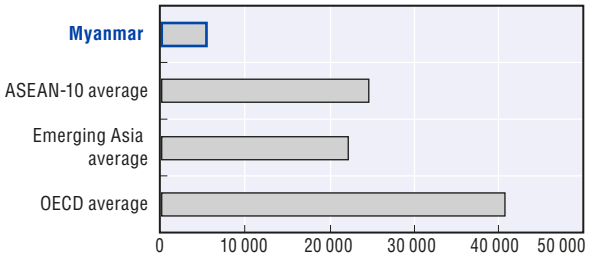
Note: * Population data are from Myanmar 2014 Census
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage changes)



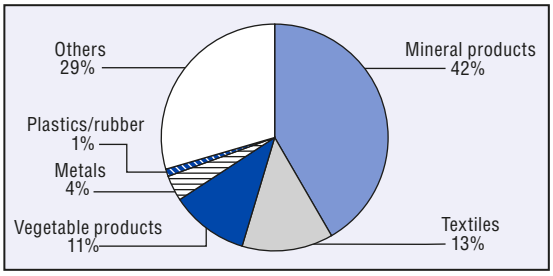
Source: OECD Development Centre, MPF-2017.

GDP per capita, 2015
(PPP, current international dollar)



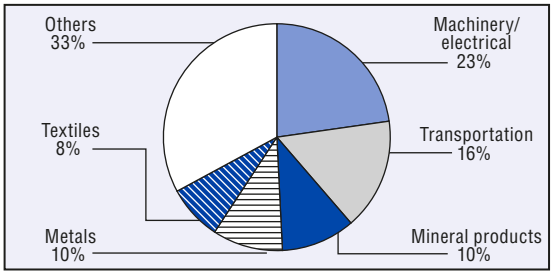
Source: IMF.

Composition of exports, 2015
(percentage of total exports)



Source: Trademap.

Composition of imports, 2015
(percentage of total imports)



Source: Trademap.

Over the past few years, Myanmar has experienced rapid economic growth and development, along with dramatic political change. A gradual process of opening up and political liberalisation led to a general election in November 2015, in which the National League for Democracy (NLD), led by Aung San Suu Kyi, prevailed. In March 2016, the NLD then formed a new government, with Htin Kyaw assuming the country's presidency. Now, continued reform to economic policy is required in order to maintain strong growth. Among the structural policy areas needing attention from the new government are the establishment of capital markets, the development of new infrastructure, and a reform of higher education.

Myanmar: Medium-term policy challenges and responses

- Promote capital markets to bolster the private sector
- Support investment in infrastructure
- Reform higher education to deliver better quality

POLICY FOCUS

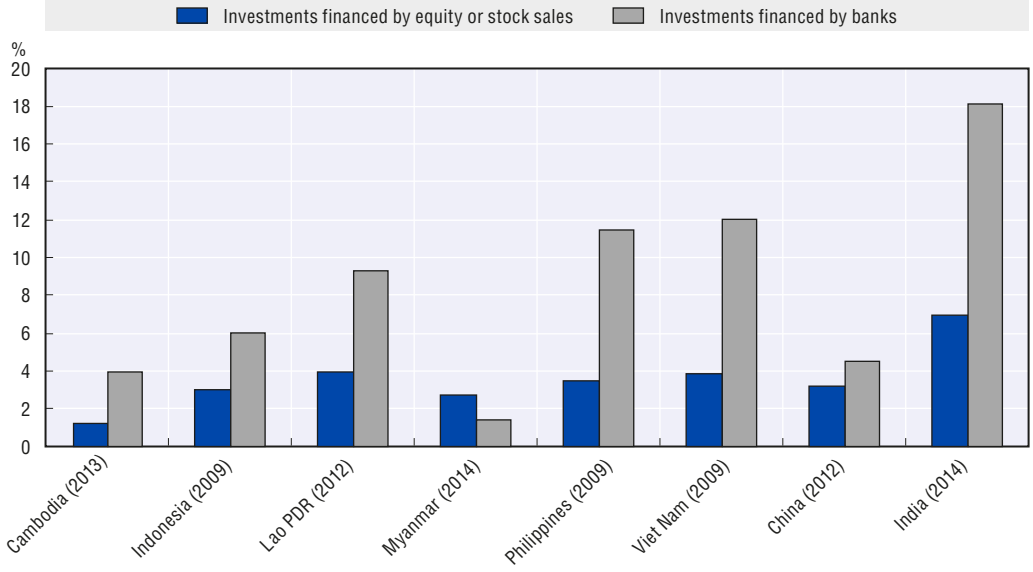
Promote capital markets to bolster the private sector

Early steps are being taken to develop Myanmar's capital markets

Myanmar's underdeveloped capital markets constrain the expansion of the private sector, leaving local firms reliant on less efficient sources of financing. In 2014, just 2.7% of company investments were financed by equity or stock sales, and only 1.4% were financed by banks. These are among the lowest rates in the region (Figure 4.10.1). A 2014 business survey by the OECD, the Union of Myanmar Federation of Chambers of Commerce (UMFCCI), and the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), found that collateral and guarantee requirements, and loan procedures were the main obstacles for firms seeking access to financing. In the study, 33.8% of firms stated that requirements for collateral or guarantees were too stringent, while 28.4% said that procedures for loan applications were too complicated and time consuming. Personal savings were instead found to be the most important source of business financing, accounting for an average 75% of firm financing (OECD, 2014).

Figure 4.10.1. **Investment financing by equity and bank loans in Emerging Asia**

Percentage of total investments, latest year available



Source: World Bank (2016), *Global Financial Development Database*, www.worldbank.org/en/publication/gfdr/data/global-financial-development-database.

StatLink http://dx.doi.org/10.1787/888933443866

In its roadmap for the development of capital markets, the Myanmar government set out plans for a series of steps to be taken between 2008 and 2015, including the diversification of treasury bonds issued by the central bank, an expanded issuance of corporate bonds, converting state-owned enterprises (SOEs) into joint-stock corporations, and the establishment of a stock market. Indeed, there has been real progress in the development of financial markets. After inaugurating a managed float exchange-rate regime in April 2012, the Central Bank of Myanmar (CBM) introduced an interbank foreign exchange market, through which the CBM intervenes to smooth out fluctuations in the exchange rate. The CBM's auctions of deposits and credit also have the scope to create short-term money markets.

The Yangon Stock Exchange (YSE) was launched in December 2015 and began trading in March 2016 (Box 4.10.1). The YSE is a joint venture on the part of the state-owned Myanma Economic Bank and two Japanese companies, Daiwa Institute of Research and Japan Exchange Group. As of October 2016, only three companies – First Myanmar Investment Co. Ltd., Myanmar Thilawa SEZ Holdings Public Ltd., and Myanmar Citizens Bank Ltd. – were listed on the exchange, with a total volume of 3 378 shares worth MMK 78 million (Myanmar kyat), and representing a market capitalisation of MMK 642.1 billion. A number of securities companies have also been established, and more firms are planning to list on the YSE. The chair of the Securities and Exchange Commission of Myanmar (SECM), U Maung Maung Win, has said that the commission is preparing, following the passage of the new Myanmar Companies Act, to grant access to foreign investors, and to permit the listing of joint ventures between local and foreign firms. A recent loosening of US government sanctions on Myanmar has removed the restrictions on US banks and private individuals doing business with the Myanma Economic Bank, which otherwise would have prevented their involvement with the YSE.

Box 4.10.1. **The Securities and Exchange Law 2013**

The Securities and Exchange Law 2013, which authorised the establishment of the Yangon Stock Exchange, was drafted by the Central Bank of Myanmar, with the assistance of the Daiwa Institute and the Tokyo Stock Exchange. These two Japanese companies had agreed to provide technical and human resource development assistance in establishing a stock exchange meeting international standards. The 2013 law also established the Securities and Exchange Commission of Myanmar as the regulator of securities trading. Myanmar's deputy minister of finance chairs this seven-member commission. Firms trading on the exchange are required to have at least 100 shareholders, paid-up capital of at least MMK 500 million, and a record of stability. Listed firms also have to be incorporated under the Myanmar Companies Act, which is set to be superseded by a new version in the near future.

While stock markets offer benefits of financial diversification and corporate governance, and for firms wishing to list for the first time, these benefits can be hard to attain without the kind of extensive infrastructure, large scale and strong supervision that may be difficult to achieve in Myanmar (OECD, 2014). While there has been progress in developing the sovereign debt market – the Central Bank of Myanmar (CBM) began issuing three- and five-year treasury bonds to the public in 1993 – the secondary market for government securities is underdeveloped, as is the corporate bond market. Along with the development of supportive institutions, regional co-operation, such as working together through the Asian Bond Market Initiative (ABMI), may be helpful in fostering the issuance and trade of local-currency denominated bonds.

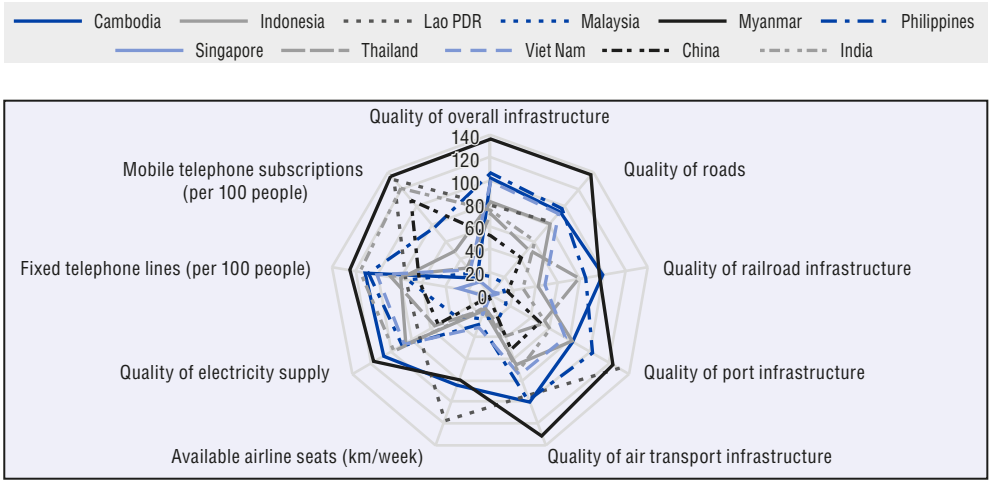
POLICY FOCUS

Support investment in infrastructure

Significant gaps in most areas of infrastructure remain a constraint on growth

Significant progress has been made in improving access to infrastructure in Myanmar – particularly information and communications technology (ICT) infrastructure. For example, the number of secure Internet servers increased from just one in 2005 to 38 in 2015. According to the World Economic Forum, the quality of infrastructure in Myanmar is among the lowest in the world, with the country ranked 135th out of 140 overall, and below other emerging economies in Asia in most of the categories (Figure 4.10.2). Myanmar performs relatively well in air transport infrastructure, as measured by the number of available airline seats for its population size (ranked 79th globally) and the quality of railroad infrastructure (ranked 96th globally), but performs particularly badly in the quality of its roads (ranked 136th globally).

Figure 4.10.2. **Emerging Asia infrastructure quality rankings, 2015**



Notes: Quality measures are based on the results of the World Economic Forum's Executive Opinion Survey. No results are available for the quality of railroad infrastructure in Lao PDR.

Source: World Economic Forum (2016), *The Global Competitiveness Report 2015-2016*, http://reports.weforum.org/global-competitiveness-report-2015-2016.

StatLink http://dx.doi.org/10.1787/888933443877

With urbanisation and economic growth set to place additional pressures on existing infrastructure, infrastructure development also has an important role to play in addressing inequalities across the country. The United Nations Population Division estimates that between 2015 and 2050 Myanmar's urban population will increase from 18.5 million to 32.2 million. Investments in infrastructure for transport, in utilities and communication and in social infrastructure will be needed to ensure that cities remain efficient, and that they protect the well-being of their residents. At the same time, improved access to infrastructure in rural areas will also be needed in order to boost rural development. Notably, access to irrigation and electricity on farms opens up opportunities for modernisation, and for increased agricultural productivity.

In recognition of this, one of the key targets of the Ministry of Agriculture and Irrigation (MOAI) is the expansion of the total irrigated area in Myanmar to 2.3 million hectares. Improvements to physical infrastructure are also required in order

to address bottlenecks in the exportation of farm products, and in the development of agricultural value chains. Outdated milling equipment prevents the production of high-quality rice. Meanwhile, logistical barriers in transportation, cold storage and hot bath facilities complicate exports of fruit, seafood and other products (OECD, 2014). The development of infrastructure through improvements to the country's "soft" infrastructure, the construction of rural access roads, and rural electrification and bioenergy use are among the strategies laid out by the MOAI.

The Asian Development Bank estimates that, left unchecked, Myanmar's growing infrastructure gap – or the difference between the infrastructural investment required, and that which is forthcoming – will reach between USD 2.3 billion and USD 4.7 billion per year from 2014 to 2030, depending on assumptions for the growth rate and unit costs (ADB, 2014). Other estimates have suggested that as much as USD 320 billion in total infrastructure investment would be needed to sustain annual gross domestic product growth of 8% over the two decades from 2010 to 2030 (Chhor et al., 2013). Public sources of finance will have to be complemented with other sources of funding, which may include the private sector. This could happen by using tools such as infrastructure bonds and public-private partnerships (PPPs).

PPPs have already been used in infrastructure projects in Myanmar, albeit sporadically. In December 2015, for example, Sembcorp Utilities, and the Ministry of Electricity and Energy's Department of Electric Power Planning (DEPP), agreed to develop the 225 MW Myingyan gas-fired power plant, a build-operate-transfer (BOT) project representing a total investment of approximately USD 300 million. Moreover, the new Hangthawaddy International Airport is being planned in association with private partners, and local and private firms are involved in operating the airports in Mandalay and Yangon, as well as a number of river ports in the Yangon area. BOT concessions have also been used to build 5 585 km of roads in Myanmar over the four decades preceding 2013.

However, significant institutional barriers still inhibit the effective use of PPPs for infrastructure. Indeed, a joint review undertaken by the Ministry of Planning and Economic Development's Directorate for Investment and Company Administration (DICA), and Japan International Cooperation Agency (JICA), discussed Myanmar's PPP framework for infrastructure development. The authors noted that Myanmar currently lacks a multi-year infrastructure investment strategy dealing with financing plans, with laws, regulations and policies towards PPPs, and with the involvement of the fiscal authorities in decision making on modes of financing. They also found a need for both an institution capable of promoting PPP use in infrastructure, and a history of awarding PPP projects through transparent and competitive processes (JICA and DICA, 2016).

POLICY FOCUS

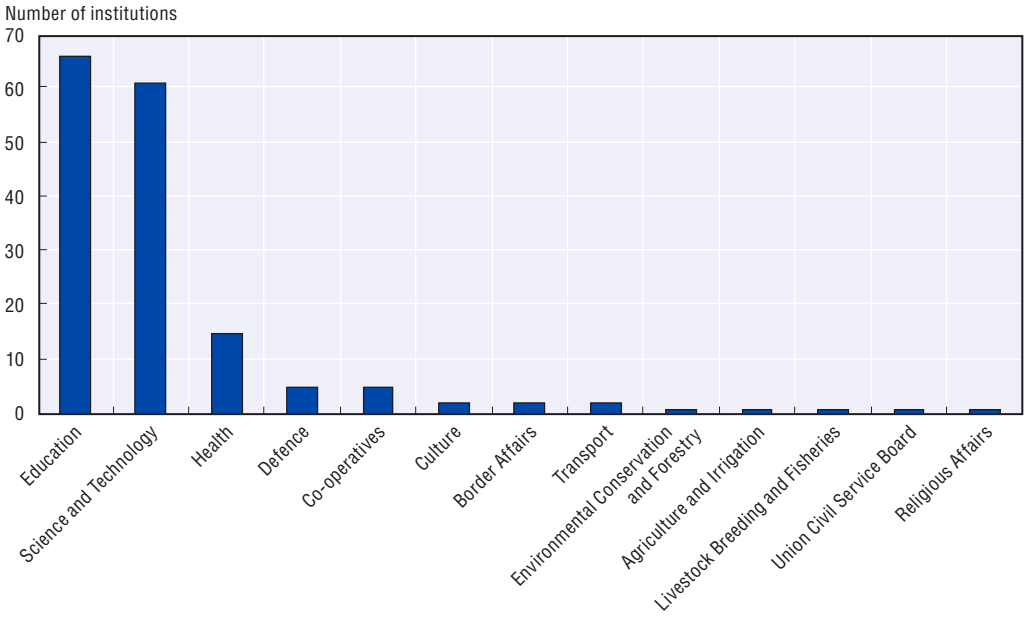
Reform higher education to deliver better quality

The quality and cost-effectiveness of tertiary education need to be improved

Higher education is growing in Myanmar. The gross enrolment ratio – total enrolment as a percentage of the population in the official age group corresponding to tertiary-level education – increased from 5.2% in 1995 to 13.5% in 2012, though this remains low in comparison with wealthier neighbours such as Thailand, where the ratio is 51.6%. The supply of higher education has also expanded in Myanmar, with the number of institutions increasing from 32 in 1988 to 163 in 2012. These 163 institutions fell under the responsibility of 13 separate ministries, with most (66) under the Ministry of Education (Figure 4.10.3). Policy and administrative matters in education, across all

levels, are, however, directed by Myanmar's National Education Committee, which is chaired by the education minister.

Figure 4.10.3. **Higher education institutions in Myanmar by ministry, 2011-12**



Source: MOE (2013), *Education System in Myanmar: Self-Evaluation and Future Plans*, Ministry of Education, www.myanmar-education.edu.mm/dhel/education-system-in-myanmar/education-structure/.
StatLink http://dx.doi.org/10.1787/888933443880

Rather than just increasing enrolment, a more appropriate priority for improving human capital may be the implementation of cost-effective measures for improving the quality of higher education. While expanding access to university-level education in Myanmar will be important as growth and development continue, it is expected that industrialisation will create more jobs for which technical and vocational education and training (TVET) is a more appropriate preparation (OECD, 2014). Naturally, university-educated workers will also have an important role to play in development. Unfortunately, many aspects of the existing university system are, however, in need of improvement. Indeed, a broad review of higher education in Myanmar by the Institute of International Education expressed several concerns about the sector. The study identified problems with physical infrastructure, access to and use of information technology, out-of-date curricula, the quality of university faculties, administration and governance, and international engagement (IIE, 2013). Furthermore, Myanmar is the only ASEAN member country that has not yet introduced a national body responsible for quality control in education.

A number of initiatives were initiated under the previous government to bring universities into line with regional and international standards, and to identify and tackle the main challenges facing the sector. As of the 2011-12 academic year, Myanmar changed the structure of its university degrees. This overhaul included replacing the three-year bachelor's degree with a four-year degree, in line with ASEAN standards.

The Comprehensive Education Sector Review (CESR) kicked off in August 2012, with the goal of understanding the strengths and weaknesses in the education system, supporting evidence-based reform, and developing plans for the sector's future. Draft recommendations from the second phase of the CESR for higher education included: consolidating universities by academic field, or by location, to form comprehensive

universities; granting autonomy to teaching staff; providing fundraising for research; allowing universities to establish their own admission systems; and assigning dedicated staff to teach and manage distance-education courses (CESR Office, 2014).

The Education Promotion Implementation Committee (EPIC) drew upon the reports and recommendations of the CESR when drafting the national education law of 2014, the aim of which was to modernise the country's education system. Still, this law also attracted criticism and became the subject of student protests. The protesters objected to what they saw as the law's centralisation of higher education by, for example, establishing a National Education Commission. The new government, which has said it would like to increase investment in education, and also to reform it, will need to identify its priorities for improving quality, and for balancing competing goals when it comes to the autonomy of higher education. While institutional autonomy can offer flexible and responsive education, centralisation can be used to promote the wider benefits of education, to facilitate access for disadvantaged students, and to ensure the quality of the system as a whole.

Key government ministries in Myanmar

President	Htin Kyaw
State Counsellor	Aung San Suu Kyi
First Vice President	Myint Swe
Second Vice President	Henry Van Thio
Agriculture, Livestock and Irrigation	Aung Thu
Border Affairs	Ye Aung
Commerce	Than Myint
Construction	Win Khaing
Defence	Sein Win
Education	Myo Thein Gyi
Electricity and Energy	Pe Zin Tun
Ethnic Affairs	Nai Thet Lwin
Foreign Affairs	Aung San Suu Kyi
Health and Sports	Myint Htwe
Home Affairs	Kyaw Swe
Hotels and Tourism	Ohn Maung
Industry	Khin Maung Cho
Information	Pe Myint
Labour, Immigration and Population	Thein Swe
Natural Resources and Environmental Conservation	Ohn Win
Office of the State Counsellor	Kyaw Tint Swe
Planning and Finance	Kyaw Win
President's Office	Aung San Suu Kyi
Religious Affairs and Culture	Aung Ko
Social Welfare, Relief and Resettlement	Win Myat Aye
Transport and Communications	Thant Sin Maung
Central Bank Governor	Kyaw Kyaw Maung

Note: Valid as of 7 December 2016

References

ADB (2014), *Myanmar: Unlocking the Potential: Country Diagnostic Study*, Asian Development Bank, Manila, https://www.adb.org/publications/myanmar-unlocking-potential.

CESR Office (2014), *Comprehensive Education Sector Review Phase (2) Report (Draft): Consultation Meeting for Development Partners* (presentation), Comprehensive Education Sector Review Office, Yangon.

Chhor, H. et al. (2013), *Myanmar's Moment: Unique Opportunities, Major Challenges*, McKinsey Global Institute, www.mckinsey.com/~/media/McKinsey/Global%20Themes/Asia%20Pacific/Myanmars%20moment/MGI_Myanmar_moment_Executive_Summary.ashx.

IIE (2013), *Investing in the Future: Rebuilding Higher Education in Myanmar*, Institute of International Education, New York, www.iie.org/~/media/Files/Corporate/Publications/Rebuilding-Higher-Education-in-Myanmar.pdf.

JICA and DICA (2016), *Financing Infrastructure Development and Public-Private-Partnership (PPP) Framework for Myanmar*, Japan International Cooperation Agency and Ministry of National Planning and Economic Development, Directorate of Investment and Company Administration, Nay Pyi Taw, Myanmar.

MOE (2013), *Education System in Myanmar: Self-Evaluation and Future Plans*, Ministry of Education, Nay Pyi Taw, Myanmar, www.myanmar-education.edu.mm/dhel/education-system-in-myanmar/education-structure.

OECD (2014), *Multi-dimensional Review of Myanmar: Volume 2. In-depth Analysis and Recommendations*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264220577-en.

World Bank (2016), *Global Financial Development Database*, World Bank, Washington DC, www.worldbank.org/en/publication/gfdr/data/global-financial-development-database.

World Economic Forum (2016), *The Global Competitiveness Report 2015-2016*, World Economic Forum, Geneva, http://reports.weforum.org/global-competitiveness-report-2015-2016.

CHINA AND INDIA

China

A. Medium-term economic outlook (forecast, 2017-21 average)

GDP growth (percentage change):	6.0
Current account balance (% of GDP):	2.1
Fiscal balance (% of GDP) (central government):	-2.7

B. Medium-term plan

Period: 2016-20

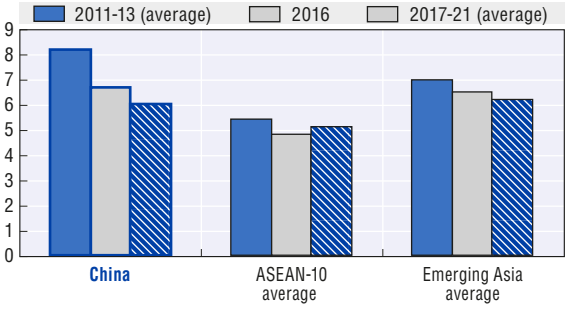
Theme: Actively manage the "new normal" of economic development, facilitate innovation and sustainable growth, maintain openness in the economy, ensure inclusiveness and establish a moderately prosperous society

C. Basic data (in 2015)

Total population:	1 373.49 million*
Population of Beijing:	21.70 million*
Nominal GDP (US dollar):	11 181.55 billion
GDP per capita at PPP:	14 339.92 (current International Dollar)
Exchange rate in the first half of 2016 (period average):	6.53 (RMB/USD)

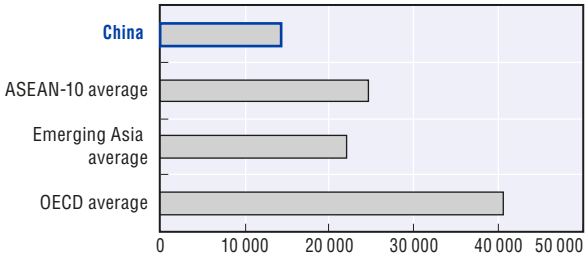
Note: * Population data are government estimates.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage changes)



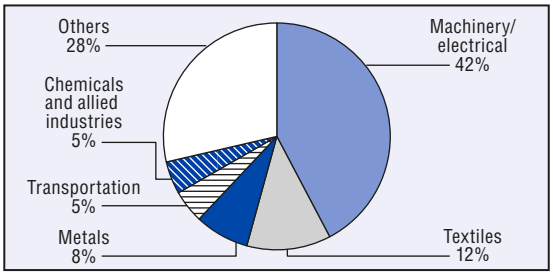
Source: OECD Development Centre, MPF-2017.

GDP per capita, 2015
(PPP, current international dollar)



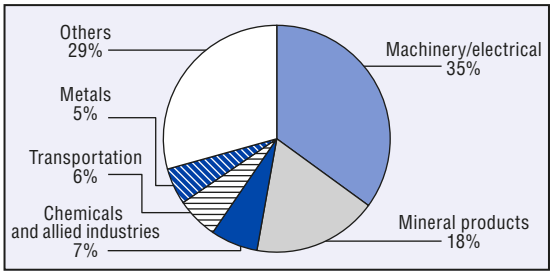
Source: IMF.

Composition of exports, 2015
(percentage of total exports)



Source: Trademap.

Composition of imports, 2015
(percentage of total imports)



Source: Trademap.

China's growth continued to slow as it entered its 13th Five Year Plan (2016-20) period, and the country is putting increasing emphasis on supply-side reform. Excess capacity, which is a result both of the misallocation of capital and of inefficient investment over the past few decades, needs to be addressed. Working off excess capacity in a number of industries is a prerequisite for boosting investment demand and restoring profits. At the moment, China's economy is undergoing a rebalancing, with a sharp slowdown in investment and robust growth in consumption. It is worthy of note, moreover, that the investment frenzy of the past two decades has led not just to overcapacity, but also to environmental degradation on a large scale. Indeed, getting rid of excess capacity and making sure the country enjoys greener growth will both be important tasks in the context of the current Five Year Plan.

China: Medium-term policy challenges and responses

- Work off excess capacity
- Upgrade the quality of the environment

POLICY FOCUS

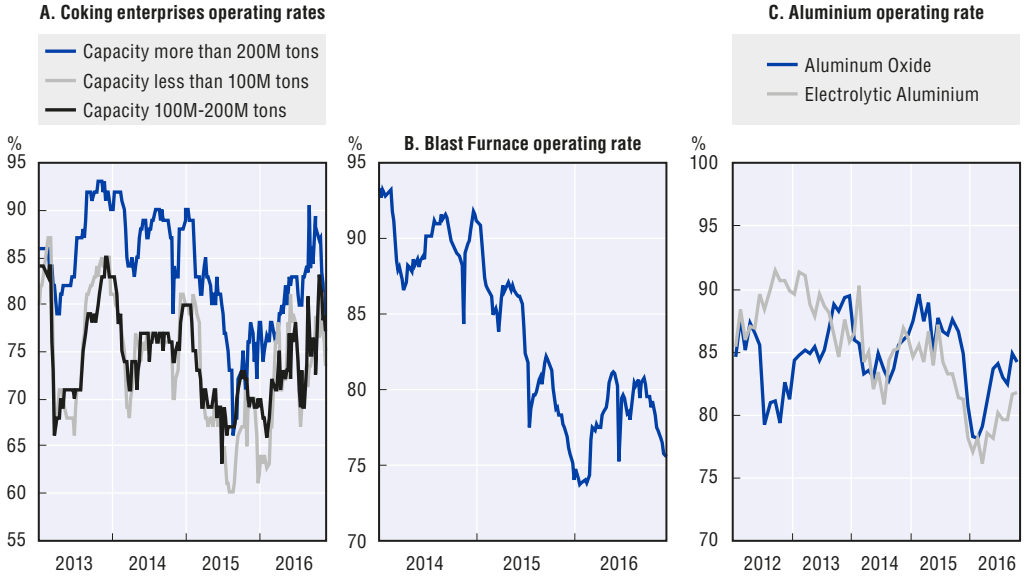
Work off excess capacity

Excess capacity weighs on growth and hinders structural adjustment

An adjustment in China towards a trend of economic growth that is both somewhat lower in absolute terms, but also higher in quality, entails getting rid of excess capacity and moving, through market-oriented mechanisms, towards more efficient, less energy-intensive production. Excess capacity in a number of sectors has not only been weighing on growth by reducing the appetite for investment, it has also been hindering the reallocation of resources to more productive uses. This kind of reallocation has contributed greatly to China's productivity growth in the past few decades. Indeed, resource reallocation has taken place mainly through urbanisation (i.e. the moving of labour resources from the less productive agricultural sector into more productive manufacturing industries) (OECD, 2015).

Overcapacity has continued to plague a number of industries including coal, cement, steel, chemicals, machinery and metallurgy (Figure 4.11.1). Beyond its direct effect on these industries, overcapacity also exerts downward pressure on the overall price level in the economy, as these industries supply intermediate inputs to most other sectors. It also reduces corporate profits and weighs on firms' appetite to invest, thereby constraining potential growth.

Figure 4.11.1. **Capacity utilisation has been low in many sectors**



Source: Wind Information (database), www.wind.com.cn/en/Default.aspx.

StatLink http://dx.doi.org/10.1787/888933443893

China has recently started to tackle excess capacity in manufacturing

Excess capacity in a number of manufacturing industries is not a new phenomenon. Indeed, the National Development and Reform Commission (NDRC) called in the early 2000s for the avoidance of "blind" investment in steel mills, copper smelters and electrolytic aluminium facilities. It was not until much later, in 2013, that China's State Council issued guidelines for improving efficiency by merging or closing down high-cost production facilities. Notwithstanding these efforts, the government has only recently come up with a broader plan to tackle the overcapacity problem. This government plan includes capacity-reduction targets for coal and steel. It supports these efforts, which will be led by sub-national governments, by disbursing funds to re-employ, re-locate or retire redundant workers in these two industries. However, a mid-2016 assessment of these efforts suggests that less than half of the capacity cuts required by the end of 2016 were implemented, while a disproportionate part of the funds were used up. By late October, the adjustment accelerated and official announcements mentioned that 80% of the planned capacity cuts have been implemented. A major reduction in coal production is slated to come from a reduction in the number of coal-mine operating days from 330 to 276 per year, starting from April 2016.

Coal prices picked up in the second half of 2016, following a combination of circumstances in the industry that reduced supply. These factors included a reduction in working days, and a trend of destocking since March 2016. Floods in the summer of 2016 and the disruption they caused to the largely rail-based distribution system also contributed, to a certain extent, to this uptick in prices. These circumstances prompted the government to partially relax its supply-cutting measures by allowing some coal mines to produce above the agreed amount, and/or to temporarily suspend the 276 working-day policy from October through to end-December 2016.

Excess capacity in real estate still awaits an effective policy response

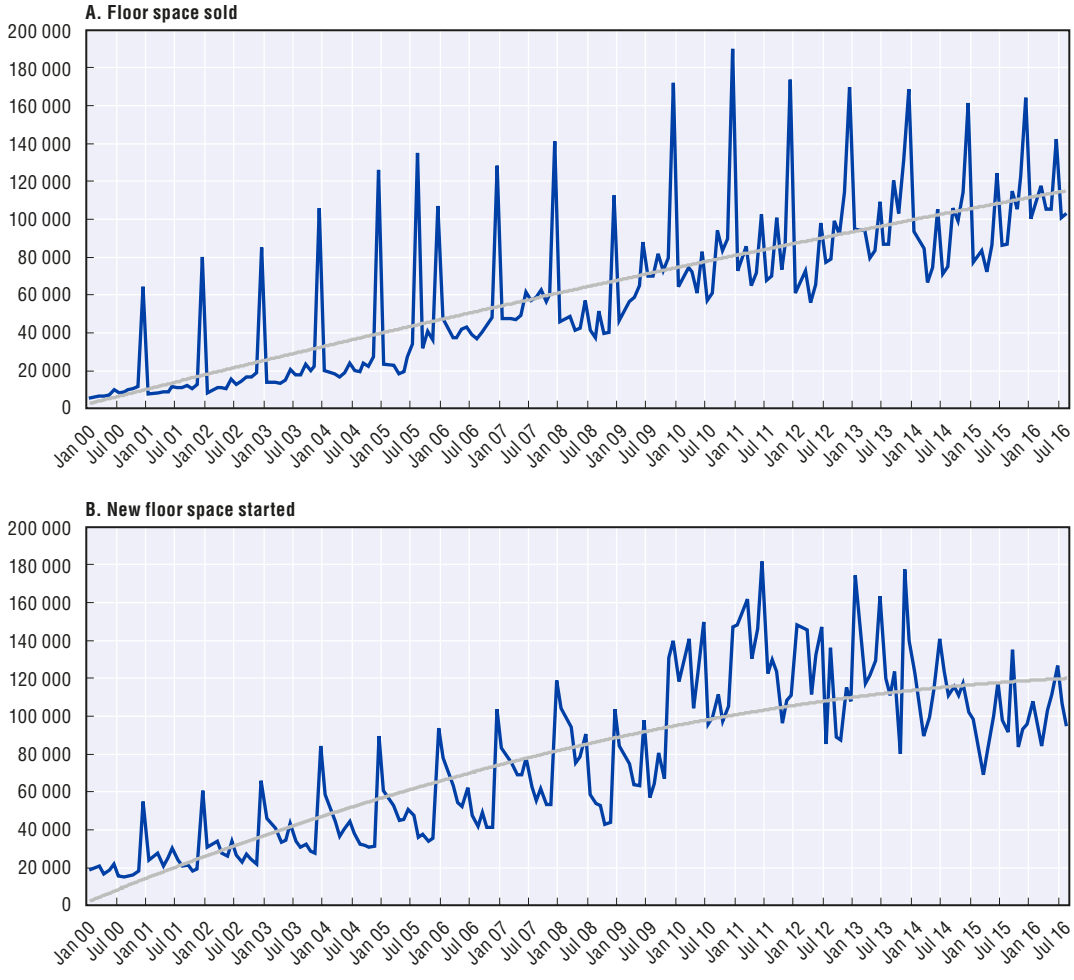
Excess capacity has also been plaguing the real-estate sector, in particular in third- and fourth-tier cities, where grandiose construction over the past few years has outstripped demand. Vacancy rates would be the appropriate measure by which to assess the magnitude of the problem, but such data are not available. However, the phenomenon of "ghost cities" in China has generated interest well beyond the country's borders. In contrast to the heavy-industry sector, where the way to mitigate the problem of overcapacity is to cut capacity, in the property sector it is to stimulate demand. The major question, however, is how to attract buyers to small cities and towns where there are no employment opportunities, no good schools, and no good quality health care. Some policy makers envisage the resettling of retired migrant workers to small towns closer to their villages of origin. Living costs in small towns may be more affordable to many of these people, who may not have pension revenues. Still, they may be reluctant to give up the quality of services they have become accustomed to in big cities during their working life. A more realistic source of demand is farmers buying apartments in nearby towns to be closer to shopping or entertainment, or to spend the months when there is no work in the fields. It is likely that working off excess housing in third- and fourth-tier cities will take several more years.

The situation in large cities contrasts sharply with that in small towns. Indeed, demand far outstrips supply in the big cities, driving up prices. Local governments are often reluctant to release more land to ease the pressure on housing prices, as high prices generate high revenues from selling land rights to developers. Moreover, they are more willing to release land for office or commercial buildings than for residential housing, as businesses are likely to generate VAT and other tax revenues, whereas residential

housing brings no definite prospect of future tax revenues as there is no tax on holding property. In an attempt to contain soaring house prices in recent months, several cities have tightened restrictions on the purchase of homes. The soaring prices have resulted from constraints in supply, as local governments have tried to keep prices high in order to ensure buoyant revenues from the sale of land rights. The tighter restrictions on home purchases include increases in the ratio of down payments to the overall price, in particular for high-end housing and for second homes. The restrictions also extend to the number of units individuals can hold, particularly if they are non-locals.

In order to understand the co-existence of soaring prices and ghost towns it is important to have a vision of the dual nature of the Chinese real estate market. However, the overall picture (which masks these two ends of the spectrum) shows that the housing market is bottoming out (Figure 4.11.2). Sales volumes are increasing at a slower rate than before, and new residential housing starts, which can be seen as a leading indicator for the residential housing market, have stabilised.

Figure 4.11.2. **The housing market is bottoming out**
Residential housing, in thousand square meters



Source: CEIC.
StatLink http://dx.doi.org/10.1787/888933443906

POLICY FOCUS

Upgrade the quality of the environment

Environmental policies are becoming more effective

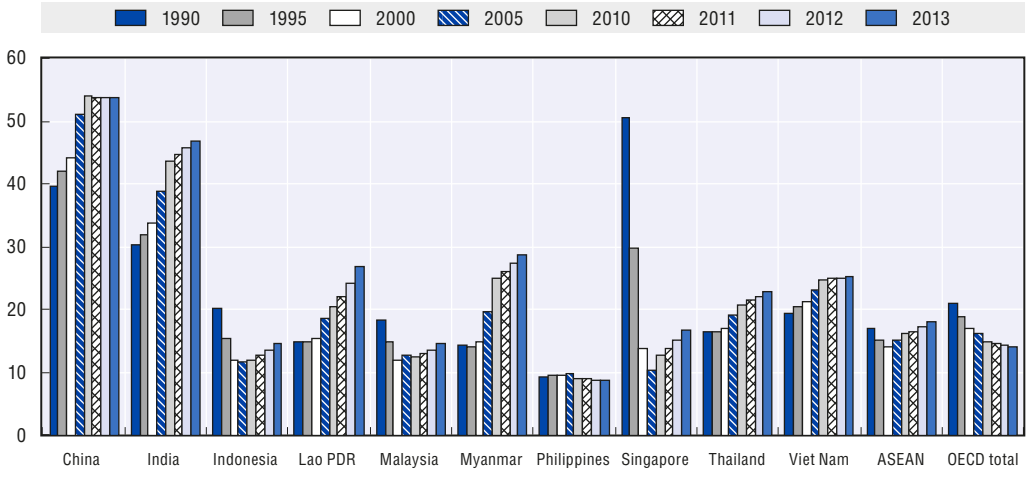
The quality of the environment has deteriorated for several decades already, but it has not been until very recently that the government categorised greening the country's economic growth as a policy priority. Recently, measures to improve air quality have appeared to be gathering momentum. In late 2014, China and the United States, the largest emitters, committed themselves to a meaningful reduction in greenhouse-gas emissions. China promised that its CO_2 emissions would peak around 2030 and be cut per unit of gross domestic product by 60-65% from the 2005 level. The Paris Agreement was then ratified at the Hangzhou Summit in September 2016.

Air pollution is being reduced but is still a major health hazard

Air pollution is a major environmental challenge for China. The concentration of PM2.5 (particulate matter of less than 2.5 microns in diameter that can lodge in the lungs) is high, and a large part of the population is exposed. In China, mean population exposure to PM2.5 is much higher, not only than the OECD average, but also than that in most Asian countries (Figure 4.11.3). Exposure rapidly increased from 1990 until 2011, and stabilised thereafter at a very high level. Internationally comparable data are not available after 2013, but Chinese national data show that most Chinese regions with pollution problems made progress in improving air quality in 2014 (Clean Air Alliance of China, 2015). The average PM2.5 concentration in ten polluted Chinese regions declined by 11.9% in 2014. This decline, however, was a mere 4% in Beijing, the lowest among these ten polluted regions. In 2015, air quality continued to improve. Indeed, PM2.5 fell in 189 cities by an average of 16% in the first half of 2015, compared with the same period a year earlier. In 2015 as a whole, average PM2.5 concentration in 189 cities around China fell by 10% compared to 2014 levels. Nevertheless, air quality is still a major health hazard in China.

Figure 4.11.3. **PM 2.5 exposure continues to be high**

Mean population exposure to PM 2.5 in micrograms per cubic metre



Source: OECD (2016a), *OECD Statistics* (database), http://stats.oecd.org/.

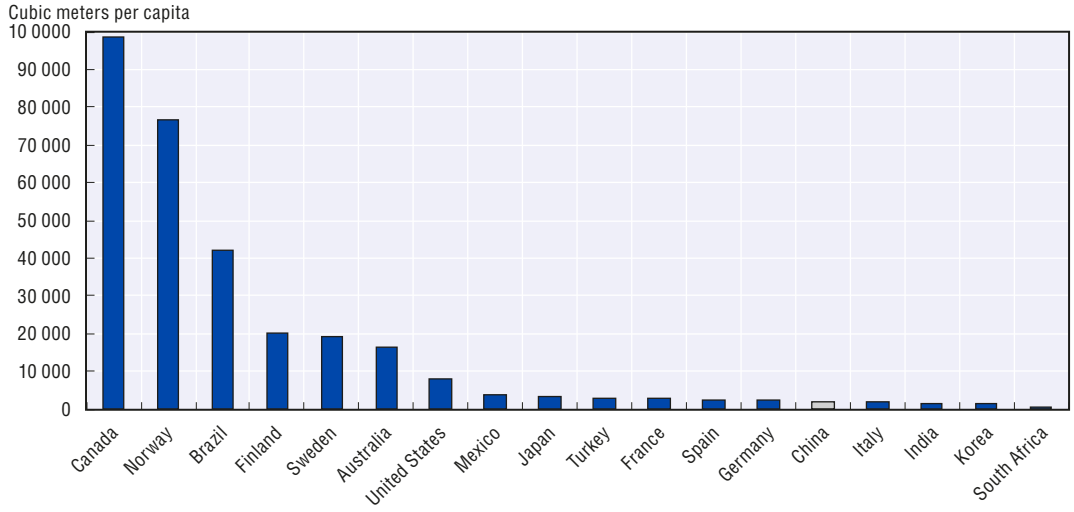
StatLink http://dx.doi.org/10.1787/888933443911

Water resources are scarce

Water resources are very scarce in China, in particular in per capita terms (Figure 4.11.4), and they are unevenly distributed. The north has experienced a series of droughts, while the south has faced floods, including a large-scale disaster in the summer of 2016. Water shortages will continue to have a serious adverse impact on the northeast of the country, which is the biggest producer of grain (OECD, 2016b). A new nationwide inspection on law enforcement with regard to water conservation got underway in May 2016, the results of which were not yet available in October 2016.

Figure 4.11.4. **China's renewable freshwater resources are very low in per capita terms**

Cubic metres per capita, long-term averages



Source: OECD (2016a), *OECD Statistics* (database), http://stats.oecd.org/.

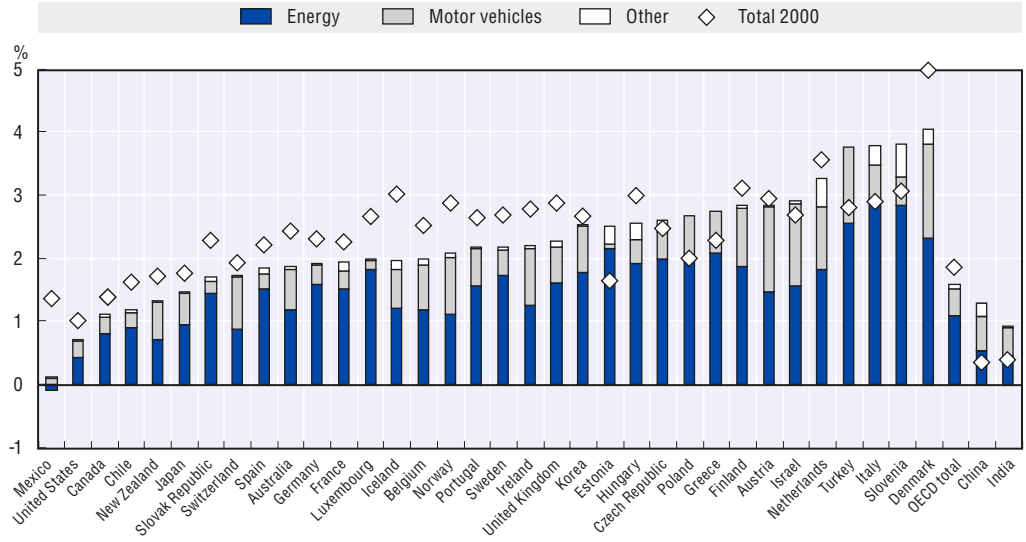
StatLink http://dx.doi.org/10.1787/888933443923

Environmental regulations are being upgraded and enforcement strengthened

A significant milestone in improving environmental quality is the release for public consultation, in June 2015, of a draft environmental tax law, which was then submitted to the top legislative body at the end of August 2016. The draft law imposes levies on air, water, noise and waste polluters. The law aims to incentivise cuts in pollution by stating that taxpayers could receive a 50% reduction if they lower their airborne and water-pollutant emissions by half of the national or provincial standards. The law does not, however, cover CO_2 emissions, as the cap-and-trade regime, due to be rolled out in 2017, is supposed to cover this form of pollution. Furthermore, urban sewage and refuse treatment plants will be exempt, as will agriculture, except large-scale animal husbandry. Motor vehicles, locomotives, non-road mobile machinery, ships and aircraft, will also be exempt, as long as the pollutants are within national standards. Authorities can tax, at most, three pollutants, except for heavy metals, where the maximum number is five. The tax level will be close to the current pollution charge, so the impact may not be immediate. With strengthening standards, pollution is, however, expected to decrease. On average, environmental taxes are less important as a source of government revenue in China than in OECD member countries (Figure 4.11.5). Moreover, sub-national authorities may adopt more stringent standards according to the circumstances they face. Although this is the first environmental tax law, environmental criteria are featured in several tax-exemption regulations. For instance, violators of environmental laws and regulations cannot enjoy the 15% reduction in corporate income tax that is usually extended to high-tech firms. Similar conditions apply to producers of software and integrated circuits.

Figure 4.11.5. **Environment-related taxes are still not an important source of government revenue in China**

The share of environment-related taxes in total revenue, 2014



Note: Values for Poland refer to 2013. The statistical data for Israel are supplied by, and under the responsibility of, the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD (2016a), *OECD Statistics* (database), http://stats.oecd.org/.

StatLink http://dx.doi.org/10.1787/888933443939

China also revised its environmental laws in April 2014, with unlimited fines for polluters. Polluters will also be liable to be sued by environmental organisations. More specific environment-related regulations were accepted by the 14th meeting of the Comprehensive Deepening of Reforms Group in July 2015. These regulations extended the liability of people in charge of units where environmental damage occurs, making them liable beyond their time in office, and even into retirement. Moreover, the law allows governments, at the county level and above, to seize or impound facilities or equipment that is causing pollution. The government's determination to make polluters responsible for damages is also reflected in an important change that makes the ruling party and the government jointly responsible for environment-related damage. Previously, party officials had not been sanctioned for severe pollution cases in their areas of jurisdiction. The half-year evaluation report of environmental enforcement by China's Ministry of Environmental Policy stated that, as of mid-2016, 11 provinces had introduced the system of "enabling the party and the government to be equally responsible for protecting the environment" as well as the "one position with dual responsibilities" system. Meanwhile, eight provinces had promulgated detailed implementation rules for the accountability of leading party and government officials for environmental damages.

To finance investments related to climate change and improving the environment, China has started to issue green bonds on a large scale. As of mid-2016, China had issued CNY 75 billion (Chinese yuan renminbi) worth of green bonds, corresponding to a third of overall worldwide issuance. The criteria of "green", however, differ from international standards. In China, green bonds also finance so-called "clean coal" projects, which seek to improve the emissions-efficiency of coal-fired power plants. Such projects would not be eligible under internationally recognised benchmarks such as the Green Bond Principles and the Climate Bonds Standard. Indeed, greater transparency would be desirable in order to prevent the disguising of regular bonds as green for the sake of preferential treatment.

Key government ministries in China

President	Xi Jinping
Premier	Li Keqiang
Agriculture	Han Changfu
Civil Affairs	Huang Shuxian
Commerce	Gao Hucheng
Culture	Luo Shugang
Education	Chen Baosheng
Environmental Protection	Chen Jining
Finance	Xiao Jie
Foreign Affairs	Wang Yi
Housing and Urban-rural Construction	Chen Zhenggao
Human Resources and Social Security	Yin Weimin
Industry and Information Technology	Miao Wei
Justice	Wu Aiying
Land and Resources	Jiang Daming
National Audit Office	Liu Jiayi
National Defense	Chang Wanquan
National Development and Reform	Xu Shaoshi
National Health and Family Planning	Li Bin
Public Security	Guo Shengkun
Science and Technology	Wan Gang
State Ethnic Affairs	Bater
State Security	Chen Wenqing
Supervision	(Vacant)
Transport	Li Xiaopeng
Water Resources	Chen Lei
Governor of the People's Bank of China	Zhou Xiaochuan

Note: Valid as of 7 December 2016

References

Clean Air Alliance of China (2015), *China Air Quality Management Assessment Report*, Innovation Center for Clean Air Solutions, http://environmental-partnership.org/wp-content/uploads/2015/09/China_Air_Quality_Management_Assessment_Report.pdf.

OECD (2016a), *OECD Statistics* (database), OECD, Paris, http://stats.oecd.org/.

OECD (2016b), *Water Risk Hotspots for Agriculture*, unpublished, mimeo.

OECD (2015), *OECD Economic Surveys: China,* OECD Publishing, Paris.

India

A. Medium-term economic outlook (forecast, 2017-21 average)

GDP growth (percentage change):	7.3
Current account balance (% of GDP):	-1.2
Fiscal balance (% of GDP) (central government):	-6.1

B. Medium-term plan

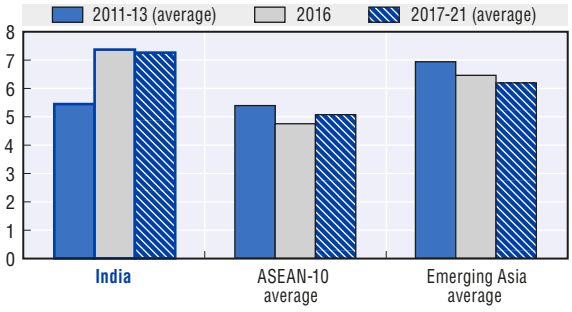
Period: 2012-17
Theme: Faster, more inclusive and sustainable growth

C. Basic data (in 2015)

Total population:	1 267.00 million*
Population of Delhi:	17.93 million*
Nominal GDP (US dollar):	2 073.00 billion
GDP per capita at PPP:	6 187.23 (current International Dollar)**
Exchange rate in the first half of 2016 (period average):	67.17 (INR/USD)

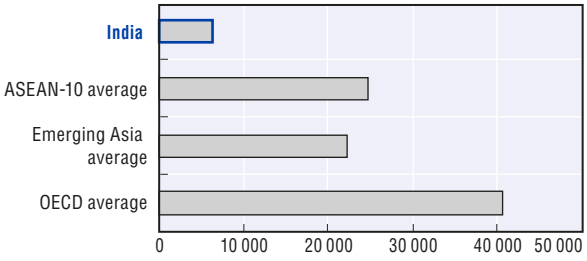
Note: * Population data are government estimates. ** IMF estimate. India GDP data refer to fiscal years starting in April.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage change)



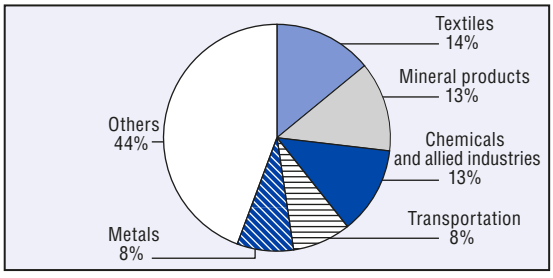
Source: OECD Development Centre, MPF-2017.

GDP per capita, 2015
(PPP, current international dollar)



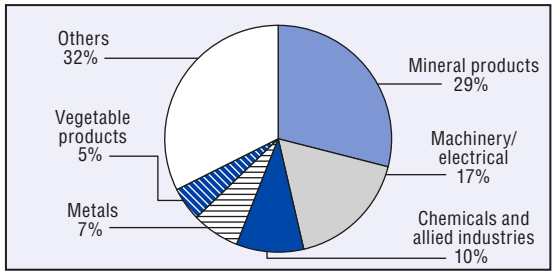
Source: IMF.

Composition of exports, 2015
(percentage of total exports)



Source: Trademap.

Composition of imports, 2015
(percentage of total imports)



Source: Trademap.

India's economic growth has been strong in recent years, driven by high rates of consumption in particular. While high rates of growth are expected to continue, further reform and the development of new industries are needed to ensure sustained and inclusive growth. Among the priorities in the Twelfth Five Year Plan (2012-17) for achieving faster economic growth are skill development and investment in science and technology. Foreign direct investment (FDI) will play a major role in India's growth and development by supporting the expansion of, and job creation in, technology- and knowledge-intensive manufacturing and services industries. Fostering innovation and entrepreneurship is also critical for realising opportunities for economic development, particularly in information technology (IT)-related fields. Recent initiatives have helped to improve the environment for FDI and entrepreneurship, though further changes may be required to improve their effectiveness.

India: Medium-term policy challenges and responses

- Foster foreign direct investment and promote Make in India
- Strengthen Startup India initiatives

POLICY FOCUS

Foster foreign direct investment and promote Make in India

Reforms to create a favourable FDI and business environment attract domestic investment and FDI inflows, which finances economic development. Managing accumulated corporate debts is also crucial. There have been two major FDI reforms recently in India. With Make in India, launched in 2014 and implemented in 2015, the government opened up 25 sectors to increased FDI, including automobiles, aviation, biotechnology, chemicals, construction, defence manufacturing, electrical machinery, electronic systems and mining. The initiative aimed to attract more FDI through further easing, rationalising and simplifying the process of FDI in the country and putting more FDI proposals into the automatic track. To create a global manufacturing hub in India, the government has allowed 100% foreign ownership in railways and foreign investors are now permitted to own up to 100% of local defence ventures after obtaining government approval that increased from 49% in defence manufacturing. Consequently, FDI inflows have increased by 20% from 2013 to 2014, and 29.5% from 2014 to 2015 while a dramatic jump was recorded from 2005 to 2006 and a continuous decrease after the global financial crisis until 2012. Capital investments increased nearly fourfold, from USD 15.9 billion in 2013 to USD 63 billion in 2015. According to the FDI Report 2016, India was the top FDI destination in the Asia-Pacific in 2015, replacing China which was top in 2013. India's market share in the Asia-Pacific improved from 8.6% in 2013 to 20% in 2015, while China's share declined from 34.5% in 2013 to 18% in 2015.

The greatest share of India's FDI inflows comes from Mauritius (33% of the total), followed by Singapore (16%) (Table 4.12.1). Table 4.12.1 shows the share of top investing countries' FDI equity inflows. The highest percentage of FDI flows from Mauritius to India at approximately 33%, with 16% coming from Singapore. The services sector attracts the greatest share of inflows – approximately 18% of total inflows – and contributes 1/3 to gross domestic product growth (Table 4.12.2). Construction development (i.e. townships, housing, built-up infrastructure) is the second largest sector, attracting approximately 8.4% of total inflows.

Table 4.12.1. **Share of top investing countries' FDI equity inflows**

USD billions

Country	2013-14 (April-March)	2014-15 (April-March)	2015-16 (April-March)	Cumulative inflows (April 2000-March2016)	Cumulative inflows (April 2000-March 2016) to total inflows from all countries (%)
Mauritius	4.859	9.030	8.355	95.910	33.2
Singapore	5.985	6.742	13.692	45.880	15.9
United Kingdom	3.215	1.447	0.898	23.108	8.0
Japan	1.718	2.084	2.614	20.966	7.3
United States	0.806	1.824	4.192	17.943	6.2
Netherlands	2.270	3.436	2.643	17.314	6.0
Germany	1.038	1.125	0.986	8.629	3.0
Cyprus*	0.557	0.598	0.508	8.552	3.0
France	0.305	0.635	0.598	5.111	1.8
United Arab Emirates	0.255	0.367	0.985	4.030	1.4
Total inflows from all countries	24.299	30.931	40.001	288.634	100.0

Notes: 1) Total FDI inflows from all countries include flows under NRI schemes of RBI. 2) FDI equity inflows exclude amount remitted through RBI's NRI schemes.
*Note by Turkey:
The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
Note by all the European Union Member States of the OECD and the European Union:
The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.
Source: Ministry of Commerce & Industry (2016), FDI Statistics (website), Department of Industrial Policy & Promotion, Government of India, http://dipp.nic.in/English/Publications/FDI_Statistics/FDI_Statistics.aspx.

Table 4.12.2. **Sectors attracting highest FDI inflows**

USD billions

Sector	2013-14 (April-March)	2014-15 (April-March)	2015-16 (April-March)	Cumulative inflows (April 2000-March2016)	Cumulative inflows (April 2000-March 2016) to total inflows from all countries (%)
Services	2.225	4.443	6.889	50.792	17.6
Construction	1.226	0.769	0.113	24.188	8.4
Computer software & hardware	1.126	2.296	5.904	21.018	7.3
Telecommunications	1.307	2.895	1.324	18.382	6.4
Automobile	1.517	2.726	2.527	15.065	5.2
Drugs & pharmaceuticals	1.279	1.498	0.754	13.849	4.8
Chemicals	0.878	0.763	1.470	11.900	4.1
Trading	1.343	2.728	3.845	11.872	4.1
Power	1.066	0.707	0.869	10.476	3.6
Hotels & tourism	0.486	0.777	1.333	9.227	3.2

Notes: 1) Total FDI inflows from all countries include flows under NRI schemes of RBI. 2) FDI equity inflows exclude amount remitted through RBI's NRI schemes.
Source: Ministry of Commerce & Industry (2016), *FDI Statistics* (website), Department of Industrial Policy & Promotion, Government of India, http://dipp.nic.in/English/Publications/FDI_Statistics/FDI_Statistics.aspx.

The first FDI reform, Make in India, has played an important role in attracting FDI, and hence fostering economic growth. A second FDI reform in 2016 eases investment caps and controls, including India's high-value industrial sectors such as defence, construction and railways. Policy in the defence sector was liberalised, while portfolio investment in the defence sector permits up to 24% under the automatic track. The full 100% in FDI is

also allowed in the defence sector for modern and state-of-the-art technology on a case-by-case basis. The reform affects 15 major sectors, including defence, civil aviation, real estate, private banking, single brand retail, e-commerce in food products, broadcasting, carriage services, private security agencies, animal husbandry and pharmaceuticals.

The government also plans to put more sectors under the automatic track, including allowing 100% FDI in construction, operation and maintenance in specified rail infrastructure projects. Many such projects exist: suburban corridor projects through the public-private partnership projects; high speed train projects; dedicated freight lines; rolling stock, including train sets; locomotives' and coaches' manufacturing and maintenance facilities; railway electrification; signalling systems; freight terminals; passenger terminals; infrastructure in industrial parks pertaining to railway line and sidings, including electrified railway lines and connectivity to the main railway line; and mass rapid transport systems.

The next phase of Make in India initiatives has streamlined investment regulations and proposes several targets for investment. Major infrastructure expansions to support rapid growth in manufacturing, including the development of smart cities and industrial corridors, focuses on the potential of design to facilitate investment, foster innovation, protect intellectual property and build best-in-class manufacturing infrastructure in India's manufacturing sector. The government promotes this initiative with Make in India Week. Make in India Week, which includes activities, seminars and summits for domestic and foreign investors, as well as collateral events on topics such as design, innovation, youth and start-ups. The government is deregulating and reducing complexity for business to increase speed and transparency, and is harmonising and rationalising the regulatory environment in India. Under Make in India initiatives, the government also endorses manufacturing infrastructure and capacity for innovation for connectivity, new youth-focused programmes and institutions dedicated to developing specialised skills. A new national industrial corridor development authority was created to co-ordinate, integrate, monitor and supervise development of all industrial corridors. Their initiatives also focus on developing smart cities and Startup India.

POLICY FOCUS

Strengthen Startup India initiatives

Startup India is a new flagship initiative, formally launched in January 2016, to build a strong system to foster and nurture innovation, encourage entrepreneurship (especially by youth and minorities), and create jobs with large-scale employment opportunities – essentially, promoting sustainable economic development in India through innovation and design. A main aspect is easing and assisting during initial start-up by encouraging free entry into the market and creating more competitive markets, which comes with a free market mechanism. The initiative aims to attract founders and investors from Silicon Valley. There are many e-commerce and consumer internet-related start-up entrepreneurs participating in the programme (Table 4.12.3).

Table 4.12.3. **Selected Startup India investments, 2016**

Sr. No.	Date (dd/mm/yyyy)	Startup	Sector	Sub-sector	Location	Investors	Investment type	Amount (USD)
1	8/1/2016	HealthKart	eCommerce	Online Pharmacy & Health Marketplace	Gurgaon	Sequoia Capital India, Omidyar Network, Kae Capital	Private Equity	12 000 000
2	8/1/2016	Medinfi	Consumer Internet	Doctor & Clinic Discovery Platform	Bangalore	Mudit Saxena, Evan Lim	Seed Funding	200 000
3	8/1/2016	RepairEasy	Consumer Internet	Gadget Repair Services Platform	Pune	Undisclosed HNIs	Seed Funding	275 000
4	8/1/2016	Voonik	eCommerce	Online Women's Fashion Marketplace	Bangalore	InnoVen Capital	Private Equity	3 000 000
5	8/1/2016	Tokri	Consumer Internet	Hyperlocal Grocery Delivery platform	Pune	Syska LED group	Private Equity	2 500 000
6	8/2/2016	Sheroes	Consumer Internet	Online Job and Career Platform for Women	Noida	Lumis Partners, The HR Fund, Rajul Garg, Quintillion Media	Private Equity	1 800 000
7	8/2/2016	Daily Ninja	Consumer Internet	Hyperlocal daily needs Products delivery platform	Bangalore	Venk Krishnan, Aprameya Radhakrishna, Anupam Mittal, Kunal Shah, Tracxn Labs, Subramanya SV, Ravi Garkipati	Seed Funding	N/A
8	8/2/2016	Yumlane	Food & Beverage	Retail Food & Snack Offline centres	Mumbai	Binny Bansal, Anupam Mittal, Sachin Bhatia, Darius Pandole, Kunal Khattar, Dheerag Jain	Seed Funding	1 000 000
9	8/3/2016	Xcode	Health care	Personal Genomics	Chennai	RoundGlass Partners	Private Equity	N/A
10	8/3/2016	ExtraCarbon	Consumer Internet	Waste Recycle Management platform	Gurgaon	Brand Capital	Seed Funding	225 000
11	8/3/2016	FlickBay	Consumer Internet	Mobile Based Bollywood Discovery platform	Mumbai	Paul Roy	Seed Funding	890 000
12	8/4/2016	Petoo	Consumer Internet	Food Delivery Platform	Bangalore	Existing Investors	Seed Funding	500 000
13	8/4/2016	Iehlehsports	Others	Sports Arena discovery	New Delhi	Anglian Omega Network	Seed Funding	N/A
14	8/5/2016	Tricog	Health care	Health care Analytics Platform	Bangalore	Inventus Capital Partners, Blume Ventures & Others	Private Equity	N/A
15	8/6/2016	VST Travels	Technology	Travel Ticket Booking Software	Kerala	Promatus Group	Seed Funding	27 000
16	8/8/2016	AdPushUp	Technology	Ad optimisation Platform	New Delhi	Geniee, Inc, Purvi Capital	Private Equity	N/A
17	8/8/2016	Wefly Indoor Skydiving	Others	Indoor Skydiving Sports Provider	Mumbai	Swastika Company Ltd.	Seed Funding	40 000
18	8/8/2016	Mojarto	eCommerce	Original Art, Digital Prints etailer	Gurgaon	Undisclosed Investors	Seed Funding	445 000
19	8/8/2016	Zipgrid	Consumer Internet	Community services platform	Mumbai	1Crowd (through crowd funding)	Seed Funding	200 000

Source: Startup India (2016), *Indian Startup Funding and Investment Chart*, webpage, http://trak.in/india-startup-funding-investment-2015/.

However, the capacity of this initiative may not keep up with the action plan. This action plan consists of 1) simplification and hand-holding, 2) funding support and incentives, and 3) industry-academia partnership and incubation. This plan diversifies activity among sectors and accelerates spreading the Startup India movement from the digital and technology sectors to other sectors, such as agriculture, manufacturing, social sector, health care, education and so on, and from specific cities to semi-urban and rural areas in India.

Yet, Startup India creates far more e-commerce and Internet-related business than otherwise because : 1) there is a dense IT-related market in India; 2) many big IT-related businesses are investing in this initiative (e.g. Silicon Valley, Google, SoftBank); and 3) the objectives in this initiative fit the IT-related business model, which can show returns in the short term, as opposed to manufacturing and agriculture start-ups. Those sectors need relatively higher initial capital and initial inputs such as land, fertiliser, machines, and garments. If the government wants to attract innovative business from different sectors, the plan should be adjusted to allow for longer start-up periods to show returns and specific initial capital and input investments. Over the longer term, additional investment in education will be needed as a complement to further growth in innovation.

Key government ministries in India

Prime Minister	Narendra Modi
Agriculture & Farmers Welfare	Radha Mohan Singh
Chemicals and Fertilizers	Ananthkumar
Civil Aviation	Ashok Gajapathi Raju Pusapati
Consumer Affairs, Food and Public Distribution	Ramvilas Paswan
Corporate Affairs	Arun Jaitley
Defence	Manohar Parrikar
Drinking Water and Sanitation	Narendra Singh Tomar
Earth Sciences	Harsh Vardhan
Electronics & Information Technology	Ravi Shankar Prasad
External Affairs	Sushma Swaraj
Finance	Arun Jaitley
Food Processing Industries	Harsimrat Kaur Badal
Health and Family Welfare	Jagat Prakash Nadda
Heavy Industries and Public Enterprises	Anant Geete
Home Affairs	Raj Nath Singh
Housing and Urban Poverty Alleviation	M. Venkaiah Naidu
Human Resource Development	Prakash Javadekar
Information & Broadcasting	M. Venkaiah Naidu
Law & Justice	Ravi Shankar Prasad
Micro, Small and Medium Enterprises	Kalraj Mishra
Panchayati Raj	Narendra Singh Tomar
Parliamentary Affairs	Ananthkumar
Personnel, Public Grievances and Pensions	Narendra Modi
Railways	Suresh Prabhu
Road Transport and Highways	Nitin Jairam Gadkari
Rural Development	Narendra Singh Tomar
Science and Technology	Harsh Vardhan
Shipping	Nitin Jairam Gadkari
Social Justice and Empowerment	Thawar Chand Gehlot
Statistics & Programme Implementation	D. V. Sadananda Gowda
Steel	Chaudhary Birender Singh
Textiles	Smriti Zubin Irani
Tribal Affairs	Jual Oram
Urban Development	M. Venkaiah Naidu
Water Resources, River Development and Ganga Rejuvenation	Uma Bharati
Women and Child Development	Maneka Sanjay Gandhi
Central Bank Governor	Urjit Patel

Note: Valid as of 7 December 2016

References

Ministry of Commerce & Industry (2016), *FDI Statistics* (website), Department of Industrial Policy & Promotion, Government of India, Government of India, http://dipp.nic.in/English/Publications/FDI_Statistics/FDI_Statistics.aspx.

Startup India (2016), *Indian Startup Funding and Investment Chart*, webpage, Ministry of Commerce and Industry, Government of India, http://trak.in/india-startup-funding-investment-2015/.

Annex A. Statistical annex

Table A.1. **Real GDP growth of Southeast Asia, China and India**

Annual percentage change

Country	2015	2016	2017	2017-21 (average)	2011-13 (average)	2003-07 (average)
ASEAN-5						
Indonesia	4.8	5.0	5.1	5.4	6.2	5.5
Malaysia	5.0	4.2	4.5	4.7	5.2	6.0
Philippines	5.9	6.8	6.2	6.1	5.9	5.7
Thailand	2.8	3.2	3.3	3.6	3.2	5.6
Viet Nam	6.7	6.0	6.2	6.2	5.6	7.2
Brunei Darussalam and Singapore						
Brunei Darussalam	-0.6	0.7	2.0	1.8	0.9	1.7
Singapore	2.0	1.8	2.0	1.8	4.1	7.9
CLM countries						
Cambodia	7.0	7.1	7.1	7.3	7.3	10.6
Lao PDR	7.4	7.1	7.3	7.5	8.1	7.1
Myanmar	8.7	8.3	8.4	8.5	6.9	-
China and India						
China	6.9	6.7	6.4	6.0	8.2	11.7
India	7.6	7.4	7.6	7.3	5.5	8.8
Average of ASEAN 10 countries	4.7	4.8	4.9	5.1	5.4	5.9
Average of Emerging Asia	6.6	6.5	6.4	6.2	7.0	9.5

Note: The cut-off date of data is 28 November 2016. The weighted averages are used for ASEAN average and Emerging Asia average. The results for China, India, and Indonesia (for 2016 and 2017 projections) are based on the OECD Economic Outlook 100, released in November 2016. The 2003-07 average does not include Myanmar. India data refer to fiscal years starting in April.
Source: OECD Development Centre, MPF-2017.

Table A.2. **Current account balance of Southeast Asia, China and India**

Percentage of GDP

Country	2015	2016	2017	2017-21 (average)	2000-07 (average)
ASEAN-5					
Indonesia	-2.1	-1.8	-1.8	-1.6	2.8
Malaysia	3.0	1.3	2.3	2.6	11.8
Philippines	2.9	1.9	1.8	2.5	1.0
Thailand	8.8	9.4	6.0	3.2	3.0
Viet Nam	0.5	2.4	2.1	3.0	-1.9
Brunei Darussalam and Singapore					
Brunei Darussalam	7.7	2.0	0.1	10.0	-
Singapore	19.7	19.0	18.9	17.2	18.5
CLM countries					
Cambodia	-11.2	-11.0	-10.8	-9.5	-2.3
Lao PDR	-20.3	-19.8	-19.0	-17.0	-13.4
Myanmar	-8.9	-8.0	-6.5	-6.5	-
China and India					
China	3.0	2.4	2.4	2.1	4.6
India	-1.3	-0.8	-0.9	-1.2	0.0
Average of ASEAN 10 countries	2.1	2.0	1.6	1.3	4.4
Average of Emerging Asia	1.8	1.6	1.5	1.1	3.4

Note: The cut-off date of data is 28 November 2016. The weighted averages are used for ASEAN average and Emerging Asia average. The results of China, India, and Indonesia (for 2016 and 2017 projections) are based on the OECD Economic Outlook 100, released in November 2016. The 2000-07 average does not include Brunei Darussalam and Myanmar.
Source: OECD Development Centre, MPF-2017

Table A.3. **Private consumption in Southeast Asia, China and India**

Percentage changes

Country	2015	2017-21 (average)	2000-07 (average)
ASEAN-5			
Indonesia	4.8	5.4	3.7
Malaysia	6.0	6.0	8.0
Philippines	6.3	6.2	4.9
Thailand	2.1	3.0	4.6
Viet Nam	9.3	6.8	7.1
China and India			
China	8.4	6.7	6.7
India	7.4	7.8	6.3
ASEAN-5 average	5.1	5.3	4.9
Emerging Asia average	7.6	6.7	6.2

Note: The cut-off date of data is 28 November 2016. The weighted averages are used for ASEAN-5 average and Emerging Asia average.
Source: OECD Development Centre, MPF-2017.

Table A.4. **Gross fixed capital formation in Southeast Asia, China and India**

Percentage changes

Country	2015	2017-21 (average)	2000-07 (average)
ASEAN-5			
Indonesia	5.1	6.2	8.3
Malaysia	3.7	5.0	6.7
Philippines	15.1	8.0	4.2
Thailand	4.8	4.3	6.8
Viet Nam	9.3	8.9	12.5
China and India			
China	5.9	6.2	12.2
India	3.9	6.2	11.8
ASEAN-5 average	6.5	6.2	7.6
Emerging Asia average	5.5	6.2	11.0

Note: The cut-off date of data is 28 November 2016. The weighted averages are used for ASEAN-5 average and Emerging Asia average.
Source: OECD Development Centre, MPF-2017.

Table A.5. **Public finances of Southeast Asia, China and India**

Fiscal balances (central government)

Country	2015	2017-21 (average)	2000-07 (average)
ASEAN-5			
Indonesia	-2.3	-2.2	-1.6
Malaysia	-3.0	-3.5	-4.7
Philippines	0.2	-2.1	-3.4
Thailand	-0.3	-2.8	-1.1
Viet Nam	-5.9	-5.0	-2.8
China and India			
China	-1.3	-2.7	-
India	-7.2	-6.1	-7.3
ASEAN-5 average	-2.1	-2.7	-2.2
Emerging Asia average	-2.8	-3.6	-4.8

Note: Data refer to consolidated public sector balance in Malaysia. The cut-off date of data is 28 November 2016. The weighted averages are used for ASEAN-5 average and Emerging Asia average. 2000-07 average does not include China.
Source: OECD Development Centre, MPF-2017.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

The OECD member countries are: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The European Union takes part in the work of the OECD.

OECD Publishing disseminates widely the results of the Organisation's statistics gathering and research on economic, social and environmental issues, as well as the conventions, guidelines and standards agreed by its members.

OECD DEVELOPMENT CENTRE

The OECD Development Centre was established in 1962 as an independent platform for knowledge sharing and policy dialogue between OECD member countries and developing economies, allowing these countries to interact on an equal footing. Today, 27 OECD countries and 24 non-OECD countries are members of the Centre. The Centre draws attention to emerging systemic issues likely to have an impact on global development and more specific development challenges faced by today's developing and emerging economies. It uses evidence-based analysis and strategic partnerships to help countries formulate innovative policy solutions to the global challenges of development.

For more information on the Centre, please see *www.oecd.org/dev*.

OECD PUBLISHING, 2, rue André-Pascal, 75775 PARIS CEDEX 16
(41 2016 12 1 P) ISBN 978-92-64-26248-5 – 2017

Economic Outlook for Southeast Asia, China and India 2017

ADDRESSING ENERGY CHALLENGES

The *Economic Outlook for Southeast Asia, China and India* is a bi-annual publication on regional economic growth, development and regional integration in Emerging Asia. It focuses on the economic conditions of Association of Southeast Asian Nations (ASEAN) member countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam. It also addresses relevant economic issues in China and India to fully reflect economic developments in the region. The 2017 edition of the Outlook comprises four main parts, each highlighting a particular dimension of recent economic developments in the region. The first part presents the regional economic monitor, depicting the near-term and medium-term economic outlooks, as well as macroeconomic and regional integration challenges in the region. The second part discusses the recent progress made in key aspects of regional integration. The third part presents this edition's special focus: addressing energy challenges and renewable energy development in particular. The fourth part includes structural policy country notes offering specific recommendations.

Contents

OECD*publishing*
www.oecd.org/publishing

ISBN: 978-92-64-262485
41 2016 12 1 P1