Economic Outlook for Southeast Asia, China and India 2019

TOWARDS SMART URBAN TRANSPORTATION

OECD DEVELOPMENT CENTRE

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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 first release of the *Update* in June 2016, the *Outlook* has become a biannual publication, with the main report released in the fall 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, structural policy country notes, an overview of recent developments in regional integration, and a thematic focus specific to each year's report. The 2019 edition of the *Outlook* focuses on the policy challenges for Emerging Asian countries in improving urban transportation, in particular addressing traffic congestion which is one of the key negative externalities of urban agglomeration. Urban population growth, rising incomes and limited transportation alternatives have all contributed to growing automobile use in the region. Policy options to be considered in improving urban transportation could include the development of efficient public transportation systems, the use of price-based and non-price based policies to affect vehicle ownership and use, the use of new technologies to increase transportation efficiencies, the promotion of flexible working arrangements, and new approaches to urban planning.

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.

Like other regional economic outlooks produced by the OECD Development Centre, this report was prepared in collaboration with regional partners; the Economic Research Institute for ASEAN and East Asia (ERIA) and UNESCAP contributed to the 2019 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 the sharing of best practices.

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Table of contents

Executive summary 15

Overview 17

Chapter 1. **Macroeconomic assessment and economic outlook** 39
- Introduction 40
- Overview and main findings 41
- Other key points of the economic outlook and assessment 43
- Recent developments and near-term outlook 44
- Foreign direct investment continues to flow into Emerging Asia 63
- Inflation picture is still mixed 65
- Non-FDI inflows uneven and pressure mounts on some currencies 70
- Central banks move to reassure the market 72
- Deficits in current account and fiscal positions need to be monitored 75
- Banking sector is generally stable even though risk factors persist 80
- Challenges to robust growth 83
- Notes 101
- References 102

Chapter 2. **Towards smart urban transportation in Emerging Asia** 107
- Introduction and overview of smart city initiatives in Emerging Asia 108
- Traffic congestion is one of the important challenges for Emerging Asia 110
- Conclusion 139
- Note 140
- References 140

Chapter 3. **Structural policy country notes** 143
- Indonesia 146
- Malaysia 154
- Philippines 159
- Thailand 170
- Viet Nam 178
- Brunei Darussalam 184
- Singapore 189
- Cambodia 196
- Lao PDR 203
- Myanmar 210
- China 222
- India 228

Chapter 4. **Progress towards regional integration in Emerging Asia** 237
- Introduction 238
- Trade in goods and services 240
- Investment and capital market liberalisation 244
- Competition and consumer protection 246
- Intellectual property 248
- Infrastructure and connectivity 251
- Small and medium-sized enterprises 253
- Food, agriculture and forestry 256
- Tourism 258
- Human and social development 260
- Energy 264

Initiative for ASEAN integration 268
Notes 272
References 272

Annex A. Statistical annex 275

Tables

1. Real GDP Growth in Southeast Asia, China and India 17
2. Examples of Fintech services in Emerging Asia 20
3. Regulations or guidelines associated with Fintech in Emerging Asia 21
4. Publicly accessible transportation modes in selected Emerging Asian cities 26
5. Examples of vehicle ownership and use policies 27
6. Structural policy challenges in Emerging Asian countries 31
7. Summary of progress of regional integration in Emerging Asia 35
1.1. Real GDP growth in ASEAN, China and India 41
1.2. Recent real GDP growth in ASEAN, China and India, 2017-18 44
1.3. Level of dollarisation in CLM countries 74
1.4. Examples of Fintech services in Emerging Asia 84
1.5. Regulations or guidelines associated with Fintech in Emerging Asia 87
1.6. Fintech regulatory agencies in Emerging Asia 87
1.7. Selected cases of natural disasters in Emerging Asia 96
1.8. How Emerging Asian countries score on World Risk Index, 2012-16 99
2.1. ASEAN Smart Cities Network pilot cities 110
2.2. Estimated annual hours spent in traffic congestion in selected cities, per person using motorised transportation 112
2.3. Share of trips to work by public transportation in selected cities 114
2.4. Public transportation fares in selected Emerging Asian cities 115
2.5. Public transportation modes in selected Emerging Asian cities 116
2.6. Examples of vehicle ownership and use policies 118
2.7. Selected vehicle acquisition taxes and fees in Emerging Asia 120
2.8. Traffic conditions in Singapore during peak hours, 2004-14 125
2.9. Technological innovations in urban transportation systems 131
2.10. Land use distribution of Putrajaya, Malaysia 136
3.4.1. Targeted public and private investment into the EEC 174
3.4.2. Enrolment in technical and vocational education and training (TVET) 175
3.5.1. PISA scores in 2015 for selected countries in the region 180
3.7.1. Singaporeans benefited from SkillsFuture, 2017 193
3.9.1. Sources of electricity production in Lao PDR, 2000-15 205
3.12.1. Entry routes and FDI caps in different sectors, 2017 231
4.1. Progress in Emerging Asia's integration in key policy areas 239
4.2. Progress in the ASEAN Highway Network project to connect and upgrade highways 251
4.3. ASCC characteristics and key result areas 260
4.4. ASEAN Framework Action Plan country coordinators and potential partners 262
4.5. APAEC 2016-2025 programme areas 264
4.6. Focus areas of Initiative for ASEAN Integration Work Plans 268
4.7. Funding and implementation of Initiative for ASEAN Integration Work Plans I and II 270

Figures

1. Intermediate goods exports to China 2017 22
2. Average annual damage as percentage of GDP and average annual occurrence of natural disasters, 1998-2018 23
3. Traffic congestion for selected roads of Southeast Asian cities, 2018 25
4. Households owning cars by wealth quintile in selected Emerging Asian countries 27

5. Share of trips to work by car in selected Emerging Asian cities 28
6. Share of total urban population by density in Emerging Asian countries, 2015 30
1.1. Real GDP growth of Southeast Asia, China and India 40
1.2. Contributions to real GDP growth in the ASEAN-5 countries, 2016-18 45
1.3. Private consumption YOY growth in Indonesia, Malaysia, the Philippines and Thailand, 2017-18 47
1.4. Gross exports YOY growth in Indonesia, Malaysia, the Philippines and Thailand, 2017-18 47
1.5. Consumer confidence indices in Indonesia, Malaysia, the Philippines and Thailand, 2017-18 49
1.6. Tourist arrivals (3-month rolling sum) in ASEAN-5 countries, 2017-18 51
1.7. Contributions to growth in Brunei Darussalam and Singapore, 2016-18 53
1.8. Goods exports of Brunei Darussalam and Singapore, 2017-18 54
1.9. Contributions to growth in CLM countries, 2015-17 56
1.10. Goods exports of CLM countries, 2017-18 58
1.11. Contributions to growth in China and India, 2016-18 60
1.12. Consumer confidence indices in China and India, 2017-18 61
1.13. Purchasing managers' indices in China and India, 2017-18 61
1.14. Goods exports of China and India, 2017-18 63
1.15. Foreign direct investment in Emerging Asian countries, 2014-18 64
1.16. Inflation in Emerging Asia, 2017-18 66
1.17. Global oil prices pass through relative to headline inflation 68
1.18. Portfolio and other investment inflows in Emerging Asian countries, 2014-18 70
1.19. Nominal effective exchange rate in Emerging Asia, 2017-18 71
1.20. Stock market returns in Emerging Asian countries, 2016-18 72
1.21. Evolution of inflation and benchmark interest rates in Emerging Asia, 2017-18 73
1.22. Credit default swap spreads (5-year senior) in Emerging Asia, 2014-18 73
1.23. Current account balances of Emerging Asian countries 76
1.24. General government fiscal balance in Emerging Asia 79
1.25. Bank lending in Emerging Asian countries, 2016-18 81
1.26. Share of selected fiat currencies in total volume of Bitcoin purchases, 2013-18 86
1.27. Financial Literacy Index and Financial Product Usage Index, 2014-17 91
1.28. Intermediate good exports to China as a percentage of GDP, 2017 92
1.29. Emerging Asia's forward and backward GVC participation in trade with China, 2011 93
1.30. Average annual damage (% of GDP) and average annual occurrence, 1998-2018 96
2.1. Estimated urban population in Emerging Asia, 2000-17 108
2.2. Traffic congestion for selected roads of Southeast Asia cities, 2018 111
2.3. Walkability Index scores for selected Emerging Asian cities 117
2.4. Estimated total motor vehicles in use, 2005-15 118
2.5. Households owning cars by wealth quintile in selected Emerging Asian countries 119
2.6. Motor vehicles and transport tax revenue, 2013 121
2.7. Households owning motorbikes or scooters by wealth quintile in selected Emerging Asian countries 122
2.8. Share of trips to work by car in selected Emerging Asian cities 123
2.9. Annual median pump price for diesel and gasoline in Emerging Asian countries, 2016 123
2.10. Average transportation expenditure among households owning at least one car by region, 2015 124
2.11. Road traffic fatalities in Emerging Asia, 2013 126
2.12. Available taxis in selected Emerging Asian cities 127
2.13. Employees' working hours flexibility in European countries, 2015 132
2.14. Share of total urban population by density in Emerging Asian countries, 2015 134
2.15. Populations of second-largest cities as percentage of population of the largest city 137
3.1.1. Access to electricity, 2016 148

3.1.2. Access to mobile cellular and Internet, 2017 ... 148
3.1.3. Account ownership at financial institutions, 2017 ... 149
3.1.4. Mobile money awareness ... 149
3.3.1. Annual value added and annual compensation per paid employee in business process management (BPM), 2015 ... 165
3.4.1. National Education System in Thailand ... 175
3.6.1. Different types of establishments in Brunei, 2008 ... 186
3.8.1. Development of tourism in Cambodia, 2000-17 ... 198
3.8.2. Arrivals of foreign visitors in ecotourism areas in Cambodia, 2013-16 ... 200
3.8.3. Foreign visitors' destinations in Cambodia, Q1 2017 ... 200
3.9.1. Value and share of electricity exports from Lao PDR, 2003-16 ... 206
3.9.2. Cost of electricity from utility-scale renewable energies, 2010 and 2017 ... 207
3.10.1. International arrivals and receipts in Myanmar, 1995-2015 ... 212
3.10.2. Biggest obstacle to operations reported by firms, 2016 ... 213
3.10.3. FDI Regulatory Restrictiveness Index in selected sectors in Emerging Asian countries ... 214
3.10.4. Number of hotel, motel and guest house rooms by location, 2016 ... 215
3.10.5. Contributions of travel and tourism to GDP in Emerging Asia, 2016 ... 218
3.11.1. Chinese patent applications have soared ... 224
3.11.2. Productivity's role in driving growth has fallen ... 225
3.11.3. Research collaboration is less common in electronics and among smaller firms ... 226
3.12.1. Innovation and technology use among Indian firms by ownership, 2014 ... 232
3.12.2. Firm distribution by ownership and municipality population, 2014 ... 233
4.1. GDP per capita and extreme poverty in Emerging Asia, 1990-2016 ... 261
4.2. Changes in energy efficiency in Emerging Asian countries, 2005-15 ... 265
4.3. Efficiency of customs clearance processes in ASEAN-6 and CLMV, 2016 ... 269

Boxes

1.1. Key assumptions of of the medium-term outlook to 2023 ... 43
1.2. Asian Games 2018 economic impact ... 45
1.3. Importance of the spill-over effects of infrastructure ... 57
1.4. Oil price pass through to inflation ... 68
1.5. Dollarisation in Cambodia, Lao PDR, Myanmar ... 74
1.6. Managing taxpayers' compliance ... 79
1.7. Sendai Framework for Disaster Risk Reduction 2015-30 ... 98
2.1. What is a smart city? ... 108
2.2. Measurement of the impact of congestion on productivity ... 112
2.3. Non-motorised transportation in Emerging Asian cities ... 116
2.4. Fuel and household transportation expenditure in the Philippines ... 124
2.5. The effects of taxis, ride-sourcing and ride-sharing services on congestion ... 127
2.6. Flexible working schedule is a stepping stone in achieving work-life balance ... 131
2.7. Administrative and capital relations in Malaysia and Myanmar ... 135
2.8. Smart trade can facilitate cross-border transportation between border cities ... 137
3.1.1. The regulatory environment for P2P lending in the international market ... 151
3.4.1. Vocational schools in Thailand's education system ... 175
3.5.1. New labour policies ... 181
3.10.1. ASEAN initiatives are addressing common challenges in travel and tourism ... 215
4.1. Greater Mekong Sub-region co-operation on improving energy efficiency ... 266

Acronyms and abbreviations

AANZFTA	ASEAN-Australia-New Zealand Free Trade Agreement
ABIF	ASEAN banking integration framework
ACIA	ASEAN Comprehensive Investment Agreement
ACMF	ASEAN Capital Markets Forum
ACR	Asset Coverage Ratio
ADB	Asian Development Bank
ADBI	Asian Development Bank Institute
AEC	ASEAN Economic Community
AEMAS	ASEAN Energy Management Accreditation Scheme
AEO	Authorised Economic Operator
AFMGM	ASEAN Finance Ministers' and Central Bank Governors' Meeting
AGBS	ASEAN Green Bond Standards
AHN	ASEAN Highway Network
AIFS	ASEAN Integrated Food Security Framework
AIIB	Asian Infrastructure Investment Bank
ALS	Area Licensing Scheme
AMRO	ASEAN+3 Macroeconomic Research Office
APAEC	ASEAN Plan of Action for Energy Co-operation
APEC	Asia-Pacific Economic Co-operation
AQRF	ASEAN Qualifications Reference Framework
ARMM	Autonomous Region of Muslim Mindanao
ASCC	ASEAN Socio-Cultural Community
ASCN	ASEAN Smart Cities Network
ASCR	APEC Services Competitiveness Roadmap
ASEAN	Association of Southeast Asian Nations
ASEAN-SAM	ASEAN Single Aviation Market
ASEAN+3	ASEAN-10 countries plus China, Japan and South Korea
ASEAN+6	ASEAN+3 countries plus Australia, India and New Zealand
ASEAN-5	Indonesia, Malaysia, the Philippines, Thailand and Viet Nam
ASEAN-6	Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand
ATF	ASEAN Tourism Forum
ATISA	ASEAN Trade in Services Agreement
B&R	Belt and Road
BAPPENAS	Indonesian Ministry of National Development Planning
BCG	Boston Consulting Group
BND	Brunei Darussalam Dollar
BRT	Bus rapid transit
BSP	Bangko Sentral ng Pilipinas
CAR	Capital Adequacy Ratio
CBM	Central Bank of Myanmar
CCI	Coordinating Committee on Investment
CDS	Credit Default Swap
CLM	Cambodia, Lao PDR, Myanmar
CNY	Chinese Yuan
CPI	Consumer Price Index
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership

CSH	Computer Software and Hardware
CTI	Committee on Trade and Investment
CTP	Capability Transfer Programme
EAS	East Asia Summit
EDSA	Epifanio de los Santos Avenue
EE&CSSN	Energy Efficiency and Conservation Sub-sector Network
ERIA	Economic Research Institute for ASEAN and East Asia
ERP	Electronic Road Pricing
ETC	Electronic Toll Collection
EWEC	East-West Economic Corridor
FCD	Foreign Currency Deposit
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
FWA	Flexible Working Arrangements
FY	Fiscal Year
GBPs	Green Bond Principles
GDP	Gross Domestic Product
GFC	Gross Fixed Capital
GI	Geographic Indications
GMS	Greater Mekong Subregion
GMS-CBTA	Greater Mekong Subregion Cross-Border Transport Facilitation Agreement
GNPA	Gross Non-Performing Assets
GOS	Group on Services
GPS	Global Positioning System
GST	Goods and Service Tax
GWh	Gigawatt hours
HOT	High Occupancy/Toll
HOV	High Occupancy Vehicle
IAI	Initiative for ASEAN Integration
IBPAP	IT and Business Process Outsourcing Association of the Philippines
IBRD	International Bank for Reconstruction and Development
ICMA	International Capital Market Association
ICO	Initial Coin Offering
ICT	Information and Communications Technology
IDR	Indonesian Rupiah
IFC	International Finance Corporation
IMF	International Monetary Fund
INR	Indian Rupee
IP	Intellectual Property
IRENA	International Renewable Energy Agency
IRR	Implementing Rules and Regulations
IT-BPM	Information Technology and Business-Process Management
ITM	Industry Transformation Map
ITS	Intelligent Transport Systems
JICA	Japan International Cooperation Agency
KHR	Cambodian Riel
KIPO	Korean Intellectual Property Office
KWh	Kilowatt hour
LAK	Laotian Kip

LCOE	Levelised Cost Of Electricity
LTA	Land Transport Authority
MAS	Monetary Authority of Singapore
MCM	Council Meeting at Ministerial level
MMK	Myanmar Kyat
MNCs	Multinational Companies
MOC	Memorandum of Co-operation
MOH	Ministry of Health
MOHT	Ministry of Hotels and Tourism
MPF	Medium-term Projection Framework
MRA	Mutual Recognition Arrangement
MSAP	Manufacturing-related Services Action Plan
MSDP	Myanmar Sustainable Development Plan
MSC	Multimedia Super Corridor
MSME	Micro, Small and Medium Enterprises
MW	Megawatt
MYR	Malaysian Ringgit
NCR	National Capital Region
NPL	Non-performing loan
NQF	National Qualifications Framework
NREL	National Renewable Energy Laboratory
NSW	National Single Window
NTB	Non-Tariff Barrier
NTM	Non-Tariff Measure
NUP	National Urban Policy
OBU	On-board Unit
OECD	Organisation for Economic Co-operation and Development
OJK	Otoritas Jasa Keuangan (Financial Services Authority)
P2P	Peer-to-Peer
PBoC	People's Bank of China
PHP	Philippine Peso
PISA	Programme for International Student Assessment
PM 2.5	Fine Particulate Matter
PMI	Purchasing Managers' Index
PWD	Persons with Disabilities
QABs	Qualified ASEAN Banks
R&D	Research and Development
RCEP	Regional Comprehensive Economic Partnership
RMS	Regional Medium Salary
RPA	Robotic Process Automation
SAVI	Singapore Autonomous Vehicle Initiative
SEARP	Southeast Asia Regional Programme (OECD)
SEZ	Special Economic Zone
SGD	Singapore Dollar
SME	Small- and Medium-sized Enterprises
SOE	State-owned Enterprise
SPA-FS	Strategic Plan of Action on ASEAN Food Security
TAE	Training and Adult Education
TAS	Transport and Storage

TCS	Transport, Communications and Storage
TeSA	TechSkills Accelerator
THB	Thai Baht
TPES	Total Primary Energy Supply
TVET	Technical and Vocational Education and Training
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
USD	US dollars
UTMS	Universal Traffic Management System
VAT	Value Added Tax
VND	Vietnamese Dong
WCO	World Customs Organisation
WIPO	World Intellectual Property Organization
WRT	Wholesale, Retail and Trade
YOY	Year-on-Year
YTD	Year-to-Date

Executive summary

The 2019 edition of the *Economic Outlook for Southeast Asia, China and India* covers four main topics related to Emerging Asia: the regional economic outlook to 2023 (Chapter 1), towards smart urban transportation – the thematic focus of this edition (Chapter 2), country notes on key structural policy challenges (Chapter 3), and recent developments in regional integration (Chapter 4).

Economic outlook to 2023

Gross domestic product (GDP) growth in Emerging Asia – Southeast Asia, China and India – has held up in 2018 despite external and domestic headwinds. GDP in Emerging Asia is estimated to grow by an average of 6.1% during 2019-23. Southeast Asia is forecast to continue to grow solidly at 5.2% annually during 2019-23, slightly faster than the rate posted in 2012-16. While China's economic growth will gradually slow, GDP growth in India is expected to remain robust.

Overall, the resilient private consumption story in the region continues, underpinned by stability in labour markets and overseas transfers in some cases. Growth in gross exports has withstood trade policy uncertainties rather well. Several monetary authorities in the region have raised interest rates to address monetary normalisation in advanced economies as well as price and exchange rate pressures. At the same time, some of them have introduced other liquidity measures to support growth. Fiscal positions in the region are generally stable, although the persistence of deficits in current account and fiscal position in some countries could dampen growth momentum.

The region's economic prospects face several challenges. To foster inclusive and sustainable growth, efforts will be needed to maximise the opportunities (e.g. through deeper financial inclusion) and mitigate the risks of financial technology (Fintech). Policy makers need to address issues related to regulatory risk management, financial literacy and cybersecurity. Furthermore, strenghtening export performance amidst rising protectionism and lessening natural disaster risks are also key for the region's development. In addition, the pace of monetary policy in advanced economies, geopolitical tensions and global oil price trends need to be carefully monitored. Mitigating the downsides of broadening trade protectionism requires continued progress in structural reforms. These include reforms to make it easier to secure documentary requirements for investment, reforms to the logistics infrastructure, and reforms to make more predictable the regulatory environment. Progress in existing and pending free trade agreements will be just as crucial. Natural disasters pose serious risks to Emerging Asia, although they vary substantially according to type and size. Natural disasters often inflict high economic costs by damaging infrastructure, physical capital, inventories, agricultural and natural resources, and by disrupting normal economic activity. Natural disaster response mechanisms before and after the event need to be further strengthened in the region. These include undertaking a long-term and comprehensive view of preparedness, disaster response and rebuilding, ensuring coordinated risk assessment, capacity building, and planning that takes into account ground conditions.

Towards smart urban transportation

Cities are growing rapidly in Emerging Asia. Urban population growth, rising incomes and limited transportation alternatives have all contributed to growing automobile use in the region. The estimated number of motor vehicles in use increased between 2005 and 2015 in Emerging Asian countries for which data was available, with the regional total expanding by an average of 13% per year.

Transportation challenges – particularly traffic congestion – in Emerging Asian cities are already imposing significant economic, social and environmental costs, and are likely to become more serious in the future. Addressing these issues is therefore critical to realising the potential benefits of urbanisation for growth and development.

Policy priorities could include expanding and upgrading public transportation systems; the use of price-based (e.g. taxes and charges, road pricing and parking fees) and non-price-based tools (e.g. licence quotas and road rationing) to affect demand for vehicle ownership and use; and the use of technologies and data in traffic management. The promotion of flexible work arrangements (FWAs), such as flexible working hours and teleworking, as well as new approaches to urban planning, including the effective use of special economic zones and the relocation of some government functions from large cities, could also ease the congestion problem. Implementation of these policy options varies largely across the countries in the region. Bus rapid transit (BRT) systems are found across the region, and new metro and light rail systems are being constructed. Taxes on the purchase of vehicles have been employed in many countries, while congestion charges are applied in Singapore. The framework for FWAs exists in the Philippines and Singapore, but most other Emerging Asian governments have not taken clear steps to foster their use. Both Malaysia and Myanmar have relocated government functions.

Policy makers at local and central levels of government should co-operate in the development and implementation of these actions to ensure that they are part of a coherent strategy. It will be necessary to consider the combined effects of various interventions on transportation. For example, disincentives to private transportation should be accompanied by greater availability of other modes of transport such as public transit systems. The goal is to not adversely affect mobility and efficiency in cities.

Key structural policy challenges

Domestic structural reform is necessary to improve prospects for inclusive and sustainable growth in Emerging Asia. The *Outlook*'s structural policy country notes highlight structural policy challenges in Emerging Asian countries, covering policy areas including education and training, tourism, financial inclusion, taxation, digitalisation, challenges of the Eastern Economic Corridor, SMEs, energy, innovation, and FDI.

Overview

Chapter 1: Macroeconomic assessment and economic outlook

Gross domestic product (GDP) growth in Emerging Asia – Southeast Asia, China and India – has held up in 2018 despite external and domestic headwinds. In Southeast Asia, economic expansion rates have remained robust although the trends by country have somewhat diverged. While China's economic growth is gradually slowing, GDP growth in India is expected to remain robust. Overall, the resilient private consumption story in the region continues, underpinned by stability in labour market and overseas transfers in some cases. Growth in gross exports has also withstood trade policy uncertainties rather well. Several monetary authorities in the region have raised interest rates to address monetary normalisation in advanced economies as well as price and exchange rate pressures. These moves have been accompanied by policies to provide liquidity to support growth. Fiscal positions in the region are generally stable.

Overview and main findings

GDP in Emerging Asia is estimated to grow by an annual average of 6.1% in 2019-23, based on the OECD Development Centre's *Medium Term Projection Framework* (MPF-2019) (Table 1). Domestic demand is expected to sustain its momentum, particularly household spending, as job markets are expected to remain vibrant. However, trade is facing more uncertain prospects as tariff measures broaden. Southeast Asia is forecast to continue to grow by 5.2% in 2019-23, faster than the rate posted in 2012-16. China is forecast to have an average growth of 5.9% in 2019-23, slower than its 2012-16 average of 7.3%. Investment and government spending are likely to offset substantial weakness in trade. India's medium-term growth is projected to be 7.3%, surpassing the average of 6.9% in 2012-16.

Table 1. **Real GDP Growth in Southeast Asia, China and India**

Annual percentage change

	2017	2018	2019	2019-23 (average)	2012-16 (average)
ASEAN-5 countries					
Indonesia	5.1	5.2	5.2	5.3	5.3
Malaysia	5.9	4.9	4.8	4.6	5.1
Philippines	6.7	6.4	6.5	6.6	6.6
Thailand	3.9	4.5	4.1	3.7	3.4
Viet Nam	6.8	6.9	6.7	6.5	5.9
Brunei Darussalam and Singapore					
Brunei Darussalam	1.3	2.0	2.3	2.0	-1.3
Singapore	3.6	3.5	2.9	2.7	3.5
CLM countries					
Cambodia	7.0	7.0	6.9	6.9	7.1
Lao PDR	6.9	6.6	6.8	7.0	7.6
Myanmar	6.8	6.6	6.9	7.0	7.3
China and India					
China	6.9	6.6	6.3	5.9	7.3
India	6.7	7.5	7.3	7.3	6.9
Average of ASEAN-10	5.3	5.3	5.2	5.2	5.1
Average of Emerging Asia	6.5	6.6	6.3	6.1	6.8

Note: The cut-off date for data used is 21 November 2018. ASEAN and Emerging Asia growth rates are the weighted averages of the individual economies in these groupings. Data for India and Myanmar relate to fiscal years. Myanmar's 2018 data refers to the interim 6-month period, from April 2018 to September 2018 while the 2019 data refers to the period from October 2018 to September 2019. The 2018 and 2019 projections for China, India and Indonesia are based on the OECD Economic Outlook 104 database.
Source: OECD Development Centre, *Medium-term Projection Framework* (MPF-2019).

ASEAN-5

- In the medium term, **Indonesia**'s GDP growth is projected to average 5.3%, the same rate as in 2012-16. Considering the vibrant health of the labour market, private consumption should expand robustly, consistent with the trend since 2007. Continuous improvement in the investment climate bodes well for expanding the production base and job opportunities. Public debt-to-GDP ratio is arguably manageable.
- **Malaysia** is estimated to grow by 4.6% in 2019-23, 50 basis points slower than growth in 2012-16. Private consumption will likely remain strong, supported by an absorptive labour market that maintains a low unemployment rate as the labour participation rate and real wages rise.
- In the next five years through 2023, the **Philippines** is estimated to grow annually by 6.6%, equalling the rate in 2012-16. Overseas remittances will still be an important component of private consumption. The underemployment rate, which has recently risen again despite the decline in the labour participation rate, requires attention. Robust public budgetary spending should help buoy the economy, albeit the quality of spending can still be improved.
- Between 2019 and 2023, **Thailand**'s economy is projected to grow 3.7% a year, up from 3.4% in 2012-16. Fixed investment should benefit from changes in key legislations in the last two years. It helps that investment climate indicators have also generally improved recently. The effective implementation of an East Economic Corridor (EEC) infrastructure will be crucial to continuing the growth momentum.
- **Viet Nam**'s medium-term growth is projected to grow to 6.5% on average in 2019-23 from 5.9% in 2012-16. Exports are expected to continue to anchor economic activity, supported by the influx of foreign direct investment (FDI). Keeping the momentum going necessitates continued efforts to improve the quality of labour. The resolution of non performing loans (NPL) is also crucial.

Brunei Darussalam and Singapore

- **Brunei Darussalam's** economy is projected to rise annually by 2.0% from 2019-23, reversing the average of -1.3% in 2012-16. The current oil price level augurs well for the country's export earnings and domestic demand. Improvements in FDI inflows and private sector development will be critical.
- **Singapore** is forecast to post 2.7% GDP annual growth in the medium term, almost a percentage point slower than its average of 3.5% in 2012-16. Fixed investment is expected to pick up in line with various infrastructure plans. The steady investment inflow into information and communication technology ventures will also help. Various initiatives to retool labour force skills are critical.

CLM countries

- **Cambodia's** economy is projected to expand by 6.9% in the next five years until 2023, more moderate than the 7.1% growth in 2012-16. The steady influx of foreign capital and the country's involvement in multilateral infrastructure projects bode well for infrastructure, exports and the job market. Capital market development ought to be pursued.
- **Lao PDR's** expected economic growth rate of 7.0% annually in 2019-23 will be down from 7.6% in 2012-16. The large energy-related deals, special economic zones and

broader fiscal incentives are engines for growth. Policies and management related to hydroelectoricity would be key for sustainable growth.

- **Myanmar's** GDP growth is estimated to average 7.0% annually in 2019-23, marginally slower than the 7.3% growth in 2012-16. Planned transportation investment, the gradual improvement in investment climate indices and recent investment liberalisation measures should strengthen the economy in the coming years. Managing inflation and resolving banking sector fragilities are challenges.

China and India

- **China** is projected to register 5.9% average annual GDP growth in 2019-23, down from 7.3% in 2012-16. The willingness of the national government to stimulate domestic activity amid trade tensions and the resurgence of investment are reassuring signals for domestic demand. Improving the relatively high level of corporate debt-to-GDP ratio and wealth inequality are challenges.
- The economy of **India** is forecast to grow by 7.3% in the medium term, up from 6.9% in 2012-16. Labour market conditions point to solid growth in private consumption, although rising inflation and interest rates can be drags. The push for consolidation will most likely limit the government's spending flexibility as well. How infrastructure projects are carried out will be key. Maintaining banking sector health is another challenge.

Other key points of the economic outlook and assessment

- Inflation trends remain divergent. Inflation is on an uptrend in China, the Philippines, Thailand and CLM countries while it is relatively stable or even declining in other Emerging Asian countries. The increase in global oil prices and domestic factors affect these trends, although the moderation of global food prices provides some respite.
- Several monetary authorities in the region have raised interest rates to address monetary normalisation in advanced economies as well as price and exchange rate pressures. Some of them have introduced other liquidity measures to support growth. Meanwhile, the banking systems are generally stable, albeit asset quality issues persist.
- Overall, the external positions of Emerging Asia are sound. Trade performance is relatively stable in Emerging Asia amid rising protectionism while regional trade agreements are progressing. FDI inflows into Emerging Asia remain positive.
- A number of economies in the region look to rein in their respective fiscal deficit ratios in the near term, though fiscal positions in the region are generally stable. The persistence of deficits in current account and fiscal positions in some countries could raise a concern to growth momentum.

Risks and challenges to the outlook

Growth projections in the near and medium term are favourable for Emerging Asia. If countries are to maintain their robust growth momentum, however, appropriate policies are needed to:

- maximise the opportunities and mitigate the risks of financial technology;
- strengthen export performance amidst rising protectionism;
- mitigate the risks of natural disasters.

In addition, the pace of monetary policy in advanced economies, along with geopolitical tensions and the trends in global oil prices, need to be carefully monitored.

Maximising opportunities and mitigating the risks of financial technology

The growing influence of technology in financial services (Fintech) in Emerging Asia carries with it economic opportunities through deeper financial inclusion. But it can also be an economic pitfall if the regulatory environment fails to appropriately guide future developments in the sector. National authorities in Emerging Asia are aware of this trade-off. Several national and cross-border initiatives have been launched, both by public and private institutions. However, regulatory progress has been uneven, and policy gaps related to potential risks remain.

In Southeast Asia, Singapore is leading the way in raising capital, market penetration and degree of sophistication. Other ASEAN-5 economies are slowly catching up. Target market coverage has gradually expanded from enterprises involved in e-commerce to farmers, social housing groups, students and even bank clients seeking to restructure debt. Fintech subindustries have also widened in the region (Table 2). In Indonesia, Malaysia, Singapore and Brunei Darussalam, sharia-compliant or Islamic Fintech services have gained investors' attention.

Table 2. **Examples of Fintech services in Emerging Asia**

Service	Description
Remittance, money transfer and mobile payments	• Web-based or application-based electronic platforms for local or overseas monetary transfers or payments for goods and services acquired • Remittance fees, if any, are generally more competitive than those offered by traditional financial institutions • Widespread in Emerging Asia
Alternative risk assessment for insurance and lending	• Alternative insurance and credit scoring services using machine learning tools and big data to assess the risks involved • Used to obtain tailored insurance policies or loan packages even in the absence of traditional documentary requirements • Relatively at its nascent stage in Emerging Asia
Lending and capital raising platforms	• Platforms that support peer-to-peer lending services as well as donation, debt and equity crowdfunding, which link investors and capital recipients directly • Gaining ground in many Emerging Asian countries
Wealth management	• Utilises machine learning tools for managing various types of financial assets, which include but are not limited to robo advisors and algorithmic trading • Relatively at its nascent stage in Emerging Asia
Platforms comparing features of financial products	• Data aggregators focusing on the characteristics of financial products that are available in the market such as loan packages and insurance policies • Compare interest rates, premiums and charges, among other features, that potential clients will likely get from different insurers and lenders based on the data they provide • Available in many Emerging Asian countries

Note: The table does not aim at providing a comprehensive coverage of Fintech services in Emerging Asia. Data are as of September 2018.

Source: OECD Development Centre.

Similarly, supervision and regulations have broadened in all Emerging Asian countries but vary in scope and depth (Table 3). Central banks have mainly opted for an overview role in Fintech matters. Many of them have set up separate entities under their supervision to cover issues in this area. In some countries, the ministry of economy, the ministry of telecommunications, the securities commission and the insurance commission also support the central bank, essentially forming an inter-agency supervisory body.

Fintech can be a source of financial system vulnerabilities. Fintech firms participating in lending businesses in the region are arguably not yet systemically important based on capitalisation. However, the steady inflow of capital and sizeable expansion of operations every year might change the picture in a few years. Policy areas requiring attention include regulatory risk management, financial literacy and cybersecurity.

Table 3. **Regulations or guidelines associated with Fintech in Emerging Asia**

Country	Regulatory sandbox	Lending and capital raising	Data protection and cyber security
Brunei Darussalam	✓	✓	✓
Cambodia	*1	nci	*1
China	*2	✓	✓
India	*3	✓	✓
Indonesia	✓	✓	✓
Lao PDR	nci	nci	✓
Malaysia	✓	✓	✓
Myanmar	nci	nci	*4
Philippines	*5	*5	✓
Singapore	✓	✓	✓
Thailand	✓	✓	*6
Viet Nam	*7	*7	✓

Note: "✓" means existent and mentions issues related to Fintech though not necessarily a standalone law, regulation or guideline. "nci" means that there is no clear information based on desktop research of official documents but it is possible that there are existing regulations that cover these areas at least in part. Lending and capital raising include services that offer a platform for debt or equity financing (e.g. P2P lending and crowdfunding).

*1 In Cambodia, the government utilises a *watch, learn and execute approach* as its version of sandbox in its regulation of financial technology. There is also a draft cybercrime law as of September 2018.

*2 In China, there is no national regulatory sandbox yet as of September 2018. But, Ganzhou, Jiangxi has reportedly established its own mechanism.

*3 In India, the government is still preparing for a national regulatory sandbox as of September 2018 although the state of Maharashtra has launched its own sandbox.

*4 In Myanmar, the *Law Protecting the Privacy and Security of Citizens* has general data protection provisions.

*5 In the Philippines, the central bank has established internal mechanisms following a *test and learn approach* to financial innovations. There is also a draft of rules for crowdfunding as of September 2018.

*6 In Thailand, the government is in the process of laying out standalone legislation or regulation on data protection and cyber security as of September 2018 though it has an existing *Computer Crimes Act*.

*7 The central bank in Viet Nam indicated that it would formulate a Fintech regulatory sandbox and is also working on its regulation for P2P lending as of September 2018.

Data are as of September 2018.

Source: OECD Development Centre based on official documents, laws, regulations and guidelines.

Alternative lending platforms have features akin to shadow banking. This can incentivise risk taking. One possible problem is a mismatch between loans and committed investment duration, which can lead to higher credit and default risks. Licensing protocols are good, but surveillance could be carried out more meaningfully with more regular and detailed reporting requirements. The possibility that Fintech firms will be used as tools for regulatory arbitrage cannot be discounted. Proper disclosure of equity and debt investment as well as management participation by traditional financial institutions in Fintech companies should be considered. Clarity of financial institutions' participation in the cryptocurrency sphere is just as vital.

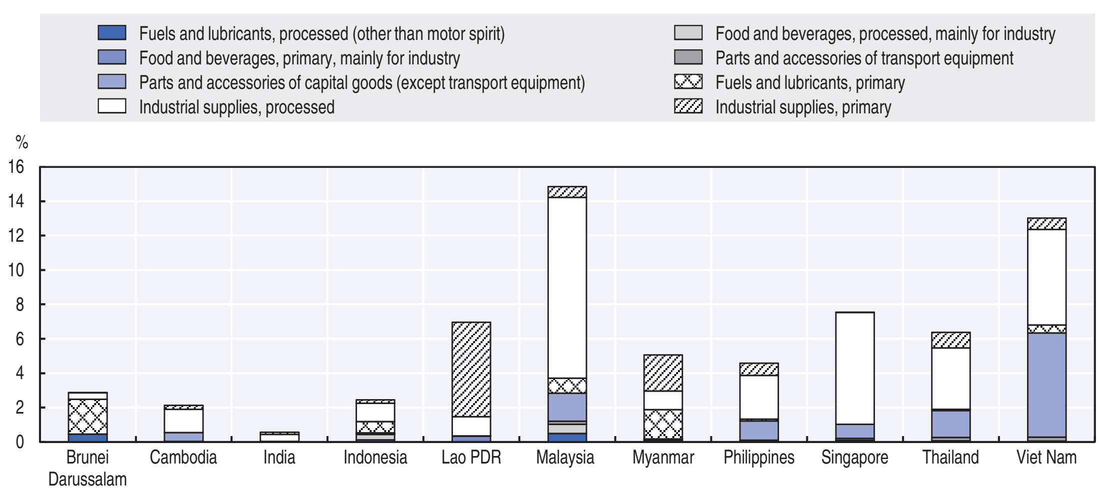
Enhancing financial literacy can help maximise the use of Fintech products as well as manage risk at the household level. In the same way, deeper Fintech penetration can improve financial literacy, as more people get involved in the industry. Many Emerging Asian economies have national strategies for financial education, which is a step in the right direction. Nonetheless, the data suggest that there is ample room to improve strategies to advance these plans.

Cybersecurity weakness is a threat to the potential of Fintech. Cybersecurity, being a nonpoint source issue, requires cross-border coordination. This is especially important because some countries are still building their frameworks at the national level. Key challenges are financial resources and the ability of the public sector to acquire the talent needed to build and maintain the needed cybersecurity systems. On the legal front, one source of friction is the difficulty in balancing censorship rules and the free flow of legitimate information. Some countries have institutional credibility issues. Additionally, much can be done to enhance AML/CFT (Anti-money laundering/Combating the financing of terrorism) measures. Even though statutes pertaining to AML/CFT are well developed and cross-border institutional arrangements exist, room remains to enhance legitimate surveillance, monitoring and dispute resolution frameworks.

Strengthening export performance amidst rising protectionism

At the beginning of the ongoing trade war between two large economies, bilateral trade between China and ASEAN economies reached USD 232.64 billion in the first five months of this year, an increase of 18.9% year-on-year. Last year, trade hit a record high of USD 514.8 billion. For now at least, trade data have yet to show a significant impact from the trade war. This may change as the tariff hikes have been extended to USD 200 billion worth of US goods imports from China. The rate as of September 2018 is 10%. This rate will be raised to 25% in January 2019.

Figure 1. **Intermediate goods exports to China, 2017**
Percentage of GDP



Note: The calculations made use of broad economic categories classification.
Source: OECD Development Centre calculations based on UN Comtrade.
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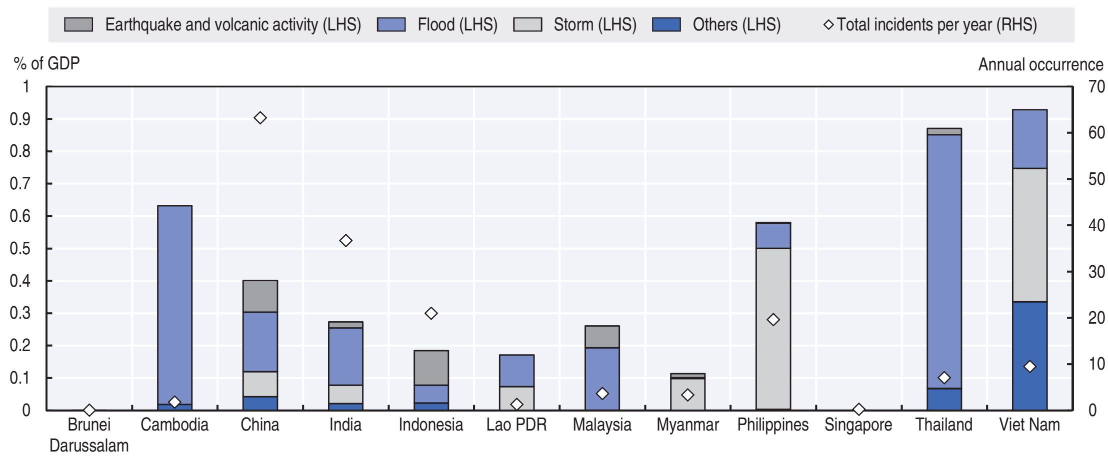
Figure 1 shows the importance of intermediate goods exports to China with respect to GDP for Emerging Asia, broken down by type. As export-related activity in China slows down, Malaysia, Viet Nam and Singapore are most at risk through Global Value Chains (GVCs), since intermediate goods exports to China represent 14.9%, 13.0% and 7.5% of their respective GDPs. It is also important to underline the composition of intermediate goods exports. Viet Nam, as a large supplier of inputs for the production of capital goods to China, might experience a delayed impact in the event of a China-United States exports slowdown.

Mitigating the downsides of broadening trade protectionism requires continued progress in structural reforms. These include making investments easier, a better logistics infrastructure and more predictability in the regulatory environment. Progress on both existing and pending free trade agreements will be just as crucial.

Mitigating natural disaster risks

Natural disasters pose a serious threat to Emerging Asia. All countries of the region are affected by calamities, although costs vary substantially depending on the type and size of the disaster. Floods are the most significant calamity, both in cost and frequency, but at the country level the picture is different. The Philippines and Viet Nam are principally victims of storms, and Indonesia of earthquakes due to their geographic locations. For most other countries in the region, floods are the most important threat (Figure 2).

Figure 2. **Average annual damage as percentage of GDP and average annual occurrence of natural disasters, 1998-2018**



Source: OECD Development Centre calculations based on Centre for Research on the Epidemiology of Disasters Emergency Events Database and World Bank World Development Indicators Database.
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In addition to high human costs, natural disasters often inflict high economic costs by damaging infrastructure, physical capital, inventories, agricultural and natural resources, and by disrupting normal economic activity. The medium- to long-term impact on growth generally depends on the speed and quality of the rehabilitation of affected sectors.

The threat and impact of natural disasters is uneven across sectors and geographic agglomerations. For instance, damage to the agriculture sector, one of the most vulnerable sectors, entails a risk to food security in many cases. Additionally, the social impact can be substantial because the sector employs a large share of low-income households in many countries in the region. This often far exceeds the estimated value of damage based on crop and property values. Small entrepreneurs are particularly exposed to risks associated with natural disasters and they usually lack the financial capacity to rebuild their livelihoods after extreme weather events. Many urban areas in Emerging Asia are similarly susceptible to multi-hazard risks. These are growing rapidly, particularly in fragile areas with inadequate infrastructure and dense populations.

Several multilateral arrangements to improve resilience to natural disasters have been launched in recent years, including the Sendai Framework for Disaster Risk Reduction 2015-30, the Paris Agreement on Climate Change and the New Urban Agenda. Fostering resiliency requires taking a long-term and comprehensive view of preparedness, disaster response, and rebuilding. It also needs co-ordinated risk assessment, capacity building and planning that takes into account ground conditions.

After every large-scale natural disaster, finance and the quality of rehabilitation projects are major issues. Disaster risk funds are available in some countries like India, Malaysia and the Philippines. National governments also contribute emergency funds and sometimes come up with supplementary budgets. An important goal would be to develop market-based instruments to address high-severity and low-frequency events. Insurance, covering a small share of losses from disasters in much of the region, may be useful in cases of disasters damaging wealth. But it is often not immediately available.

Chapter 2: Towards smart urban transportation

Rapid urbanisation is creating opportunities for economic growth and development in Emerging Asia. As elsewhere around the world, approaches to these challenges are being used as a part of smart city initiatives. In addition, supportive efforts are being made at the regional level. Amongst the strategic objectives for achieving sustainable infrastructure, outlined in the Master Plan on ASEAN Connectivity 2025, is the increased use of smart urbanisation models. A total of 26 pilot smart cities have been selected from the ten ASEAN Member States for inclusion in the ASEAN Smart Cities Network (ASCN), a collaborative platform for smart and sustainable urban development through the use of technology.

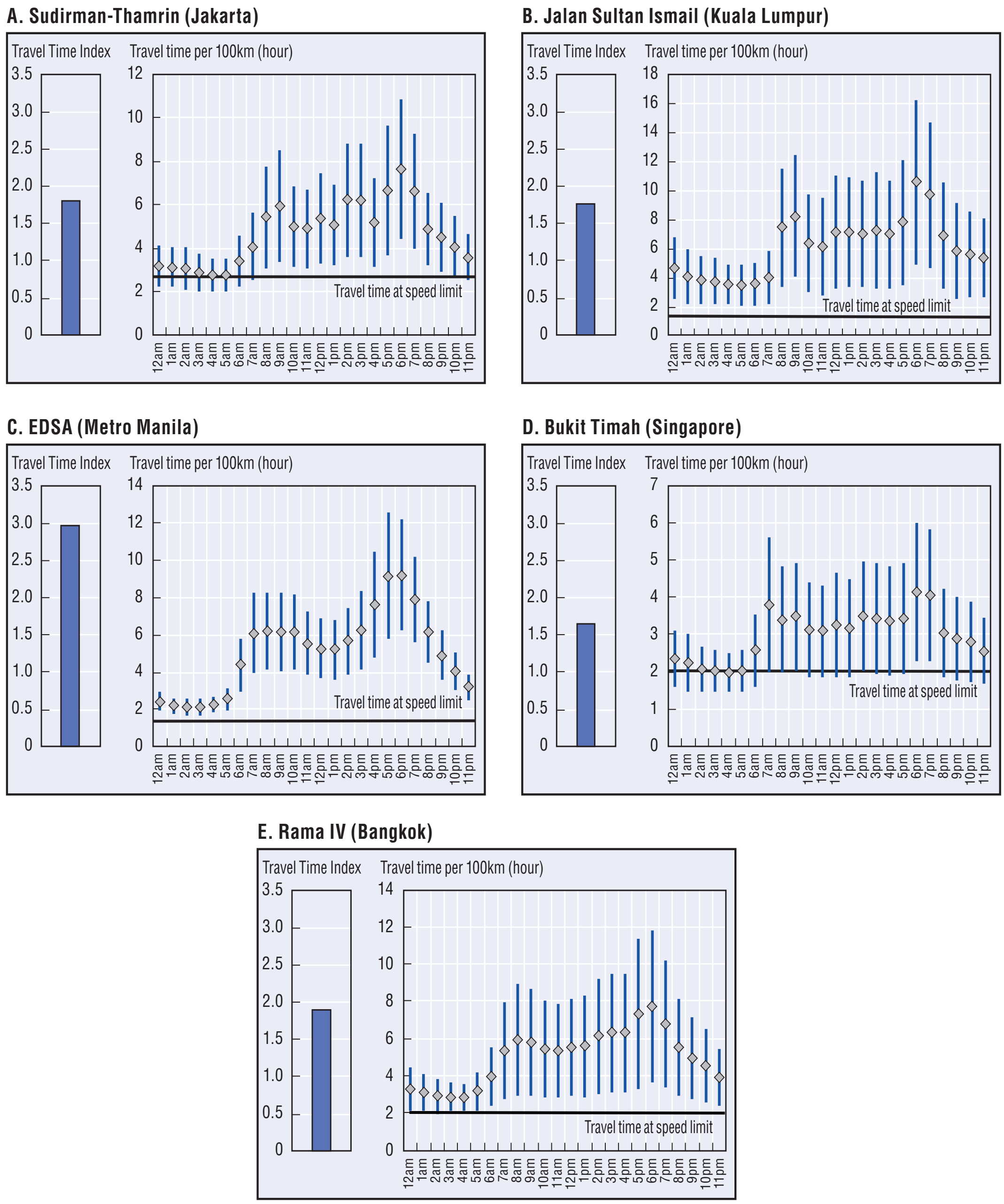
Traffic congestion is one of the key negative externalities of urban agglomeration. Urban population growth, rising incomes and limited transportation alternatives have all contributed to growing automobile use in the region. Congestion is a considerable challenge in many of the region's cities, and travel time along selected major roads in five large cities (Jakarta, Kuala Lumpur, Metro Manila, Singapore and Bangkok) is generally quite high during peak hours. Some cities experience congestion throughout the day (Figure 3). This congestion imposes a range of economic, environmental and social costs. Policy options to improve urban transportation systems include developing efficient public transportation systems, implementing pricing and other mechanisms to affect vehicle ownership and use, incorporating new technologies in managing transportation challenges, adopting new modes of work, and reforming land use and urban planning.

Public transportation systems in the region will need to be upgraded and expanded

In replacing the use of private motor vehicles, publicly available transportation systems are critical components of efficient urban transportation systems. Public transportation accounts for a large share of travel in many Emerging Asian cities. For example, bus and bus rapid transit (BRT) account for 36% of trips to work in Hyderabad, 35% in Bangalore and 35% in Guangzhou, and rail services account for 45% in Mumbai and 39% in Pune. Supportive policies can lead to further growth in public transportation use in absolute terms and as a share of total travel in the region.

Institutional reforms may be needed to realise needed changes in public transportation systems. In many countries in the region, and in Southeast Asia in particular, public transportation organisations and local authorities lack sufficient powers and capacities to effectively manage urban transportation issues. Combined metropolitan transport authorities may be the answer to managing public transportation in larger urban areas. Regionally, initiatives such as those under the Master Plan on ASEAN Connectivity 2025, offer co-operation for the development of sustainable urbanisation strategies in ASEAN cities.

Figure 3. **Traffic congestion for selected roads of Southeast Asian cities, 2018**



Note: Travel Time Index is defined as peak hour travel time divided by free-flow hour travel time, where 1=no congestion and higher values indicate worse traffic. Free-flow hour is set to be midnight-12 a.m. for all cities without loss of generality. Peak hours are 7 a.m.-10 a.m. and 4 p.m.-8 p.m. for the road in Jakarta, 8 a.m.-10 a.m. and 6 p.m.-8 p.m. for the road in Kuala Lumpur, 7 a.m.-10 a.m., and 4 p.m.-8 p.m. for the road in Metro Manila, 8 a.m.-9 a.m. and 6 p.m.-7 p.m. for the road in Singapore, and 7 a.m.-10 a.m. and 5 p.m.-8 p.m. for the road in Bangkok. In travel time figures, markers refer to average travel time at a specific hour in the day while the vertical bars represent the ranges of travel time. Speed limits are set to be 40 km/h on the road in Jakarta, 60 km/h on the road in Malaysia, 60 km/h on the road in Metro Manila, 50 km/h on the road in Singapore and 50 km/h on the road in Bangkok. Traffic congestion data are based either on the entire specified road if possible or a selected representative segment of a specified road. Data are not necessarily comparable across the five areas shown above.

Source: OECD Development Centre calculations based on data from Google Maps (accessed on 24 September 2018).

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Financially sustainable systems may take advantage of new forms of financing for their operations, development, expansion and upgrading. Public and private funds, along with Official Development Assistance, all have roles to play in financing sustainable investments in public transportation. User fares also contribute to capital and operating costs, although these are often offset by subsidies. For example, Singapore's bus network costs USD 742.8 million (in 2007 PPP) to operate and collects USD 631.9 million in fares. Fares need to balance fiscal sustainability and the goal of making public transportation more attractive or accessible, especially for lower-income users.

Cities must also decide on the appropriate modes of public transportation and how best to facilitate intermodal travel. Buses are common to public transportation systems (Table 4). High-speed and high-capacity mass transit options include metros, which use tunnels or other physically separated infrastructure to provide high-frequency service, and other light rail systems, such as streetcars that operate at surface level with segregated routes or rights-of-way at intersections. BRT systems could increase passenger capacity (compared to buses in regular traffic) by operating at surface level with exclusive rights-of-way. While metro and light rail systems can be cost-effective in large cities due to their high capacities, BRT systems tend to be the least expensive to develop. Integration between different modes of public transportation – as well as with other modes of transportation, including non-motorised transportation – is needed to attract users and increase the system's efficiency. This requires the consideration of physical infrastructure, fare payment, routes, information for users, and institutions and management.

Table 4. **Publicly accessible transportation modes in selected Emerging Asian cities**

City	Bus	BRT	Metro and light rail
Bandar Seri Begawan, Brunei Darussalam	✓		
Phnom Penh, Cambodia	✓		
Jakarta, Indonesia*	✓	✓	
Vientiane, Lao PDR	✓		
Kuala Lumpur, Malaysia	✓		✓
Yangon, Myanmar	✓		
Metro Manila, Philippines	✓		✓
Singapore, Singapore	✓		✓
Bangkok, Thailand	✓	✓	✓
Hanoi, Viet Nam*	✓	✓	
Ho Chi Minh City, Viet Nam*	✓		
Beijing, China	✓	✓	✓
Shanghai, China	✓		✓
Delhi, India	✓		✓
Mumbai, India	✓		✓

Note: (*) Metro or light rail system currently under construction.
Source: OECD Development Centre compilation, using national sources.

Pricing and other policies can affect vehicle ownership and use

Along with improved access to alternative modes of transportation, policies to affect vehicle ownership and use can help manage demand for private transportation (Table 5). These policies may be either price-based or non-priced based.

Table 5. **Examples of vehicle ownership and use policies**

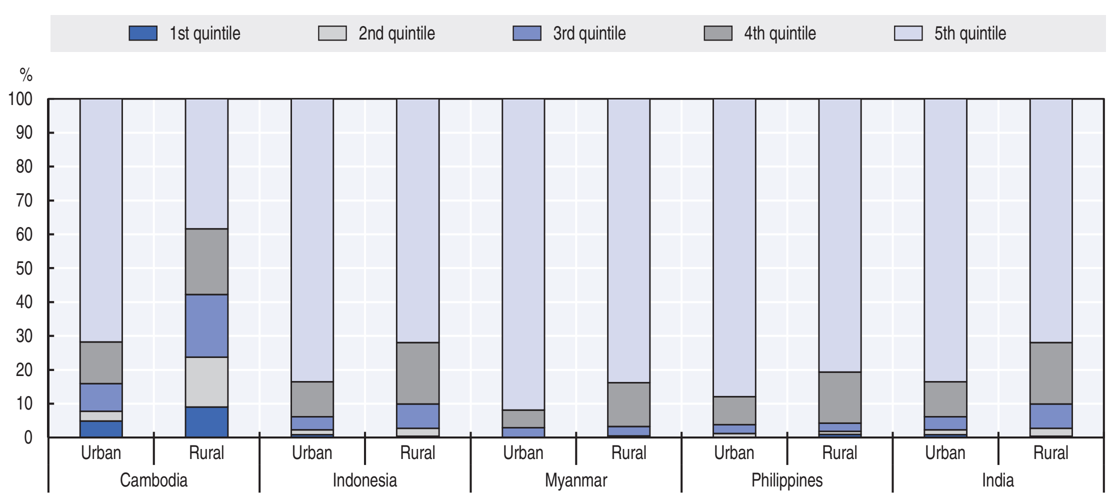
	Price-based	Non-price-based
Vehicle ownership	Vehicle purchase taxes Recurring taxes and charges	Licence quotas
Vehicle use	Fuel taxes and subsidies Road use pricing and parking fees	Road rationing

Source: OECD Development Centre compilation.

Vehicle ownership has increased rapidly in many Emerging Asian cities. The estimated number of motor vehicles in use increased between 2005 and 2015 in Emerging Asia (excluding the CLM countries, for which data were not available) by an average of 13.2% per year. Many of the region's motor vehicles are used in cities, with increasing use accompanying urban population growth. Including both two- and four- wheeled motor vehicles, there are 10.7 million registered vehicles in Delhi, 9.7 million registered vehicles in Bangkok and 5.4 million registered vehicles in Chennai. Increases in vehicle ownership look set to continue in the region as incomes rise.

High income elasticities of demand for motor vehicles imply that price-based mechanisms need to be substantial in size to have a significant effect on vehicle ownership, with emphasis on the wealthier social segments. Car owners in Emerging Asia's urban areas tend to be amongst the wealthiest, and the differences in rates of ownership by household wealth category tend to be greater than in rural areas, based on data from Cambodia, Indonesia, Myanmar, the Philippines and India (Figure 4).

Figure 4. **Households owning cars by wealth quintile in selected Emerging Asian countries**



Notes: Results are taken from household surveys from Cambodia (2014), Indonesia (2012), Myanmar (2015/16), the Philippines (2013) and India (2015/16). Wealth indices are calculated using information on household ownership of selected assets, housing construction materials, and access to water and sanitation facilities.

Source: OECD Development Centre's calculations, using USAID (2012), *Indonesia: Standard DHS, 2012*; USAID (2013), *Philippines: Standard DHS, 2013*; USAID (2014), *Cambodia: Standard DHS*, 2014; USAID (2016), *Myanmar: Standard DHS*, 2015-16; USAID (2016), *India: Standard DHS, 2015-16*.

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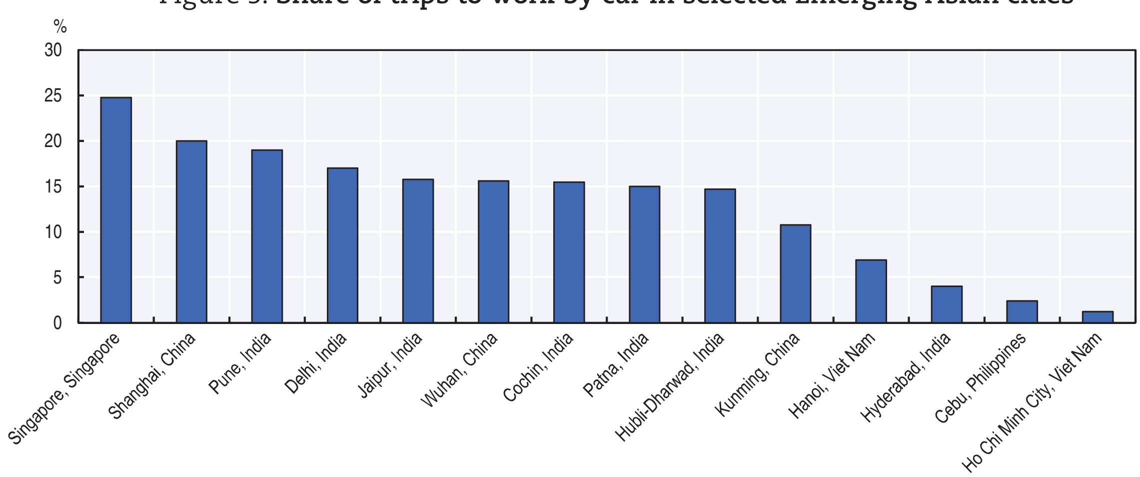
Price-based mechanisms may be imposed at the time of purchase, on a recurring basis or both. Current excise taxes and similar charges on the sale of motor vehicles in Emerging Asia are applied on an *ad valorem* basis. These rates vary in each country with factors such as the vehicle type, seating capacity, or price range, as well as the number of cars already registered to the owner. All Emerging Asian countries impose some form of recurring tax on the ownership of motor vehicles, typically with lower rates for two-wheeled vehicles, though they differ in their form, based on vehicle weight, engine capacity, value, use and other characteristics. Regular vehicle inspections, to test the roadworthiness and emissions of older vehicles, also raise the cost of holding vehicles. Total tax revenue from motor vehicles and transport represented, on average, 0.44% of GDP in OECD member countries in 2013, below the 0.52% in China and 0.45% in India, but above the 0.24% in Malaysia and the 0.13% in the Philippines.

In addition to taxes, the purchase of new cars by residents of cities may be explicitly limited through quota systems, or the limited distribution of car registrations through auctions and lotteries. Licences and other quotas in different forms are used to restrict car ownership in Singapore, Shanghai, Beijing, Guangzhou, Hangzhou, Shenzhen and Tianjin.

Vehicle use policies are used in the region to affect incentives for driving generally and in specific areas, such as cities and their central districts. Since they can be used to more precisely target use in the busiest areas and times of day, policies to reduce the unnecessary use of vehicles may be a useful alternative to pricing and other policies discouraging vehicle ownership in addressing urban traffic congestion. The extent of car use in urban transportation varies considerably across Emerging Asian cities. In Singapore and Shanghai, 24.8% and 20.0% of trips to work are made by car (Figure 5). In Ho Chi Minh City, however, only 1.2% of trips to work are made by car, although motorcycles are used for 61.8% of such journeys. Distances travelled vary considerably between cities as well; the length of the average trip by car is 14.2 kilometres in Mumbai, but only 3.1 kilometres in Bhopal.

Figure 5. **Share of trips to work by car in selected Emerging Asian cities**



Source: World Bank (2014), *Urban Transport Data Analysis Tool*.
StatLink https://doi.org/10.1787/888933886322

Fuel prices, which can be a major factor affecting individuals' decisions on the use of private vehicles, vary considerably across the region. The pump price per litre of diesel varies across the region, from USD 0.22 in Brunei Darussalam to USD 0.81 in China and India, while that of gasoline ranges between USD 0.37 in Brunei Darussalam to USD 1.25 in Singapore. Fuel excise taxes are applied in all Emerging Asian countries except Brunei Darussalam, Indonesia and Viet Nam. Fuel subsidies, while considerable in several Emerging Asian countries, have been reduced or eliminated in recent reforms, though rising global oil prices pose a challenge.

Taxes and charges on road use can be more targeted ways of addressing congestion in urban areas. Congestion pricing schemes, for example, charge drivers in high-use areas, often with rates that are higher at times of peak demand. While road and bridge tolls, along with express toll lanes, are already used in much of the region to pay for infrastructure and to manage traffic flows, cordon charges to reduce traffic congestion in urban areas are less common. Singapore is a notable exception; it has used cordon charges in its current Electronic Road Pricing (ERP) scheme since 1998, when it replaced the Area Licensing Scheme (ALS) introduced in 1975. The experience of Singapore and other cities around the world using cordon charges suggests that they are successful in reducing the traffic volume and improving traffic speeds in the areas that they cover.

Other types of policies have also been used in the region. Vehicle use in cities can also be targeted through policies on street parking charges and the use of private parking facilities. Some cities use non-price-based initiatives or rules for rationing road access amongst drivers, such as the implementation of high occupancy vehicle lanes and similar restrictions. In a stricter example, under the Three-in-One policy, vehicles in central Jakarta were required to have at least two passengers in addition to the driver during peak hours until the policy was abandoned in 2016. Road use may also be rationed over time, such as by allowing cars with licence plates ending in odd and even numbers the right to drive on alternate days, which is typically a response to periods of high pollution.

New technologies offer tools for increasing efficiencies in urban transportation

Smart city initiatives can be applied in a range of policy areas, including transportation, to improve efficiency. The benefits of combining the use of technology and data are evident in traffic management, in line with efforts to build intelligent transport systems (ITS).

Public transportation systems may be limited by their lack of flexibility, which can be addressed through the use of new technologies. Low-cost and widespread sensors, the growth of data storage, and improvements in analytical capacities can be used in assessing long-term trends to inform future decisions on system design and operations and in the management of day-to-day issues. Information on transportation options for travellers can be made more accessible through personal devices. Innovations in mobility outside the sector also present opportunities for public transportation systems, as they can co-operate with other transportation providers, including taxis and, increasingly, ride-sourcing and ride-sharing services. In addition to making personal transportation more efficient, improvements to urban transportation systems can improve the efficiency of cities in general by reducing costs involved in delivery and logistics services.

Successful ITS policies are people-oriented and based on user demand. They are inclusive, facilitating participation by lower-income individuals and other marginalised groups. They are open to use by new arrivals and visitors. The selection of appropriate technologies is also important; mature and established technologies may be the best option in many cases, although consideration should also be given to the interactions between technologies and their future developments. Implementing these innovations requires leadership at local and higher levels, along with the involvement of a range of stakeholders. Cities can also learn from the experiences of others.

Examples from inside Emerging Asia and from OECD member countries illustrate the many ways in which ITS policies have been applied to improve urban transportation. Technology use in traffic management has been common in Singapore since the early 1980s. Japan's Universal Traffic Management System (UTMS), established in 1993, provides additional examples of technology-based traffic management mechanisms. In other OECD member countries, technological innovations have been used in cities to connect bus and taxi systems, improve real-time access to traffic information, increase the ease of access to various modes of transportation, make traffic signals responsive to current conditions, and facilitate toll payments.

Fostering flexible work arrangements can help alleviate congestion

Since commuters travelling to and from work account for much of the traffic volume during peak hours, the use of flexible work arrangements (FWAs) can help reduce traffic congestion. Forms of FWA relevant to managing transportation demand include flexibility in setting work-day start and end times, part-time work, compressed work weeks, telecommuting and working from home, and job sharing. Currently, FWAs are not widely used in Emerging Asian countries, although flexible working hours are the most common arrangement offered across Asia amongst firms that do make these arrangements available to staff. In addition to the social benefits, FWAs can help firms to attract and retain staff who see these as improving work-life balance.

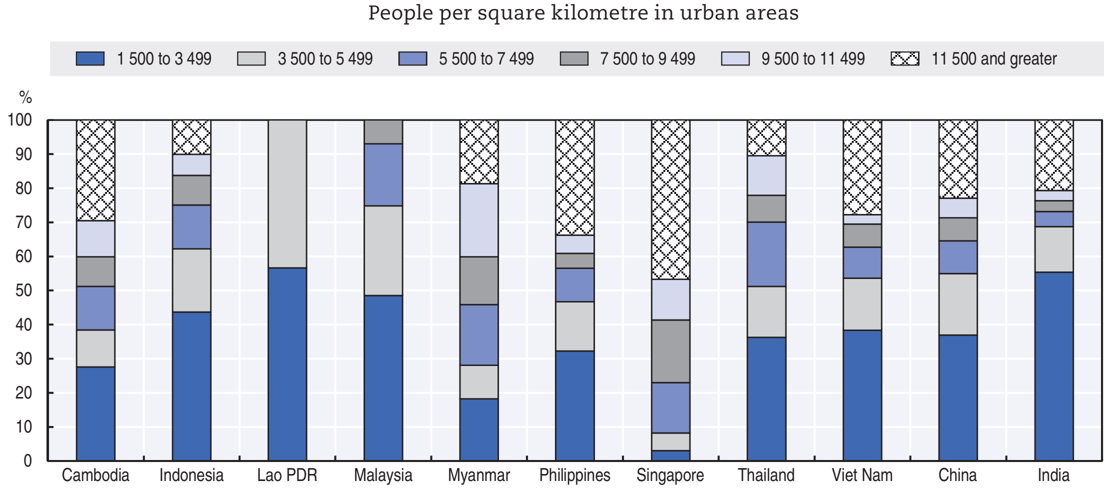
The wider use of FWAs in the region is constrained by the nature of work, insufficient infrastructure, including Internet access and speed, and cultural factors. A lack of clear frameworks on FWAs may also discourage their use. Most Emerging Asian governments have not taken clear steps to foster the use of FWAs, with leadership instead coming from the private sector. The Philippines and Singapore are notable exceptions to this; both countries have recently introduced policies and initiatives designed to encourage the use of FWAs. In the Philippines, the Telecommuting Act, which passed final reading in the House of Representatives in May 2018, requires that workers telecommuting be covered by no less than the minimum labour standards under law and that firms offer similar treatment to these workers as to those working on the employers' premises. In Singapore, the Tripartite Standard on Flexible Work Arrangements establishes voluntary standards for employers introducing FWAs.

The design of cities affects transportation demand

Over the longer term, urban planning can have significant effects on cities' transportation systems. While compact cities can create other social, environmental and economic challenges, dense urban areas limit travel distances, reduce car dependence and facilitate the development of public transport systems. Asian cities have tended to have higher population densities than Australian, New Zealander, American or Western European cities. However, urban population density varies considerably within and across countries in the region, and Asia's highly-populated cities take up considerable land area (Figure 6).

Figure 6. **Share of total urban population by density in Emerging Asian countries, 2015**

People per square kilometre in urban areas



Note: Using gridded data covering areas of approximately five square kilometres, areas with population densities of at least 1 500 people per square kilometre are defined as urban, following OECD (2013).

Source: OECD Development Centre calculations based on CIESIN (2017), *Gridded Population of the World, Version 4*.

StatLink https://doi.org/10.1787/888933886341

Flexible, mixed-use zoning can also reduce transportation demand in cities. Less segregation between land uses reduces travel distances between home, work and other destinations. Similarly, transit-oriented development strategies can be employed to reduce travel distances. An example is the concentration of various functions of the city along public transit corridors. Density credits and other incentives for developers and the overhaul of zoning codes help implement these strategies.

Urbanisation should also be balanced across multiple areas to avoid cities growing past their period of increased returns. Some governments respond to urban congestion by moving government functions from large cities, as in the relocation of government administrative functions from Kuala Lumpur to Putrajaya in 1999 and the relocation of the capital of Myanmar from Yangon to Nay Pyi Taw in 2005. The potential exists for diversified urban development across the large cities of several countries in the region. Urban sprawl is a related challenge that can be limited by developing transportation systems, implementing land-use policies that encourage increased density, and fostering economic linkages between large- and medium-sized cities to create sites of further growth.

Chapter 3: Structural policy country notes

The *Outlook*'s country notes highlight structural policy challenges in Emerging Asian countries, covering policy areas including education and training, tourism, financial inclusion, taxation, digitalisation, the Eastern Economic Corridor, small- and medium-sized enterprises (SMEs), energy, innovation, and FDI (Table 6).

Table 6. **Structural policy challenges in Emerging Asian countries**

Country	Topic	Focus
ASEAN-5		
Indonesia	Financial inclusion	Leveraging financial technology to bring banking services closer to the people
Malaysia	Taxation	Reintroducing a sales and services tax after the scrapping of the goods and services tax
Philippines	Digitalisation	Coping with the risk of job automation in the offshoring and outsourcing industry
Thailand	Eastern Economic Corridor	Developing human capital to strengthen the Eastern Economic Corridor
Viet Nam	Education and training	Improving access to secondary education as a driver for social equality and social mobility
Brunei Darussalam and Singapore		
Brunei Darussalam	SMEs	Strengthening local small and medium-sized enterprises
Singapore	Education and training	Enhancing strategies for lifelong learning programmes
CLM		
Cambodia	Tourism	Addressing challenges in developing ecotourism
Lao PDR	Energy	Diversifying Lao PDR's energy portfolio by developing solar power
Myanmar	Tourism	Fostering the inclusive development of the travel and tourism sector
China and India		
China	Innovation	Making innovation a new driver of growth
India	FDI	Continuing FDI reforms and develop opportunities for technology transfer

Source: OECD Development Centre.

ASEAN-5

Indonesia

Financial inclusion: Financial technologies offer new tools for increasing financial inclusion in Indonesia, where many lack access to traditional banking services. Financial literacy and awareness, ICT (Information and communications technology) and related infrastructure are challenges for Fintech's growth. While the development of regulation for the sector is at an early stage, actions are being taken by the financial services authority, Otoritas Jasa Keuangan (OJK) and Bank Indonesia. Going forward, it will be crucial that the work of multiple regulatory bodies is well co-ordinated. Banks are increasingly investing in the use of new technologies, though Fintech also widens potential sources of financing.

Malaysia

Taxation: Following its election in May 2018, the new government of Malaysia announced plans to abolish the goods and services tax, which had come into force in April 2015. The government is expected to introduce other fiscal measures to make up for some of the fall in revenue and to support the reinstatement of the petrol and diesel subsidies. A bill restoring the sales and services tax, which is only imposed when goods are manufactured or imported or when specific services are provided, was passed by the legislature in August 2018. Ongoing structural and administrative reforms are being pursued to address the increasing national debt.

Philippines

Digitalisation: While the information technology and business-process management sector has contributed significantly to employment in the Philippines, automation is likely to affect job creation in the sector in the future. Although the ultimate extent of effects of automation on total employment are unclear, automation may reduce demand for outsourcing of business functions and could increase the focus on innovation and creativity. Most employment in the sector in the Philippines is concentrated on the management of customer relationships, which tend to be susceptible to automation, although employment has remained robust thus far. Efforts are being made to raise skill levels in the sector, but scope remains ample for policy support; existing programmes can be expanded, funding allocated more efficiently, reforms made to formal education and infrastructure quality upgraded.

Thailand

Eastern Economic Corridor: As part of its actions towards Thailand 4.0, the country is developing its eastern provinces with the government's Eastern Economic Corridor initiative (EEC) to become a leading economic zone within ASEAN, as well as a hub for technological manufacturing and services. While a range of programmes and regulations has been put in place to support the EEC initiative, some challenges remain to be addressed. Developing human capital is crucial to meet the demand of highly skilled workers, particularly those with sufficient knowledge of science, engineering and technology. Ensuring the transfer of skills and technology from foreign investment is also important for further developing local human resources.

Viet Nam

Education and training: Viet Nam's strategic plan for the development of education in 2011-20 targets a fundamental and comprehensive reform of the system. Past education reforms have improved the quality of the system, but inequalities in access to education remain to be addressed. High student drop-out rates can be lowered by providing extra coaching, partnering with multinational companies, and improving and making visible job opportunities for graduates.

Brunei Darussalam and Singapore

Brunei Darussalam

SMEs: The development of SMEs has the potential to help diversify Brunei Darussalam's economy. In its push to diversify, the government is paying particular attention to business services, financial services, hospitality and tourism, transport and logistics, manufacturing, primary resources, and the food and halal industries. Policies targeting SMEs in particular include financial assistance, promoting technological transfers and overcoming other challenges. The sector remains at an early stage of development, however, and Brunei Darussalam has no specific policy for SMEs to date.

Singapore

Education and training: With an ageing population, Singapore can merge schools with declining enrolment and redirect resources toward supporting lifelong learning. Retraining programmes can help to prepare workers with digital and other needed skills. The SkillsFuture programme can provide a framework for such training. Its transformational map for training and adult education focuses on three aspects of education: driving innovation, improving careers and skills, and increasing productivity.

CLM

Cambodia

Tourism: Growing numbers of international visitors and the growth in Cambodia's tourism sector, including the potential for ecotourism, have made important contributions to economic growth. While the government recognises this in its economic planning, development has been slow. Key challenges in promoting ecotourism in Cambodia include improving quality, offering distinct experiences to visitors, marketing ecotourism, and tapping into regional co-operation.

Lao PDR

Energy: Lao PDR's energy mix is heavily reliant on hydroelectricity, which also produces a major share of the country's exports. The potential to further develop hydroelectricity will reach its limits in the near future. The government emphasises the development of other renewable sources of energy. Solar power, for example, has the potential for further development and to improve electricity access. Falling costs also make solar power a more attractive alternative.

Myanmar

Tourism: Myanmar has significant potential to develop its travel and tourism sector and has seen impressive growth in the number of arrivals and receipts as it has opened up in recent years. However, the sector's further growth may be constrained by the general business environment, insufficient investment flows, and the geographic concentration of tourist destinations. Government initiatives are needed to improve training for the sector and to address related challenges. Sectors supplying the travel and tourism industry must also become more competitive and improve linkages with the industry to increase indirect income from the sector.

China and India

China

Innovation: Productivity growth through continuous innovation is needed to drive ongoing economic growth in China. The number of patent applications has increased rapidly in recent years. China has now become the country with the greatest number of patents filed. While patents suggest innovative activity, it appears to be weakly linked to productivity. The country must address the relatively limited collaboration amongst firms and with research institutions. It must also consider concerns about the protection of intellectual property rights.

India

FDI: Reforms to FDI regulation are being made under the *Make in India* initiative, liberalising inflows in a number of sectors. Along with this initiative, efforts are being made to improve the business environment generally. However, more can be done to realise the full potential of foreign investment, particularly in fostering technology transfers and productivity growth. Policy options include training and education, protecting intellectual property rights, promoting FDI in technology-intensive sectors, enhancing performance requirements linked to the transfer of technology, offering investment incentives, and retooling policies restricting FDI. At the same time, it is important that FDI supports inclusive growth by generating employment through balanced geographical distribution.

Chapter 4: Progress of regional integration in Emerging Asia

Integration can improve the prospects for economic growth and resilience. While ASEAN has played a central role in many of the integration efforts in Emerging Asia, broader frameworks are increasingly being used to address common challenges. ASEAN+3 (the ten ASEAN Member States, China, Japan and Korea) has been particularly active on financial issues, and the ASEAN+6 countries (the ASEAN+3 members, Australia, India and New Zealand) were the original participants in the East Asia Summit, which has since been joined by the Russian Federation and United States. Since 2012, the ASEAN+6 countries have also been negotiating the Regional Comprehensive Economic Partnership (RCEP), a proposed free trade agreement. Several countries in the region – Brunei Darussalam, Malaysia, Singapore and Viet Nam – are also signatories to the Comprehensive and Progressive Agreements for Trans-Pacific Partnership (CPTPP). Most Emerging Asian countries (with the exceptions of Cambodia, Lao PDR, Myanmar and India) are also members of Asia-Pacific Economic Co-operation (APEC).

Through these frameworks, gradual progress is being made toward regional goals regarding trade in goods and services, investment and capital market liberalisation, competition and consumer protection, intellectual property, infrastructure and connectivity, small- and medium-sized enterprises, food, agriculture and forestry, tourism, human and social development, energy and the Initiative for ASEAN Integration (IAI) (Table 7).

Table 7. **Summary of progress of regional integration in Emerging Asia**

Policy area	Summary of progress
Trade in goods and services	ASEAN countries have made progress in reducing tariffs, but non-tariff barriers remain. Recent developments are liberalising trade in services.
Investment and capital market liberalisation	Investment integration is progressing through ASEAN's FAST Action Agenda and the 3rd AFMGM (ASEAN Finance Ministers' and Central Bank Governors' Meeting). Liberalisation in financial services is opening new opportunities for innovation and modernisation.
Competition and consumer protection	A common framework on cross-border consumer protection is being developed. Regional co-operation is strengthening competition law.
Intellectual property	Progress is being made at the national and regional levels in strengthening intellectual property protection frameworks, though additional efforts will be needed.
Infrastructure and connectivity	Regional road, rail and air connectivity is improving. While the development of roll-on/roll-off shipping routes is progressing, limited port capacities remain a constraint.
Small- and medium-sized enterprises	Work on small- and medium-sized enterprises by ASEAN is progressing, including work with young and female entrepreneurs and integration into global value chains.
Food, agriculture and forestry	Progress is being made in implementing the ASEAN Integrated Food Security Framework and the Strategic Plan of Action on ASEAN Food Security 2015-20.
Tourism	Efforts are being made to strengthen and co-ordinate national tourism policies, as well as to promote the region as a tourism destination, such as through the Visit ASEAN@50 campaign.
Human and social development	Extreme poverty is declining in Emerging Asian countries. Plans for regional co-operation on the issue are outlined in the ASEAN Framework Action Plan on Rural Development and Poverty Eradication 2016-20.
Energy	Amongst other programme areas, the ASEAN Plan of Action for Energy Co-operation outlines strategies for improving energy efficiency, which is improving in much of the region.
Initiative for ASEAN Integration	IAI Work Plan III outlines actions to be taken to reduce development gaps in a number of important policy areas. Differences between the ASEAN-6 and CLMV countries are more pronounced in some of these areas than others.

Source: OECD Development Centre.

The liberalisation of **trade in goods and services** in the region is progressing. Tariff reductions by the CLMV countries (Cambodia, Lao PDR, Myanmar and Viet Nam) and other ASEAN Member States continue as these countries also address non-tariff barriers. National authorised economic operator programmes are being introduced and work is being done on customs integration and co-operation. Trade in services has been growing rapidly in recent years. While services in the region remain relatively closed to FDI inflows, liberalising measures have been introduced through various ASEAN Framework Agreement on Services (AFAS) packages. Commitments have also been made to open air transport services under AFAS. While the movement of skilled labour remains constrained, the issue is being addressed through initiatives such as the ASEAN Qualifications Reference Framework (AQRF), which was published in 2016. Realising the potential offered by the region's mutual recognition arrangements requires strengthening the AQRF. Progress is being made in negotiating the RCEP, and many countries in the region have signed the CPTPP.

Investment and capital market integration in the region are being supported through initiatives such as the Focused and Strategic (FAST) Action Agenda on Investment and the work of the 3rd ASEAN Finance Ministers' and Central Bank Governors' Meeting (AFMGM). The FAST Action Agenda is intended to promote the competitiveness of small firms, while the April 2017 AFMGM marked significant progress on financial integration and capital market liberalisation. The ASEAN Green Bond Standards, which were launched by the ASEAN Capital Markets Forum in November 2017, are intended to strengthen connectivity in the region's capital markets and help ensure corporate governance practices that yield environmental and climate-related benefits.

Increasing cross-border transactions in the region underline the importance of co-operation on **competition and consumer protection**, a common framework for which is being developed. The development of national-level competition frameworks remains uneven, however. ASEAN provides information on Member States' policies and laws. Countries in the region are also supported by international partners in building the capacity of their competition authorities. ASEAN plans to establish an ASEAN Research Centre for Competition by 2020 and is working on a Regional Cooperation Framework as the basis for a Regional Co-operation Agreement.

Intellectual property is a policy area identified in the ASEAN Economic Community Blueprint 2025 as in need of attention to build an innovative and competitive region. The value of intellectual property rights (IPRs) and geographical indications has been recognised at the national level. Institutions to support innovation, patenting and related activities have been established, with the World Intellectual Property Organisation (WIPO) also helping countries in the region to strengthen IPRs. Regional co-operation takes place mainly through the ASEAN Working Group on Intellectual Property Co-operation (AWGIPC). And the ASEAN Patent Examination Co-operation (ASPEC) is working to streamline patent application procedures.

Improvements to **infrastructure and connectivity** at the regional level are being made, but the extent of progress varies by sector and project. Work remains to be done on the ASEAN Highway Network, with a few missing links remaining. The construction of several sections of the Singapore-Kunming Rail Link remains stalled. Progress has been made toward the development of the ASEAN Single Aviation Market, but port capacities and connectivity will need to be improved to facilitate maritime transportation and the establishment of a roll-on/roll-off network. Efforts to facilitate logistics in the region would also improve trade and transportation flows.

ASEAN efforts regarding **small- and medium-sized enterprises** are outlined in the ASEAN Strategic Action Plan for SME Development 2016-25. The empowerment of young and female entrepreneurs in particular was the focus of the ASEAN Plus Three Young Entrepreneurs Forum in August 2017 in Phnom Penh. At the regional level, work is being done on internationalising and integrating small firms into global value chains. APEC is also working on this issue through its Committee on Trade and Investment and Promoting E-commerce to Globalise MSMEs, a 2017 study on the challenges and means of facilitating e-commerce participation amongst these firms.

Co-operation is improving in the **food, agriculture and forestry** sectors. Regional efforts to improve food security and safety and enhance farmers' livelihoods are being made through the ASEAN Integrated Food Security Framework (AIFS) and the Strategic Plan of Action on ASEAN Food Security (SPAFS) 2015-20. Further progress in the harmonisation of non-tariff measures affecting trade in the sector could be made, however. Regional integration is progressing through capacity-building initiatives amongst ASEAN Member States and the standardisation of rules and regulations, including increasing compatibility with international standards.

The harmonisation of **tourism** policies in the region is central to the ASEAN Economic Community Blueprint 2025 vision regarding the sector. This vision aims to make the region a single destination where tourism contributes to sustainable and inclusive growth. Issues related to this were discussed during meetings of the ASEAN Tourism Forum (ATF). During the 2017 ATF meeting, the Visit ASEAN@50 campaign was officially launched. Cruise tourism has the potential for further development in the region.

Goals regarding **human and social development** in ASEAN are primarily outlined in the ASEAN Socio-Cultural Community (ASCC) Blueprint 2025. Recently released regional plans on human and social development relevant to the ASCC include the ASEAN Work Plan on Securing Communities Against Illicit Drugs 2016-25, which was adopted in October 2016, and the ASEAN Framework Action Plan on Rural Development and Poverty

Eradication 2016-20, published in September 2017. The latter document targets improving access to and control of productive natural resources, financial and support services, and social protection. It aims to enable participation in socio-economic opportunities and create a convergence of local, national and regional actions. Poverty is also addressed through regional frameworks, including at the East Asia Summit.

Regional **energy** co-operation, as outlined in Phase I of the ASEAN Plan of Action for Energy Co-operation (APAEC), covers seven programme areas: the ASEAN Power Grid, the Trans-ASEAN Gas Pipeline, coal and clean coal technology, energy efficiency and conservation, renewable energy, regional energy policy and planning, and civilian nuclear energy. Almost all ASEAN member countries have improved energy efficiency and have drawn up policies and programmes to continue improvements. Collective efforts on improving efficiency include the work of the Energy Efficiency and Conservation Sub-sector Network (EE&CSSN) and discussions at the East Asia Summit and amongst the energy ministers of the ASEAN+3 countries.

The **Initiative for ASEAN Integration** Work Plan III outlines enabling actions relating to regulatory, legal and judicial frameworks, digital government strategies, crisis and disaster management, administration and public policy, safety standards and systems, and sustainable development. Differences between the ASEAN-6 and CLMV countries are more pronounced in some of the policy areas covered by Work Plan III's objectives than in others. The implementation of past work plans has proven to be challenging, but Work Plan III includes additional details about implementation. Further work on monitoring and evaluation will be needed as well.

Chapter 1

Macroeconomic assessment and economic outlook

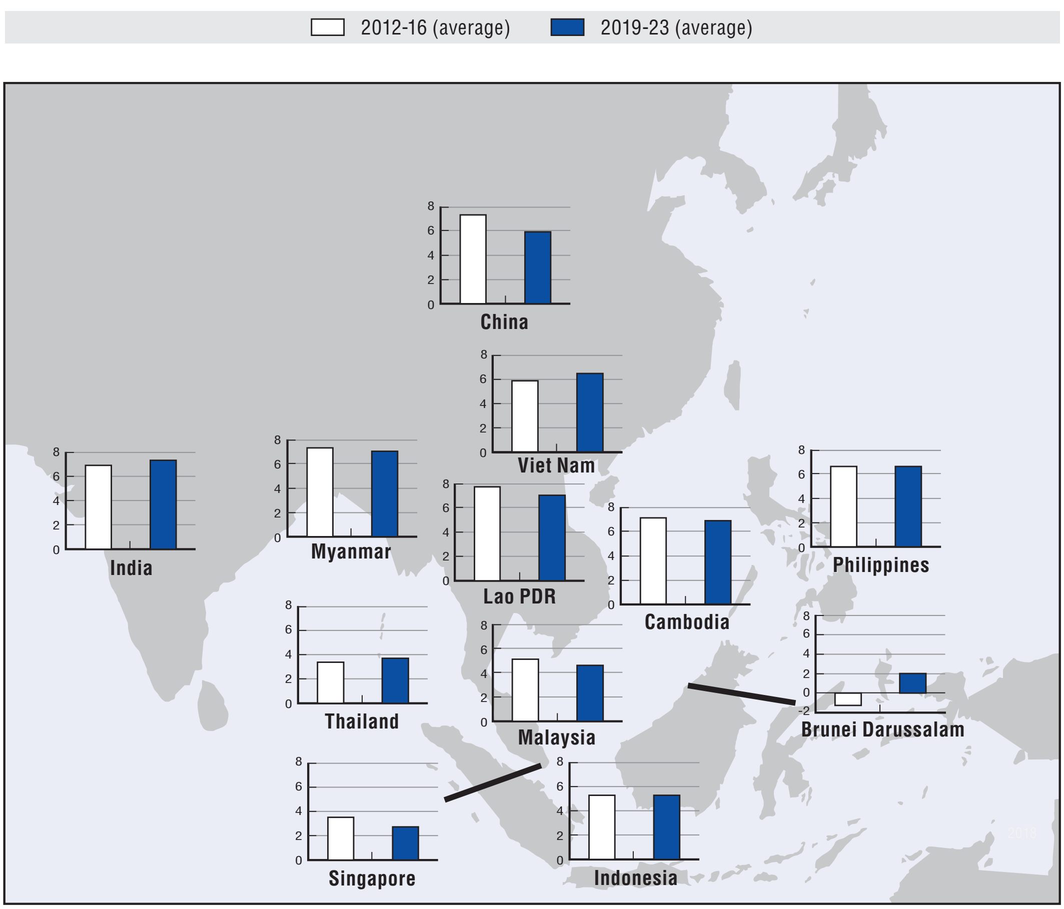
Gross domestic product (GDP) growth in Emerging Asia – Southeast Asia, China and India – held up in 2018 despite external and domestic headwinds. In Southeast Asia, economic expansion rates remained robust in general, although the trends by country diverged somewhat. While China's economic growth is gradually slowing, GDP growth in India is expected to remain robust. As for the region's private consumption story, resilience continued, underpinned by stability in labour markets and overseas transfers in some cases. Growth in gross exports likewise withstood trade policy uncertainties rather well. Several monetary authorities in the region have raised interest rates to address monetary normalisation of advanced economies as well as price and exchange rate pressures. These moves have been accompanied by policies to provide liquidity to support growth. Fiscal positions in the region are generally stable. The main risks to growth are related to the financial technologies (Fintech), constraints to international trade and the management of natural disaster risks.

Introduction

Gross domestic product (GDP) growth in Emerging Asia – Southeast Asia, China and India – held up in 2018 despite external and domestic headwinds. In Southeast Asia, economic expansion rates remained robust in general, although the trends by country diverged somewhat. While China's economic growth is gradually slowing, GDP growth in India is expected to remain robust. As for the region's private consumption story, resilience continued, underpinned by stability in labour markets and overseas transfers in some cases. Growth in gross exports likewise withstood trade policy uncertainties rather well. Several monetary authorities in the region have raised interest rates to address monetary normalisation of advanced economies as well as price and exchange rate pressures. These moves have been accompanied by policies to provide liquidity to support growth. Fiscal positions in the region are generally stable.

In the medium term– 2019 to 2023 –Southeast Asian countries will maintain solid growth momentum, while Emerging Asia's pace of economic growth is projected to be slower than the annual average between 2012 and 2016 average (Figure 1.1)

Figure 1.1. **Real GDP growth of Southeast Asia, China and India**



Source: OECD Development Centre, MPF-2019 (Medium-term Projection Framework).
StatLink https://doi.org/10.1787/888933886360

Overview and main findings

GDP in Emerging Asia is estimated to grow by an annual average of 6.1% in 2019-23, based on the OECD Development Centre's *Medium Term Projection Framework* (MPF-2019) (Table 1.1) (Box 1.1). Domestic demand is expected to sustain its momentum, particularly household spending, as job markets are expected to remain vibrant. However, trade is facing more uncertain prospects as tariff measures broaden. Southeast Asia is forecast to continue to grow solidly at 5.2% in 2019-23, faster than the rate posted in 2012-16. China is forecast to have an average growth of 5.9% in 2019-23, slower than its 2012-16 average of 7.3%. Investment and government spending are likely to offset substantial weakness in trade. India's medium-term growth is projected to be 7.3%, surpassing the average of 6.9% in 2012-16.

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

Annual percentage change

	2017	2018	2019	2019-23 (average)	2012-16 (average)
ASEAN-5 countries					
Indonesia	5.1	5.2	5.2	5.3	5.3
Malaysia	5.9	4.9	4.8	4.6	5.1
Philippines	6.7	6.4	6.5	6.6	6.6
Thailand	3.9	4.5	4.1	3.7	3.4
Viet Nam	6.8	6.9	6.7	6.5	5.9
Brunei Darussalam and Singapore					
Brunei Darussalam	1.3	2.0	2.3	2.0	-1.3
Singapore	3.6	3.5	2.9	2.7	3.5
CLM countries					
Cambodia	7.0	7.0	6.9	6.9	7.1
Lao PDR	6.9	6.6	6.8	7.0	7.6
Myanmar	6.8	6.6	6.9	7.0	7.3
China and India					
China	6.9	6.6	6.3	5.9	7.3
India	6.7	7.5	7.3	7.3	6.9
Average of ASEAN-10	5.3	5.3	5.2	5.2	5.1
Average of Emerging Asia	6.5	6.6	6.3	6.1	6.8

Note: The cut-off date for data used is 21 November 2018. ASEAN and Emerging Asia growth rates are the weighted averages of the individual economies in those groupings. Data for India and Myanmar relate to fiscal years. Myanmar's 2018 data refers to the interim 6-month period, from April 2018 to September 2018 while the 2019 data refers to the period from October 2018 to September 2019. The 2018 and 2019 projections for China, India and Indonesia are based on the OECD Economic Outlook 104 (database).
Source: OECD Development Centre, Medium-term Projection Framework (MPF-2019).

ASEAN-5

- In the medium term, **Indonesia**'s GDP growth is projected to average 5.3%, the same rate as in 2012-16. Considering the vibrant health of the labour market, private consumption should expand robustly, consistent with the trend since 2007. Continuous improvement in the investment climate bodes well for expanding the production base and job opportunities. Public debt-to-GDP ratio is arguably manageable.
- **Malaysia** is estimated to grow by 4.6% in 2019-23, 50 basis points slower than growth in 2012-16. Private consumption will likely remain strong, supported by an absorptive labour market that maintains a low unemployment rate as the labour participation rate and real wages rise.

- In the next five years through 2023, the **Philippines** is estimated to grow annually by 6.6%, equalling the rate in 2012-16. Overseas remittances will still be an important component of private consumption. The underemployment rate, which has recently risen again despite the decline in the labour participation rate, requires attention. Robust public budgetary spending should help buoy the economy, albeit the quality of spending can still be improved.
- Between 2019 and 2023, **Thailand**'s economy is projected to grow 3.7% a year, up from 3.4% in 2012-16. Fixed investment should benefit from changes in key legislation in the last two years. It helps that investment climate indicators have also generally improved. The effective implementation of an East Economic Corridor (EEC) infrastructure will be crucial to continuing the growth momentum.
- **Viet Nam**'s medium-term growth is projected to grow to 6.5% on average in 2019-23 from 5.9% in 2012-16. Exports are expected to continue to anchor economic activity, supported by the influx of Foreign Direct Investment (FDI). Keeping the momentum going necessitates continued efforts to improve the quality of labour. The resolution of non performing loans (NPL) is also crucial.

Brunei Darussalam and Singapore

- **Brunei Darussalam's** economy is projected to rise annually by 2.0% from 2019-23, reversing the average of -1.3% in 2012-16. The current oil price level augurs well for the country's export earnings and domestic demand. Improvements in FDI inflows and private sector development will be critical.
- **Singapore** is forecast to post 2.7% GDP annual growth in the medium term, almost a percentage point slower than its average of 3.5% in 2012-16. Fixed investment is expected to pick up in line with various infrastructure plans. The steady investment inflow into information and communication technology ventures will also help. Various initiatives to retool labour force skills are critical.

CLM countries

- **Cambodia's** economy is projected to expand by 6.9% in the next five years until 2023, more moderate than the 7.1% growth in 2012-16. The steady influx of foreign capital and the country's involvement in multilateral infrastructure projects bode well for infrastructure, exports and the job market. Capital market development ought to be pursued.
- **Lao PDR's** expected economic growth rate of 7.0% annually in 2019-23 will be down from 7.6% in 2012-16. The large energy-related deals, special economic zones and broader fiscal incentives are engines for growth. Policies and management related to hydroelectoricity will be key for sustainable growth.
- **Myanmar's** GDP growth is estimated to average 7.0% annually in 2019-23, marginally slower than the 7.3% growth in 2012-16. Planned transportation investment, the gradual improvement in investment climate indices and recent investment liberalisation measures should strengthen the economy in the coming years. Managing inflation and resolving banking sector fragilities are challenges.

China and India

- **China** is projected to register 5.9% average annual GDP growth in 2019-23, down from 7.3% in 2012-16. The willingness of the national government to stimulate domestic activity amid trade tensions and the resurgence of investment are reassuring signals for domestic demand. Improving the relatively high level of corporate debt-to-GDP ratio and wealth inequality are challenges.

- The economy of **India** is forecast to grow by 7.3% in the medium term, up from 6.9% in 2012-16. Labour market conditions point to solid growth in private consumption, although rising inflation and interest rates can be drags. The push for consolidation will most likely limit the government's spending flexibility as well. How infrastructure projects are carried out will be key. Maintaining banking sector health is another challenge.

Other key points of the economic outlook and assessment

- Inflation trends remain divergent. Inflation is on an uptrend in China, the Philippines, Thailand and CLM countries, while it is relatively stable or even declining in other Emerging Asian countries. The increase in global oil prices and domestic factors affect these trends, although the moderation of global food prices provides some respite.
- Several monetary authorities in the region have raised interest rates to address monetary normalisation in advanced economies as well as price and exchange rate pressures. Some of them have introduced other liquidity measures to support growth. Meanwhile, the banking systems are generally stable, albeit asset quality issues persist.
- Overall, the external positions of Emerging Asia are sound. Trade performance is relatively stable in Emerging Asia amid rising protectionism while regional trade agreements are progressing. FDI inflows into Emerging Asia remains positive.
- A number of economies in the region look to rein in their respective fiscal deficit ratios in the near term, though fiscal positions in the region are generally stable. The persistence of deficits in current accounts and the fiscal positions in some countries could raise a concern to growth momentum.
- There are several risks and challenges confronting the region's economic prospects. They include; i) stabilising and developing financial markets, and, in particular, maximising opportunities related to financial technology; ii) strengthening export performance amidst rising protectionism; and iii) mitigating natural disaster risks to growth from natural disasters. In addition, Emerging Asian countries need to monitor the pace of monetary normalisation in advanced economies, while geopolitical tensions and trends in global oil prices also need to be carefully monitored.

Box 1.1. **Key assumptions of the medium-term outlook to 2023**

Projections over 2018-23 are produced using the OECD Development Centre's Medium-term Projection Framework (MPF), which includes the following assumptions:

- The output gap – the gap between actual and potential GDP – will converge to zero by 2023.
- Inflation-targeting countries will continue to pursue stability and to adjust monetary policies to support their targets.
- The national medium-term development plans of Emerging Asia countries will largely be implemented, subject to budgetary and other policy considerations.
- Regional economic integration initiatives and projects will advance at the same pace as before.
- 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 21 November 2018. For more detailed information on MPF, please see www.oecd.org/dev/asia-pacific/mpf.htm.

Recent developments and near-term outlook

ASEAN-5

Indonesia

Indonesia's gross domestic product (GDP) grew 5.2% year-on-year (YOY) in the third quarter (3Q) of 2018, equalling the rate in the first half (1H) (Table 1.2). The rise in demand was driven by the brisk expansion in public and private spending (Figure 1.2), with expenditure during the run-up to the local elections held in the last week of June 2018 partly contributing to the momentum. Gross fixed capital (GFC) growth rose to 7.0% in 3Q 2018 from 6.9% in 1H 2018 and capital inventory increased sharply–up 58% in 3Q 2018. Investment expansion in buildings and other structures increased to 5.7% in 3Q 2018 from 5.6% in the 1H 2018. Separately, gross export growth inched up to 7.5% in 3Q 2018 from 6.9% in 1H 2018. On the supply side, growth in agricultural output increased to 4.8% in 2Q 2018 and 3.6% in 3Q 2018, up from 3.3% in 1Q 2018, thanks to the good weather. Stronger export sales have helped crude petroleum, gas and geothermal production to post growth in 2Q 2018, the first time in seven quarters, though it declined again in 3Q 2018. By comparison, production of metal ores and construction materials has expanded markedly since 1Q 2018. Meanwhile, manufacturing growth rebounded in 3Q 2018 after it slowed in 2Q 2018. Services growth had been steady in 2018, anchored by information and communication technology (ICT), wholesale and retail trade (WRT), and transport and storage (TAS).

Table 1.2. **Recent real GDP growth in ASEAN, China and India, 2017-18**

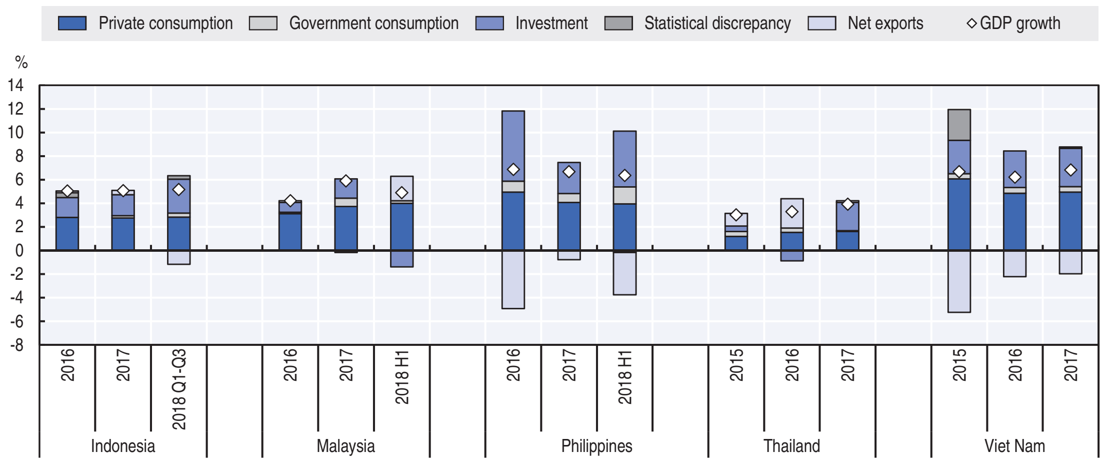
Quarterly year-on-year percentage changes

	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2018 Q1	2018 Q2	2018 Q3
ASEAN-5 countries							
Indonesia	5.0	5.0	5.1	5.2	5.1	5.3	5.2
Malaysia	5.6	5.8	6.2	5.9	5.4	4.5	—
Philippines	6.5	6.6	7.2	6.5	6.6	6.2	—
Thailand	3.4	3.9	4.3	4.0	4.9	4.6	—
Viet Nam	5.2	6.3	7.5	7.7	7.5	6.7	6.9
Brunei Darussalam and Singapore							
Brunei Darussalam	-1.3	0.2	1.3	5.2	2.6	-2.8	—
Singapore	2.5	2.8	5.5	3.6	4.6	4.1	2.6
China and India							
China	6.9	6.9	6.8	6.8	6.8	6.7	6.5
India	5.6	6.3	7.0	7.7	8.2	—	—

Note: The cut-off date for data used is 7 November 2018. Data for India and Myanmar relate to fiscal years.
Source: OECD Development Centre, CEIC Data and national sources.

Figure 1.2. **Contributions to real GDP growth in the ASEAN-5 countries, 2016-18**

Percentage points



Note: Thailand uses chain volume measures. The sum of contributions to growth is not necessarily equal to GDP growth.

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

StatLink https://doi.org/10.1787/888933886379

Indonesia's GDP is expected to increase to 5.2 % in 2018 and in 2019. Retail sales growth in 3Q 2018 accelerated relative to 1H 2018, possibly benefitting from the one-off boost from the Asian Games (Box 1.2). The consumer spending outlook has also remained positive though the level of optimism in 3Q 2018 receded relative to 1H 2018 as interest and core inflation rates rose. The national elections scheduled for April 2019, however, should lift spending. The reconstruction and rehabilitation of areas affected by the recent earthquakes also provide impetus for increased spending in the coming months, partially compensating for the negative impact on productivity and the socio-economic cost due to household and firm displacement. That being said, the series of policy rate hikes since 17 May 2018 – totalling 150 basis points – could be a drag on consumer spending. There are also uncertainties about the inflation pass-through of new import tariffs on consumer goods and the decision to curb oil imports.

Box 1.2. **Asian Games 2018 economic impact**

Between the 18th of August and 2nd of September 2018 the 18th Asian games were held in Jakarta and Palembang with 45 nations participating, marking a sportive but also an economic success for Indonesia. The Ministry of National Development Planning of Indonesia (BAPPENAS) estimated the total effect on 2015-19 GDP at USD 2.80 billion (US dollars), slightly below the predicted USD 2.97 billion. This led to an impact on economic growth estimated at 0.05% on top of baseline growth over 2015-19, with USD 540 million in value added created in 2018 only. Specifically, in Jakarta the Asian Games of 2018 contributed to a 0.23% increase from the baseline growth.

The number of tourists amounted to 1.78 million, of which 1.7 million were domestic visitors and 78 854 foreign visitors. This is below the expected 154 069 expected foreign tourists for Jakarta alone. However, in terms of tourist spending, the Games outperformed expectations by generating USD 244 million instead of the forecasted USD 234 million, which indicated that per head spending was significantly higher than planned. The

Box 1.2. **Asian Games 2018 economic impact** *(cont.)*

distribution of spending between foreign and domestic visitors was balanced, with the foreigners slightly outspending their domestic counterparts. Asian Games' foreign visitors mostly came from China, Japan and Korea, and stayed on average for 13 days, nearly spanning the full duration of the event.

The direct economic impact of the 18th edition of Asian Games over 2015-19 is estimated at USD 2.68 billion slightly above the initially projected USD 2.66 billion due to higher visitor spending. The main contributors to the above mentioned figure were investment in infrastructure (USD 1.9 billion), followed by operating spending (USD 514 million) and finally tourism spending (USD 244 million). The effects on employment were also positive, with the employment of 108 780 people over the country and an associated increase of real wages by 0.03%. Finally, the implementation of odd-even policies for road traffic led to decreased traveling times, in line with a 4.7% decrease in congestions during the Games.

The rise in Indonesia's GDP in the medium term – 2019 to 2023 – is projected to average 5.3%, the same rate recorded in 2012-16. Considering the vibrant health of the labour market, private consumption, which accounts for 58.8% of the economy in current prices and 55.4% in constant prices, should expand robustly during the period in line with the trend that has prevailed since 2007. The improvements in investment climate metrics (e.g. ease of doing business, investment competitiveness and perceptions of corruption) since 2016 bode well for expansion of the production base and an increase in job opportunities.[1] Presidential Instruction No. 7 (November 2017) and Presidential Regulation 91 (September 2017) institutionalised inter-ministerial coordination in the policy-making process. The two pieces of legislation, part of efforts to further enhance the business climate, promote the practices of impact evaluation and public consultation and streamline the business licensing regime.

The ongoing infrastructure programme is promising though the net benefits it yields will depend on the quality of execution. Currently, though, timeliness of delivery and the government's ability to attract partners remain key challenges. About 245 projects, with a value of about USD 327 billion, were initially included in the list of National Strategic Projects signed in January 2016. Six projects had been completed by the end of 2017, while 14 had been dropped by April 2018 according to the Committee for the Acceleration of Priority Infrastructure Delivery for failing to meet specifications.

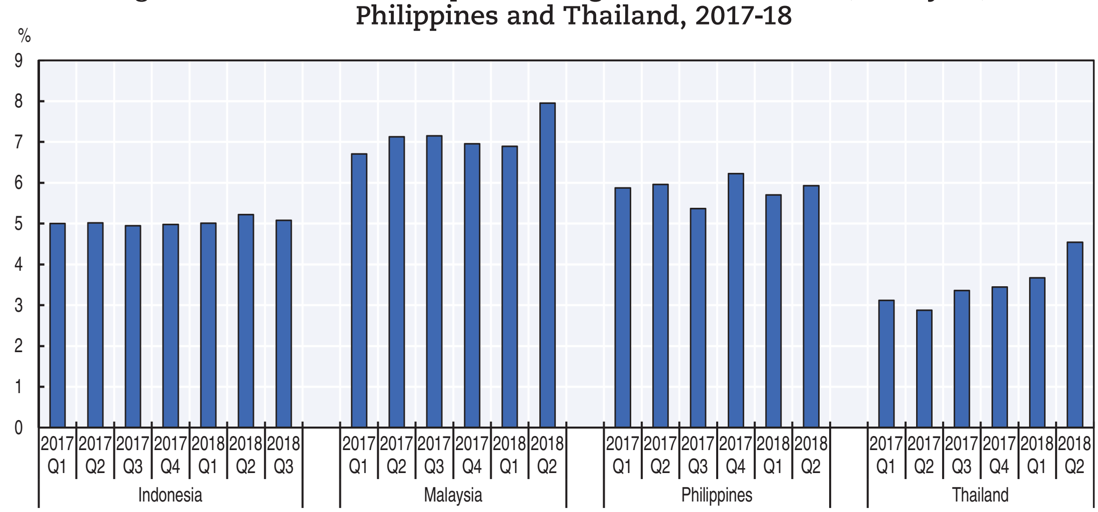
While tax-to-GDP and revenue-to-GDP ratios have been showing signs of improvement since 4Q 2017, thanks to recent reform measures, the expansion of fiscal capture of economic activity still requires attention. The public debt-to-GDP ratio, which stood at around 29% of GDP in 2Q 2018, is manageable by regional standards. Worries centre chiefly on the high share of foreign-held debt in total central government debt, estimated at just under 58% of the total value or roughly 17% of GDP.

Malaysia

GDP growth in Malaysia slipped from 5.4% in the first quarter to 4.5% in 2Q 2018. Household consumption, however, grew faster in 2Q 2018 than in the first quarter, attributable to the repeal of the goods and services tax (GST) in June 2018 and the extension of gasoline subsidies until the end of 2018 (Figure 1.3). Public spending growth also picked up, while private sector outlay, particularly on machinery and equipment, drove growth in GFC that was faster in the second than the first quarter of 2018. The acceleration in consumption and investment in turn prompted 2.1% growth in imports (chiefly of capital goods) in 2Q 2018 after a 2% contraction in 1Q. Gross export growth, by contrast, weakened over the same period (Figure 1.4), weighed down by poor sales of machinery, agricultural products (like live animals, vegetable oils and fats), beverages and tobacco, and crude inedible goods.

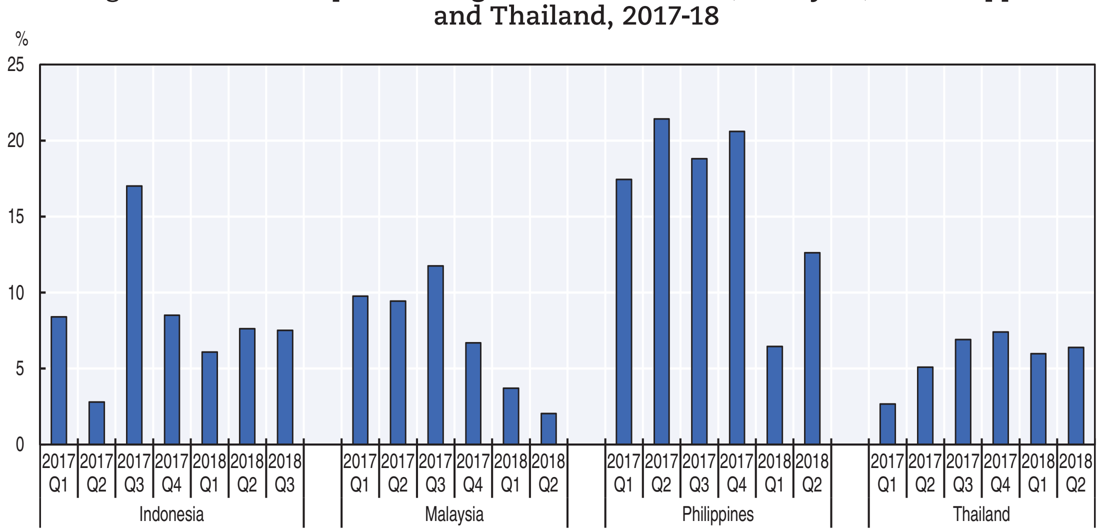
The first contraction in agricultural output (down 2.5%) since 4Q 2016 mirrors the lethargic external demand for agricultural products on the supply side. Low prices prompted a year-on-year decline in the production of palm oil, rubber and other forestry goods in 2Q 2018. Mining and quarrying output also dipped by 2.2% in 2Q 2018. Manufacturing, driven by the electronics, metal product and transportation equipment segments, took up some of the slack as it grew 4.9%, which was marginally slower, however, than the 5.4% recorded in 1Q 2018. Services held up relatively well in 2Q 2018, especially WRT, utilities, TAS and communication, while growth in financial services (excluding insurance) was more measured.

Figure 1.3. **Private consumption YOY growth in Indonesia, Malaysia, the Philippines and Thailand, 2017-18**



Source: OECD Development Centre calculations based on CEIC Data and national sources.
StatLink https://doi.org/10.1787/888933886398

Figure 1.4. **Gross exports YOY growth in Indonesia, Malaysia, the Philippines and Thailand, 2017-18**



Source: OECD Development Centre calculations based on CEIC Data and national sources.
StatLink https://doi.org/10.1787/888933886417

Malaysia's growth outlook for 2018 and 2019 is 4.9% and 4.8%, lower than the June 2018 projections on the Update of Outlook 2018. Nor are investment prospects very upbeat, as FDI inflows in 2Q 2018 fell to their lowest quarterly level since 4Q 2012. The shelving of some infrastructure projects may also add to the slow-down. Moreover, the lack of fiscal space and concerns over the build-up of debt suggest that levels of public spending will be modest until the end of the year.

Export growth in nominal terms has slightly eased in 3Q 2018 from 1H 2018. The manufacturing production index performed modestly in 3Q 2018 relative to 1H 2018. The mining production index also stayed on a downtrend in the same period, while palm oil production continued to decline in 3Q 2018. The spikes in consumer and business confidence appear to have been fuelled by the easing of fears over inflation, coupled with the abolition of GST and the extension of fuel subsidies. However, the reintroduction of consumption taxes in September 2018 has somewhat lessened the optimism.

As for Malaysia's medium-term economic prospects, GDP is forecast to grow 4.6% between 2019 and 2023, 50 basis points lower than the average rate in 2012-16. Private consumption is likely to remain strong, supported by an absorptive labour market that maintains a low unemployment rate as labour participation rate and real wages rise.

One of the key challenges is containing any possible downturn in gross exports, which account for 72.9% of GDP in constant prices. Business climate indicators – such as ease of doing business and perceptions of corruption – have generally improved since 2017, but the country could be in a stronger position if it brought greater clarity to its infrastructure policy after a number of projects were placed under review. The Digital Free Trade Zone, which opened in November 2017 (in collaboration with Alibaba), is one of the government's promising new investment approaches to cross-border trading and e-commerce.

As part of systemic reform, the offices that report to the Prime Minister's Department have also been reorganised, with their number being cut from more than 90 to 26 to promote transparency. Meanwhile, continuing budgetary reform will help make spending more efficient and keep fiscal risk in check – particularly in light of public liabilities, which re-evaluation shows to be substantially higher than originally estimated. The government expenditure growth will likely be pinned to around its average in the last 5 to 6 years.

Philippines

In the Philippines, GDP growth came in at 6.2% in 2Q 2018, the thirteenth consecutive quarter in which it had posted a rate of 6% or higher. Private consumption grew 5.9%, higher than the previous quarter's rate of 5.7%, despite the rising inflation pressures and interest rate. Growth in government spending eased in 2Q 2018, though it was still brisk at 11.9% on the back of strong revenue performance. With public project rollouts gathering pace, GFC growth surged to 21.2% in 2Q 2018 from 8.8% in 1Q 2018, arresting the declining trend since 2Q 2016. Gross exports also rose strongly, doubling between the first and second quarters thanks to increasing demand for electronic products.

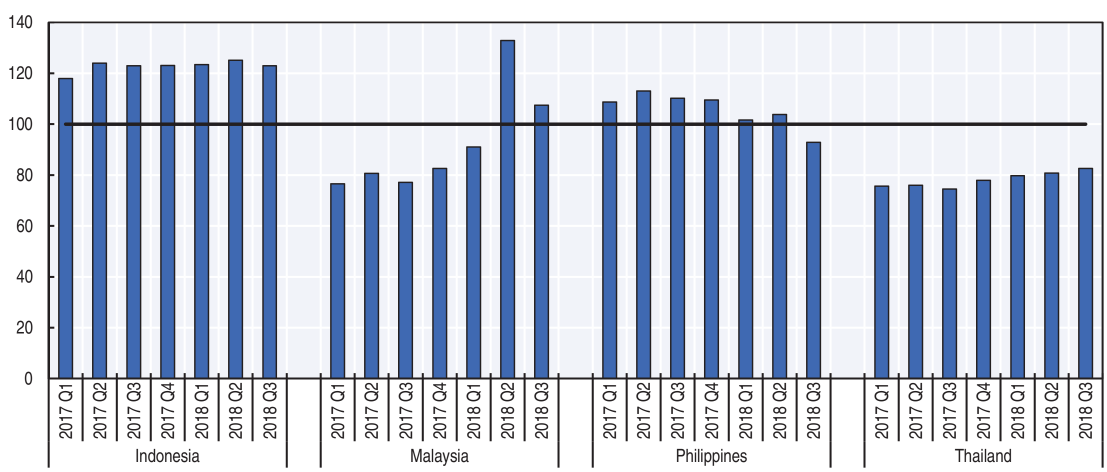
On the supply side, agriculture output growth fell to 0.3% in 2Q 2018, the slowest rate since the contraction in 4Q 2016. Changes in the planting cycle of some crops and reduced harvested areas probably affected the volume of output in some staples (PSA, 2018). Manufacturing growth also slowed for the third straight quarter while the mining sector's value added shrank by almost 7% in 2Q 2018. The construction industry was one of the bright spots. Buoyed by the growth momentum in gross fixed capital, it expanded by

14.1% in 2Q 2018 from 8.8% in 1Q. Both public and private construction value added grew faster in the second than the first quarter of 2018. The services sector too maintained a strong rate of expansion, led by public services, financial services and transport, communication and storage (TCS).

GDP growth is forecast to come in at 6.4% and 6.5% in 2018 and 2019 respectively, slightly down from the June 2018 projections. The continuing rise in inflation and the interest rate will likely temper household consumption growth more in coming months. As it is, consumer and business sentiment indices have weakened markedly between 3Q and 1H 2018 (Figure 1.5). Foreign tourist arrivals growth in 3Q 2018 was slower than in the same period in 2017 and was weaker than the year-to-date (YTD) average. Remittances from overseas workers contracted again in August 2018, reversing the 5.2% YOY growth posted in July 2018. The decision to increase rice imports and allocate fuel subsidies to certain sectors should help lessen the burden, although calls for higher transport fares and wages are gaining traction, which will feed back into inflation.

Meanwhile, government expenditure grew more firmly in the third quarter than in the first half of 2018 thanks to the rising revenue-to-GDP ratio. GFC growth is on track to sustain its quarterly average rate, as indicated by the 22.4% rise in the nominal value of capital imports in 3Q 2018 and following the 13.3% growth in 1H 2018. Anecdotal evidence also suggests sustained momentum in project rollouts. Growth in the nominal value of goods exports turned positive, albeit weak, in 3Q 2018, driven primarily by the electronics subsector, which has high import content.

Figure 1.5. **Consumer confidence indices in Indonesia, Malaysia, the Philippines and Thailand, 2017-18**



Note: All indices are adjusted to set 100 as neutral confidence point.
Source: OECD Development Centre calculations based on CEIC Data and national sources.
StatLink https://doi.org/10.1787/888933886436

In the next five years to 2023, the Philippines is forecast to post an average GDP growth rate of 6.6%, just as it did in 2012-16. Private consumption will continue to be fuelled by overseas remittances that accounted for about 9% of GDP in 2017. The relatively steady unemployment rate since the April 2017 round of the labour force survey will support household consumption. However, the underemployment trend (based on 4-quarter moving average) that has risen since 4Q 2017, despite the persistent downward trend in the labour participation rate, suggests that there is a glut in the availability of quality jobs. Public budgetary spending continues to be robust thanks to the stable fiscal position, which should help buoy the economy. That being said, it is just as important to increase the quality of spending – by strengthening post-construction project quality audits, for example.

The timeline for the subsequent instalments of tax reform legislation may be pushed back. Indeed, the limitations of social safety nets and delays in additional measures to soften the impact of rising inflation since the first reform package have combined with rice supply management issues, global oil prices and exchange rate weakness to produce one of the main pressure points. Meantime, the pace of delivery of infrastructure projects before the national elections in 2022 will be crucial for the momentum of investment. The Investor Relations Office (IRO, 2018) reported that infrastructure spending is programmed to rise from 5.4% of GDP in 2017 to 7.3% in 2022, as the pace of project rollout seems to have accelerated in recent months.

On the regulatory side, the signing of the Ease of Doing Business Law in May 2018 brought with it hopes to improve investment competitiveness. The ease of doing business and competitiveness indices have been mixed since 2016 and the corruption perception index has deteriorated between 2014 and 2017. Concerning trade, policy uncertainties could, in coming years, dent the growth of gross exports, which make up 31% of GDP in current and 57% in constant prices.

Thailand

Thailand recorded GDP growth of 4.6% in the second quarter of 2018. Though it was slightly down from the first quarter's 4.9%, it was still commendable compared to the trend since 2013. Private consumption drove domestic demand, supported by steady expansion in fixed investment as government expenditure marginally receded. Household spending on food and non-alcoholic beverages, housing and utilities, and household items were higher than in 1Q 2018. Investment in construction (private and public), machinery and equipment also grew briskly. As for goods exports, which account for roughly three-quarters of gross exports, they rose 7.4% in the second quarter against 4.7% in the first, while growth in services export fell back. Nominal customs data reveal that overseas sales of agricultural commodities and manufactured and mineral goods have maintained particularly encouraging trends.

On the supply side, agricultural output rose 10.4% in 2Q 2018, up from 6.5% in 1Q, driven by the increase in overseas demand, generally good weather and the clearing of the domestic stockpile of rice. The construction industry's growth rate climbed to 2% in 2Q 2018 from 1.2% in the first quarter. However, growth in manufacturing and the utilities slowed, while mining contracted for the second straight quarter. In the services sector, WRT expanded at a faster rate in 2Q 2018, as did financial services. Growth in TCS and hotel and restaurant services also remained robust, although it was slower than in 1Q 2018.

GDP growth rates in 2018 and 2019 are forecast to be 4.5% and 4.1%, respectively, higher than the June 2018 projections. In August 2018, the consumer confidence index recorded its highest score since April 2013, before waning marginally in September and October 2018. The sentiment was bolstered in part by the fuel and natural gas price controls announced by the government in May 2018. The upward trend in outstanding bank credit to individuals and the robust growth in tourist arrivals (Figure 1.6) are also upsides private spending.

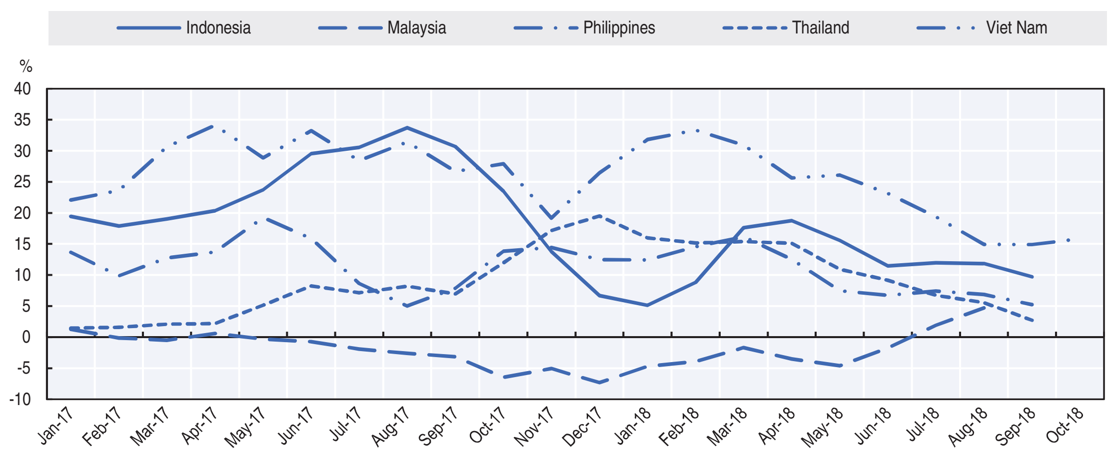
Central government nominal data in July-September 2018 show that public expenditure YOY growth was faster than in January-June 2018. The scheduled general elections in February 2019, should it take place, could relaunch it. Infrastructure investment outlays should accelerate between October 2018 and March 2019 as the government draws down undisbursed allotments in fiscal year (FY) 2017/18 (i.e. fiscal year ending September 2018).

The initial public offering of the Thailand Future Fund announced in 2015, which seeks to amass THB 100 billion, or USD 3.1 billion, in capital, was also set for October 2018.

External trade prospects are slightly down, as evidenced by the YOY decline in monthly export value in September 2018, which maintained a trend set in train in May 2018. Moreover, the manufacturing purchasing manager's index (PMI) dipped for the third consecutive month in August 2018 before rising slightly in September 2018 to a neutral level of 50. Rice producers and exporters, by contrast, are looking to finish the year on a high thanks to government-to-government deals made earlier this year.

Figure 1.6. **Tourist arrivals (3-month rolling sum) in ASEAN-5 countries, 2017-18**

Year-on-year growth



Source: OECD Development Centre calculations based on CEIC Data and national sources.

StatLink https://doi.org/10.1787/888933886455

Between 2019 and 2023, Thailand's economy is projected to grow by 3.7% on average, an improvement on the 3.4% figure for 2012-16. Fixed investment should benefit from the introduction over the last two years of investment-related legislation – e.g. National Competitiveness Enhancement Act for Targeted Industries and amendments to the Investment Promotion Act. It helps that investment climate indicators – like ease of doing business, competitiveness and perceived corruption – are also more positive according to the latest data from the previous year. How swiftly implementations in building EEC infrastructure are addressed however, will be a vital determinant of the magnitude of capital inflows. An equally important factor will be bringing to fruition infrastructure projects outside the scope of the EEC – e.g. rail projects in Phuket, Chiang Mai, Nakhon Ratchasima and Khon Kaen.

With regard to private spending, household debt – estimated at over 77% of GDP in 2Q 2018– remains a concern though it has gradually declined since 2015. The low unemployment rate should help sustain private consumption. Tourism, as in the past, could also be another driver of consumption, with Thailand's 2017 standing in the Travel and Tourism Competitiveness showing an improvement over 2015. The government aims to attract 40 million international tourists in 2019, compared to 35.4 million in 2017. Meanwhile, gross exports, which account for 78% of GDP in constant prices, have been recovering strongly since 2015.

Viet Nam

Viet Nam's economic growth dipped to 6.7% in 2Q 2018 from 7.5% in the first, before picking up to 6.9% in the third quarter. The improvement in the nominal growth of retail sales of consumer goods and services indicates that private consumption has firmed up. Nominal government spending also gathered pace in 2Q and 3Q 2018, while growth in the state's placement of capital in social investment programmes held steady. Non-state capital placements also gained traction, as did inflows of foreign capital. Separately, nominal growth in exports of goods – especially phones and related parts, electrical computer parts and garments – recovered in 3Q 2018 after a sharp decline between the first and second quarters.

Although not quite as strong as 1Q's 13.6%, supply-side disaggregation shows that growth in manufacturing value added stayed robust in the second and third quarters of 2018 at over 12%, supported by demand from the offshore market. The same goes for utilities, while construction also grew between the second and third quarters. In the services sector, growth in the value added of WRT, TAS, information and communication, and financial services was brisk in 3Q 2018. Meanwhile, agricultural growth eased somewhat in 2Q and 3Q 2018 compared to 1Q 2018, but was still stronger than in the same periods in 2017. Growth in farming output benefitted from the generally favourable monsoon and robust export demand. Nonetheless, the heavy rains leading to floods and landslides in the three months to September 2018 badly affected some parts of the country.

Viet Nam's GDP is forecast to rise by 6.9% in 2018 and 6.7% in 2019. The main indicators are sending mixed signals, however. Nominal growth in retail sales continued to gain momentum in October 2018. As for state investment, which is still under budget, it was on an upward trend in 3Q 2018, though still 39% below the annual target, which leaves the government with ample budgetary space for the rest of the year. Credit growth in September 2018 stayed slack, however, in line with central bank policy, coming in at its slowest pace since September 2014. Growth in the industrial production index was sturdy in 3Q 2018, though monthly data show signs of it having eased up since July 2018, much like the manufacturing and utilities indices. Mining and quarrying production index reverted to a contractionary cycle in August-October 2018 after rising in July 2018. The fall is attributable partly to tighter regulations and partly to the weak financial standing of many large mining firms resulting from subdued global metal prices.

Viet Nam's economy is forecast to grow 6.5% in 2019-23,compared to 5.9% in 2012-16. Exports, which accounted for 101.6% of GDP in current and 119.7% in constant prices in 2017 (ADB, 2018), are expected to continue to be the mainstay of medium-term economic growth. FDI, which maintained its upward trend and posted a new record high in 2017 of USD 14 billion, has provided the country with capital ammunition over the years. However, amid the changing global export and investment policy landscape, keeping the momentum going necessitates continued efforts to improve the quality of labour.

Initiatives to widen the scope and institutional framework of some economic zones (by converting them into special economic zones) could further bolster the improving investment competitiveness and help the country as it seeks to increase the domestic value added content of its output. The official NPL ratio fell to less than 2% in 4Q 2017 from almost 5% in 3Q 2012 (excluding the holdings of Vietnam Asset Management Company), which should ease the strain on banks and free up some capital for lending. Bad debt resolution, however, is gaining ground slowly in the absence of a well-structured market for troubled assets. Resolution 42 has been instrumental in making settlements easier, though lack of clarity concerning tax matters, the length of foreclosure proceedings, legal unpredictability and fragmented processing system deter investors. Meanwhile, the elevated public debt-to-GDP ratio, which is expected to come within 1 percentage point of the legal ceiling of 65% in 2018, will limit fiscal expansion in the coming years. The country must address that issue through a combination of domestic private sector and foreign participation, if it is to meet its large capital requirements, especially for infrastructure.

Brunei Darussalam and Singapore

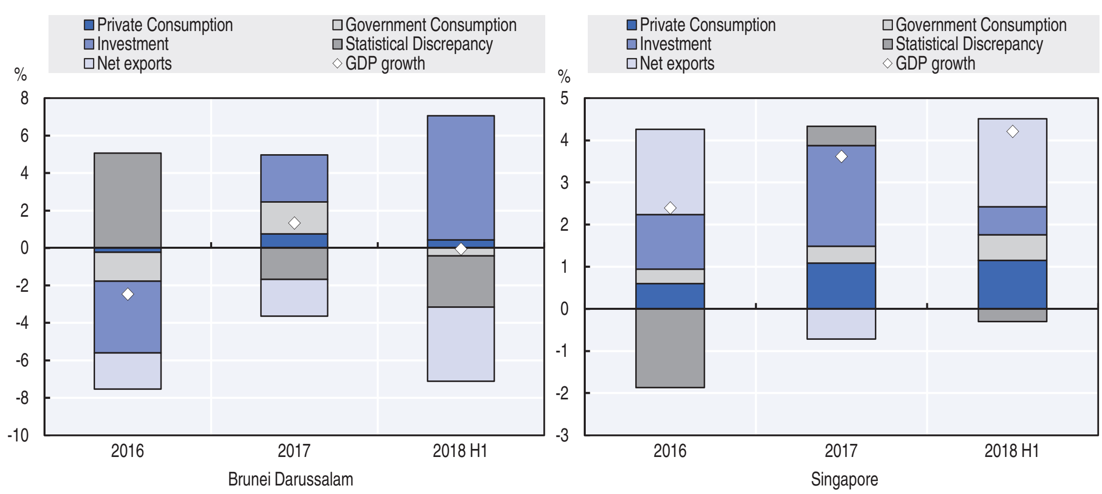
Brunei Darussalam

Brunei Darussalam's economy grew by 2.6% in 1Q 2018, a substantial improvement over the same period the previous year, but contracted by 2.8% in 2Q 2018. Household consumption grew by 4.6% in 2Q 2018 after a modest 0.2% increase in 1Q, while private GFC too was buoyant in in both quarters, increasing by 29.9% on average, though slower than the 44.9% YOY growth in 4Q 2017 (Figure 1.7). Gross exports, government consumption and public GFC, which all expanded in 1Q 2018 contracted in 2Q 2018.

On the supply side, reduced output in vegetable farming and fisheries saw agricultural production decline further to 5.7% in the 2Q 2018 after a 1.1% drop in the previous quarter. The industrial sector likewise retreated by 2.0% in 2Q 2018 following a growth of 5.0% in 1Q 2017, due to broad-based decline across subsectors except electricity and construction in spite of the rising global oil prices and the construction of several key downstream industrial projects such as the refinery on Pulau Muara Besar and a fertilizer production plant. The services sector contracted for the third straight quarter as finance declined by 37% in 2Q 2018 following a 5.9% contraction in 1Q 2018.

Figure 1.7. **Contributions to growth in Brunei Darussalam and Singapore, 2016-18**

Percentage points



Source: OECD Development Centre calculations based on CEIC Data and national sources.
StatLink https://doi.org/10.1787/888933886474

In 2018 and 2019, Brunei Darussalam is expected to grow by 2.0% and 2.3%, respectively. The prevailing global oil price trend still works in the country's favour. Outstanding commercial bank loans rose 3.1% in 2Q 2018 after seven consecutive quarters of decline, which bodes well for household spending. Furthermore, goods exports (in local currency) displayed a healthy increase of 41.6% in July 2018, compared to the 9.2% rise in 1H 2018, compared to the 11.1% rise in the same period in 2017 (Figure 1.8). The increase in sales was led by mineral fuel exports (up 7.4%) and by strong expansion in manufactured goods exports, up 149.6%.

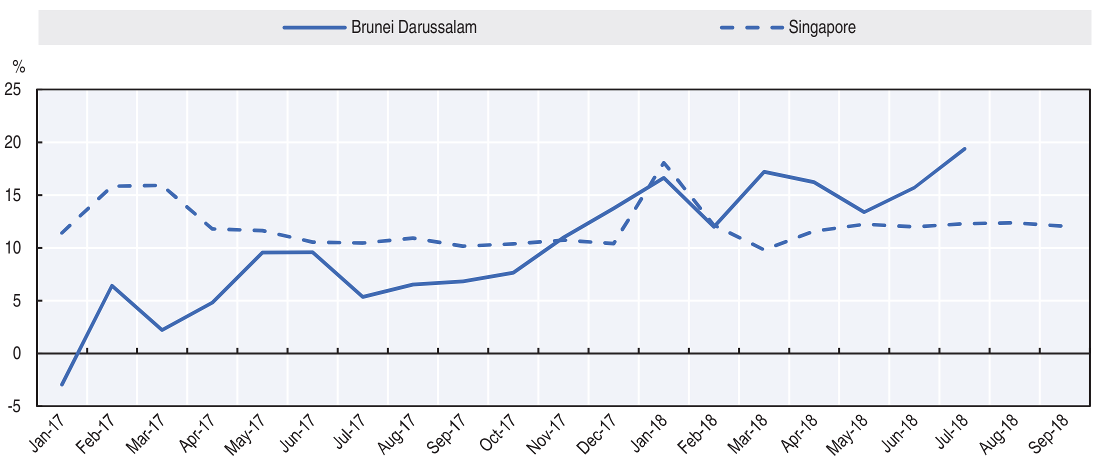
Brunei Darussalam's economy is projected to grow by 2% in 2019-23 in a rebound from an average annual contraction rate of 1.3% in 2012-16. Oil prices, which almost doubled between mid-June 2017 and end-September 2018, augur well for the country's export earnings, domestic personal consumption and the government's fiscal space.

Investment prospects, too, are looking up. The upward reversal in the annualised (four-quarter moving sum) FDI trend in 4Q 2017 is also indicative of brightening prospects after the net outflow for five consecutive quarters from 3Q 2016. Improved business climate indices (ease of doing business and perceptions of corruption) in data for 2017-18 is another upside to the country's investment potential.

The government formally created the Muara Export Zone in September 2017 in a move to attract investment for industries outside oil. The government's intent to diversify its economic growth sources – a policy priority since the early 2000s – has so far met with limited success. Halal food and eco-tourism industries are two of the key areas that the government aims to strengthen in the coming years. Capital market depth is another area that it could harness further to increase private sector involvement in enterprises. It should also look more closely at adjusting its monetary framework if it is to improve its policy toolkit as part of the move to gradually open up its domestic market.

Figure 1.8. **Goods exports of Brunei Darussalam and Singapore, 2017-18**

Year-on-year and year-to-date growth



Note: Calculations are based on levels data in US dollars.

Source: OECD Development Centre calculations based on CEIC Data and national sources.

StatLink https://doi.org/10.1787/888933886493

Singapore

According to the government's advance estimates, the rate of expansion of Singapore's economy slipped back to 4.1% in 2Q 2018 and 2.6% in 3Q from 4.6% in 1Q 2018. Manufacturing growth slowed markedly to 4.5% from 10.6% and 10.8% in the second and first quarters of 2018, respectively. The services sector grew 2.9% in 3Q 2018 – the same as in 2Q but less than in 1Q 2018. The decline in the construction industry's output continued for the eighth straight quarter though less steeply (shrinking by 3.1%) than in the previous seven quarters.

On the demand side, data from 2Q 2018 show that YOY growth in private consumption slowed for the second straight quarter, possibly due to rising interest rates, growing property prices and overall headline inflation against a background of weaker growth in real wages. Government expenditure growth slowed sharply to 2.2% in 2Q 2018 from 8.7% in 1Q 2018. Investment in transportation equipment jumped 31.8% in 2Q 2018 to reverse the contraction of the previous quarter and make up for the weakness in capital outlays in construction, machinery and intellectual property items. Gross export growth was relatively steady, borne by sales of mineral fuels, chemical products and manufactured goods.

Singapore's economy is forecast to grow by 3.5% in 2018 and 2.9% in 2019, lower than the rates projected in June 2018. Growth in the value and volume of goods exports in 3Q 2018 showed improvement over the first two quarters, even though it was weaker than in 3Q 2017. While growth in the volume of non-oil exports has picked up since June 2018, it has dwindled in oil exports since February 2018, falling by 16.7%, in September 2018. Furthermore, the decline in the purchasing managers index for manufacturing in September indicates that offshore orders are falling off.

Singapore is forecast to post 2.7% GDP growth in the medium term, less than the 3.5% average in 2012-16. Fixed investment, which declined in 2016 and 2017, is expected to pick up in line with various infrastructure plans, e.g. Singapore to Kuala Lumpur high-speed rail link, the Tuas Megaport and Changi Airport Terminal 5. The steady inflow of investment into ICT and other Research and Development (R&D) ventures can also boost productivity and efforts to diversify the earnings of the services sector. Increases in public spending on healthcare and other social services are also anticipated, which should give economic growth an additional boost. The opening of an infrastructure office in October 2018 to facilitate infrastructure financing in Asia, particularly in Southeast Asia, will provide the financial services sector with a further line of business.

Although its impact has been muted in recent months, protectionism is likely to hobble trade, which drives a number of manufacturing and services segments. Balancing the pace of technological development and job market vibrancy remains another concern, despite various initiatives to reskill the labour force.

Other issues in the longer term are the fertility rate, which declined from 1.6 in 2000 to 1.16 in 2017, and the old-age support ratio – the proportion of 15 to 64 year-olds to the over 65s, which fell from 9.9 in 2000 to 5.2 in 2018. Keeping the older generation productive has been one approach to supporting the country's competitiveness. To that end, the government and academia have introduced a number of lifelong learning programmes as part of the Industry Transformation Maps strategy. Programmes include SkillsFuture and the School of Continuing and Lifelong Education run by the National University of Singapore. Encouraging firms to adopt programmes is seen as a crucial next step. Challenges related to income disparity are taken into consideration. The government had been tackling the issue by addressing concerns related to wages, education, immigration and social integration.

CLM economies

Cambodia

Cambodia's growth has firmed up in recent months, supported by private consumption, investment and exports as the underlying drivers. Personal lending rose by 27.1% in June 2018 from 25.8% in the previous month, while growth in total credit reached 18.3% in June 2018, down marginally from 19.9% in the previous three months.

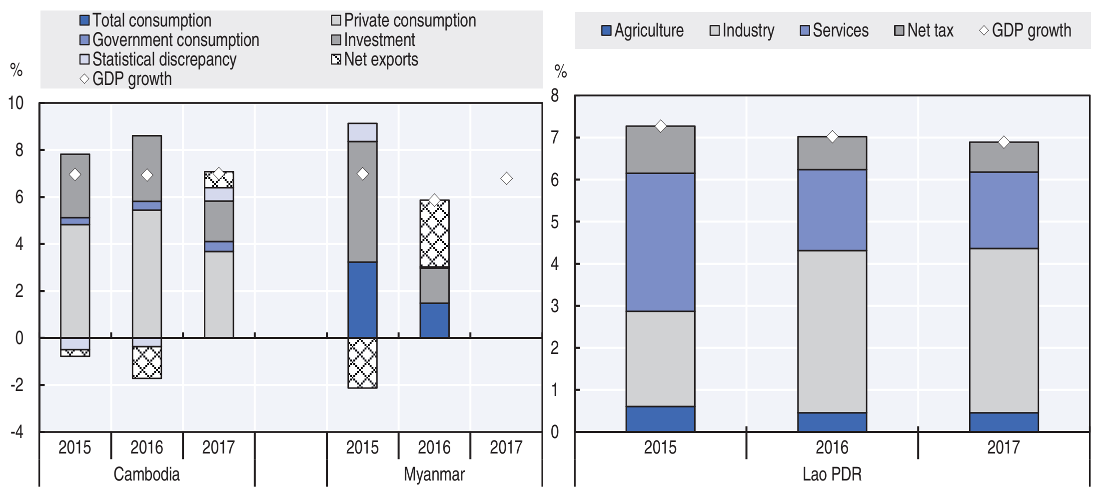
The sectors that saw the biggest rises in credit were real estate (48.2%), transport and storage (42.15%) and utilities (37%). Tourist arrivals also showed increased YTD growth of 11.7% YTD in August 2018, so sustaining the 11.8% showing in the same period in 2017. Year-on-year year-to-date growth in approved fixed investment assets was up 38.4% in June 2018 from 17.3% in June 2017. As for FDI growth, it rose to 38.7% in 2Q 2018 from 8.23% in 1Q 2018. The banking, assembly, electronics and real estate sectors saw inflows increase in 2Q 2018, while there were declines in the garment industry and agriculture. Goods exports in nominal terms climbed by a robust 18.4% in 2Q 2018 from 13.3% in 1Q

2018, driven by garments (20.1%) and agricultural products (43.2%), but pulled back by electrical and vehicle parts and rubber.

Government expenditure, which rose by an average of 16.3% between January and August 2018, is expected to rise faster for the remainder of the year. Furthermore, thanks to favourable conditions, the rice harvest yield in February 2018 was 10.4 million tonnes, about 4% up on the previous year, while growth in rubber production increased for the third successive quarter in 2Q 2018. Against that backdrop, GDP growth in Cambodia is estimated to be 7% in 2018 and 6.9% in 2019, broadly in line with the June 2018 forecast and much the same as the growth rate in 2017 (Figure 1.9).

Figure 1.9. **Contributions to growth in CLM countries, 2015-17**

Percentage points



Notes: Data for Myanmar relate to fiscal years. Lao PDR does not publish demand-side data. Total consumption is private consumption plus government spending. Net tax is taxes minus subsidies.

Source: OECD Development Centre calculations based on CEIC Data and national sources.

StatLink https://doi.org/10.1787/888933886512

Cambodia's economy is projected to expand by 6.9% in the next five years to 2023, a more moderate rise than the 7.1% growth in 2012-16. The steady inflow of foreign capital, which reached a new high of almost USD 11.4 billion in 1Q 2018 on an annualised basis (i.e. four-quarterly moving sum) bodes well for the country's ability to create quality jobs (job informality is widespread) and, ultimately, for the resilience of household spending.

Cambodia's participation in infrastructure projects – like those that are part of the Greater Mekong Subregion (GMS) and Belt and Road (B&R) initiatives – affords it opportunities to improve existing public capital stock. (Box 1.3) Reform measures such as the updated Law on Financial Management, which offered small businesses incentives to formalise their operations, paved the way for the tax-to-GDP ratio's climb from less than 10% in 2010 to over 16% in 2017.

Promoting listing and trading in the nation's stock market and developing its capital market institutional framework, as outlined by the Securities and Exchange Commission (Cambodia SEC, 2018), will bring sizeable benefits, as long as safeguards against systemic risks are not set aside. However, measures to promote the use of the local currency need to be strengthened to increase the efficacy of the central bank's monetary policy. The ratio of foreign currency deposits to total deposits (i.e. demand, time and foreign currency deposits) exceeded 90% between January 2000 and June 2018.

Box 1.3. **Importance of the spill-over effects of infrastructure**

Infrastructure investment decisions must include a full evaluation of externality effects. This means going beyond an evaluation of the financial feasibility of an individual project to make an effort to judge the positive and negative economic, social and environmental effects over the different time periods of the planned investments (OECD, 2018a).

During construction, infrastructure projects provide stimulus to the local and wider economy. Over the longer term, transportation infrastructure can lead to local efficiency gains, increased demand and economic activity, while also producing a combination of positive and negative health, environmental and other effects. Quality infrastructure investment has positive spillover effects that range from job creation and increased FDI, improved tax revenues through an expanded tax base, to improved well-being and inclusive growth while also addressing environmental impacts. According to a study of spillover externalities by the Asian Development Bank Institute (ADBI), the STAR highway in the Philippines had "a significant impact not only on business taxes, but also on property taxes and regulatory fees". In a similar study on the Tashguzar–Boysun–Kumkurgon railway line in Uzbekistan, ADBI identified a 2% increase in the growth rate of regional GDP in affected regions, 5% value added in industry and 7% value added in services because of the project. On the other hand, low-quality infrastructure imposes lasting costs, even when the up-front price is significantly lower. Poorly planned and constructed infrastructure may not function as intended and can lead to long-term public debt, accidents and environmental damage.

To develop quality infrastructure, senior levels of government need to adopt a comprehensive perspective. This requires sufficient political support and institutionalised practice within government, including at the local level. While the ideal division of responsibilities between local, regional and national authorities on any given project is shaped by a number of factors, including the respective capacities of the different levels of government and the need to consider projects' wider spillovers and synergies, new forms of co-ordination may be required over time. New approaches may also be needed to finance quality infrastructure. A variety of revenue and financing tools are available to governments to raise funds for infrastructure investment. These tools should be dedicated not only to increase infrastructure investment, but also to finance project needs throughout their life-cycle. Finally, quality infrastructure principles should be integrated into development planning, and aligned with budget priorities, including at local and regional levels. In this way they will remain at the forefront of investment decisions.

Lao PDR

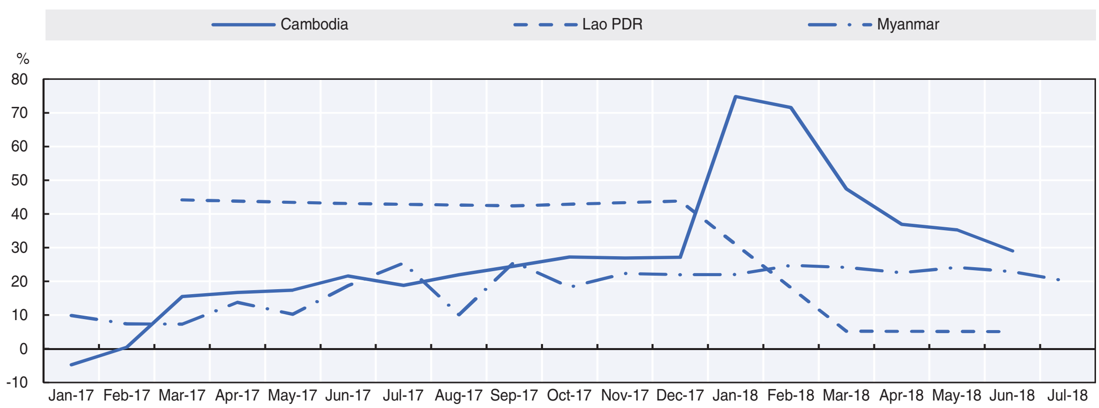
In 2018, the economy of Lao PDR is projected to remain robust at 6.6% growth rate. Electricity consumption increased by 5% in 1Q 2018 following an uptick of 7% in 1Q 2017. That increase, along with greater volumes of oil imports and improved tax collection, point to resilient consumption. Nominal export growth year-on-year tumbled to 5.1% in 1H 2018 in sharp contrast to the rise of 43.1% in 1H 2017 (Figure 1.10). Sales of electronic parts and electricity strengthened while agricultural exports stagnated in line with falling rubber and coffee prices.

Notwithstanding the dam collapse in July, key dam projects are likely to be maintained and the construction of the Vientiane to Kunming rail link will continue to support capital formation. Meanwhile, public spending surged by 33% in 1Q 2018, thanks to a significant increase in loan-financed public investment in the power sector. Government debt, for its part, remained broadly stable with only a slight increase of 0.35%.

On the production side, power generation increased significantly, as indicated by the 70% growth of energy exports to Thailand in 1Q 2018 and the commissioning of the 86 MW Nam Phay dam in January 2018. The electronic parts and components industry has also continued to fare well in 2018, growing by 13% in the first four months of the year. Nonetheless, the decline of mining continued in H1 2018, as resources dwindled in the main active mines. Some agricultural products, which included rubber and vegetables, suffered a slight downturn in 1Q 2018 due to low prices and persistent flooding in certain areas. Lao PDR is forecast to grow by 6.6% in 2018 and 6.8% in 2019, less than in 2017, though still faster than other countries in the region.

Figure 1.10. **Goods exports of CLM countries, 2017-18**

Year-on-year and year-to-date growth



Notes: Data for Lao PDR are quarterly. Data of Myanmar relate to fiscal years. Calculations are based on levels data in US dollars.

Source: OECD Development Centre calculations based on CEIC Data and national sources.

StatLink https://doi.org/10.1787/888933886531

Lao PDR is expected to grow by 7% in 2019-23, down from 7.6% in 2012-16. Apart from the large electricity deals in the offing, capital inflow will also be attracted by the new special economic zones (SEZs) coupled with broader fiscal incentives and the simplification of business procedures specified in the amendments to the investment promotion law issued in April 2017. The outlay on infrastructure that comes with the development of SEZs as well as those related to the GMS and B&R initiatives should support medium-term growth as long as they do not weigh on fiscal stability.

On the downside, the persistence of informal business practices is cited as a key business climate impediment (World Bank, 2018a). In the financial sector, resolving banks' legacy assets and strengthening solvency and liquidity positions are the chief challenges. Another concern is public and publicly guaranteed debt, which exceeded 61% of GDP in 2017 (IMF, 2018c) compared to 56.3% in 2013. Regarding land usage, energy industry expansion plans around the Mekong River have to be carefully re-examined following the dam collapse in July 2018. Surveillance of built structures in the vicinity of the river could be improved with the participation of local people, who are directly affected by any incident. The river is a source of food and ensures a livelihood for many households in a number of Southeast Asian countries.

Myanmar

In Myanmar, the main indicators point to robust, albeit more moderate, economic expansion in 2018. Private consumption is on an upward trend, as indicated by the substantial 49.7% rise in commercial taxes collected in January 2018 and confirmed by car registrations which were up 8.2% and the 13.1% increase in private electricity consumption over the same period. The simplified entry conditions for Chinese tourists, along with visa-free entry permits for Korean and Japanese visitors implemented in October 2018, should also reinvigorate flagging growth in tourist arrivals over coming months.

Foreign investment in permitted enterprises saw a year-on-year increase of 5.5% between April and September 2018. Less than the 13.5% rise for the same period in 2017 of 13.5%, it chiefly benefitted manufacturing, transport and communication and real estate. Goods exports posted a healthy year-on-year increase of 24.2% in April and May 2018. More than twice the growth rate of 10.3% for the same period in 2017, it was driven by brisk agricultural and garment sales.

On the supply side, the purchasing managers' index for manufacturing has steadily declined since April 2018 and fell to below 50 between July and September 2018. Natural gas output continued to fall in January 2018 – down 4.5% after a 6.1% contraction in FY 2016 (i.e. fiscal year ending March 2017). The drop was attributable to low energy prices. Agricultural output, despite a good harvest, was affected by severe flooding between June and August 2018.

Projections point to Myanmar's economy growing by 6.6% during the six-month period ending September 2018 and by 6.9% in FY 2019 (i.e. fiscal year ending September 2019). Its medium-term GDP growth between 2019 and 2023 is forecast to average 7%, marginally slower than the rate of 7.3% in 2012-16. Investment is likely to get a boost in coming years from infrastructure projects, particularly the big ones that are part of the National Transport Master Plan. The gradual improvement in investment climate indices provide additional impetus, particularly when coupled with investment liberalisation measures. Such measures include the relaxation of business ownership regulations, the opening of equities market to foreign players, new SEZs and townships, and the easing of restrictions on business operations in areas like gaming and entertainment. FDI inflows more than tripled to about USD 4.7 billion in 2017 from USD 1.3 billion in 2012, when the reform got underway. The new Companies Law, which came into effect on August 2018, is seen as a step in the right direction in the support of small local enterprises.

The sustainability of economic growth is hampered by underdeveloped electricity infrastructure and unstable power supply. Importing electricity from Lao PDR and India, leveraging the domestic natural gas supply and building facilities to develop renewables (such as solar energy) are some stop-gap measures proposed as the government targets 100% electrification in 2030.

How fast the technical functions of the central bank and securities commission can be developed is also essential to government efforts to deepen the financial market. Managing inflation and addressing banking sector fragilities are further concerns that are tied to the technical capacity of the central bank. The interplay between volatile inflation on one hand and the persistently high budget deficit on the other is a downside of growth – especially when the local currency is under pressure due to weaknesses in current account position. Separate anecdotal evidence suggests that local banks are struggling to meet the standards set by new central bank regulations in line with the recent Financial Institutions Law.

China and India

China

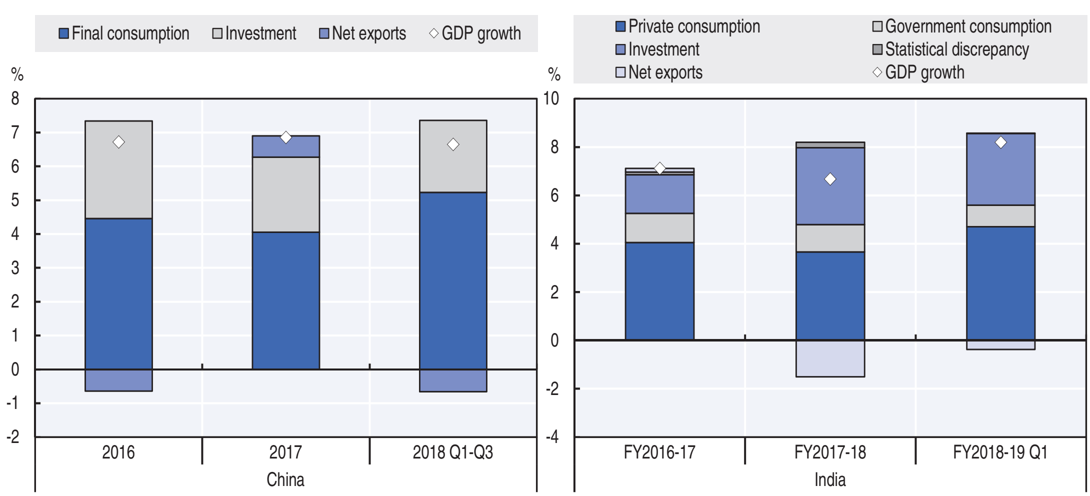
China's GDP growth inched down from 6.8% in 1Q 2018 to 6.7% in 2Q and 6.5% in 3Q. However, the annual growth rate is still likely to surpass the government target of 6.5%. Domestic demand has accounted for almost 80% of the expansion in output over the last two quarters (Figure 1.11). Growth in retail sales and real estate stabilised as automobile sales declined in 3Q 2018. Although balance of payments data point to continued healthy growth in gross exports, net exports were a drag on GDP growth for the third straight quarter due to faster growth in imports.

The contribution of investment to GDP growth continued to fall, in line with the trend that has prevailed since 3Q 2017. While completed investment in state-owned-and-controlled corporations continued at a more moderate rate in 2Q and 3Q 2018, outlays in private fixed assets picked up.

On the supply side, manufacturing grew 6.6% and 6.0% in the second and third quarters, almost unchanged from the 6.7% in 1Q 2018. By comparison, construction growth retreated more markedly after the inventory of unoccupied residential and office spaces was drawn down. Accordingly, the year-on-year increase in newly built house prices accelerated in 3Q 2018. The steady growth of the services sector (4% in both 2Q and 3Q 2018) was driven by the expansion of 31.7% in IT-related services, 9.4% in leasing and commercial services, and 8.1% in transport and storage. Growth in WRT declined for the seventh straight quarter whereas financial services growth recovered in 2Q and 3Q 2018 following a dip in 1Q 2018.

Figure 1.11. **Contributions to growth in China and India, 2016-18**

Percentage points



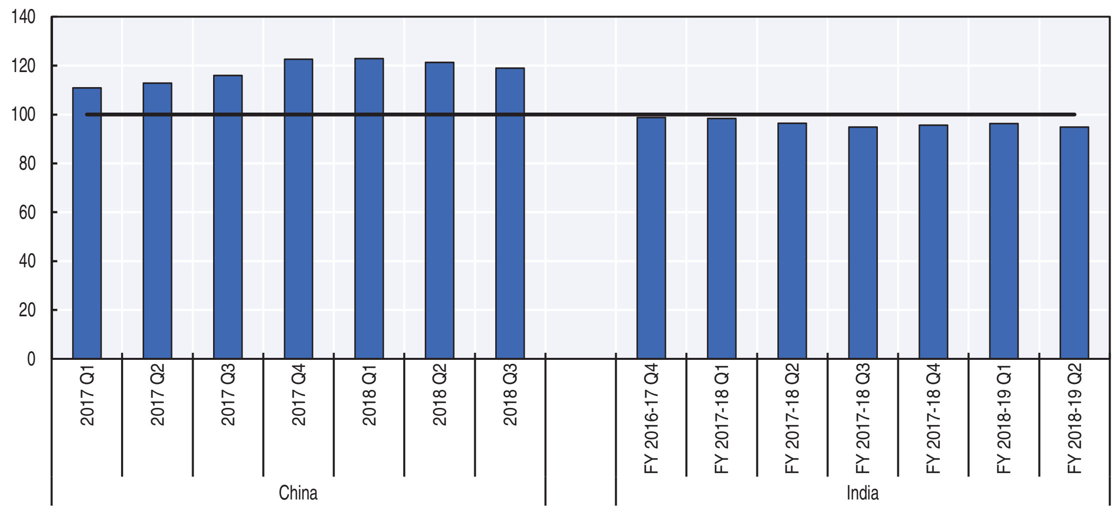
Note: Data for India relate to fiscal years.

Source: OECD Development Centre calculations based on CEIC Data and national sources.

StatLink https://doi.org/10.1787/888933886550

In 2018 and 2019, China's economy is forecast to grow by 6.6% and 6.3%, respectively, lower than projections made in June 2018. The willingness of the government to take monetary and fiscal action to counter trade-related headwinds (e.g. cutting reserve requirement ratios) will keep domestic demand buoyant at least in the near term. Nevertheless, the consumer confidence index, though positive, has weakened (Figure 1.12). Fixed asset investment year-on-year growth also moderated in September 2018 even though the FDI utilisation had been gaining momentum since January 2018. On the external front, the PMI relative to new export orders for manufacturing goods contracted for the fourth straight month in September 2018, mirrored by the declining overall trend in the PMI for manufacturing. By contrast, the PMI for non-manufacturing business activity expanded briskly over the same period (Figure 1.13).

Figure 1.12. **Consumer confidence indices in China and India, 2017-18**



Note: All indices are adjusted so that 100 is the neutral confidence point.

Source: OECD Development Centre calculations based on CEIC Data and national sources.

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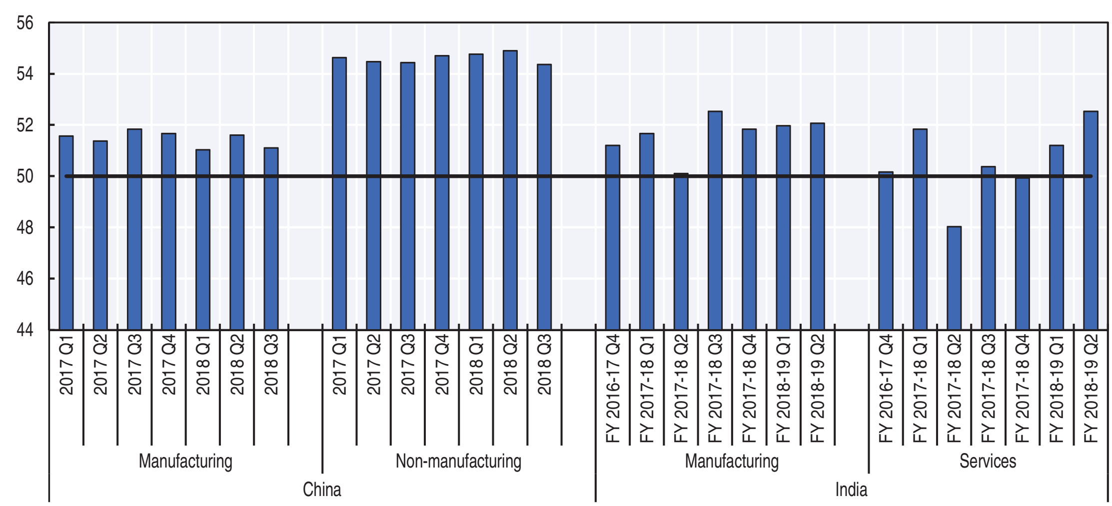
Figure 1.13. **Purchasing managers' indices in China and India, 2017-18**



Note: The neutral point of the indices is 50.

Source: CEIC Data, national sources and Nikkei Asian Review.

StatLink https://doi.org/10.1787/888933886588

China is projected to register an average growth of 5.9% in 2019-23. The private consumption outlook remains encouraging, with the central bank showing its willingness to take measures when needed to stimulate domestic activity. In the longer term, the government's increased focus on education over the years will prove valuable as the labour market adjusts to more technology-driven global affairs.[2]

Investment, which saw its share in nominal GDP decline from 2013 to 2017, appears to be surging back. When it comes to FDI, inflows annualised over four quarters rose steadily between 2Q 2017 and 2Q 2018 after two years of decline. The trend was supported by the consistent improvement from 2014 to 2017 in investment climate indices like the ease of doing business, competitiveness and perceived corruption. New investment liberalisation measures have also been implemented in sectors such as finance, manufacturing, transportation and ICT.[3] Trade, by contrast, is beset with uncertainties. There is a possibility that trade frictions could weaken corporate balance sheets and consequently exacerbate overall credit risk at a time when interest rates are rising.

India

India's economy expanded 8.2% in 1Q 2018 (i.e. 1Q of the fiscal year ending March 2019). It was the fastest rate since 1Q 2016 and the fifth straight quarter that GDP growth had risen since stabilising at 5.6% in 1Q 2017. Private spending accounted for more than half of that growth, increasing by 8.6%, up from 6.7% in 4Q 2017 as headline inflation receded despite weakness in the local currency and rising oil prices. Nominal growth in personal loans was brisk. Gross exports, too, lent strong support, growing 12.5%, up from 3.6% in the previous quarter, on the back of petroleum and manufactures sales.

Fixed investment growth stayed strong at 10% in 1Q 2018, though slower than the 14.4% growth in 4Q 2017. Growth in public spending, by contrast, decreased to 7.6% from 16.9% in the same period in line with the government's intention of trimming the deficit for the fiscal year.

Reflecting the strength of offshore sales in manufactured goods, the manufacturing sector's output growth rose to 13.5% in 1Q 2018 from 9.1% in 4Q 2017 to lead supply-side components. Construction grew 8.7%, following the rate of 11.5% in 1Q 2018, though well above the average of the previous five years. Growth in utilities was just as robust, even though activity in mining and quarrying was subdued.

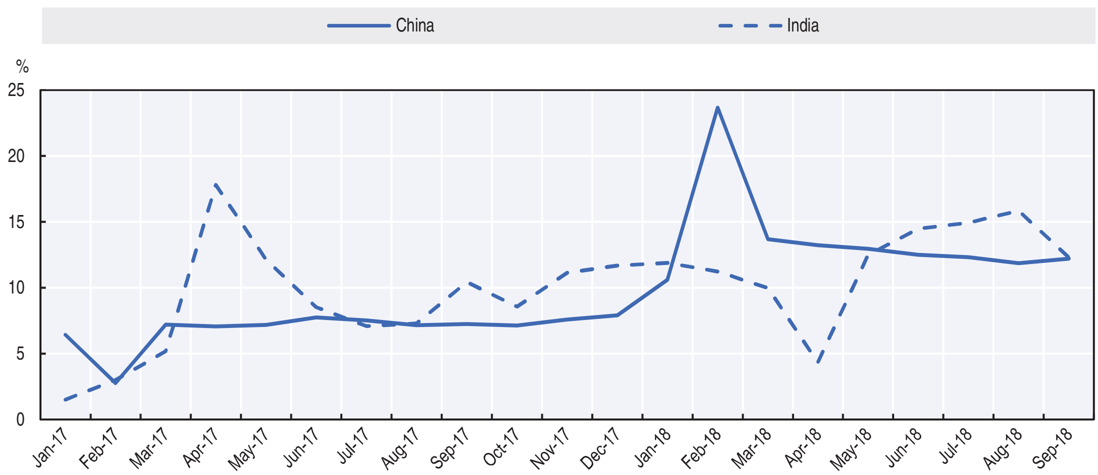
The services sector was resilient, growing 7.3% in 1Q 2018 in the wake of a 7.7% expansion in 4Q 2017, driven by buoyancy in a range of subsectors – particularly trade, transport, communication, finance, real estate and professional services, and not forgetting public services. Benefitting from relatively good weather, the agricultural sector also posted higher output growth during the period, climbing from 4.5% to 5.3%.

Economic growth forecasts point to 7.5% in FY 2018 and 7.3% in FY 2019. Positive near-term factors include sturdy bank credit growth in 2Q 2018 and the recovery in the year-on-year growth in tourist arrivals to 4.1% in 2Q 2018 from 1.6% in 1Q 2018, which indicate the strengthening of private spending. It is also unlikely that government price stability mechanisms will be scaled back until the end of the fiscal year.

Factors such as the continuous climb in global oil prices, weak currency and rising interest rate do not bode well for consumption. Consumers remained generally pessimistic in 1H 2018 though the extent of pessimism has declined marginally from 4Q 2017. Fixed investment prospects, too, are dimmer. Apprehensions were compounded by the decline in the growth of infrastructure industries index. Hikes in central bank policy rates supporting uptick short- and long-term bond yields also present challenges to resolution of bad debts. However, nominal growth in goods exports (denominated in the local currency) averaged 20.7% 3Q 2018. Sales of crude petroleum and manufacturing products also continued to register large increases during the third quarter (Figure 1.14).

Figure 1.14. **Goods exports of China and India, 2017-18**

Year-on-year year-to-date growth



Note: Data for India relate to fiscal years. Calculations are based on levels data in US dollars.

Source: OECD Development Centre calculations based on CEIC Data and national sources.

StatLink https://doi.org/10.1787/888933886607

India's economy is projected to grow by 7.3% in the medium term from 2019 to 2023. Infrastructure projects, which number more than 1 300 and were originally valued at INR 15,72,066.02 crore, or USD 216 billion, will be key to India's medium term economic performance.[4] The manner in which the projects will be delivered is equally crucial to the mitigation of credit and fiscal risks. Incidentally, a government assessment noted that delays had already affected 263 projects in May 2018 due to issues related to land acquisition, forest clearance, supply of equipment, fund constraints and geological surprises, for example (MOSPI, 2018). Another 348 projects had logged cost overruns, which carry excess cost amounting to INR 3,00,135.5 crore (USD 41 billion) and are equivalent to more than 19% of the initial total cost.

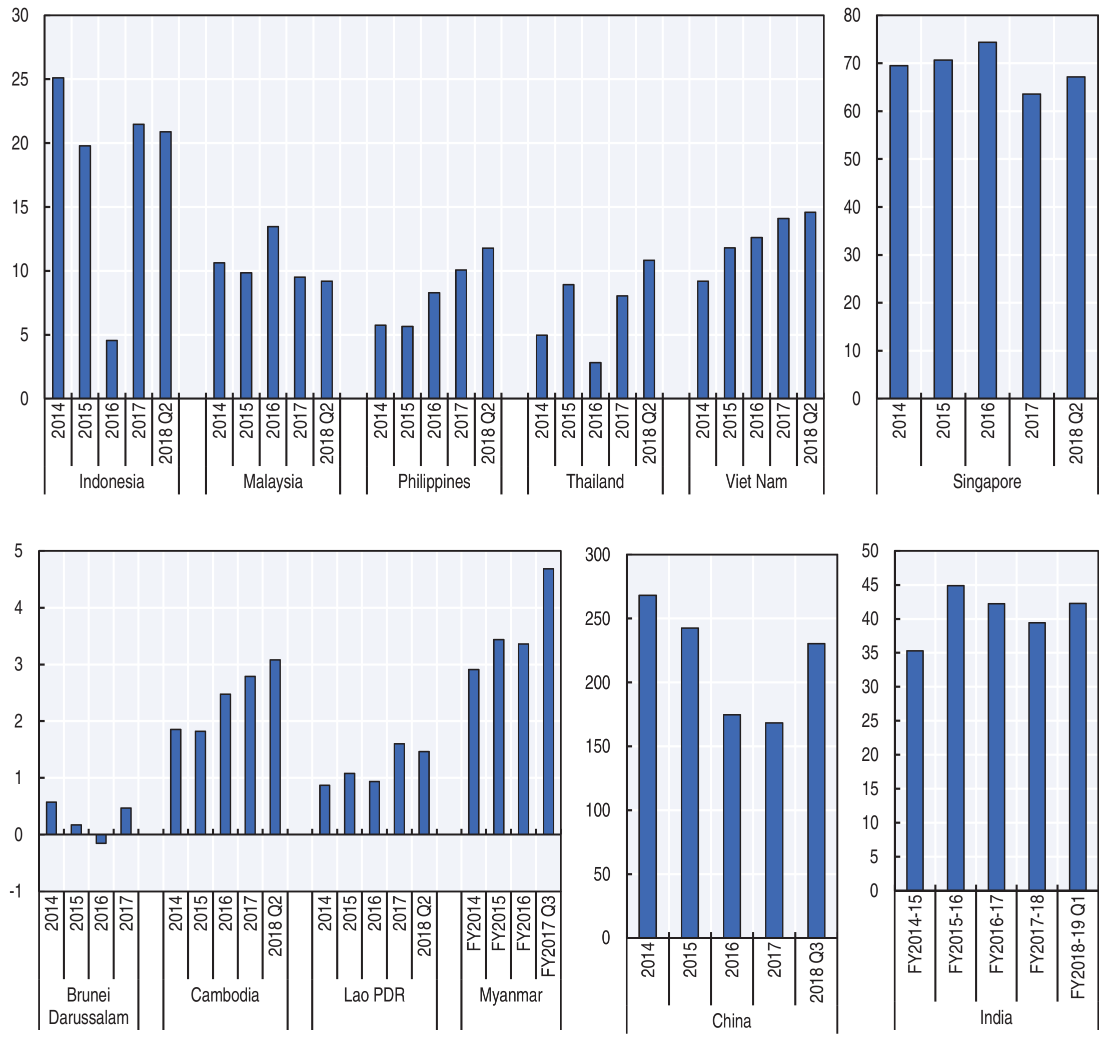
Investment in areas outside infrastructure will just be as crucial and it is encouraging that FDI inflows have continued to rise. Four-quarter moving sum of inflows reached at a multi-year high in 3Q 2017 and remained robust through 2Q 2018. Since 2017, India has gradually opened up further sectors to foreign participation. They include the retail, private security, construction, air transport and pharmaceutical sectors. Private consumption will likely remain buoyant during the period given the positive labour market situation, as long as the inflation and interest rates do not pick up steeply in the coming months.

Foreign direct investment continues to flow into Emerging Asia

FDI in Emerging Asia stayed positive in 2Q 2018, and have generally risen across countries from a year earlier (Figure 1.15). The exceptions were Indonesia and Malaysia, which experienced slight declines in annualised FDI inflows in 2Q 2018 over the same period in 2017. Quarterly annualised trends had been mostly upward since mid-2017 across the region, with levels posting new historic highs in the Philippines, Viet Nam and the CLM countries. Malaysia was the odd one out with its continued decline in inflows in 2Q 2018 – a trend that began in 3Q 2017.

Figure 1.15. **Foreign direct investment in Emerging Asian countries, 2014-18**

USD billion



Notes: Data for India and Myanmar relate to fiscal years. Quarterly data are annualised (i.e. four-quarter sum as of the period indicated). The asset/liability principle is followed in the presentation of FDI data. FDI inflows data refer to foreign placements minus foreign withdrawals (Balance of Payments liability side).

Source: OECD Development Centre calculations based on CEIC data, national sources and IMF (2018b), International Financial Statistics (database).

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Equities accounted for at least 72% of total annualised placements in Cambodia, China, India, Indonesia and Thailand in 2Q 2018 with the rest going to debt instruments, presumably driven by investment liberalisation measures. By contrast, FDI in debt in the Philippines outstripped FDI in equities during the same period by 53.7% to 46.3%, partly attributable to bond issuances to finance the infrastructure drive.

FDI flowed chiefly into manufacturing and partly into financial and insurance services, particularly in ASEAN-5 and China, while capital placements in computers and technology also picked up in China and India.

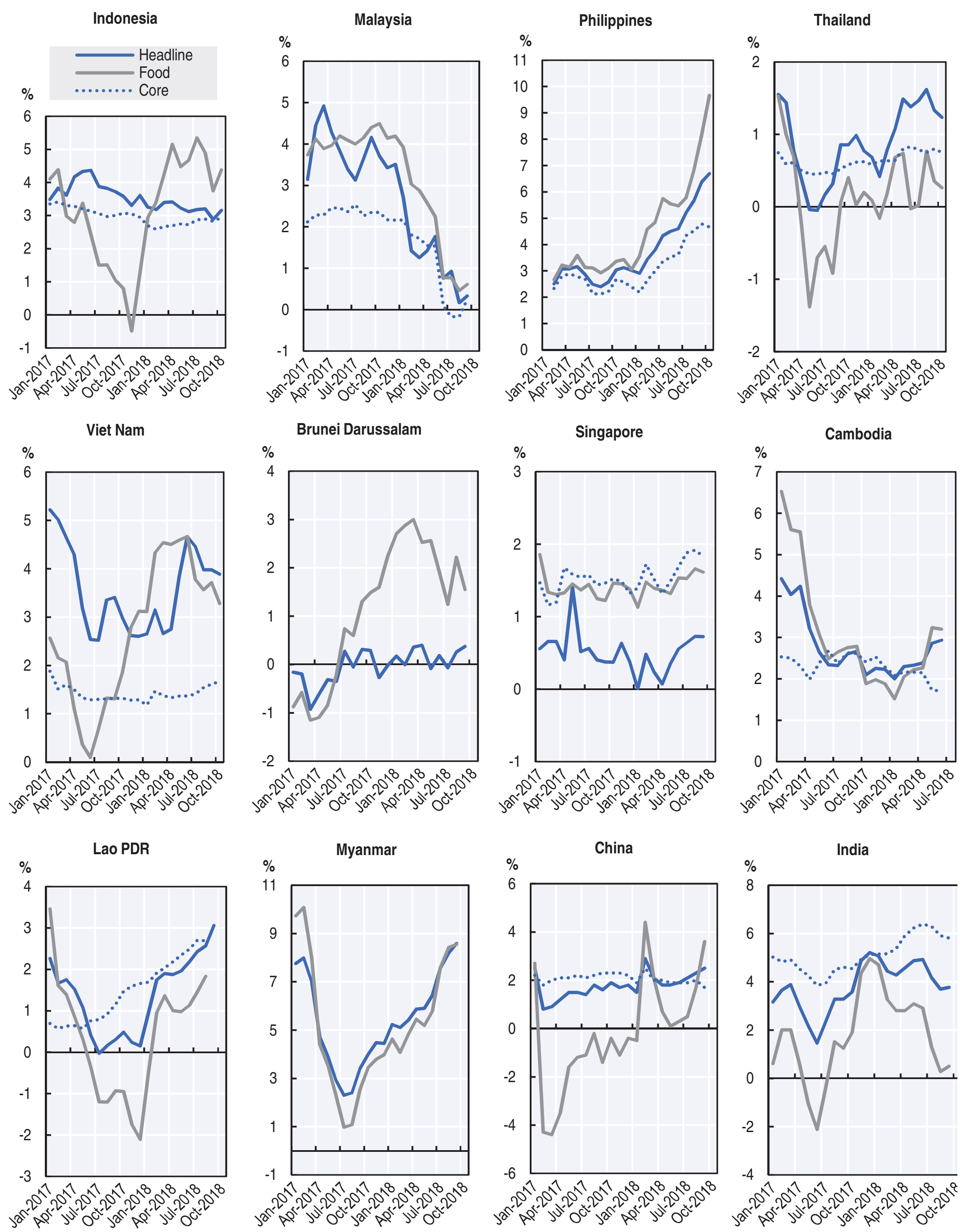
In Indonesia, manufacturing and the wholesale and retail trade accounted for 74% of FDI inflows in the four quarters through to 2Q 2018. Annualised FDI in manufacturing rose year-on-year by over 50% in 2Q 2018, compared to the 46% increase in 2Q 2017. Growth in annualised FDI in WRT was even more impressive at close to 109% year-on-year in 2Q 2018, compared to a 69% climb the previous year. In Malaysia, over 70% of FDI inflows between 3Q and 2Q 2018 went into manufacturing (40%), mining and quarrying (18.6%) and finance and insurance (12%). However, while annualised inflows into manufacturing grew year-on-year by 28.4% in 2Q 2018, FDI declined in mining and quarrying by 8.3% and in finance and insurance by 3.9%. In the Philippines, more than 71% of annualised equity FDI in 2Q 2018 was channelled into the electricity, gas, steam and air-conditioning (EGSA) segment (36.6%) and manufacturing (34.7%). The value of placements in EGSA was USD 1.4 billion, which reversed the USD 190 million outflow in 2Q 2017. As for inflows into manufacturing, they were more than seven times higher in 2Q 2018 than in 2Q 2017. Among other segments, financial and insurance services accounted for 7.8% of inflows and real estate 7%. In Thailand, annualised FDI in manufacturing rebounded by more than a factor of six in 2Q 2018 after declining by close to 70% year-on-year in 2Q 2017. The sector accounted for 42.4% of inflows in the last four quarters. Annualised inflows into financial and insurance activities and real estate activities respectively climbed to 60.1% and 20.4% from the previous year, thus making up 39.5% and 17.8% of total FDI. In Viet Nam, although annualised FDI registered in manufacturing fell by 15.7% year-on-year in 2Q 2018, the sector still took in the largest share at 38.7% of total inward foreign investment. By contrast, annualised registered capital in real estate, construction, accommodation and food services, WRT and professional scientific technology, grew substantially from a year before and accounted for a combined 41.4% of the total. In Cambodia, on an annualised basis, 45% of approved fixed assets were placed in tourism-related enterprises in 2Q 2018. Other services accounted for some 35%. The respective figures were 26% and 42% in 2Q 2017, with the rest going to agriculture and industry.

In China, manufacturing, real estate, leasing and commercial services and financial intermediation captured over 57% of utilised FDI in 2Q 2018 in annualised terms, even though their aggregate share had dropped steadily from almost 78% in 2Q 2015. By comparison, ICT's share in utilised FDI jumped from 2.1% to 14.3% over the same period. In India, telecommunications, computer software and hardware (CSH), wholesale trade, construction and financial, banking and insurance services together accounted for close to 58% of total annualised FDI inflows in 2Q 2018 – substantially higher than their 40.3% aggregate share in 2Q 2017. The segments where FDI increased the most between the two periods were telecommunications, CSH and wholesale trade.

Inflation picture is still mixed

Inflation trends vary. It is upward in China, Philippines, Thailand and the CLM countries but relatively stable or even downward in other Emerging Asian countries (Figure 1.16). All countries in the region have been affected by global oil prices, which almost doubled in the last 15 months (i.e. Brent oil futures price rose from around USD 45 per barrel in mid-June 2017 to USD 85 per barrel by the end of September) before falling marginally. The scale of impacts, however, varies from country to country, chiefly because of differences in relative exchange rate stability, fuel tax regimes and subsidy schemes. In some countries, changes in domestic tax frameworks and food-related policies have contributed to seasonal price push factors. Moderate global food prices (FAO, 2018) provide some respite.

Figure 1.16. **Inflation in Emerging Asia, 2017-18**



Note: Core price index in Emerging Asian countries is generally defined as headline CPI excluding prices of food, energy and other administered goods and services. In Singapore, core price index excludes accommodation and private road transport.

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

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In Indonesia, year-to-date headline and core inflation rates have been lower in 2018 than they were in 2017, with trends relatively stable in the first ten months of the year. Growth in the housing and utilities index as well as in transport, communication and finance, which respectively account for 25.4% and 19.2% of the consumer price index (CPI), had been on a downtrend since June 2017, due in part to government support measures. Food price inflation, for its part, which makes up 18.9% of the CPI, saw a build-up in prices in the early part of the year that ran out of steam in recent months. As for growth in the prices of processed food, beverages and tobacco (16.2% of CPI), it was steady at around 4.1% in January-October 2018 – about 50 basis points lower than in 2017. In Malaysia, headline and core inflation have eased markedly since mid-2017. All CPI subindices recorded weaker year-to-date growth in 2018 through to September than in the same period in 2017. Some prices even fell, such as those of alcoholic beverages, garments, communication and durable goods. Core inflation also receded in July and August 2018 before rising slightly in September 2018. The high base effect,the reintroduction of caps on diesel and gas prices, and the scrapping of GST in June 2018 have all been factors in the slowing of CPI growth. In the Philippines, headline inflation in September rose to its highest level since February-March 2010 at 6.7%, which was maintained in October 2018 to peg the year-to-date rate at 5.1%. The increase was attributable to the climb in subindices across the board led by food and transport.[5] The surge in the prices of rice, corn, meat, fish and vegetables drove the index of food and non-alcoholic beverages (38.3% of CPI) up to a year-on-year average increase of 9.6% in September-October 2018 and a year-to-date rise of 6.7%. The rates in the same periods in 2017 were 3.2% and 3%. The prices of alcoholic beverages and tobacco inflation, though smaller components of CPI, also rose year-on-year by an average of 21.7% in September-October 2018 and by 19.5% year-to-date, almost three times higher than in the same period in 2017. As for transport, which accounts for 8.1% of CPI, it climbed to 8.4% year-on-year on average in September-October 2018 and 6.5% year-to-date from 5.8% and 5%, respectively, one year earlier. The strong climb in consumer price inflation is attributable chiefly to the changes in rice importation policy that commenced early 2017, the rise in global oil prices, the weakening exchange rate, the increase in tax rates on a number of goods and services and inadequate safety nets (Box 1.4).

In Thailand, the uptick in inflation in 2018 was relatively mild at 1.1% year-to-date through to October 2018 from 0.6% a year earlier. Non-core raw food and energy prices (27.4% of the CPI) supplied much of the momentum, rising 2.3% year-to-date from 0.9% between January and October 2017. By contrast, average core inflation moved up only marginally, from 0.5% to 0.7%, over the same period. Of the sub-components, tobacco and alcoholic beverages (1.4% of CPI) rose markedly in 2018, up 5.2% year-to-date from 2.5% in the same period in 2017 presumably due to the increase in excise tax rates and continued tightening up of digital stamp inspection. Similarly, transport and communication prices have increased by between 3.3% and 4.4% respectively since May 2018, after more measured showings between January and April 2018. In Viet Nam, although headline inflation eased slightly, it was still high at 3.9% in October 2018 and 3.6% year-to-date, compared to 3.7% between January and October 2017. The price of food and foodstuffs (36.1% of the CPI), rose 5.2% in September 2018, the highest increase since August 2015, before tapering slightly to 5.1% in October 2018. The agricultural sector grappled with heavy rains and floods in 3Q 2018. Rises in the prices of health and personal care, by contrast, eased substantially in 3Q 2018 as the base effects of the readjustment in medical fees in 2016 and 2017 waned. Increases in the cost of education also leveled out.

Box 1.4. **Oil price pass through to inflation**

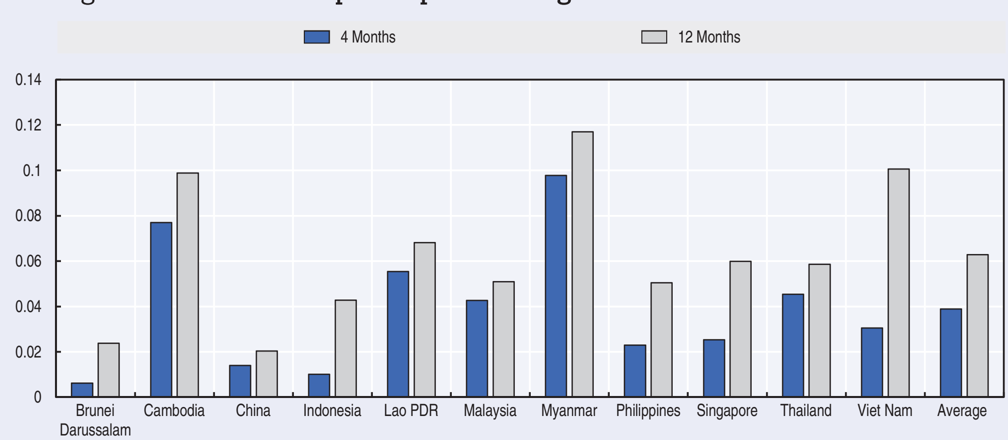
Oil demand increased by approximately 60% during 2000-16 in Southeast Asia, while production declined by 13.8%, causing net imports to increase by 400% over the period (IEA, 2017). This has caused a greater interlink between global fuel inflation and domestic headline inflation even if the connection between price levels in Emerging Asia and global oil prices is lower relative to advanced economies (Kpodar and Abdallah, 2017). More recently, high oil prices and depreciation pressures have made fuel imports more costly and caused higher fuel-driven inflation in some Southeast Asian countries. Energy subsidies and price controls prevailing in Emerging Asia explain the difference in spillover effects across countries. These artificially lower end-user prices to below international market levels (Choi et. al., 2017). Countries such as Brunei Darussalam, India, Indonesia, Malaysia, Myanmar, Thailand and Viet Nam employ such policies. However, due to their cost and distortionary effects, initiatives to reduce them have been taken (IEA, 2017).

As shown in Figure 1.17, there are large disparities between countries regarding oil price pass through. Cambodia, Lao PDR and Myanmar have the higher pass through both in the short and long term. This indicates a large degree of dependence on fuel. These results were obtained using the local projections method proposed by Choi et al. (2017) based on Jorda (2005). The following equation is estimated:

$$\pi_{t+k} = \alpha_k + \sum_{i=1}^{12} \gamma_{k,t-i}\pi_{t-i} + \beta_k \pi_t^{oil} + \sum_{i=1}^{k} \theta_j \pi_{t+i}^{oil} + \varepsilon_{k,t}.$$

where ϖ_{t+k} stands for headline inflation at period t and horizon k, ϖ_t^{oil} global oil inflation and $\varepsilon_{k,t}$ is the error term. We take $\sum_{k=1}^{l} \varepsilon_k$, for l=4,12 as our measure for global oil price pass through. It is the cumulative effect over 4 and 12 months after the shock.

Figure 1.17. **Global oil prices pass through relative to headline inflation**



Note: Crude oil prices used are the European Brent spot prices, in USD per barrel.
Source: OECD Development Centre calculations based on CEIC data and U.S Energy Information Administration (2018).
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In Brunei Darussalam, headline inflation rose but stayed muted at 0.4% in September 2018 and 0.2% YTD. While the prices of food and non-alcoholic beverages (19.1% of the CPI) went up by 2.3% YTD from 0.2% fall in the same period in 2017, monthly rates have been generally easing since March 2018. Transport prices, by contrast, which account for 18.3%

of the CPI, contracted between May and August 2018, before turning positive in September, resulting in a YTD rate of -0.4%, compared to the 1.1% rise in the same period in 2017.

In Singapore, headline inflation was steady, at between 1.3% and 1.9% from January to September 2018. Housing and utilities prices (26.3% of the CPI) declined for the 49th time in the previous 50 months (the exception being May 2017). The decline was also the 16th in straight month between June 2017 and September 2018, though it has lessened steadily since April 2018. Transport prices (15.8% of the CPI) also fell 0.2% on average in July-September 2018, driving the year-to-date index down to about the same level as in the same period the year before. As for food prices (21.7% of the CPI), where the trend has been upward since May 2018, the increase was still arguably mild at 1.6% in September 2018 and at 1.4% year-to-date, which matched the rate in the same period in 2017.

In Cambodia, headline inflation inched upwards to 2.9% in June 2018, continuing its steady rise since it recorded its 22-month low of 2% in January 2018. The inflation uptick had been driven by the prices of food and non-alcoholic beverages (44.8% of the CPI) which rose from 1.5% in January to 3.2% in June 2018. Transportation prices (12.2% of CPI) were also a factor, rising, to 4.9% in June 2018 from 2.5% in March 2018. Housing and utilities, which account for 17.1% of CPI, increased at a steady rate in 2018 after generally contracting the previous year. In Lao PDR, the uptick in inflation was relatively pronounced, with the headline CPI rising 2.6% in August from 0.1% in December 2017 and the YTD rate rising to 2% from 1.1% between January and August 2017. Core inflation more than tripled to 2.3% year-to-date over comparable periods in 2017. The prices of clothing and garments, up 5.1% from 2.4%, and those of transport and communication, which climbed from 2.8% to 4.3%, have gathered the most momentum, partly as a result of external factors and the weakness of the exchange rate. Although the pace of increases in food prices had also been rising, it was still modest at 1.8% in August 2018 despite the flooding caused by the dam collapse in July 2018. In Myanmar, headline inflation recorded a fresh 26-month high in September 2018 at 8.6%, driving YTD inflation up to 6.5% from 4.7% in the same period in 2017. The prices of food and non-alcoholic beverages, alcoholic beverages and tobacco, communication, housing and utilities, restaurants and accommodation, education and health have all posted faster rates of increases in 2018 than in comparable months in 2017. The considerable weakness of the kyat against the United States dollar and the dollar's extensive penetration in the domestic economy appear to be two key factors in inflation's upward trend.

In China, in September 2018, inflation rose for the fourth month in a row, reaching 2.5% headline inflation. This translated into a year-to-date rise of 2.1% compared to 1.5% over the same period in 2017. If Chinese New Year months are excluded, the September 2018 inflation rate was also the steepest since May 2014, with 80% of it attributable to current price factors and 20% to previous year carry-over factors. The prices of food, tobacco and liquor had been increasing at a faster pace since May 2018 and those of transport and communication since March 2018. By comparison, the housing and education inflation rates had been stable since the start of the year, whereas health prices had grown at a slower rate for the twelfth month in succession – from 7.6% in September 2017 to 2.7% in September 2018 – as the impact of measures to make medical prices more market-oriented faded. India experienced an upsurge in inflation that started in June 2017. It slowed down to some extent in 3Q 2018, declining to 3.8% in September 2018 from 4.9% between May and June 2018, even as year-to-date remained high at 4.4% compared to 2.9% between January and September 2017. Growth in food prices (39.1% of CPI) fell to 0.5% in September 2018 from 3.1% in May 2018. The rises in the prices of housing, clothing and footwear, and pan, tobacco and intoxicants (which together account for 19% of the CPI) have lessened slightly in recent months, even though rates remain higher than in 2017. By contrast, the fuel and light price index (6.8% of CPI) exceeded 8% for the third straight month in September 2018, while growth in the prices of miscellaneous items (28.3 % of CPI) steadied at over 5% since April 2018. In July 2017, the government introduced a goods and sales tax system in lieu of federal and state taxes and improved the coverage of sales taxation, which also lowered effective rates of tax on some commodities.

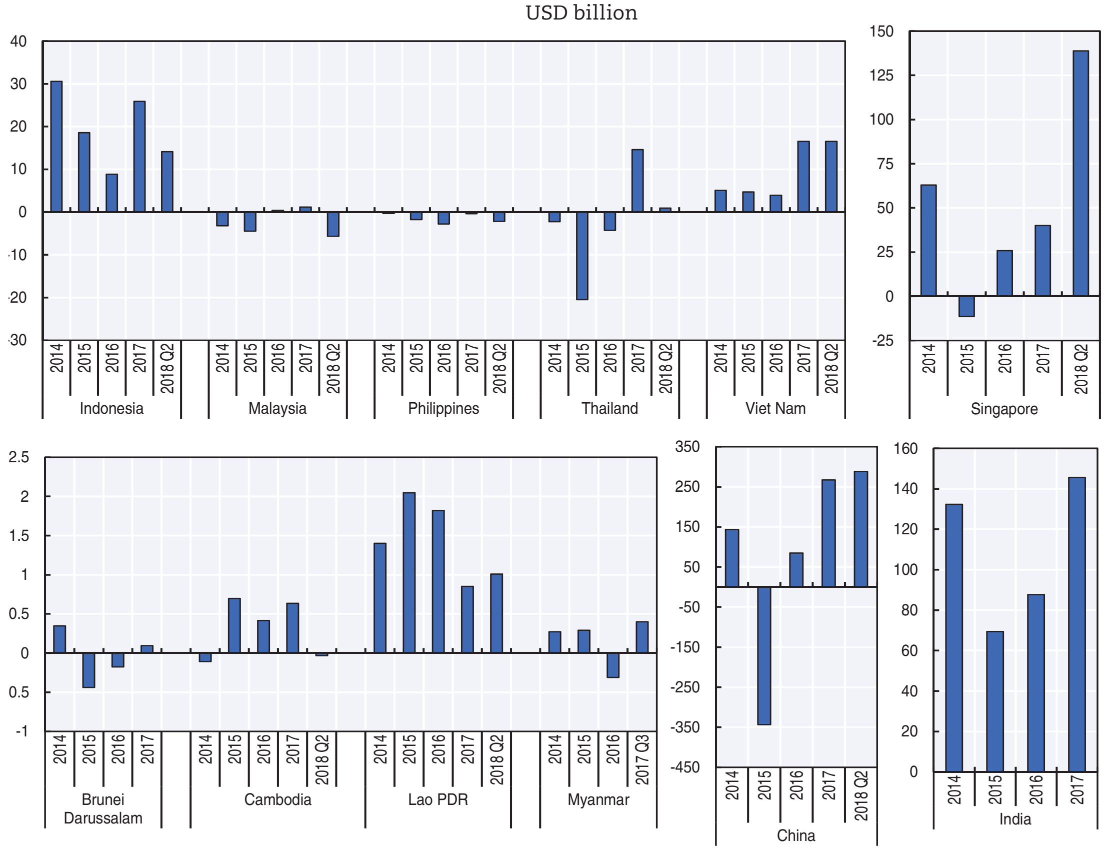
Non-FDI inflows uneven and pressure mounts on some currencies

Uneven non-FDI inflows

Portfolio and other investment inflows in Emerging Asia have been uneven (Figure 1.18). With the exception of Viet Nam, annualised intake in 2018 has weakened in the ASEAN-5 economies. In Indonesia, the decline in portfolio investment and the net outflow in public sector cross-border loans accounted for the fall in capital inflows in the four quarters to 2Q 2018. Portfolio investment outflows in 2Q 2018 in Malaysia were also substantial, exceeding the inflows of the previous two quarters. As for the Philippines, non-FDI outflows in 1H 2018 were greater than in 2H 2017, with negative figures in all three subcomponents – i.e. portfolio, derivatives and other investments. Very similar trends were at work in Thailand. The sole exception was other investments that exclude portfolio capital and derivatives, which turned positive in 2Q 2018 thanks to cross-border loans and trade credits. Meanwhile, the increase in annualised inflows to Viet Nam was driven by the rise in portfolio and cross-border loans.

Figure 1.18. **Portfolio and other investment inflows in Emerging Asian countries, 2014-18**

USD billion



Note: Data for India and Myanmar relate to fiscal years. Quarterly data are annualised, i.e. 4-quarter moving sum. Portfolio and other investment inflows data refer to foreign placements minus foreign withdrawals (Balance of Payments liability side).

Source: OECD Development Centre calculations based on CEIC, IMF (2018b) and national sources.

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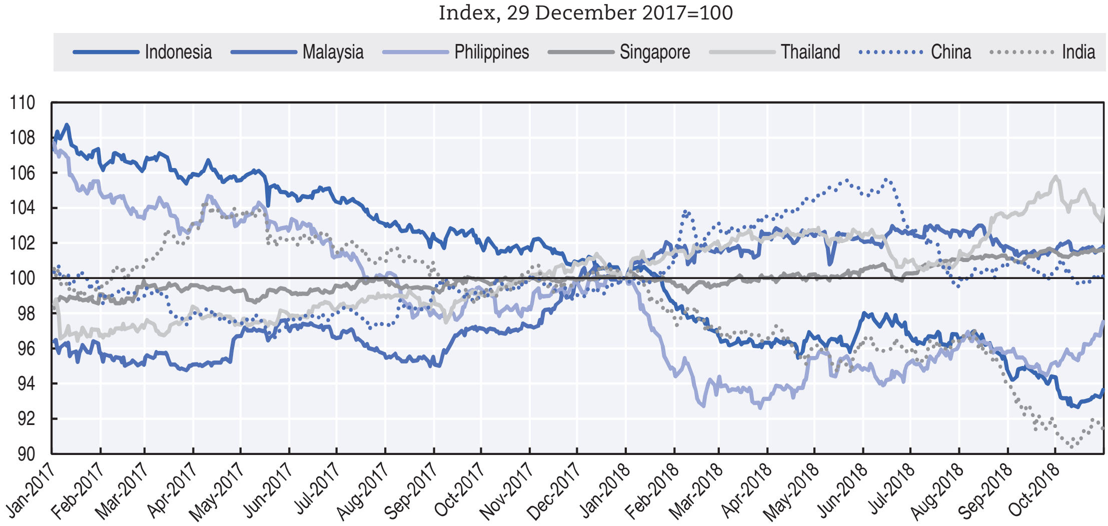
Inflows in 2017 were positive for the first time in three years in Brunei Darussalam, thanks mainly to strong capital investment in debt instruments in 4Q 2017. Similarly, Singapore's annualised non-FDI intake in 2Q 2018 also rose from 2017 as placements in debt instruments picked up substantially. Among the CLM economies, figures for 2017 generally made good reading, though Cambodia posted an annualised outflow in Q2 2018 while Lao PDR continued to take in capital (Myanmar does not have 2018 data yet). China's annualised intake in 2Q 2018 continued to rise on the back of relatively large portfolio investment in the last four quarters. As for India, its position in 2017 was an improvement on 2016, driven by inflows into "other" investments, chiefly debt instruments.

Depreciation pressures on Emerging Asian currencies persist while equity prices slump

The currencies of a number of Emerging Asian economies have been under pressure in 2018. Chiefly responsible are trade uncertainties and the direction of US monetary policy. Worries over possible emerging market contagion stemming from instability in other countries like Argentina and Turkey have also been a contributory factor. Of countries with available data, the Indian rupee, Indonesian rupiah and the Philippine peso have weakened most this year in terms of nominal effective exchange rates (Figure 1.19). In addition, performances between July and September 2018 reveal that pressure on the rupee and the rupiah continued to mount, even as the depreciation pull against the peso eased off. The yuan, too, also lost ground over the three months. Exchange rates against the US dollar further showed that the Myanmar kyat has weakened markedly in the last few months while depreciation has been modest for the Brunei dollar, Singaporean dollar, Malaysian ringgit and Vietnamese dong since June 2018.

Figure 1.19. **Nominal effective exchange rate in Emerging Asia, 2017-18**

Index, 29 December 2017=100



Source: OECD Development Centre calculations based on BIS (2018).

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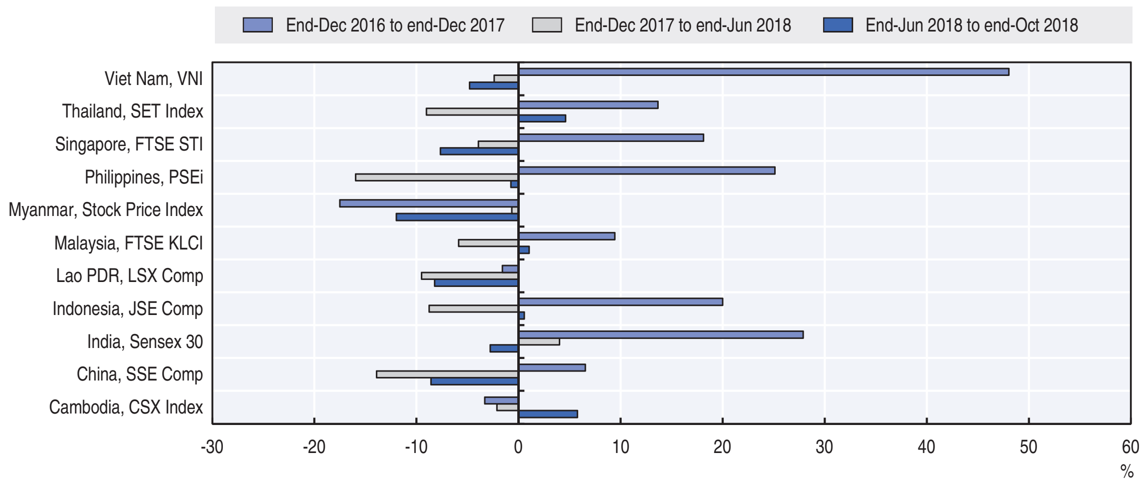
The equity markets in the region have similarly struggled to maintain investor optimism (Figure 1.20). In October 2018, the Shanghai Composite Index experienced the steepest decline of Emerging Asia's bellwether indices – down 26.9% on its peak between November 2017 and April 2018. The Vietnamese, Philippine and Lao PDR stock indices were close behind after declining by somewhere between 21.2% and 24% against their recent peak values. Reassurances from the authorities tempered downbeat sentiments to some extent, with gradual recoveries in the main stock indices of Indonesia, Malaysia, Singapore, Thailand and Viet Nam from June-July 2018 to September 2018. However, investor appetite faltered in October 2018.

Figure 1.20. **Stock market returns in Emerging Asian countries, 2016-18**



Source: OECD Development Centre calculations based on Fusion Media Ltd (2018), www.investing.com.
StatLink https://doi.org/10.1787/888933886721

Central banks move to reassure the market

Some of the central banks in Emerging Asia have signaled their willingness to tighten their policy stances. The central banks of India, Indonesia and the Philippines (all of which target inflation), for instance, have raised their policy rates by another 25 to 50 basis points since June 2018 (Figure 1.21). Increases in policy rates have supported the upward yield movement in both short- and long-term benchmark bonds in most Emerging Asian countries' secondary markets. In a similar fashion, the Monetary Authority of Singapore increased the slope of the nominal effective exchange rate bands in October while the State Bank of Viet Nam moved to reduce credit growth.

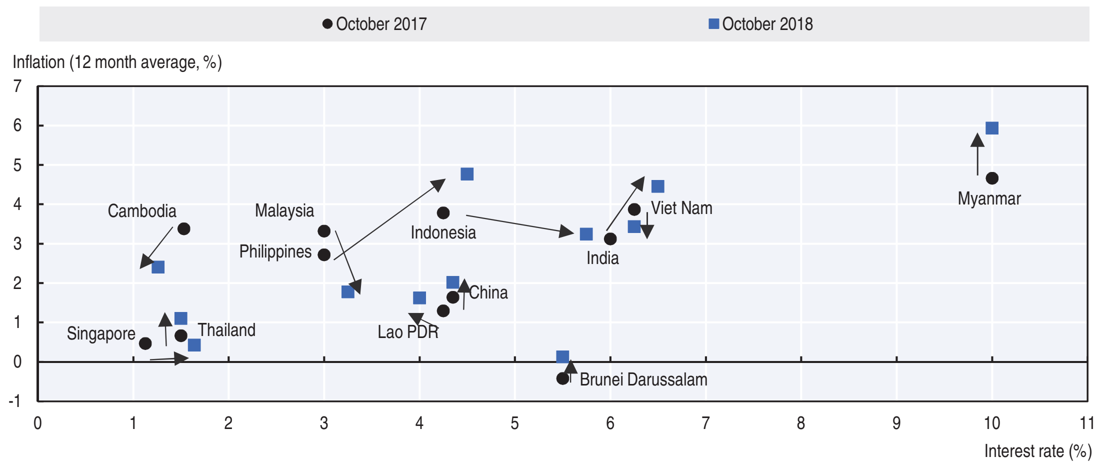
However, the central banks also showed their openness to calibrating other instruments so as to limit the liquidity impact of higher interest rates. As the OECD (2018b) points out, central banks in India, Indonesia and the Philippines accompanied their policy rate hikes with liquidity-enhancing measures such as reductions in their commercial bank reserve requirement ratios (RRRs) earlier this year. More recently, the People's Bank of China (PBoC) cut its RRR by another 100 base points (the third time it has done so in 2018), releasing into the system an estimated CNY 1.2 trillion (Chinese yuan), or USD 173.3 billion, that will more than offset the maturing medium-term lending facility valued at CNY 450 billion, or USD 65 billion.

By comparison, monetary policy is somewhat restrained in containing inflation and exchange rate pressures in CLM countries resulting from greater usage of foreign currencies in domestic transactions (Box 1.5).

In addition to monetary policy measures, India and Indonesia have implemented capital controls – mainly through import restrictions – to contain outflows of hard currencies.

Since February 2018, the direction of spreads in five-year senior credit default swap (CDS) spreads have diverged from one country to another, suggesting contrasting evolution in risk perception (Figure 1.22). While the CDS spreads in China and Thailand stayed at multi-year lows, they rose sharply in Indonesia and Viet Nam (to their levels prior to the 2016 United States presidential elections). In Malaysia and the Philippines rises were moderate.

Figure 1.21. **Evolution of inflation and benchmark interest rates in Emerging Asia, 2017-18**



Note: The policy and benchmark interest rates used in the chart are as follows: prime lending rate (Brunei Darussalam), saving deposit rate as provided by IMF (Cambodia), nominal lending rate ≤1 year (China), repo rate (India), BI 7-day reverse repo rate (Indonesia), BOL short-term lending rate (Lao PDR), overnight policy rate (Malaysia), central bank 1-year fixed deposit rate (Myanmar), reverse repo rate (Philippines), monthly average of SIBOR (Singapore), repo rate (Thailand) and refinancing rate (Viet Nam). Annualised inflation pertains to the 12-month average of monthly inflation rates up to the latest data. Latest available data between June 2018 and October 2018.

Source: OECD Development Centre calculations based on CEIC and national sources.

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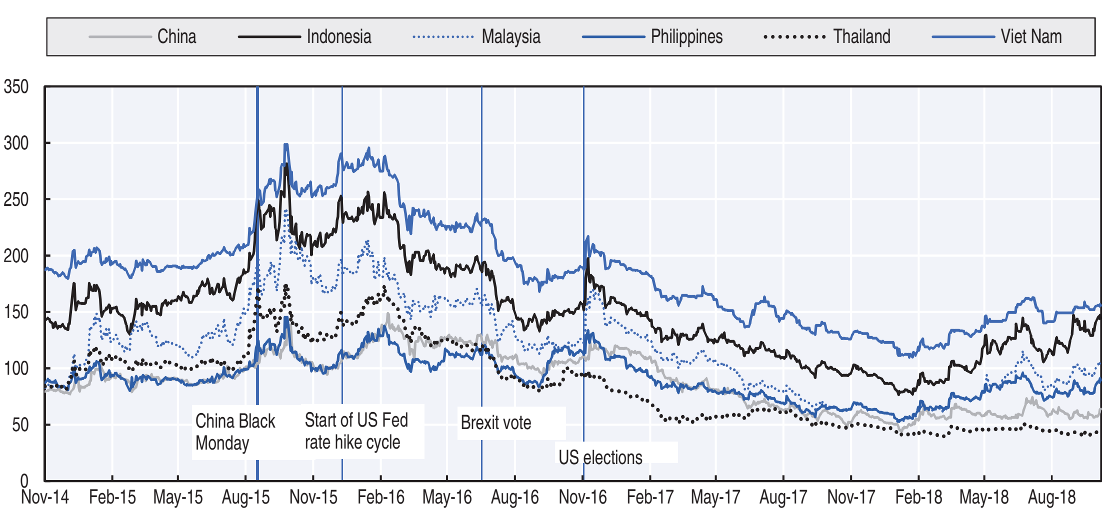
Figure 1.22. **Credit default swap spreads (5-year senior) in Emerging Asia, 2014-18**

Mid-spread in basis points



Source: OECD Development Centre and Thompson Reuters.

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Box 1.5. **Dollarisation in Cambodia, Lao PDR, Myanmar**

Foreign currency denominated assets still represent a large share of the assets held and used for transactions by residents in the CLM countries. This is known as "dollarisation". In the literature, two main motives for holding foreign currencies emerge: asset substitution, where the foreign currency assets are held to shield against inflation, and currency substitution, where foreign currencies are used as a stable unit of account and exchange (Duma, 2011). The former is prevalent in CLM countries and is measured through the ratio of foreign currency deposits (FCD) over broad money (M2). Trends in dollarisation vary substantially across CLM countries (Table 1.3). Lao PDR had the highest level in the region until roughly 2003. The level of dollarisation has dropped steadily over the last 20 years, although the use of the Thai baht remains strong in border regions and is under-reported in general. In Cambodia, the level of dollarisation increased and Myanmar has seen its level fall, from 41.7% in 2007 to 19.4% currently.

Table 1.3. **Level of dollarisation in CLM countries**

Ratio of foreign currency deposits over broad money M2

Country	Cambodia	Lao PDR	Myanmar
FCD/M2	84.75%	37.60%	19.39%

Source: OECD Development Centre calculations based on national sources.

In Cambodia, a stable macroeconomic and political environment has been achieved and the banking sector significantly developed over time, but dollarisation has remained large, especially in the cities. Measures have been taken, such as requiring a minimum of 10% of the loan portfolio to be in Riel by 2019 and obliging businesses registered with the government to post prices in Riel (IMF, 2017). Dollarisation in Myanmar has different characteristics as it is mainly driven by administrative rigidities which are gradually being removed (Kubo, 2014). Recent measures include allowing private firms to buy and sell foreign exchange at banks. This gives firms an alternative to the usual direct FCD trading amongst importers and exporters, which required large amounts of foreign currency holdings. But conversion through banks is still less prevalent due to shortages of foreign currencies and high fees.

Recent normalisation of US monetary policy will provide an opportunity to consider de-dollarisation, but the process must be gradual and market-oriented to prevent adverse effects related to forced transitioning to a domestic currency. Switching to a domestic currency should not represent a cost for businesses. Convertibility should be easy and cheap. Firms should also be assured that they can switch between currencies at all times, and the government should hold a large cushion of foreign reserves to deal with convertibility scares. Furthermore, financial literacy concerning monetary policy could be improved to avoid unfounded worries about holding domestic currency. Central banks could be given more independence. This could drive down inflation expectations and reinforce the credibility of convertibility. These measures would underline that doing business in a local currency does not represent a higher risk or cost and should promote their use.

Deficits in current account and fiscal position need to be monitored

The persistence in some countries of deficits in both current account and fiscal positions relative to GDP is raising some concerns. India, Indonesia, Lao PDR, Myanmar and the Philippines are among the Emerging Asian countries that have recorded generally low but persistent twin deficits in the last few years – the same countries that have had to contend with relatively stronger asset sell-off pressure in the last two quarters, as indicated by the direction of exchange rates and bond yields.

Current account balance outlooks are mixed as fiscal consolidation gains traction in many Emerging Asian economies. The extent to which trade will be affected by protectionist measures may also impact the inflow of hard currencies and government revenue. Global oil prices, which can raise the import bill and the cost of related social safety nets, are another factor. Domestically, on top of subsidy payouts, governments may also restrict the rollout of infrastructure programmes as they consider their bottom lines.

Current account balance trends not synchronous

In Indonesia, the current account balance (CAB) deepened to about -2.3% of GDP in 2Q 2018 on an annualised basis (four-quarter moving sum) from about -1.9% in 2017 (Figure 1.23).[6] The annualised goods trade surplus in 2Q 2018 narrowed to about half of the level in the previous year, whereas deficits in the services trade and income transfer widened during the same period. The slippage in the goods trade balance was largely due to the sharp rise in growth of non-oil merchandise imports, matched by a more moderate uptick in the growth of non-oil exports. Oil shipments in both directions rose robustly, though the net deficit widened. In a move to contain vulnerabilities, oil contractors were instructed to sell all their output to the government-owned Pertamina company, so affording the country's palm crop fund greater leeway in narrowing the price gap between biodiesel and diesel. In Malaysia, the annualised CAB inched up to about 3.3% of GDP in 2Q 2018 from 3% in 2017. The goods trade annualised surplus increased by 16% year-on-year in 2Q 2018 despite the slow-down in the growth of both goods exports and imports. As for current account deficits, they deepened in trade in services. In the Philippines, the annualised CAB further declined to a negative 1.6% share of GDP in 2Q 2018 from -0.7% in 2017. The goods trade deficit grew by more than a quarter, with growth in goods exports declining substantially more than in goods imports. The gap in goods trade was partially offset by gains in the services trade, primary income and secondary income – fuelled by remittances from overseas workers and the earnings of outsourcing firms. In Thailand, though lower than the 11% of 2017, the annualised CAB stayed robust at about 10% of GDP in 2Q 2018. The goods trade's annualised surplus in 2Q 2018 was down 8.7% year-on-year, while the primary income deficit increased by the same amount year-on-year. Over the same period, however, the services trade surplus rose by 28.7% year-on-year, bolstered by the 24.9% increase in travel services receipts. The secondary income surplus also rose, by 12.3% YOY. In Viet Nam, driven by the strong 116% year-on-year rise in the annualised surplus of the goods trade, the annualised CAB almost doubled to 5.4% of GDP in 2Q 2018 from 2.9% in 2017. The services trade deficit persisted, although it was less pronounced than the previous year. Over the same period, the net secondary income surplus showed further improvement on the year before, though the margin was more than offset by the increase in the net primary income deficit.

In Brunei Darussalam, an improved trade position was the main factor in the CAB's recovery from 12.9% in 2016 to 16.7% of GDP in 2017 (roughly the same as in 2015). The goods trade surplus rose by more than 11%, whereas the services trade deficit declined by some 37%. In Singapore, the annualised CAB held up well at 18.9% of GDP in 2Q 2018, marginally higher than 2017's 18.8%. The trade in goods maintained the surplus of the previous four quarters. It inched up by 1.2% year-on-year, which was more than enough to compensate for the wider trade services deficit.

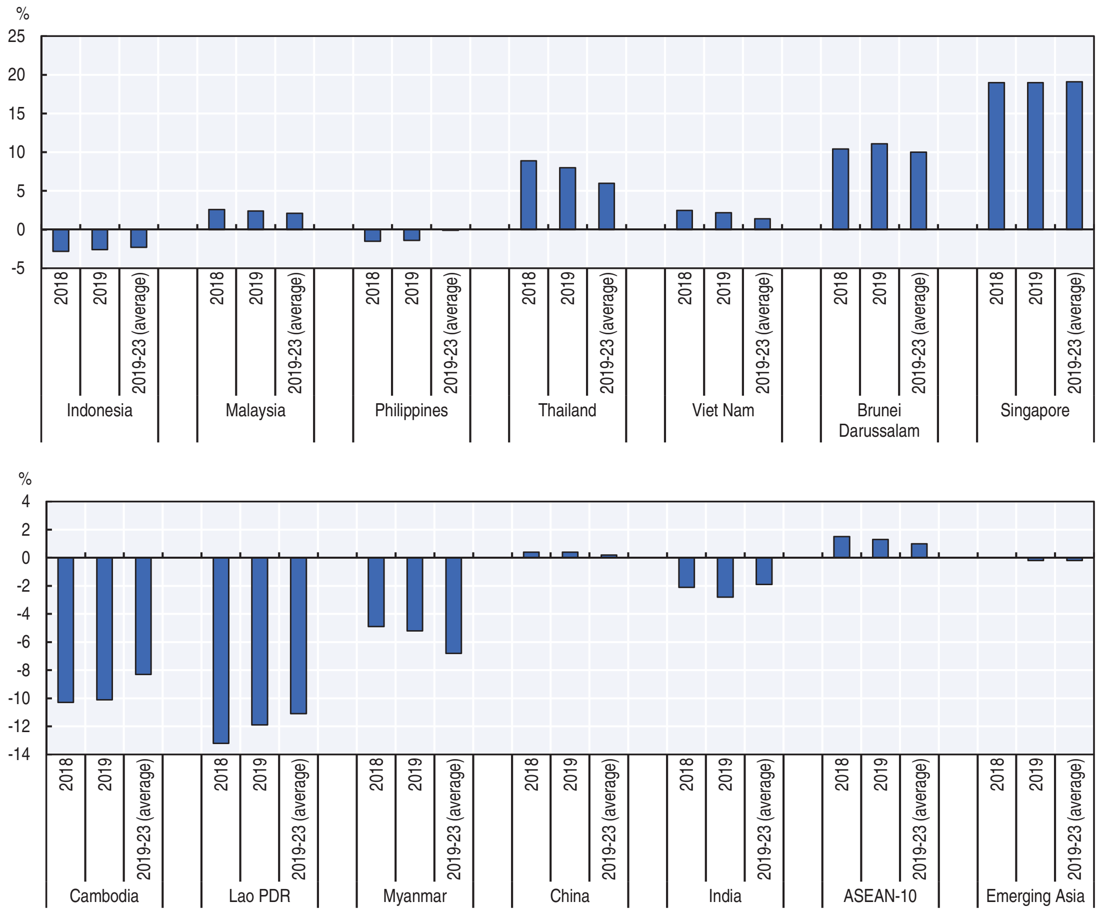
In Cambodia, the CAB was a negative 8.1% of GDP in 2017, continuing the deficit trend of at least 8% of GDP since 2012. Annualised CAB in 2Q 2018 also declined, recording a deficit that was about 46% wider than a year earlier.[7] Goods trade deficit also worsened in 2Q 2018 on an annualised basis compared to the previous year, which had been partially buttressed by the improvement in the services trade surplus. During the same period, the surplus in current transfers increased by about 1% year-on-year thanks to the resilience of overseas workers' remittances. However, that improved showing was more than cancelled out by the rise in the current income deficit, which grew by about 8% year-on-year during the same period. In Lao PDR, the CAB came in at a negative 7.2% of GDP in 2017. That deficit was nevertheless an improvement on those of 7.8% and 15.8% in 2016 and 2015 respectively. That being said, the deficit was still the second largest in Emerging Asia. Although trade in goods saw its deficit shrink, so did the surplus in the services trade. The combined current transfer and income deficit, which has doubled since 2016, was an additional negative factor. In Myanmar, the annualised current account deficit in the third quarter of FY 2017 swelled by over 124% from a year earlier, putting the CAB-to-GDP ratio on track to exceed 4.5% by end of the fiscal year, compared to 3.9% in FY 2016. The trade in goods deficit of the previous four quarters widened by over 67% year-on-year, while the trade in services surplus fell slightly. On the upside, combined primary and secondary income surplus increased by more than 43% during the same period, fuelled by international remittances.

In China, the annualised CAB slipped to 0.5% of GDP in 2Q 2018 from 1.3% in 2017, which suggests that the 2018 annual figure could be the lowest in more than 20 years. The annualised trade in goods surplus posted a modest uptick, while the annualised trade in services deficit declined minimally. However, the annualised primary income deficit surged more than nine-fold year-on-year as payments held steady, while income fell by close to 18% as offshore earnings from investment and the offshore compensation of domestic employees tumbled sharply. In India, the annualised CAB deteriorated to a negative 3.4% of GDP in 1Q of FY 2018 from negative 2.5% of GDP in FY 2017. The annualised deficit of trade in goods increased by more than 25% year-on-year in 1Q FY 2018, driven by the large imbalance in general merchandise trade. Gold imports, which had been a central current account issue in the past, saw their four-quarter cumulative amount decline by about 11.5% year-on-year in 2Q 2018. The primary income annualised deficit also widened due to the repatriation of investment earnings. By contrast, the annualised surplus of trade in services grew by close to 10% year-on-year on the back of computer-related services. Overseas workers' remittances similarly propelled secondary income to a year-on-year growth rate of about 15%.

Over the medium term, the CAB-to-GDP ratio of most of the surplus countries in the region is projected to narrow slightly, with the exception of Singapore (Figure 1.23). At the same time, the CAB-to-GDP ratio of most of the deficit countries will likely improve (i.e. deficit will lessen), with the exception of Myanmar.

Figure 1.23. **Current account balances of Emerging Asian countries**

Percentage of GDP



Note: The cut-off date for data used is 21 November 2018. The weighted averages are used for ASEAN average and Emerging Asia average. Data for India and Myanmar relate to fiscal years. Myanmar's 2018 data refers to the interim 6-month period, from April 2018 to September 2018 while the 2019 data refers to the period from October 2018 to September 2019. The 2018 and 2019 projections for China, India and Indonesia are based on OECD Economic Outlook 104 (database).

Source: OECD Development Centre, MPF-2019 (Medium-term Projection Framework).

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Fiscal consolidation is generally gaining a foothold

Indonesia's central government's annualised fiscal deficit-to-GDP ratio (deficit ratio) declined to 2% in 2Q 2018, well below the 2.5% recorded in 2017 and the statutory limit of 3%. The annualised total revenue-to-GDP ratio (revenue effort) and the tax revenue-to-GDP ratio (tax effort) continued to rise, after hitting multi-year lows in 3Q 2017. The annualised expenditure-to-GDP ratio (expenditure ratio) also fell, albeit marginally, from 2017. In August 2018, the national government set its fiscal deficit target at 2.1% of GDP for 2018 and 1.8% for 2019. Malaysia's annualised deficit ratio eased to 2.6% in 2Q 2018 from 3% in 2017, just within government's target of 2.8%. Annualised revenue and tax efforts improved between 2Q 2018 and 2017 after a continuous decline since 2Q 2015, while the annualised expenditure ratio had been steady since 2017. However, with revenues under pressure, the deficit ratio could still overshoot in the wake of the scrapping of the goods and service tax (GST) in June 2018 and despite the introduction of a sales and service tax (SST) in September 2018. The SST is expected to yield an annual revenue of

MYR 21 billion, less than half of revenue collected from the GST, estimated to be about MYR 44 billion in 2017. The government has also scrapped its plan of balancing the budget in 2020 and has projected a 3% deficit ratio target. It will set its 2019 fiscal target in November 2019 with debt-related concerns figuring prominently in the background. As for the Philippines, it saw its annualised fiscal deficit ratio climb to 2.4% in 2Q 2018 from 2.2% in 2017. Between 2017 and 2Q 2018, annualised revenue rose from 15.6% to 16.4% and tax efforts from 14.2% to 14.7%. Accordingly, annualised expenditure ratio went up by 80 base points to 18.7% compared to 4Q 2017. While the first instalment of the tax reform programme improved the intake of revenue, the resulting inflationary push – compounded, among other things, by limited safety nets – will be a concern. Thailand, for its part, also saw its annualised fiscal deficit ratio decline to 3.3% in 3Q FY 2018 from 3.5% at the end of FY 2017. Furthermore, monthly data from August 2018 (one month before the end of the fiscal year) showed that the deficit level was about THB 100 billion below the target of THB 550 billion set for the period. The annualised revenue effort rose marginally, while the tax effort and expenditure ratio were by and large steady.[8] For FY 2019, the legislative assembly has set a target deficit level of THB 450 billion, some 26% lower than the revised target in fiscal year 2018. The situation in Viet Nam was more upbeat, as central government's annualised budget deficit ratio of 4.7% in 3Q 2018 was not only a improvement on 2017's 6.7%, it was also the country's lowest since 3Q 2013. Revenue and tax efforts posted modest gains between 2017 and 3Q 2018, matched by a marginal decline in the annualised expenditure ratio. In addition, the government's annualised primary deficit ratio in 3Q 2018 was substantially lower than the target of 3.7%, though the gap is expected to narrow in the last quarter of the year. For 2019, the government has set a lower primary deficit ratio target of 3.6%.

The fiscal deficit ratio of Brunei Darussalam settled at 10.9% in FY 2017 (i.e. fiscal year ending March 2018) after following a steep 18.3% slide in FY 2016. The recovery in oil prices was instrumental in the revenue effort's first year of improvement after five consecutive years of decline. It also helped that the government was able to rein in the expenditure ratio in FY 2017, so halting a three-year climb. For FY 2018, the government proposed the same budget as in the previous fiscal year to hedge against the volatility of oil prices. Singapore posted a surplus in FY 2017 (i.e. fiscal year ending March 2018) equivalent to about 2.1% of GDP. It was the second year running it had done so, after ending FY 2016 with a surplus ratio of 1.4%. In line with the rising trend since FY 2015, total revenue (including net investment) and tax efforts increased over the previous year, while the expenditure ratio (including transfers) again fell after also edging downwards the previous year. For FY 2018, the government is looking at reduced total revenue and tax efforts which, coupled with a higher expenditure ratio, should yield a deficit ratio of about 0.1%.

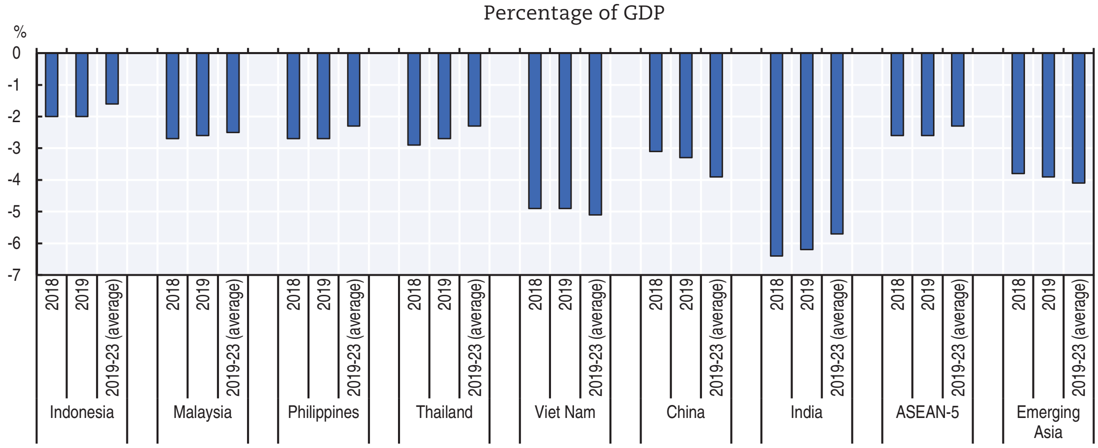
In Cambodia, the fiscal balance reverted to a deficit of about 0.9% of GDP in 2017 following a slight surplus of 0.4% in 2016. The uptick in spending, driven by both current and capital outlays, outstripped the improvement in revenue collection. Data from January to August 2018 reveal that the country's year-to-date fiscal balance stayed positive, though its level was lower than in the same period a year earlier. As with the previous year, however, spending is expected to gain some momentum before the end of the year. Lao PDR's fiscal deficit ratio logged in at 5.5% in 2017 from 5.2% in 2016, the third straight year that the deficit exceeded 5% of GDP. The annualised expenditure ratio rose minimally in 2017, while the revenue and tax efforts declined more pronouncedly to continue a trend that goes back to 2014. In 2018, the government programmed a deficit level that is almost 21% lower than in 2017. The assumption is that revenues will rise by 11.2%, whereas expenditure will increase by only 2.8%. Although Myanmar's deficit level declined by about 10% between fiscal years 2017 and 2018, its deficit ratio remained elevated at around 5%. The spending plan submitted in July 2018 expects expenditure to pick up, taking into account projects that have been brought forward during the interim six-month period. Revenues are also expected to rise, but they are projected to do so at a slower pace.

China's annualised deficit ratio narrowed to 3.4% in 3Q 2018 from 3.7% in 2017. The revenue effort declined by about 10 base points during the period. The decline was attributable chiefly to the fact that weaker collection of non-tax revenues cancelled out the increase in the tax effort, which rose by about 40 basis points. The expenditure ratio also declined to contain the slippage. By comparison, India's annualised deficit ratio steadied at 3.5% between 1Q FY 2018 and FY 2017 and was thus slightly higher than the target of 3.3% set for the year. The revenue effort nudged downwards by about 20 basis points despite the similar magnitude of the increase in the tax effort. The expenditure ratio compensated, however, thanks to a fall of roughly 20 basis points, mainly due to a contraction in capital account spending.

In the medium term, overall, the general government fiscal deficit of the larger Emerging Asian economies is estimated to deepen slightly (Figure 1.24). Fiscal risks will require close monitoring in India and Viet Nam as well as Lao PDR and Myanmar among smaller economies in the region.

Figure 1.24. **General government fiscal balance in Emerging Asia**

Percentage of GDP



Note: The cut-off date for data used is 21 November 2018. ASEAN and Emerging Asia are weighted averages of the individual economies. Data for India and Thailand relate to fiscal years. The 2018 and 2019 projections for China, India and Indonesia are based on the OECD Economic Outlook 104 database. General government balances data are not necessarily comparable to the budget balances published by national governments. Emerging Asia in this chart is comprised of ASEAN-5, China and India.

Source: OECD Development Centre, MPF-2019 (Medium-term Projection Framework).

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Box 1.6. **Managing taxpayers' compliance**

Many factors influence the level of tax revenues in an economy. These include economic structure and conditions, tax policy and tax administration, and the level of taxpayers' compliance and government enforcement. In the management of taxpayers' compliance, it is important to pay more attention to ensuring effective compliance risk management, managing the compliance of large taxpayers, addressing international tax avoidance and evasion, optimising the use of tax withholding at source and third party reporting requirements, and the use of voluntary disclosure policies and programs.

Effective compliance risk management processes are an integral part of a revenue body's strategy for improving taxpayers' compliance. The approach should be systematic and cyclical, focusing on the overall compliance environment rather than on individual

Box 1.6. **Managing taxpayers' compliance** *(cont.)*

taxpayers. By identifying and assessing the main compliance risks and their drivers, the process can assist revenue bodies to establish overall priorities for their compliance activities across all segments of taxpayers.

In the Asia-Pacific region, the trend has been to organise revenue bodies' compliance programmes around "taxpayer segments", in particular, large corporate taxpayers. Most tax administrations in the region say they have an organisational division or unit that manages the tax affairs of designated large taxpayers. The Inland Revenue Board of Malaysia created a large taxpayer branch in 2015 that will handle large and high- profile taxpayers, while the Bureau of Internal Revenue of the Philippines has a criterion based on size for each type of tax it collects. A level above an indicated threshold implies being serviced by the large taxpayer unit.

As for international tax avoidance and evasion, promoting transparency and the exchange of information among jurisdictions for tax purposes - exchange of information on request, and automatic exchange of information - and tackling tax avoidance with the OECD/G20's Base Erosion and Profit Shifting (BEPS) project, have been the two key components of international efforts to address weaknesses in the international tax system.

Withholding-at-source arrangements are regarded as the cornerstone of an effective personal income tax system. Imposing the obligation on intermediaries such as employers and financial institutions to withhold tax from payments of income generally ensures that the large bulk of tax due on such income is paid to government in a timely manner, and that taxpayers meet their income tax obligations. The benefits of withholding mechanisms are particularly important to developing and emerging economies where the level of tax morale and understanding may be low, and where most taxpayers are not required to file annual tax returns. In Viet Nam for instance, employers must withhold the income taxes of their employees and deposit them with the State Treasury before the 20th of the following month. Employers also fill in the personal income tax declarations on behalf of their employees if they are their sole source of revenues. They then submit them before the end of the year. In the Philippines, revenues are withheld from passive incomes such as interest and dividends at levels of 20% and 10% respectively. Lao PDR has a similar system but at a flat rate of 10%.

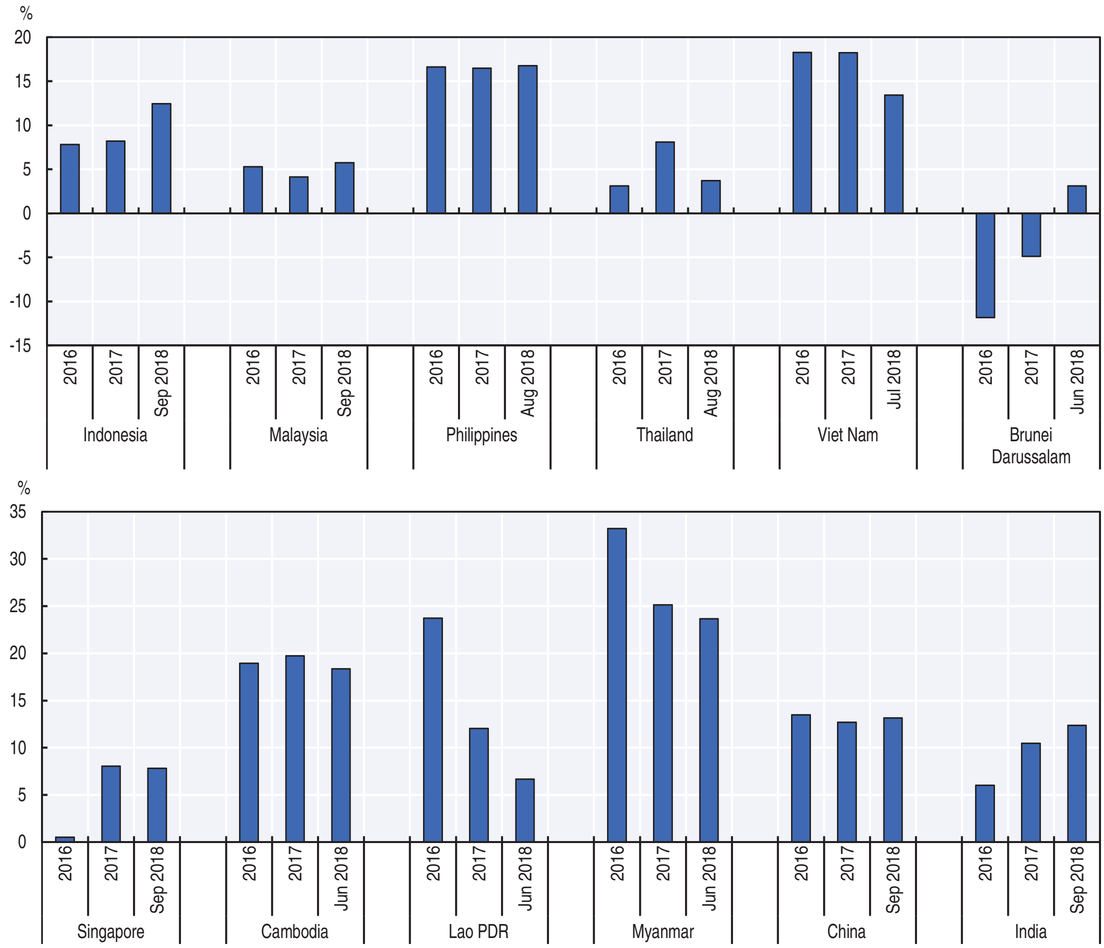
Voluntary disclosure mechanisms can be an important part of compliance programmes as part of a broad approach to facilitating compliance outcomes. Such programmes offer non-compliant taxpayers the opportunity and incentive to put their tax affairs in order. As well as being less resource-intensive than investigations, they may generate significant insights into the reasons for evasion (including through accident) and the structures used to facilitate deliberate evasion.

Banking sector is generally stable even though risk factors

The banking systems in Emerging Asia have generally remained steady despite the spread of risk factors. Loan growth widely sustained its momentum in 2017 through 2Q and 3Q 2018 and rates are still brisk by and large (Figure 1.25). Capitalisation remains sufficient by global standards even if adequacy rates have declined in much of the region since 2017. Profitability trends vary, with half of the countries which have data showing improvement in returns since 2017 in line with the global picture. Asset coverage of short-term liabilities is also ample and continues to increase. However, although the proportion of stale assets to total portfolio is relatively low in most Emerging Asian countries, asset quality issues persist. While national frameworks have made progress in resolving stale assets and developing a market for them, concrete policy action at national and regional levels must address issues of clarity and asset valuation standards.

Figure 1.25. **Bank lending in Emerging Asian countries, 2016-18**

YOY growth



Note: Indonesia-Commercial and rural bank loans; Malaysia-Total banking sector loans; Philippines-Total banking sector loans; Thailand-Outstanding commercial bank credit; Viet Nam-Total outstanding bank credit; Brunei Darussalam-Commercial bank loans; Singapore-Loans and advances, ACU and DBU; Cambodia-Deposit money bank total gross loan; Lao PDR-Commercial bank total loans; Myanmar-Other depository corporation claims on private sector; China-Total loans; and India-Scheduled bank credit.

Source: OECD Development Centre calculations based on CEIC and national sources.

StatLink https://doi.org/10.1787/888933886816

Bank lending has kept up its strong momentum in much of Emerging Asia. In Cambodia, China, India, Indonesia and Viet Nam rates were in double digits and still rising through to August/September 2018. Though slower, rates had also risen in Brunei Darussalam, Malaysia and, before its August 2018 pullback, in Singapore too. In Myanmar, the direction has been downward since April 2016. Yet the rate of growth in lending still exceeded 23% in May 2018. In the Philippines, rates remained between 15% and 20% from May 2016 to August 2018. Lao PDR and Thailand, where loan growth rates have declined more pronouncedly in recent months are the two exceptions in the region.

The capital adequacy ratio (CAR) of banking systems in Emerging Asia economies is sufficient. Most recent figures point to a CAR average of 16.4% between 4Q 2016 and 2Q 2018 in the 11 economies with data available.[9] The regional average is above the Basel 3 requirement of 8%, but lower than the global average of 19.2% (or 18.2% median) for 133 economies. Only three of the region's economies have CARs above the 50th percentile of the 133-country sample. Cambodia presently has the most capitalised banking system in the region with a CAR of 22.5%. In Myanmar's fledgling banking system, by contrast, it is 12.3%. Capital adequacy ratios of the banking sector in five countries out of nine with data fell between 2017 and 1Q/2Q 2018. The countries were Indonesia, Malaysia, Myanmar, Singapore and Thailand. Four countries, by contrast, boast improved CARs – Brunei Darussalam, Cambodia, India and the Philippines. The narrower Tier 1 CAR metric reveals a similar overall picture. Cambodia's banking system remains the most capitalised of the Emerging Asian economies, though it is Viet Nam that brings up the rear.

Returns on equity (ROEs) data from the period between 4Q 2016 and 2Q 2018 reveal that Emerging Asia's average ROE was lower than the global mean – 10.9% for the 11 countries with data against 13.8% for a 132-country global sample. Only 4 of the 11 boast ROEs above the global median of 13.7%. With its 16.1% ROE in 2Q 2018, Indonesia's banking system leads the Emerging Asia, while India's banking sector, still struggling with non-performing assets, offered a negative ROE of 1.2% over the same period. Of the 9 Emerging Asian countries with data in 2018, 5 have seen their ROEs increase since 2017. They are Indonesia, Malaysia, Myanmar, Singapore and Thailand. The other 4 – Brunei Darussalam, Cambodia, India and the Philippines – have posted declines.

Data on the ratio of liquid assets to short-term liabilities or the asset coverage ratio (ACR) between 4Q 2016 and 2Q 2018 reveal that, although the Emerging Asian average was lower than the global mean, 6 of the 10 countries with data have an ACR above the global 50th percentile. However, their ACRs range widely. Malaysia posted the highest – 151.7% in 2Q 2018. Cambodia's ratio, which has historically been low, was only 25.7% in 2Q 2018 – the lowest in the region. Between 2017 and 1Q/2Q 2018, ACRs rose in 6 of the region's 9 countries – Cambodia, India, Indonesia, Malaysia, Singapore and Thailand – but declined in 3 of them, i.e. Brunei Darussalam, Myanmar and the Philippines).

Arguably, the NPL ratios of Emerging Asian economies are largely benign. Between 4Q 2016 and 2Q 2018, they averaged less than 3.5%, compared to the 7.4% average of a global sample of 131 economies (IMF, 2018a).[10] However, NPL ratios did edge upwards in 2018 in 7 of the 8 countries in the region. In India, government projections point to the estimated gross non-performing asset (GNPA) increasing strongly – from 11.6% in March 2018 to between 12.2% and 13.3% in March 2019 depending on levels of financial stress (RBI, 2018). Most troubled assets are to be found in the books of public sector banks whose GNPA ratio was 15.6% in March 2018. Most such assets are loans incurred by the manufacturing sector with a GNPA ratio of 22.8%. In Thailand, the official NPL ratio in 2Q 2018 was below 3% and had hardly changed since 1Q 2017. However, a number of sectors continue to have NPL ratios of 5% or more – e.g. mining and quarrying (12.2%), construction (5.6%), WRT (5.6%), agriculture (5.3%) and manufacturing (5.2%). In China, Lao PDR and Viet Nam, the official NPL ratios are also low, due to mechanisms like asset sales to public asset management companies and/or delayed the recognition of stale debts. Governments have sought to improve national institutional frameworks for resolving bad debt and have made progress. They have also worked to make public asset management companies (AMCs) more responsive to the needs in developing the market (Deloitte, 2018). However, they have room for improvement when it comes to asset disposal and value recovery. In general terms, the lack of clarity in parts of the regulatory frameworks and the limited acceptability of standards used in asset valuation are two of the factors that constrain market development.

Challenges to robust growth

Overall, growth projections in the near and medium term are favourable for Emerging Asia – Southeast Asia, China and India. If countries were to maintain their robust growth momentum, however, appropriate policies are needed to:

- maximise the opportunities and mitigate the risks of financial technology;
- strengthen export performance amidst rising protectionism;
- mitigate the risks of natural disaster.

Maximising opportunities and mitigating the risks of financial technology

The growing influence of technology in financial services (Fintech) in Emerging Asia carries with it economic opportunities of deeper financial inclusion. By the same token, however, it could also be an economic pitfall if the regulatory environment fails to appropriately guide future developments in the sector. Governments in Emerging Asia are aware of the importance of such a trade-off. Both public and private institutions have launched domestic and cross-border initiatives focusing on various dimensions of Fintech. However, progress on the regulatory front has been uneven and policy gaps related to potential risks remain.

Fintech has penetrated almost every node of the system over the years. It has transformed mechanisms related to the deposit and storage of financial assets, credit transfers, accountancy, trade, payment and settlement, and asset management.[11] Prominent examples of Fintech-enabled innovations include automated teller machines and online banking, debit and credit cards, and electronic payment and settlement.[12] Transactions have become faster and cheaper, financial markets have extended their reach and improved transparency – all of which has contributed to substantial growth in the business of financial institutions.

More recently, mobile devices, together with web- and cloud-based financial functionalities, have become the focus of development. Among the new arrangements that have emerged are open banking, digital wallets, peer-to-peer (P2P) lending and crowdfunding, and robo-advisors. Blockchain technology arguably underpins most innovations, which includes cryptocurrency transactions.

The Fintech in Emerging Asia is gradually expanding

The Fintech by and large comprises payment and transfer systems (both cross-border and domestic), tech-driven insurance (insurtech), asset and wealth management, financial service comparison platforms, data and security systems, mobile banking, cryptocurrency and regulation technology. Global investment in Fintech – through general mergers, acquisitions, venture financing and private equity buyouts – was estimated to be about USD 31 billion in 2016 and 2017 (KPMG, 2018). Though it was more modest than the capital injection in 2015, prospects are promising. Innovation in banking services has attracted the most capital globally and interest in insurance and asset management technologies is growing apace (KPMG and City of London Corporation, 2017). Within banking services, global investment has flowed chiefly into lending services followed by personal finance and payments.

Geographically, investment has focused largely on the United States, the United Kingdom and China in the last few years, though India is gradually making a case for itself as a destination (KPMG, 2018). In Southeast Asia, Singapore, the region's financial centre, leads the way in raising capital and has the most active and sophisticated market in Southeast Asia at the moment. However, the ASEAN-5 economies are slowly catching up (EY, 2018).

Just as they are globally, banking services are currently attracting most capital in Emerging Asia, with alternative lending and payments as the top two subsectors (EY, 2018, 2017b; PWC, 2017a). And as investment flows continue, business is picking up markedly. A study by the Cambridge Centre for Alternative Finance, the Australian Centre for Financial Studies and Tsinghua University (2017) shows that alternative finance credit volume in China grew almost 44 fold to more than USD 243 billion between 2013 and 2016. Although by much less, credit volume in the rest of Asia Pacific also increased over the same period – by more than 14 fold to over USD 2 billion.

Fintech market coverage has gradually widened from enterprises to include e-commerce for farmers, social housing providers, students and even bank clients seeking to restructure debt. Fintech sub-industries have also widened in Emerging Asia (Table 1.4). Moreover, in Indonesia, Malaysia, Singapore and Brunei Darussalam, Sharia-compliant Islamic Fintech services have caught investors' attention. Incidentally, Fintech project return-on-investment in Asia, estimated to be about 25%, surpasses the global average of 20% and the rates in other regions (PWC, 2017b).

Table 1.4. **Examples of Fintech services in Emerging Asia**

Service	Description
Remittance, money transfer and mobile payments	• Web-based or application-based electronic platforms for local or overseas monetary transfers or payments for goods and services acquired • Remittance fees, if any, are generally more competitive than those offered by traditional financial institutions • Widespread in Emerging Asia
Alternative risk assessment for insurance and lending	• Alternative insurance and credit scoring services using machine learning tools and big data to assess the risks involved • Used to obtain tailored insurance policies or loan packages even in the absence of traditional documentary requirements • Relatively at its nascent stage in Emerging Asia
Lending and capital raising platforms	• Platforms that support peer-to-peer lending services as well as donation, debt and equity crowdfunding, which link investors and capital recipients directly • Gaining ground in many Emerging Asian countries
Wealth management	• Utilises machine learning tools for managing various types of financial assets, which include but are not limited to robo advisors and algorithmic trading • Relatively at its nascent stage in Emerging Asia
Platforms comparing features of financial products	• Data aggregators focusing on the characteristics of financial products that are available in the market such as loan packages and insurance policies • Compare interest rates, premiums and charges, among other features, that potential clients will likely get from different insurers and lenders based on the data they provide • Available in many Emerging Asian countries

Note: The table does not aim at providing a comprehensive coverage of Fintech services in Emerging Asia. Data are as of September 2018.

Source: OECD Development Centre.

Fintech offers opportunities for financial inclusion

Fintech could be a way to deepen financial inclusion – chiefly by widening access to credit and insurance services through the inclusion of sectors with limited credit history, patchy financial documentation and minimal collateral. As it currently stands, financial market development in Emerging Asia is uneven. Although banks are the primary intermediaries, a number of constraints make them less responsive to the financial needs of marginalised segments of the economy such as micro, small and medium enterprises (MSMEs) and individuals who have few dealings with financial institutions even when lending quotas are in place (Abraham and Schmukler, 2017; Creehan, 2014; Khor et al., 2015).

As the OECD (2018b) points out, Fintech has the potential for plugging the gap in inclusive lending, particularly in light of deepening technology penetration. Technology has improved credit assessment tools, deepened know-your-customer databases, broadened credit scoring frameworks and made lending arrangements more fit for purpose. Initiatives like open banking have also facilitated the growth of a system in which Fintech firms and traditional financial institutions collaborate through standardised application programming interface. Lower cost and greater efficiency are other key facets of Fintech. They come to the fore in P2P digital money transfers and cross-border remittances and platforms that automate underwriting procedures for MSMEs (BNY Melon, 2015; WEF, 2015). Similarly, mobile e-wallets and mobile banking firms (not to be confused with online banking) have also made it easier and faster to open accounts for parking and transferring funds.

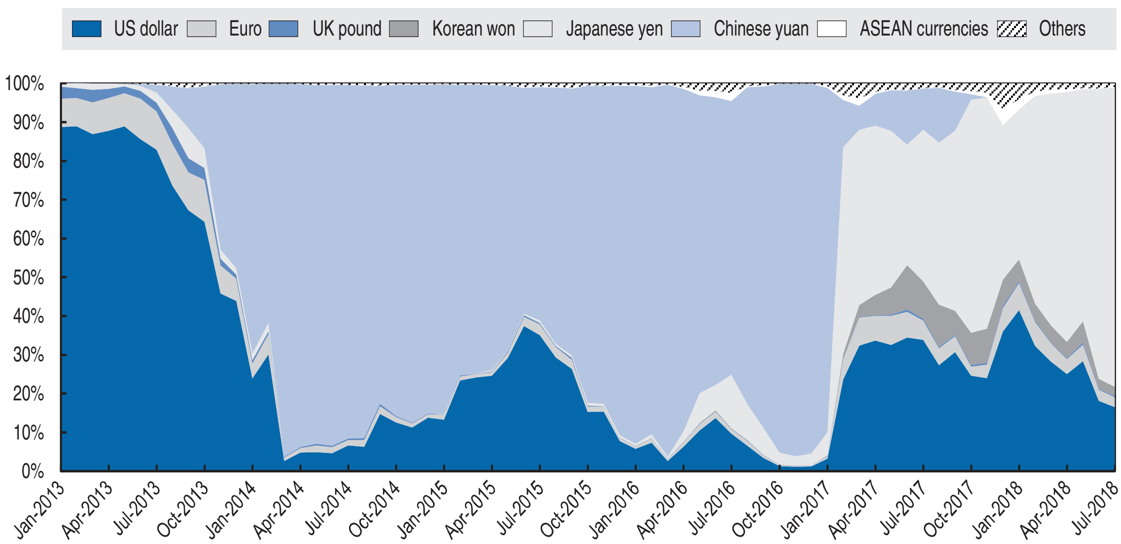
Fintech's potential in fostering insurance and reinsurance market development catch-up in many Emerging Asian countries (particularly the non-life segment) is also highly promising, even though insurtech is still nascent in the region (Willis Towers Watson, 2018). It is estimated that, as a proportion of GDP, insurance premiums in Emerging Asia, excluding Singapore, are less than half those of OECD countries based on the data of SwissRe Institute (2018).[13] By contrast, the premium-to-GDP ratios of Singapore, Japan, Korea, Hong Kong, China and Chinese Taipei all exceed the OECD average. Insurtech offers the prospect of using big data to produce tailored products such as the usage-based policies "pay-as-you-drive" and "pay-how-you-drive". Agriculture also stands to gain from insurtech (Smit, Denoon-Stevens and Esser, 2017) – of particular interest to the many Emerging Asian economies that regularly have to cope with natural disasters.

Asia plays an important role in the cryptocurrency sphere

In spite of tightening regulations and well-publicised instances of fraud, cryptocurrencies, or "cryptos", and their trading platforms have managed to thrive since the introduction of the bitcoin in late 2008 and the first transaction in January 2009. Interest in cryptos initially stemmed from the anonymity enjoyed by the parties in a transaction and the supposedly decentralised exchange system.[14] That interest has since gathered impetus as other uses have emerged. These include the gains to be made from speculative trading and cheaper cross-border transactions cost since payments no longer have to go through banks and there is no need for currency exchange.[15]

Asia is an important player in the crypto market. Currencies such as the Chinese yuan (between mid-2013 and end 2016) and the Japanese yen (more recently) have accounted for large portions of Bitcoin acquisitions globally (Figure 1.26). Bitcoin exchanges in the Korean won, Vietnamese dong, Malaysian ringgit and Philippine peso also increased dramatically until around early 2018, before momentum has ebbed somewhat. Similarly, governments have recently shown greater interest in issuing their own cryptos. Dubai became the first state to launch a government-backed crypto (emCash) in October 2017, while Venezuela was the first to issue a sovereign crypto (the petro) in February 2018. Ecuador, Tunisia and Senegal also have national digital currencies and are slowly migrating their systems to blockchain.[16 17,]

Figure 1.26. **Share of selected fiat currencies in total volume of Bitcoin purchases, 2013-18**



Note: Total volume refers to the sum of bitcoins bought and sold using the major fiat currencies included in the chart. Trading between cryptocurrencies, such as the USD-backed tether, is not taken into account. ASEAN currencies in the chart include the Indonesian rupiah, Malaysian ringgit, Philippine peso, Singaporean dollar, Thai baht and Vietnamese dong. "Other" currencies are the Australian dollar, Canadian dollar, Polish zloty, Russian rubble, Swiss francs, Indian rupee and Taiwan New Dollar. While additional currencies are used as payment and settlement currencies for bitcoin, their shares are arguably small.

Source: OECD Development Centre based on CryptoCompare.

StatLink https://doi.org/10.1787/888933886835

The regulatory environment is catching up

Supervision and regulations have grown in all Emerging Asian countries, although they vary in scope and depth. Nonetheless, comparison reveals that some existent services are operating in relatively unregulated environments, such as P2P lending (Table 1.5). Central banks have mainly assumed the role of focus points in Fintech-related matters, with many of them creating dedicated entities (Table 1.6). In some countries, the economy and telecommunications ministries as well as the securities and insurance commissions also support central banks, thus forming inter-agency supervisory bodies.

Table 1.5. Regulations or guidelines associated with Fintech in Emerging Asia

Country	Regulatory sandbox	Lending and capital raising	Data protection and cyber security
Brunei Darussalam	✓	✓	✓
Cambodia	*1	nci	*1
China	*2	✓	✓
India	*3	✓	✓
Indonesia	✓	✓	✓
Lao PDR	nci	nci	✓
Malaysia	✓	✓	✓
Myanmar	nci	nci	*4
Philippines	*5	*5	✓
Singapore	✓	✓	✓
Thailand	✓	✓	*6
Viet Nam	*7	*7	✓

Note: "✓" means existent and mentions issues related to Fintech though not necessarily a standalone law, regulation or guideline. "nci" means that there is no clear information based on desktop research of official documents but it is possible that there are existing regulations that cover these areas at least in part. Lending and capital raising include services that offer a platform for debt or equity financing (e.g. P2P lending and crowdfunding).

*1 In Cambodia, the government utilises a *watch, learn and execute approach* as its version of sandbox in its regulation of financial technology. There is also a draft cybercrime law as of September 2018.

*2 In China, there is no national regulatory sandbox yet as of September 2018. But, Ganzhou, Jiangxi has reportedly established its own mechanism.

*3 In India, the government is still preparing for a national regulatory sandbox as of September 2018 although the state of Maharashtra has launched its own sandbox.

*4 In Myanmar, the *Law Protecting the Privacy and Security of Citizens* has general data protection provisions.

*5 In the Philippines, the central bank has established internal mechanisms following a *test and learn approach* to financial innovations. There is also a draft of rules for crowdfunding as of September 2018.

*6 In Thailand, the government is in the process of laying out standalone legislation or regulation on data protection and cyber security as of September 2018 though it has an existing *Computer Crimes Act*.

*7 The central bank in Viet Nam indicated that it would formulate a Fintech regulatory sandbox and is also working on its regulation for P2P lending as of September 2018.

Data are as of September 2018.

Source: OECD Development Centre based on official documents, laws, regulations and guidelines.

Table 1.6. Fintech regulatory agencies in Emerging Asia

Country	Main Regulatory Agencies	Fintech-Focused Unit
Brunei Darussalam	Autoriti Monetari Brunei Darussalam	Fintech Office (AMBD)
Cambodia	National Bank of Cambodia and Ministry of Economy and Finance	---
China	People's Bank of China, China Banking and Insurance Regulatory Commission, China Securities Regulatory Commission, Ministry of Public Security's Research Institute and Financial Stability and Development Committee	Fintech Committee (PBoC)
India	Reserve Bank of India, Securities Exchange Board of India, Insurance Regulatory and Development Authority and Telecom Regulatory Authority of India	Working Group on Fintech and Digital Banking (RBI); Committee on Financial and Regulatory Technology (SEBI)
Indonesia	Bank Indonesia, Financial Services Authority and Ministry of Communication and Informatics	Fintech Office (BI), OJK Innovation Center for Digital Financial Technology
Lao PDR	---	---
Malaysia	Bank Negara Malaysia, Securities Commission and Companies Commission	Fintech Enablement Group (BNM)
Myanmar	Central Bank of Myanmar	
Philippines	Bangko Sentral ng Pilipinas (BSP), Securities and Exchange Commission and National Privacy Commission	Financial Technology Sub-Sector (BSP)
Singapore	Monetary Authority of Singapore, Ministry of Law and International Enterprise Singapore	Fintech & Innovation Group (MAS)
Thailand	Bank of Thailand, Securities and Exchange Commission, Ministry of Finance and Electronic Transactions Development Agency	---
Viet Nam	State Bank of Viet Nam	Steering Committee on Fintech (SBV)

Note: Data are as of 14 September 2018.
Source: OECD Development Centre compilation based on various sources.

Regulatory sandboxes

A regulatory sandbox is one of the tools utilised by supervising agencies to incubate Fintech firms in a controlled environment. It is a way of protecting intellectual property and can serve as a laboratory for regulations as they seek to keep pace with developments in the market. As of July 2018, Brunei Darussalam, Indonesia, Malaysia, Singapore and Thailand have implemented national sandboxes. Local governments in China (e.g. Ganzhou Jiangxi) and India (e.g. state of Maharashtra) have launched similar mechanisms, pending national frameworks (which were still under study at the end of July 2018). It should be noted, however, that sandboxes' rules and industry coverage tend to differ from country to country.

Consumer protection

Most Emerging Asian countries introduced consumer protection legislation a number of years ago. They have recently extended their legislation to e-commerce transactions and some countries have put in place agencies to promote consumer welfare. In 2012, the central bank of Thailand even formed a Financial Consumer Protection Center that serves as both a grievance and information desk. However, few countries have explicit Fintech-related consumer protection provision and they are typically contained in broader non-bank lending regulations.

P2P lending and crowdfunding

P2P and crowdfunding regulatory frameworks are still at an early stage. China has been the most active in this sphere after a series of high profile fraud cases involving over 200 lending platforms came to light. The Ministry of Commerce has recently implemented a record filing system to tighten up licensing that includes mergers and acquisitions. The government has also introduced more frequent checks and mandated self-reviews to rein in the build-up of risk in its Fintech industry valued at USD 200 billion. Elsewhere in the region, India, Indonesia, Malaysia, Singapore and Thailand have lately issued their own P2P lending and crowdfunding rules, while the other Emerging Asian economies continue to deliberate over their oversight frameworks.

Data privacy protection

Governments have taken steps to improve coverage of data protection regulations. The Philippines' National Privacy Commission, created in 2012, administers and implements the law on data privacy. The law was also passed in 2012, while its implementing rules and regulations were finalised in 2016. Indonesia's Ministry of Communication and Informatics issued the Data Protection Regulation. Effective since December 2016, it is an implementing regulation of the Electronic Information and Transactions Law of 2008 and Government Regulation No. 82 of 2012. Meanwhile, key regulations are under review in India (Data Protection Framework), Singapore (Personal Data Protection Act of 2012), and Thailand (Data Protection Bill). The European Union's General Data Protection Regulation, particularly its data breach protocols, has served as one of the bases of regulations in the Philippines, China and India (Hogan Lovells, 2018; Blackmore, 2018).

Money laundering, terrorism financing and cybercrime

Similarly, anti-money laundering and combating financing of terrorism (AML/CFT) measures have been fortified. All countries in Emerging Asia have their own AML/CFT legislation and continue to engage through platforms such as the Asia/Pacific Group on

Money Laundering, established in 1997.[18] Some governments have adopted standards set by the intergovernmental Financial Action Task Force, while others have entered into bilateral agreements, e.g. the Brunei Darussalam-Singapore Fintech Cooperation Agreement to strengthen surveillance and promote innovation in payments networks.

Cybersecurity laws, too, are slowly catching up with practices. China passed a law in November 2016, which became effective in June 2017. As for Singapore and Viet Nam, they enacted their legislation in 2018. In Indonesia, Lao PDR, Malaysia and the Philippines, cybersecurity regulations are embedded in cybercrime or in personal data protection legislation. In Thailand, the regulation issued by the office of the Prime Minister in 2017 on National Cybersecurity Preparation provides monitoring guidelines while the cabinet approved a separate cybersecurity bill in 2015, which is currently under legislative deliberations.

Digital identity systems

Although countries in Emerging Asia widely use national identity cards, digital ID systems are not yet as common as in developed economies. In 2016, Singapore unveiled CorpPass, a digital identity system for corporations and organisations transacting with the government. CorpPass is intended to slowly replace the earlier digital ID mechanisms like SingPass for individual users launched in 2003 and the eServices Authorisation System for businesses and organisations that was introduced in 2002. In 2009, India launched its Aadhaar project, a 12-digit biometric digital ID system. Though designed chiefly for the transfer of benefits such as social welfare and unemployment allowances, it can be linked to other digital systems (e.g. SIM cards, provident funds, electronic know-your-customer systems). The Chinese government moved to convert national ID cards to a digital system in 2018 in order to streamline business processes and is working with Tencent's WeChat on data hosting. Malaysia, which was the first country to issue a chip-based national ID card in 2004, looks to follow suit in digitalising its platform.

Regulating cryptocurrency

Emerging Asian countries' stances on cryptocurrency regulations are diverse. Although none consider any crypto as legal tender, the authorities in Malaysia, Philippines, Singapore and Thailand are relatively more open to fostering a viable business environment for the issuance and trading of such currencies. Indonesia's central bank gave cryptos a legal standing similar to that of a commodity in June 2018, but continues to warn the public about the risks of trade in cryptocurrencies. By comparison, central banks in Cambodia and India have prohibited financial institutions from crypto-related activities, even though crypto-denominated trade and payments are not technically considered illicit. As for China, it has outlawed initial coin offerings (ICOs) and severely restricts trading and mining,[19] while Viet Nam barred public companies and financial firms from engaging in crypto activities.

Fintech development comes with risk factors

Fintech, just like other innovations, could change the prevailing market conditions in terms of ways of delivering services, quickness of transaction turnover, manner of risk assessment, etc. At the same time, it may cause new financial system vulnerabilities. Fintech firms are arguably not yet systemically important. However, the steady inflow of capital and sizeable expansion of operations every year might change the picture in the next few years. Policy areas that necessitate focus include regulatory risk management, financial literacy and cybersecurity.

Regulating financial and banking service risks

Forcing Fintech firms involved in banking services to follow the fraction reserve system for consumer protection will be an area of debate. In January 2017, for instance, the People's Bank of China (PBoC) announced that it was requiring third-party payment platforms to hold 20% of customer deposits in one dedicated non-interest-bearing custodial account at a commercial bank. The PBoC subsequently raised the mandated ratio to 50% in April 2018 and is expected to hike it to 100% by January 2019. At the same time, proper disclosure of equity and debt investment and the participation of traditional financial institutions in the management of Fintech companies is worth a consideration.

In the cryptocurrency area, cross-border agreements may be needed to increase flows of information on crypto transactions. Cryptos can be a means of moving financial assets across national borders outside the traditional channels monitored by the authorities. Although there have been initiatives on self-regulation within the crypto domain – by the Waves Platform and the Virtual Commodity Association Working Group, for example – explicit guidelines can mitigate the build-up of crypto-related risks. Where financial institutions stand in this asset class should also be clarified. If institutional investors are allowed to participate in any way, the extent of their exposure and participation ought to be part of standard disclosures.

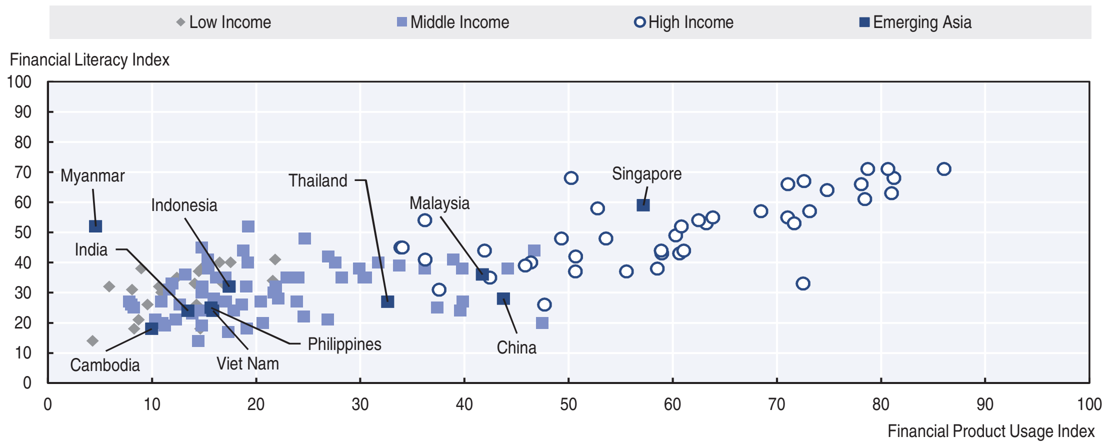
Improved financial literacy maximises the use of technology and financial inclusion

Improved financial literacy could, at household level, help maximise the use of Fintech products and manage the attendant risks. Conversely, deeper Fintech penetration could help improve financial literacy as more people get involved in the industry. Grohmann, Klühs and Menkhoff (2017), who examined the link between financial literacy and financial inclusion, also argued that impact of financial literacy on access to financial services is significant and comparatively higher in lower-income economies.

As it is, global trends show that literacy is positively correlated with the use of traditional financial products in every income group (Figure 1.27). With the exceptions of Singapore, Malaysia, China and Thailand, financial literacy in Emerging Asia generally lags behind levels in many middle income countries. Incidentally, financial literacy in Myanmar is notably high even by the standards of advanced economies, despite low usage of financial products. Many Emerging Asian economies have national strategies for financial education, which is a step in the right direction (OECD, 2015a). Nonetheless, the data suggest that there is ample room for improvement in advancing the objectives of such strategies.

The degree of Fintech adoption varies widely across countries in the region. At 69% and 52%, respectively, China and India are well above the 33% average of the 20 countries surveyed by Ernst & Young (EY, 2017a). Korea and Hong Kong, China are mid-ranking with adoption rates of about 32%, good for 11th and 12th places, respectively. Singapore, the only ASEAN economy included in the assessment, has an adoption rate of about 23%, putting it in 17th place. As for Japan, the survey estimated its adoption rate at about 14% (19th).[20] The report noted that in all six countries with data (including Singapore and Hong Kong, China), adoption rates have increased between 2015 and 2017 in line with the rise in awareness and that the future use of Fintech in these economies is expected to rise further. In a separate assessment, EY (2018) finds that Fintech adoption in ASEAN has also been growing robustly.

Figure 1.27. **Financial Literacy Index and Financial Product Usage Index, 2014-17**



Note: The Financial Product Usage Index is simple average of the proportion of the population aged over 15 who used the internet to pay bills or make a purchase in the past year, own a debit card, sent or received domestic remittances in the past year, used a mobile phone or the internet to access an account held in a financial institution in the past year, own a credit card, and made or received digital payments in the past year. Only countries with complete data in all the categories of financial product usage are included in the calculation. The Financial Literacy Index is based on a survey on respondents' understanding of risk diversification, inflation, simple interest and compounded interest. Data are not available for Brunei Darussalam and Lao PDR.

Source: OECD Development Centre based on data from the World Bank (2017), *Global Findex Database* and Klapper, et al. (2015).

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Cybersecurity and AML/CFT are cross-border issues

Weakness in cybersecurity is a threat to the potential of Fintech. Cybersecurity, being a nonpoint source issue, requires cross-border coordination, particularly as some countries are still in the process of building their national frameworks. The ASEAN-Japan Cybersecurity Center, established in Thailand in 2018 to boost regulatory capacity, is a valuable step. Fully using and building on the gains of initiatives such as the ASEAN Cyber Capacity Programme and ASEAN Ministerial Conferences on Cybersecurity will be crucial. Key challenges in this respect are financial resources and the ability of the public sector to attract the talent needed to build and maintain cyber security systems. On the legal front and against the background of institutional credibility issues in some countries, one source of friction is striking the right balance between censorship and the free flow of legitimate information.

Much can be done to strengthen AML/CFT measures. Statutes are well developed and some institutional cross-border arrangements are in place. However, there is room to improve legitimate surveillance, monitoring and dispute resolution frameworks. The cyber-heist in 2016 concerning the central bank of Bangladesh and a Philippine commercial bank provides a relevant backdrop. As regards to data protection, there has been a concerted effort to develop guidelines and build institutions capable of handling related issues. Nevertheless, the harmonisation of cross-country data privacy regulations, even if partial, will be a boon for cross-border electronic transactions. The voluntary Cross-Border Privacy Rules System of the Asia-Pacific Economic Cooperation (APEC) is one model that Emerging Asian countries may be able to work with (APEC, 2018).[21]

Strengthening export performance amidst rising protectionism

In the first half of 2018, positive trade growth was recorded in all regions worldwide, albeit at different levels. North America led the way in export volume growth with 4.8%. Asia came next at 4.2%, while Europe trailed behind at 2.8%. As for imports, Asia came at the top with a 6.1% growth rate, followed by South America, North America and Europe at 5.5%, 4.8% and 2.9%, respectively (WTO, 2018).

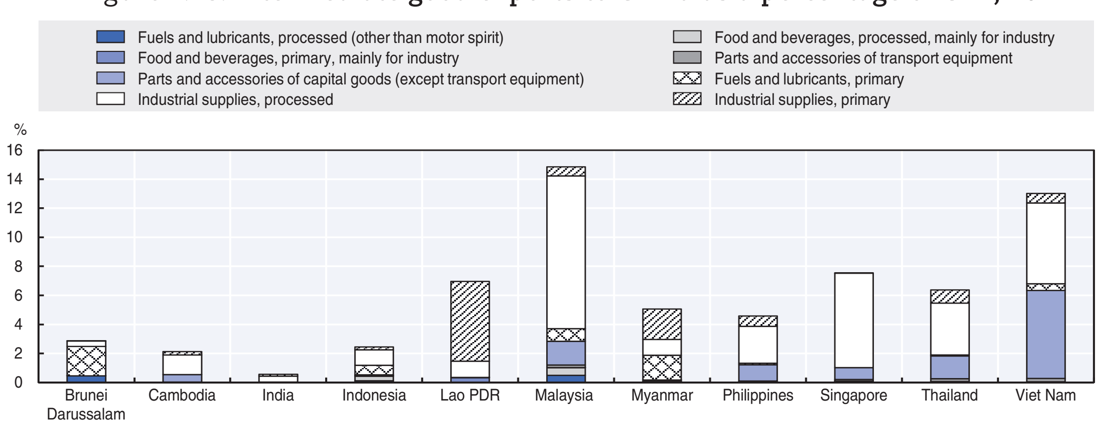
At the beginning of the ongoing trade war between two large economies, bilateral trade between China and the ASEAN economies reached USD 232.64 billion in the first five months of 2018, up by 18.9% over the same period in 2017, the year in which trade hit a record high of USD 514.8 billion.

For now at least, trade data have yet to show any significant impact from the trade war. That, however, may change. In September, the United States extended tariff hikes of 10% to USD 200 billion worth of Chinese imports (which accounts for half of the products China exports to the United States). It will further raise the rate to 25% in January 2019.

Due to the fact that countries in the region are intertwined in global value chains and production networks, they are expected to feel the heat. ASEAN countries are also at risk because of their trade openness and exposure to the supply chain. For instance, escalating trade friction caused by the trade war could dent Viet Nam's export opportunities. The same is true of other countries in the region which, like Viet Nam, are an integral part of GVCs and production networks. In the medium term, Southeast Asian countries and newly industrialised economies stand to gain from trade in global supply chains being redirected to economies producing similar goods (ADB, 2018).

As export-related activity in China slows down due to a slump in demand from the United States, intermediate goods exports from Emerging Asia could well be affected (Figure 1.28). Malaysia, Viet Nam and Singapore are most at risk through the GVC channel, as their intermediate goods exports to China account for 14.9%, 13% and 7.5% of their GDP, respectively. The composition of intermediate goods exports is also an important factor. Viet Nam, for example, being a large supplier of inputs for the production of capital goods in China, could experience a delayed impact in the event of a slowdown in Chinese exports to the United States. The reason is that investment plans generally take longer to adjust than consumption (Fuss and Vermeulen, 2004). Vietnamese exports could therefore be more resilient at first than, for example, Malaysia's, which chiefly comprise processed industrial supplies.

Figure 1.28. **Intermediate good exports to China as a percentage of GDP, 2017**



Note: The calculations made use of BEC commodity classification.
Source: OECD Development Centre calculations based on UN Comtrade.
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Rethink export strategies to head off impact of growing trade war

Countries become part of GVCs through backward or forward participation. The former denotes the import of inputs for goods and services that are later exported, the latter denotes the export of locally produced goods to countries involved in downstream production. However, countries' GVC participation is generally both forward and backward. The most recent available data show that China trades with ASEAN and India more through forward than backward GVC participation. In 2011, the domestic value added of the Philippines, Malaysia and Indonesia embodied in China's exports respectively made up 8.9%, 5.9% and 5.8% of their total exports. In other words, China's value added embodied in their total exports is relatively less than their domestic value added embodied in China's exports as a share of their total exports. This comparison of trade in value added further strengthens the theory of China as the factory of the world, which imports, processes, then reassembles raw and intermediary goods as final products for re-export worldwide.

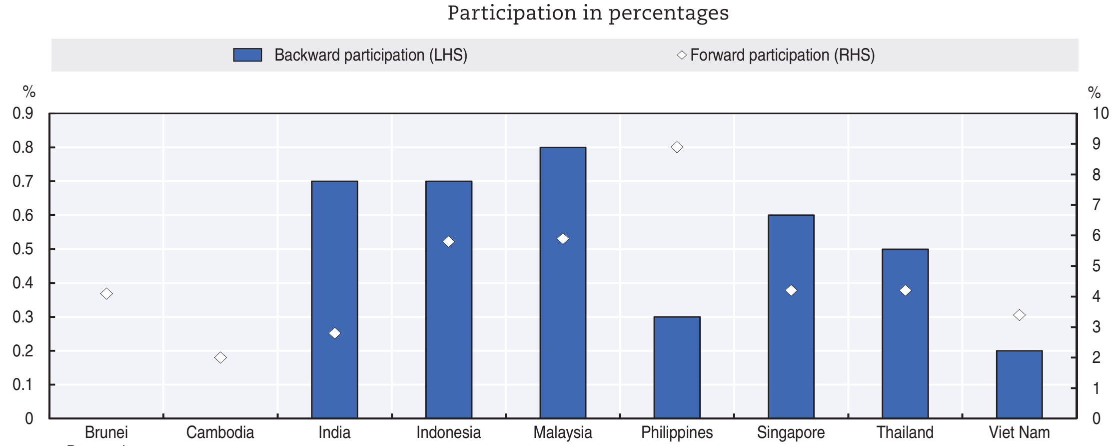
Backward GVC participation in the region's trade with China is less intense, as no more than 0.8% of China's value added is embodied in total ASEAN and Indian exports, which suggests that their export sectors are less dependent on products from China. The United States' increase in tariffs on Chinese goods thus translates into higher prices for Chinese goods which embody the region's value added. These goods' higher prices may dampen United States demand for China's exports and curb China's imports of intermediary goods from South East Asia and India (Figure 1.29).

Nevertheless, to survive and even benefit from the redirection of trade to their partners in GVCs, countries should identify the determinants of export in order to strategise in the medium to long-term amidst global uncertainty. In this way, they may pre-empt the next round of tariff hikes on a wider range of goods in the new year.

To date, China remains the top trading partner of neighbouring Southeast Asian countries. Dependency on a major trading partner involved in a trade war may impact the region negatively. To survive amidst the protectionist sentiments, countries need to focus on strengthening their supply capacity. A restricted supply capacity will limit their ability to improve their trade performance and reap all the benefits that come with trade within the ASEAN Free Trade Agreement and its plus–one agreements. Factors such as transport costs affect the cost of production and limit supply capacity. Apart from a stable macroeconomic environment and accountable institutions, the availability of domestic transport infrastructure and attracting the right type of FDI in the region are also important in strengthening the supply capacity.

Figure 1.29. **Emerging Asia's forward and backward GVC participation in trade with China, 2011**

Participation in percentages



Note: Forward GVC participation denotes domestic value added embodied in foreign (China's) exports as shares of a countries' total gross exports shown on the right-hand y axis. Backward GVC participation denotes foreign (China) value added embodied in countries' exports as a percentage of its total gross exports shown on the left-hand y axis.

Source: OECD Development Centre data compiled from TiVA database, https://stats.oecd.org

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Strengthening supply capacity is key to improving trade performance

Build transport and energy infrastructure

Efficient physical infrastructure is essential if ASEAN countries are to increase the size and growth rate of their supply capacity. For example, the CLMV countries (Cambodia, Lao PDR, Myanmar and Viet Nam) still lack transport infrastructure, which negatively affects their trade activities with regional partners. A case in point is the trade between the CLMV countries and India. Over 17 years, it grew considerably from a mere USD 460 million in 2000 to USD 14.5 billion in 2017.

Inadequate energy infrastructure in a number of countries also impairs the growth of supply capacity. Therefore, extending grid connections to those without access to electricity is a top priority. Countries across the region have made great strides in addressing the issue. The electrification rate has risen by 28 percentage points since 2000 and is now at 90% across ASEAN. Nevertheless, achieving universal access in a very diverse region requires carefully considering the specific situation of different communities.

Attract greater FDI and nurture SMEs to create jobs and diversify

Another supply-side factor that countries must address if they are to improve their trade performance is greater FDI. Countries that are starting to export or are trying to expand their export capacity, need FDI to contribute to their capital formation. SMEs continue to play a significant part in the development of new products and new markets, even across the developing world. Beck, Demirguc-Kunt and Levine (2005) examined the link between SMEs, income inequality and poverty and found that there is a strong, positive link between the number of SMEs and GDP per capita growth. Governments need therefore to nurture their home-grown SMEs to make them competitive, viable businesses both domestically and internationally. They make a strong contribution to the diversification of the economy and job creation.

Governments should support SMEs through appropriate investment plans. There is a need for a greater diversity of SME financing models to offset the difficulty of obtaining traditional bank loans without proper collateral. SMEs in emerging economies are increasingly turning to asset-based finance for their working capital needs, the expansion of domestic and international business and, in part, as a source of investment. Asset-based finance enables firms to obtain funding based on the value of specific assets – e.g. accounts receivables, inventory, machinery, equipment and real estate – rather than on their own credit standing. Additionally, tapping into crowd-funding is one way of financing SMEs that has grown rapidly and encouragingly since the middle of 2000s. However, it accounts for only a minor share of financing options for businesses, as it serves to finance specific projects rather than enterprises themselves (OECD, 2015b).

Increasing market access is essential to enhance exports

Access to foreign markets is a critical determinant of export performance. In general, there has been widespread improvement in foreign market access since the early 1980s, which correlates with an improvement in export performance. An UNCTAD analysis pointed out that the East Asian and Pacific countries were among the main beneficiaries of the observed increase in foreign market access. Their greater access to markets both within and outside the region coincides with their successful diversification efforts and participation in the more dynamic sectors of world trade through GVCs (UNCTAD, 2005).

Countries in the region are parties to many bilateral and multilateral trade agreements which have expanded their markets beyond their borders. Schott (2017) has emphasised that bigger is better when it comes to the Asia-Pacific trade agreements. Apart from ASEAN and ASEAN-plus-one frameworks, some countries in the region are also part of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). Amidst growing protectionist sentiment in global trade, CPTPP was successfully signed in March 2018.

Pressure is also mounting on member countries to conclude negotiations on the proposed free trade pact, called the Regional Comprehensive Economic Partnership (RCEP), by the end of 2018. The RCEP covers both traditional and non-traditional FTA chapters that include provisions on goods, services, investment, economic and technical cooperation, competition and intellectual property rights. Talks have progressed steadily, albeit slowly, as the member countries continue to discuss by how much to reduce customs duties on a maximum number of traded products. RCEP comprises 10 ASEAN members and their 6 FTA partners – India, China, Japan, South Korea, Australia and New Zealand. The involvement of more countries than in the CPTPP adds to the complexity of negotiations.

The economic gains of CPTPP are projected to reach USD 147 billion by 2030 (in 2015 dollars). Malaysia and Viet Nam will be Southeast Asia's biggest beneficiaries in the CPTPP, with exports that look set to reach USD 42 and USD 31 billion (in real terms by 2030). Countries who are not party to the agreement are expected to lose out as a result of trade diversion. As for the RCEP, which comprises a bigger number of countries, the model assumes the elimination of 85% of tariff lines and the reduction of non-tariff barriers by 10%. It should generate welfare gains of USD 286 billion in real terms by 2030, with the exports of the region's biggest beneficiaries, China and India, reaching USD 101 billion and USD 57 billion, respectively. They are followed by Thailand, Viet Nam and Malaysia (Petri et al., 2017).

Mitigating natural disaster risks to growth

Natural disasters pose serious challenges to Emerging Asia. Indeed, all countries in the region are affected (Table 1.7), though costs vary substantially with the type and size of the disaster. For instance, the recent succession of disasters in Indonesia on the islands of Lombok (August 2018) and Sulawesi (September 2018) are a case in point. The earthquakes and tsunami exacted a large human toll and an estimated economic cost of USD 523 million for Lombok and USD 1 billion in Sulawesi (Aon, 2018). The floods in the state of Kerala in India in August 2018 – the worst in the region since 1924 – are another example. Their economic impact, estimated at USD 4.6 billion, could inhibit growth in the short term by a projected 1% for the year. The final growth outcome will depend on the swiftness of rehabilitation in the services sector (63% of total gross value added), especially in tourism, which represents 40% of gross value added in services (CARE, 2018).

The Philippines, too, have been hit. Typhoon Mangkhut in early September 2018 caused damage estimated at USD 641 million. The second-round effects of the disaster on prices could be detrimental, given that the country was already struggling with high inflation in July and August 2018. Inflation was driven partly by the prices of vegetables (a rate of 19.3%), corn (12.6%) and fish (12.4%). Moreover, the hardest hit regions were precisely the ones that produce vegetables (Cordillera), corn (Cagayan) and fish (Pangasinan and Ilocos). The prices of cabbages and carrots rose steeply during the first three weeks of September by 81.9% and 33.3% respectively in Metro Manila. There was, however, no evidence of effects on fish and rice prices, probably due to the availability of alternative suppliers. In most ASEAN countries, floods are the most costly and frequent natural disaster. Due to their geographic locations, the Philippines and Viet Nam are affected chiefly by storms and Indonesia by earthquakes (Figure 1.30).

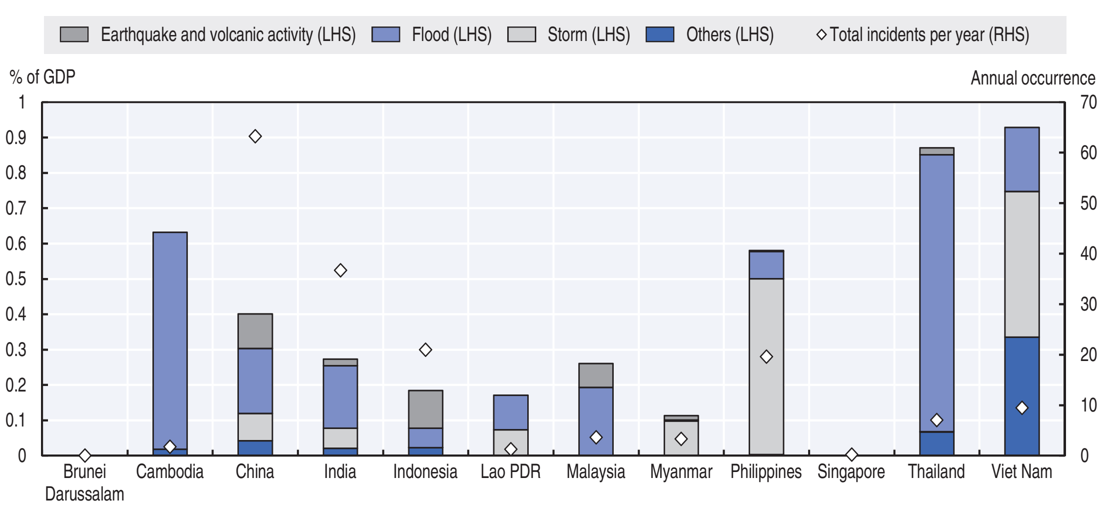
The high economic costs of disasters takes the form of damage to infrastructure, physical capital, inventories, agricultural and natural resources and the disruption of normal economic activity. Relative to GDP, Viet Nam, Thailand and Cambodia are the worst affected. Viet Nam experiences yearly damage approaching 1% of GDP. The countries with the highest number of incidents every year are actually China and India. The economic impact relative to their GDP impact is, however, weaker than in some other countries in the region.

Table 1.7. **Selected cases of natural disasters in Emerging Asia**

Country	Month and year	Disaster	Estimated cost (USD million)
Brunei Darussalam	Feb/Apr-98	Wildfires	2
Cambodia	Sep/Oct-13	River floods in north-west and along the Mekong River in central and southern Cambodia	521
China	Jul-18	Floods in central and northern China	1 300
India	Aug-18	Floods in Kerala State	4 600
Indonesia	Aug-18	Earthquake in Lombok	500
Lao PDR	Jul/Aug-18	Floods in many provinces associated to tropical storm Sonca	6.5
Malaysia	Dec-16	Floods across eastern peninsular Malaysia	132
Myanmar	Jul/Aug-15	Flooding in 12 states and regions	119
Philippines	Sep-18	Typhoon Mangkhut in northern Philippines	641
Singapore	Oct-17	Bishan MRT tunnel flooding	2
Thailand	Aug/Dec-11	Floods in Bangkok and surroundings	40 000
Viet Nam	Aug-18	Typhoon Hato in Lao Cai	1 450

Source: EM-DAT and OECD Development Centre based on various sources.

Figure 1.30. **Average annual damage and average annual occurrence, 1998-2018**



Source: OECD Development Centre calculations based on Centre for Research on the Epidemiology of Disasters Emergency Events Database and World Bank (2018c), *World Development Indicators Database*.
StatLink https://doi.org/10.1787/888933886265

The effect of natural disasters on growth is complex and wide-ranging

Beyond the initial impact, the effects of natural disasters on growth can be more complex. To some extent, they depend on the type of event. Disasters, like drought, that primarily disrupt the supply of intermediate inputs in production typically curb growth. By contrast, disasters that chiefly reduce capital to-labour ratios (e.g. earthquakes) can, in some circumstances, promote growth by increasing returns to labour inputs and spurring investment. Severe disasters tend not to be good for growth, however, particularly in developing countries. Disasters may also affect different sectors in different ways. The positive effects of moderate earthquakes on growth, for example, come mostly in the non-agricultural sector (Fomby, Ikeda and Loayza, 2009).

The effects of large-scale disasters on growth can be significant. Shortly after Typhoon Haiyan, which struck the Philippines in 2013, it was estimated that the effects of the storm would reduce GDP growth by 0.3 percentage points in both 2013 and 2014 (NEDA, 2013). How growth is affected also depend on the reconstruction efforts. It is estimated that government-led reconstruction in the wake of the 2008 Sichuan earthquake reduced the gap between actual and hypothetical provincial GDP in a no-earthquake scenario to 3% by the end of the reconstruction period – that was four years faster than would have been the case had no programme been undertaken (Xi et al., 2014). Other research, however, finds more ambiguous connections between reconstruction and economic recovery, or at least suggests that the form of assistance offered matters (Xu and Mo, 2013).

Natural disaster risks also affect longer-term growth prospects indirectly through their impacts on investment and savings, though the evidence on the net effect is mixed. Higher levels of exposure to natural disasters is associated with lower levels of FDI inflows, with investment decisions more likely to be affected by recent events and disasters that cause large-scale damage (Escaleras and Register, 2011). Conversely, the risk of natural disaster may benefit growth by increasing precautionary savings (Bakkensen and Barrage, 2016).

The damage to livelihoods and supply chains caused by natural disasters takes multiple forms

In general, the agricultural sector is highly vulnerable to natural disasters (OECD, 2015c). Vulnerability is attributable to the fact that land mass in the region extends through a number of ecological and climatical zones. Countries consequently have to cope simultaneously or in short sequence with excesses and lack of water and other extreme weather events (OECD, 2018c). Natural disasters damage crops and sorely affect livelihoods. Between 2004 and 2014, for example, Southeast Asia lost 3% of its potential agricultural production to natural disasters (FAO, 2017). The result is a twin threat to food security in rural areas – the destruction of the crops can cause food shortages and farmers lose their livelihoods when they have no other income.

Although insurance could offset such threats, the high frequency of agricultural losses makes agriculture insurance economically unviable. It is therefore up to governments to intervene and provide such a public good. Thailand, for example, has introduced a partly government-funded programme, the Rice Disaster Relief Top-up Crop Insurance Scheme. It covers damages to rice crops, when growing or being harvested, in the event of floods, drought, windstorms, frost, hail or bushfires (OECD, 2015c).

Small entrepreneurs are particularly exposed to risks associated with natural disasters as they seldom have the financial capacity to rebuild after an extreme weather event. In Emerging Asia, small businesses are often uninsured and struggle to raise new funds when a disaster destroys their existing capital. Indeed, micro finance and local credit institutions have to contend with liquidity issues, poor loan performance and capital base erosion issues in the wake of natural disasters, which restrict their capacity to provide credit (OECD, 2015c). However, micro insurance providers may be a viable solution. In

India for instance, the All India Disaster Mitigation Institute protects property (dwellings and their contents), stock in trade and insures against personal accident and death from 19 natural disaster risks, including earthquakes, fires and floods (OECD, 2015c).

Companies that have not suffered from capital losses or which do business with firms that have, may be harmed by supply chain disruptions caused by a natural disaster. Indeed, if infrastructure is destroyed or the production of other firms in the value chain disrupted, economic activity may well be sorely hampered (G20/OECD, 2012). The World Economic Forum has found that natural disasters are one of the greatest threats to global value chains (WEF, 2012).

Lack of planning makes emerging Asian cities among the world's most disaster-prone

Urban areas host an average of 44.5% of populations in Emerging Asian countries (excluding Brunei Darussalam and Singapore) and are located in areas where multi-hazard risks are growing rapidly. Indeed, Emerging Asian cities make up half of the 10 cities in the world where most inhabitants are at risk from natural disasters. Metro Manila ranks second (SwissRe Institute, 2014).

A number of coastal mega-cities in Asia are also expected to face a substantial escalation of losses due to once in 100 year floods attributable to population growth and economic development (OECD, 2016). Informal urban sprawl in vulnerable locations such as river beds, drainage channels or steep slopes increases exposure to natural hazards among the poor, whose substandard housing conditions already put them at greater risk.

Also, the lack of urban planning and construction in disaster-prone areas is a serious challenge to future disaster mitigation policies (OECD, 2015c). Risk assessment is a prerequisite for a disaster-aware urban planning. Indonesia, for example, has developed a hazard impact modelling tool for emergency planning – the Indonesia Scenario Assessment for Emergencies. It is designed to improve the understanding of the likely impacts of disasters such as floods, earthquakes or tsunamis (APEC/OECD, 2013).

Policy options for promoting resilience

Mitigating the risks of natural disaster is critical to inclusive growth and development. While actual exposure to most natural hazards is beyond the control of policy makers, vulnerability is certainly affected by institutional and other factors that stem from policy. Increasingly, governments have been focusing on improving resiliency rather than merely responding to disasters. They have taken longer-term perspectives in capacity building and widening access to resources as part of policies to prepare for, resist, cope with and recover from disasters. The principles that underpin resilience – which include disaster risk reduction, climate change adaptation and the integration of risk management in development planning – have been recognised in international documents such as the Sendai Framework for Disaster Risk Reduction 2015-30 (Box 1.7), the Sustainable Development Goals, the Paris Agreement on Climate Change, and the New Urban Agenda.

Box 1.7. **Sendai Framework for Disaster Risk Reduction 2015-2030**

The Sendai Framework for Disaster Risk Reduction 2015-30 was adopted at the Third UN World Conference held in Sendai, Japan, in 2015. It is the successor to the Hyogo Framework for Action 2005-15: Building the Resilience of Nations and Communities to Disasters. It includes four priorities for action: understanding disaster risk; strengthening disaster risk governance to manage disaster risk; investing in disaster risk reduction for resilience; and enhancing disaster preparedness for effective response and better build-back in recovery, rehabilitation and reconstruction.

Box 1.7. **Sendai Framework for Disaster Risk Reduction 2015-2030** *(cont.)*

- The framework sets seven global targets:
- Substantially reduce global disaster mortality by 2030 with the objective of making the 2020-30 average global mortality rate lower than between 2005 and 2015.
- Substantially reduce the number of people affected globally by 2030, with the objective of making the average 2020-30 global figure lower than between 2005 and 2015.
- Reduce direct, disaster-related economic loss relative to global GDP by 2030.
- Substantially reduce disaster-related damage to critical infrastructure and the disruption of basic services, such as health and education by 2030. Efforts should include building resilience.
- Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020.
- Substantially enhance international cooperation with developing countries through adequate, sustainable support measures that complement national action to implementing the Sendai Framework by 2030.
- Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments by 2030.

Source : UNISDR (2015), *Sendai Framework for Disaster Risk Reduction 2015-2030*, United Nations International Strategy for Disaster Reduction, Geneva.

Countries in the Emerging Asia region could do more to improve resilience. According to the World Risk Index, half of them are in the list of the top 50 countries that are most at risk from natural disasters (Table 1.8). The Philippines has the region's highest overall ranking and exposure score, which measures exposure to natural hazards. Cambodia comes top in vulnerability, which indicates the population's exposure to natural hazards, and in susceptibility, an indicator that measures the quality of infrastructure, nutrition, income and general economic framework. As for Myanmar, it has the worst coping capacity, an indicator of governance, medical care and material security. It also has the poorest adaptive capacity, an indicator that rates the ability to adapt to future natural events and climate change. Like most countries around the world, Emerging Asian countries perform the worst in the coping capacity indicator.

Table 1.8. **How Emerging Asian countries score on World Risk Index, 2012-16**

Mean scores

Ranking (out of 171)	Country	Overall score	Exposure	Vulnerability	Susceptibility	Lack of coping capacities	Lack of adaptive capacities
3	Philippines	27.7%	52.5%	52.8%	33.0%	80.9%	44.5%
8	Cambodia	16.9%	27.7%	61.2%	41.7%	86.8%	55.0%
12	Brunei Darussalam	16.2%	41.1%	39.5%	16.4%	64.0%	38.0%
18	Viet Nam	12.8%	25.4%	50.7%	27.2%	76.7%	48.0%
33	Indonesia	10.5%	19.4%	54.2%	32.4%	80.9%	49.3%
42	Myanmar	9.1%	14.9%	61.0%	36.2%	88.1%	58.6%
74	India	7.0%	11.9%	58.6%	38.2%	80.5%	57.2%
80	China	6.8%	14.4%	47.2%	26.4%	70.4%	44.7%
89	Malaysia	6.5%	14.6%	44.3%	19.9%	68.2%	44.8%
91	Thailand	6.35%	13.7%	46.3%	20.3%	75.6%	43.1%
100	Lao PDR	5.7%	9.55%	59.6%	40.9%	84.9%	53.1%
158	Singapore	2.4%	7.8%	30.1%	14.2%	48.8%	27.4%

Note: Risk is measured in ascending order – 0% denotes no risk and 100% high risk.
Source: Bündnis Entwicklung Hilft (2017).

Strengthening resilience-building policies

If natural disaster risk management is to foster resilience, it should take a long-term, comprehensive view of preparedness, disaster response and rebuilding. Coordinated risk assessment is therefore fundamental (G20/OECD, 2012), as are capacity building and effective planning. Similarly, regional conditions should be factored into the development of recovery strategies. The OECD (2013) sets out some principles for rebuilding resilient regions in the wake of disasters. They include:

- making sure that short-term decisions do not constrain longer-term options;
- identifying social and economic drivers specific to the region;
- strengthening dialogue between stakeholders to develop an integrated strategy;
- ensuring local leadership in decision making;
- introducing appropriate reforms;
- fostering public participation;
- making public deliberation a regular component of regional development strategies;
- building trust, increasing accountability and improving capacity in local administration.

Investments are likely to be needed to build resilient infrastructure, early warning and response systems, and other preparatory measures. Downstream, assistance programmes can help to inject post-disaster economic stimulus and to address some of the challenges to longer-term growth. To be effective, however, disbursements should be timely and closely targeted and use clear, transparent administrative procedures (OECD, 2015d).

Government compensation and financial assistance programmes for victims of natural disaster in the region include Malaysia's National Disaster Trust Fund. It compensates farmers whose agricultural assets and buildings were damaged or destroyed and people who have to shoulder burial costs or relocate. While the fund covers a variety of types of disaster, money is allocated chiefly to flood victims. The Philippines' National Disaster Risk Reduction and Management Fund provides financial assistance for relief, recovery and reconstruction and for prevention and preparedness. As for India, its National Disaster Response Fund and State Disaster Response Fund provides relief to disaster victims, helping them to meet their immediate needs and rebuild livelihoods. However, the funds operate on a case-by-case basis and only in response to disasters deemed severe, a designation with no legislative definition.

Governments may be best placed to address less severe but more frequent hazards, and market-based instruments high-severity, low-frequency events (Cummins and Mahul, 2010). Ideally, countries should harness a range of financing and risk transfer instruments to control the costs of natural disaster risk management. Government reserve funds, though available immediately and often at low cost, do have opportunity costs and require time and institutional capacity to build and maintain. While contingent credit facilities, too, can also be called upon with little delay and may be more useful for large-scale disasters, they also involve opportunity costs and counterparty credit risks. Insurance, which covers a small share of losses from disasters in much of the region, may be useful in the event of loss of wealth. However, it takes time to release payments and may have counterparty credit risks and other limitations. Catastrophe bonds and similar securities are effective in transferring risk to the capital markets.

Over the longer term, governments should take exposure to natural disaster hazards and the effects of climate change into consideration when developing economic diversification strategies – particularly in economies highly dependent on vulnerable sectors, such as agriculture and fisheries, forestry, tourism, energy and the production of energy-intensive goods. Articles 4 and 7 of the Paris Agreement, signed in 2016, acknowledge the need for diversification. A green economy is conducive to diversification for resilience. However, it can also be fostered through openness to investment and increased participation in global value chains, which offer opportunities for product, process, functional and chain upgrading in new areas of economic activity.

Notes

1. These indicators are from WEF (2018), World Bank (2018b) and Transparency International (2018).
2. Between 2000 and 2015, average annual growth in government spending on education was about 17.6% (nominal compound growth) or 14.9% (real compound growth). The proportion of students in higher education to the total population also went up markedly from 7.2:1000 in 2000 to 25.3:1000 in 2016.
3. New investment regulations are set out in Special Administrative Measures on Access to Foreign Investment 2018, Special Administrative Measures for Foreign Investment Access to Pilot Free Zones, and State Council Circulars 5 and 39 in 2017 and State Council Circular 19 in 2018.
4. This estimate only covers projects that cost INR 150 crore, or USD 20.6 million.
5. The observation concerning CPI inflation time series is based on a roughly reconstructed series which use growth in indices that follow the old series (2006=100) and the weights for the new series (2012=100).
6. In this section, unless stated otherwise, levels are expressed in annualised terms (annualised by the fourth-quarter moving sum) as are growth rates and ratios with respect to GDP.
7. Cambodia does not publish quarterly GDP data.
8. Revenue is defined as gross revenue net of tax rebates from the Revenue Department, duty rebates from the Customs Department, VAT allocation for provincial administrative organisations, VAT allocation for local administrative organisations and export duty compensation.
9. Data used in this section (relating to CAR, ROE, ACR and NPLs) were sourced from IMF (2018a), unless indicated otherwise.
10. The official NPL ratio of Lao PDR is 3.1% according to World Bank (2018a).
11. In certain cases, fintech is defined as internet-based finance (PWC, 2017b). It is also sometimes construed as a subset and not synonymous with financial innovation.
12. Household names like PayPal, VISA and MasterCard, and the likes of Euroclear and Clearstream in securities clearing and settlement, are to a certain extent the first big movers.
13. Data are not available for Brunei Darussalam, Cambodia, Lao PDR and Myanmar.
14. There remain some differences in views over the decentralised nature of cryptocurrencies.
15. Calculations based on purpose-related ICO data compiled by Coinschedule Ltd. (2018) reveal that about a quarter of the capital raised between March 2016 and July 2018 went to cryptos that offer improvements in exchange infrastructure. Specific infrastructure areas identified include processing time, scalability, accessibility, security and connectivity with other systems. About a fifth of the capital went to cryptos that tokenise assets and services related to finance, investing and trading. More than 11% of the capital went to cryptos tokenising access to communication-related services like internet protocols and messaging applications that double as, for example, digital wallets, smart contracts and the storage of smart documents. The remaining 40% of the capital raised was distributed across various categories, e.g. payments, advertising, energy, legal, gaming, gambling, government transactions, travel, charity.
16. Tar (2017) explains the similarities and differences between digital and crypto currencies.
17. Governments that have declared plans to follow suit include Estonia (Estcoin), Japan (J coin), Russia (Cryptoruble) and Sweden (E krona) as well as Israel, Iran and Turkey. In a separate development, the Chicago Board of Exchange Global Markets and the Chicago Mercantile Exchange rolled out bitcoin futures (XBT and BTC) for the first time in December 2017, while a bitcoin exchange traded fund is expected to go live in 2019.
18. This is discussed in International Bar Associations Anti-Money Laundering Legislation Implementation Working Group (2018).
19. China’s policies since the latter part of 2016 have had considerable impact on cryptocurrency prices and the mining and exchange business, forcing operators to relocate outside the mainland.
20. The measure follows Everett Rogers’ Adoption Innovation Curve.
21. Refer to APEC (2018) for the details.

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Chapter 2

Towards smart urban transportation in Emerging Asia

Transportation challenges, particularly traffic congestion, can be a serious constraint to urban economies, in addition to creating a number of social and environmental problems. As a result of rapid growth in population and the use of private motor vehicles, congestion is a common issue in many Emerging Asian cities. Policy options to be considered in improving urban transportation systems include the development of efficient and accessible public transportation systems; implementing pricing and other mechanisms for affecting vehicle ownership and use; reforming land use and urban planning; adopting new modes of work, including teleworking and flexible hours; and incorporating new technologies, such as through smart city initiatives, in managing transportation challenges.

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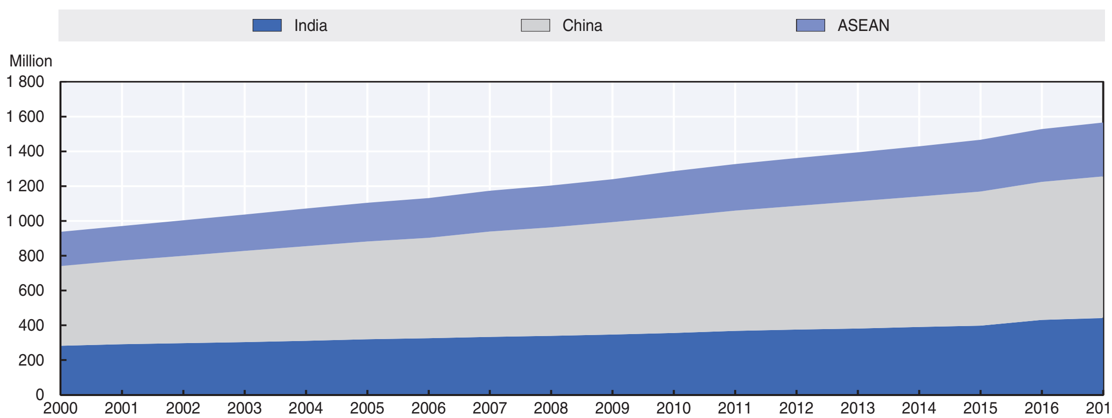
Introduction and overview of smart city initiatives in Emerging Asia

Emerging Asia's cities are growing rapidly. Between 2000 and 2017, the combined urban population in Emerging Asia increased from 936.1 million to 1.6 billion people (Figure 2.1). Cities are also growing as centres of economic activity; 60 cities in the region were among the 300 largest metropolitan economies in the world in 2013-14 (Brookings, 2014). Cities often have higher income levels and lower rates of poverty than rural areas, investment in modern manufacturing and services activities tends to be concentrated in cities, and urban agglomeration effects can increase economic efficiency. Where cities are integrated with their surrounding regions, growth in urban areas can play an important role in broader development and economic transformation. At the same time, urban areas can experience unique economic, social and environmental policy challenges (OECD, 2016a), due to high concentration of people and economic activities.

Figure 2.1. **Estimated urban population in Emerging Asia, 2000-17**



Source: ADB (2018), Key Indicators for Asia and the Pacific (database), https://www.adb.org/publications/key-indicators-asia-and-pacific-2018.

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New approaches are being used to address these challenges in the region, as elsewhere. Various activities described with the term "smart city" are being pursued in Emerging Asia (Box 2.1). These activities tend to be focused on improving the competitiveness of the city, accelerating the pace of economic growth and providing solutions to challenges arising from rapid urbanisation.

Box 2.1. **What is a smart city?**

Around the world, smart city initiatives are increasingly being used in addressing urban policy challenges. While there is no universal definition of the smart city as a concept, it is generally defined to include the use of technology to collect and analyse data and to implement interventions designed to improve cities. The Smart Cities Council, an international network of firms, defines a smart city as one that "uses ICT to enhance liveability, workability, and sustainability" (Smart Cities Council, 2018). The New Urban Agenda includes a commitment to adopting smart city approaches on digitalisation, clean energy and technology, and innovation in transportation and other sectors to support sustainable growth and improved service delivery. While the goals of the smart city concept are rooted in a long history of thought and practice on urban development (Zubizarretal, Seravalli and Arrizabalaga, 2015), it has attracted attention from government, the private sector, researchers and other actors over the past two decades (Kitchin, 2013). Projects like those in smart cities can and have been applied

Box 2.1. **What is a smart city?** *(cont.)*

outside of urban areas, though economies of scale and existing technologies on which to build these initiatives often make cities particularly attractive for the use of ICT.

The tools and applications of smart city initiatives have varied widely. Producing new data and improving existing data can help to better identify problems and to make interventions more targeted and effective, such as in mapping traffic congestion or identifying trends in energy use and adjusting pricing accordingly. Smart and connected sensors may be used to collect data or crowdsourced data generated by individuals may also be provided actively or passively from devices such as mobile phones or public transportation cards. Cloud-based computing services and tools for offline or real-time analysis may also be used. Smart city initiatives have been applied in many sectors around the world, including pollution and emissions monitoring; energy projects, such as smart grids and metering; flood management and other water-related projects; the management of public transportation system and of road use; solid waste collection, sorting and management; improving governance and transparency with open data and other projects; disaster preparedness and resiliency; and addressing crime and security (OECD, 2016b).

Smart city initiatives are being pursued in the ASEAN-5 countries (Indonesia, Malaysia, Philippines, Thailand and Viet Nam), to varying degrees and across a range of policy areas. In Indonesia, smart city activities include the smart city strategy for Bandung included in the 2013-2018 ICT Master Plan, which emphasises e-government and digital infrastructure. The city also plans a new district designed to attract investment from the technology industry. Efforts to reform transportation are also being perused as smart city initiatives in Medan. Smart city projects in Malaysia include initiatives in Greater Kuala Lumpur, Iskandar Malaysia, Smart Selangor, Putrajaya Smart City and George Town's heritage-protection strategy. In January 2018, the Malaysia City Brain initiative was announced as a collaboration between Alibaba Cloud, the Malaysia Digital Economy Corporation and the city council of Kuala Lumpur to use Alibaba Cloud's cloud computing infrastructure as a smart city platform for data analysis for the first time outside of China. In the Philippines, the development of New Clark City in Central Luzon is being planned as a twin city to Manila with smart and disaster-resistant features. In Manila, the City of Pearl is being constructed as a central business district on reclaimed land. As part of the Thailand 4.0 initiative, a strategy for promoting the development of the digital economy, the Deputy Prime Minister announced plans to develop at least 100 smart cities over the following two decades. Smart city projects in Viet Nam include efforts in Ho Chi Minh City, beginning with the data sharing and the establishment of a smart city administration centre, and efforts in Da Nang to address environmental issues and governance.

Singapore is pursuing a number of smart city initiatives, while Brunei Darussalam is beginning to study potential smart city activities. As an urban and advanced economy, Singapore is making considerable investments in smart city initiatives. Launched by the Prime Minister in November 2014, the Smart Nation project aims to use digital technologies in areas including digital identity, e-payment, urban sensors, transportation and mobility, and government services. The government announced plans for SGD 2.4 billion in tenders to be called in 2017 for the delivery of Smart Nation projects. In addition, the Centre for Liveable Cities was established in 2008 with the mission "to distil, create and share knowledge on liveable and sustainable cities" through research, capacity development, knowledge platforms and advisory work. In Brunei Darussalam, a study was initiated in 2017 on making Temburong District a low-carbon area and smart city and initiatives are planned for Bandar Seri Begawan.

While they face different challenges and often have less-developed ICT infrastructure than other countries in the region, urbanisation is also progressing rapidly in the CLM countries and some smart city projects are being considered and implemented. Under an agreement signed with the Korean government in 2016, the Korea Land and Housing Corp. will develop a smart city in Sihanoukville province in Cambodia. Smart city projects are also planned in and near Phnom Penh. Moreover, smart city initiatives are being planned in Luang Prabang and Vientiane in Lao PDR and in Mandalay, Nay Pyi Taw and Yangon in Myanmar.

The development of many smart cities is planned across China and India in managing the challenges associated with their large urban populations. In China, a smart city is defined as "a new concept and model which utilises the next generation of information technology, such as the Internet of Things (IoT), cloud computing, and big data, to promote smart urban planning, construction, management and services for cities" (NDRC, 2014). These initiatives have been carried out in China since 2012, targeting policy areas including traffic management, security and law enforcement, and energy efficiency. A list of pilot smart cities was announced by the Ministry of Housing and Urban-Rural Development in 2013, which has grown ever since and also includes 41 special pilot projects. India's definition emphasises developing the entire urban eco-system, which is represented by the four pillars of comprehensive development — institutional, physical, social and economic infrastructure. The Union Ministry of Urban Development is responsible for the implementation of the Smart Cities Mission, which targets 100 cities across the country to improve well-being and sustainability through the use of ICT and other interventions.

Smart city initiatives are also being supported at the regional level. Among the strategic objectives for achieving sustainable infrastructure outlined in the Master Plan on ASEAN Connectivity 2025 is increased "deployment of smart urbanisation models across ASEAN" (ASEAN, 2016). The plan calls for the sharing of experiences and lessons learned on smart urbanisation models in transportation and other policy areas through a network of cities using an assessment framework for understanding performance. This network is intended to build on work done through initiatives such as the Indonesia-Malaysia-Thailand Growth Triangle Green Cities Initiative and the ASEAN-German Technical Cooperation Programme on Cities, Environment and Transport. The inaugural meeting of the ASEAN Smart Cities Network – a collaborative platform for working on smart and sustainable urban development through the use of technology – was held on 8 July 2018. A total of 26 pilot smart cities have been selected from the ten ASEAN Member States (Table 2.1).

Table 2.1. **ASEAN Smart Cities Network pilot cities**

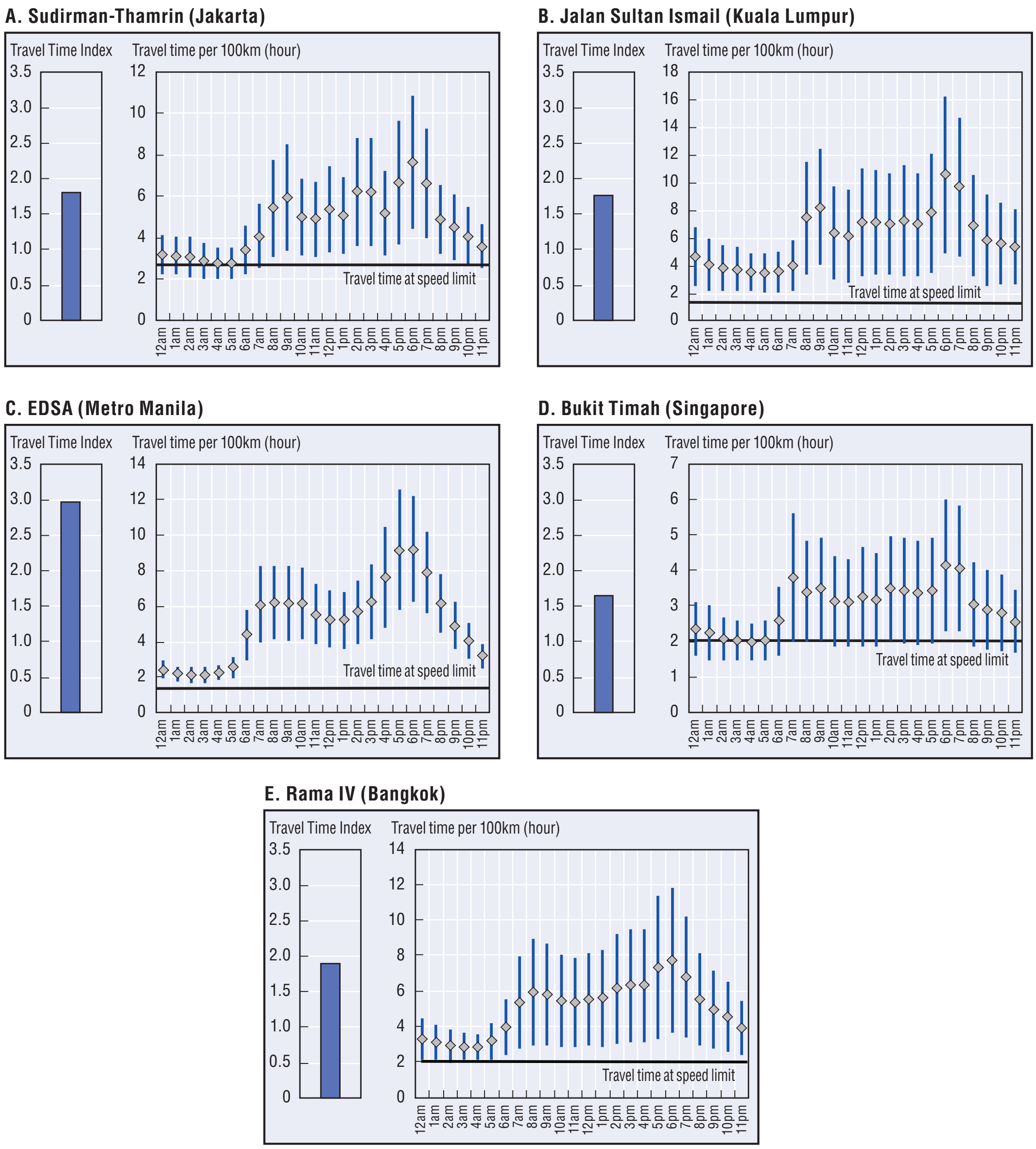
Country	Cities
Brunei Darussalam	Bandar Seri Begawan
Cambodia	Battambang, Phnom Penh, Siem Reap
Indonesia	Banyuwangi, DKI Jakarta, Makassar
Lao PDR	Luang Prabang, Vientiane
Malaysia	Johor Bahru, Kota Kinabalu, Kuala Lumpur, Kuching
Myanmar	Mandalay, Nay Pyi Taw, Yangon
Philippines	Cebu City, Davao City, Manila
Singapore	Singapore
Thailand	Bangkok, Chonburi, Phuket
Viet Nam	Da Nang, Ha Noi, Ho Chi Minh City

Source: ASEAN Secretariat.

Traffic congestion is one of the important challenges for Emerging Asia

Rapid urbanisation creates important challenges for policy makers in Emerging Asia to address. The positive externalities arising from agglomeration can be offset by negative externalities when a city's equilibrium size exceeds its socially optimum size (OECD, 2010a; OECD, 2015a). Traffic congestion is one of the key negative externalities of urban agglomeration, particularly in Emerging Asia. Urban population growth, rising incomes and limited transportation alternatives have all contributed to growing automobile use in the region. Congestion is a considerable challenge in many of the region's cities. For example, travel time along selected major roads in five large cities is generally quite high during peak hours and for some cities congestion can be observed throughout the day (Figure 2.2).

Figure 2.2. **Traffic congestion for selected roads of Southeast Asia cities, 2018**



Note: Travel Time Index is defined as peak hour travel time divided by free-flow hour travel time, where 1=no congestion and higher values indicate worse traffic. Free-flow hour is set to be mid-night 12am for all cities without loss of generality. Peak hours are 7am-10am and 4pm-8pm for the road in Jakarta, 8am-10am and 6pm-8pm for the road in Kuala Lumpur, 7am-10am and 4pm-8pm for the road in Metro Manila, 8am-9am and 6pm-7pm for the road in Singapore, and 7am-10am and 5pm-8pm for the road in Bangkok. In travel time figures, markers refer to average travel time at a specific hour within the day while the vertical bars represent the ranges of travel time. Speed limits are set to be 40km/h on the road in Jakarta, 60km/h on the road in Malaysia, 60km/h on the road in Metro Manila, 50km/h on the road in Singapore and 50km/h on the road in Bangkok. Traffic congestion data are based on either entire specified road wherever possible or a selected representative segment of specified road. Data are not necessarily comparable across the five areas shown above.

Source: OECD Development Centre calculations based on data from Google Maps (accessed on 24th September 2018).

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Inefficiencies in urban transportation impose economic costs. In some of the region's larger cities, a significant amount of time is wasted in traffic congestion (Table 2.2). There are also additional economic costs in the form of increased fuel and other transportation costs, and reduced productivity and efficiency (Box 2.2). Congestion also exacerbates noise pollution, air pollution and the emission of greenhouse gases by vehicles. Social impacts include increased stress and road safety problems (OECD/ECMT, 2007).

Table 2.2. **Estimated annual hours spent in traffic congestion in selected cities, per person using motorised transportation**

	Hours lost per worker per year
Jakarta, Indonesia	124.8
Kuala Lumpur, Malaysia	99.2
Manila, Philippines	233.6
Singapore, Singapore	89.6
Bangkok, Thailand	208.0
Ho Chi Minh City, Viet Nam	100.0
Beijing, China	208.0
Shanghai, China	264.0
Delhi, India	76.8
Mumbai, India	68.8

Notes: Congestion costs were estimated using the average speed of motorised transportation and average trip length in selected cities to calculate average trip duration. This was compared with a counterfactual average trip duration if average motorised transport speeds were 30 km/h and average trips were of the same length. The difference between the actual average trip duration and the counterfactual was assumed to be the result of traffic congestion. Time spent in congestion per person per year was calculated assuming two trips per day and twenty trips per month.
Source: OECD Development Centre calculations, using World Bank (2014).

Box 2.2. **Measurement of the impact of congestion on productivity**

The impact of congestion on productivity is somewhat hard to evaluate as productivity encompasses many layers that are possibility interlinked. One approach is to evaluate the effect of traffic congestions on businesses and households separately and abstracting from second round effect such as pollution or stress (OECD, 2007).

Congestion affects business productivity through various channels, including additional fuel, labour and vehicle running costs but also through downstream impacts on logistic chains. The first are relatively straightforward to measure, as they are the marginal labour and vehicle operating costs, measured through costs for fuel and vehicle maintenance. Costs associated to schedule delay and non-adherence are harder to grasp, and can be classified into three categories.

Logistics and business productivity impacts focus on efficiency losses related to failures in timely deliveries. These are especially harmful in the context of just in time delivery practises, flexible inventories and perishable goods. A related detrimental impact is the time-based competitiveness loss caused by delays, as customers highly value swift deliveries. The second indirect effect relates to the fact that cities are usually highly productive areas, and congestion reduces the benefits of such concentration by increasing the travel time between economic actors, services and goods. Finally, businesses face the indirect cost associated to their workers spending increased time commuting. Firms that are located in hard to access sectors due to traffic may have to offer higher wages to retain workers. This effect has been proven to exist but only for highly-skilled workers in urban areas (Zax, 1991).

Box 2.2. **Measurement of the impact of congestion on productivity** *(cont.)*

Households' time allocation is significantly affected by congestion. It has been found that in the short run, family time is compromised by increased commuting time (USDOT, 2006), although in the long run, evidence points towards households keeping a steady travel time budget. It seems therefore that households make decisions to keep their travel time constant in the long run by adapting their home and work locations. However, most housing and work arrangements are fixed in the short run and other barriers such as two-worker households, high housing costs or limited access to real estate financing might limit long run flexibility. Also, research conducted in several OECD member state cities indicates that while work related travel time has increased, non-work related travel time has decreased, keeping long run travel times constant.

Congestion therefore represents a large cost to society. A study of the city of Toronto and its metropolitan area conducted in 2005 gives an idea of the costs that congestion can produce (OECD, 2010b). The average commuting time in Toronto was one of the highest among metropolitan regions in the OECD, with congestion imposing costs estimated at CAD 2.7 billion per year.

This chapter discusses some of the policy options to be considered in improving urban transportation systems, including examples of initiatives tried in OECD member countries that may be relevant to policy makers in Emerging Asia. In particular, it focuses on the development of efficient public transportation systems, implementing pricing and other mechanisms for affecting vehicle ownership and use, incorporating new technologies in managing transportation challenges, adopting new modes of work, and reforming land use and urban planning.

Developing efficient public transportation systems as an alternative to private motor vehicle use

Public transportation is a critical component of urban transportation systems.[1] Public transportation vehicles could potentially use 15 to 100 times less road space per passenger than private cars (Litman, 2013a). The development of bus and rail networks can therefore play an important role in reducing traffic congestion. Across all size categories of cities in India, for example, traffic congestion is worse in cities without rail transit (Smith, 2008). The extent and use of public transportation systems vary considerably across the region. Improvements to public transportation in Emerging Asian cities requires financing, investment in new infrastructure and the maintenance and upgrading of existing systems, the appropriate selection of modes of transportation and consideration of needs for intermodal travel, and the responsible use of new technologies.

In general, public transportation accounts for a large share of travel in some Emerging Asian cities, exceeding the rates at which public transportation is used in selected large OECD cities (Table 2.3). The extent of transportation networks varies among cities, however. Relative to total area, the mass transit networks in Kuala Lumpur (0.27 km per km^2) and Singapore (0.21 km per km^2) are relatively large among major cities in the region, while those of Beijing (0.02 km per km^2) and Nanjing (0.01 km per km^2) are relatively small (EIU and Siemens AG, 2011).

Table 2.3. **Share of trips to work by public transportation in selected cities**

	Bus/BRT	Rail
Singapore, Singapore	19%	31%
Hanoi, Viet Nam	10%	-
Beijing, China	21%	2%
Shanghai, China	-	33%
Delhi, India	-	32%
Melbourne, Australia	3%	4%
Paris, France	-	57%
London, United Kingdom	15%	13%
New York, United States	9%	22%

Note: Missing values are either zero or not available.
Source: World Bank (2014), *Urban Transport Data Analysis Tool*.

Supportive policies can lead to further growth in public transportation use in absolute terms and as a share of total travel in the region. According to projections by the International Transport Forum, the share of all trips in Asian cities taken by public transportation will decline from 23.8% in 2015 to 20.6% in 2050 with no new measures on sustainable transportation, but will increase to 56.3% with policies to slow the ownership and use of personal vehicles and to 61.7% with prioritisation of sustainable urban transport development and a joint land-use policy (OECD/ITF, 2017a).

Effective planning and implementation of transportation policies in co-ordination with other aspects of urban planning is therefore critical for Emerging Asian cities. In many countries in the region, and in Southeast Asia in particular, public transportation organisations and local authorities lack sufficient powers and capacities to effectively manage urban transportation issues. Municipal boundaries not aligned with functional urban areas – core urban areas and the surroundings with which they share highly integrated labour markets – can further complicate transportation planning, as residents of suburban cities may regularly commute to and from the city centre, crossing municipal borders. Combined metropolitan transport authorities with appropriate institutional capacity may be the answer to managing public transportation in larger urban areas. Singapore's Land Transport Authority (LTA), for example, has been effective in co-ordinating planning and operation of public transportation and land transportation generally (Mo and Park, 2014). Efforts in co-operation at the regional level on the improvement of public transportation are also being made. One of the initiatives of the Master Plan on ASEAN Connectivity 2025 is the development of sustainable urbanisation strategies in ASEAN cities. This includes the launching of a smart transportation initiative for public transportation and non-motorised transportation.

As in other areas of infrastructure, investment in new public transportation capacity should emphasise quality, by taking a life-cycle perspective that accounts for the broad effects of projects. These include employment creation, social and environmental impacts, and alignment with broader development strategies and resource mobilisation (OECD, 2018a). Public and private funds have roles to play in financing sustainable investments in public transportation. Public financing could benefit from the development of new sources of revenue, including land value capture tools that allow governments to collect revenue generated through the effects of improved infrastructure and services on nearby land values (OECD, 2015a). Land development sale or lease, partnerships with developers, the sale of air rights, and targeted taxes are all popular forms of land value capture. Although a sensitive issue in some jurisdictions, the experience of New Zealand, South

Africa and some parts in Australia provide valuable insights on how these arrangements can work in practice (Dye and England, 2010).

User fares also contribute to capital and operating costs, though these are often offset by subsidies, though ownership of mass transportation differs across the region. For example, Singapore's bus network cost USD 742.8 million (in 2007 PPP) to operate and collects USD 631.9 million in fares (World Bank, 2014). Fares need to balance fiscal sustainability and the goal of making public transportation more attractive or accessible. Public transportation not only provides an alternative to private motor vehicle use, it also contributes to poverty reduction in cities by improving access to economic opportunities and promoting growth generally (Carruthers, Dick and Saurkar, 2005). Relative to average income levels, public transportation is more expensive in Hanoi (where the cost of regular use is equivalent to 12.0% of local GDP per capita) than in some other major cities in the region (Table 2.4) but overall, public transport fares are relatively inexpensive in Singapore and Beijing. User fares may also be set in response to demand, such as through peak-hour pricing, to better manage demand on demand for public transportation systems.

Table 2.4. **Public transportation fares in selected Emerging Asian cities**

	All public transportation		Mass transit	
	Average 10-km fare (2007 USD PPP)	Cost as percentage of city GDP per capita	Average 10-km fare (2007 USD PPP)	Cost as percentage of city GDP per capita
Kuala Lumpur, Malaysia	0.16	-	0.11	-
Singapore, Singapore	0.39	0.8%	0.36	0.9%
Bangkok, Thailand	0.65	2.7%	0.76	2.7%
Hanoi, Viet Nam	0.05	12.0%	-	-
Ho Chi Minh City, Viet Nam	0.05	2.4%	-	-
Beijing, China	0.16	0.7%	0.15	0.8%
Shanghai, China	0.28	1.1%	0.24	1.2%
Delhi, India	0.17	3.7%	0.12	4.6%
Mumbai, India	0.03	-	0.03	-

Notes: Mass transit includes all public transit modes except for non-BRT buses. Costs are calculated as the average cost of 40 00 km trips per month.
Source: World Bank (2014), *Urban Transport Data Analysis Tool*.

The introduction of integrated modes of rapid transportation may be needed in a number of cities in the region

In addition to expanded systems and improved accessibility, improvements in service will be needed to attract travellers to public transportation and away from private motorised transportation. In many cases, this will include the development or expansion of rapid public transportation systems, such as BRT systems, which operate at surface level with exclusive right-of-way; and metro and light rail, which use tunnels or other physically separated infrastructure, segregated routes, or right-of-way at intersections to provide high-frequency service. Buses are the only form of land-based public transportation in a number of major cities in Emerging Asian countries, including Bandar Seri Begawan, Phnom Penh, Vientiane, Yangon and Ho Chi Minh City (Table 2.5). Increased capacity over buses operating in regular traffic may be provided through BRT systems. BRT systems are found across the region, in cities in Indonesia, Viet Nam, China and India. Metro and light rail systems now operate in cities in Malaysia, the Philippines, Singapore, Thailand, China and India, with new systems under construction in Hanoi, Ho Chi Minh City and Jakarta.

Table 2.5. **Public transportation modes in selected Emerging Asian cities**

City/area	Bus	BRT	Metro and light rail
Bandar Seri Begawan, Brunei Darussalam	✓		
Phnom Penh, Cambodia	✓		
Jakarta, Indonesia*	✓	✓	
Vientiane, Lao PDR	✓		
Kuala Lumpur, Malaysia	✓		✓
Yangon, Myanmar	✓		
Metro Manila, Philippines	✓		✓
Singapore, Singapore	✓		✓
Bangkok, Thailand	✓	✓	✓
Hanoi, Viet Nam*	✓	✓	
Ho Chi Minh City, Viet Nam*	✓		
Beijing, China	✓	✓	✓
Shanghai, China	✓		✓
Delhi, India	✓		✓
Mumbai, India	✓		✓

Note: (*) Metro or light rail system currently under construction.
Source: OECD Development Centre compilation, using national sources.

Future plans must also factor in costs and benefits of the various modes of transportation. While metro and light rail systems can be cost-effective in large cities due to their high capacities, BRT systems tend to be the least expensive to develop, with capital costs 4 to 20 times lower than those of light rail systems and 10 to 100 times lower than those of metro systems (ITDP, 2007). BRT systems with low initial costs may require two to four lanes of existing roads, however (UN-Habitat, 2013). These are relatively popular in Emerging Asia. They exist in Jakarta, Subang Jaya, Malaysia, Bangkok and Hanoi as well as 18 cities in China and 7 cities in India. They may not be appropriate in many cases in the region, however, due to insufficient demand, difficulties in operating the system, and challenges in introducing and promoting the use of the system to the public (Satiennam, Fukuda and Oshima, 2006).

Integration between different modes of public transportation is needed to attract users and increase the efficiency of the system. This requires consideration of physical infrastructure, fare payment, routes, information for users, and institutions and management (IDFC, 2010). New technologies, such as smart cards, can help to facilitate convenient intermodal travel (OECD, 2016c). Intermodality is not only an issue to be considered between modes of public transportation; authorities must look at how users incorporate other forms of transportation such as walking and cycling into their journeys. The Guangzhou BRT, for example, was designed to be integrated with bicycle paths, bicycle parking facilities and the city's bicycle sharing programme. Such an approach can be a part of wider initiatives to promote the use of non-motorised transportation (Box 2.3) Governments are also working on interoperability of transport systems across ASEAN countries.

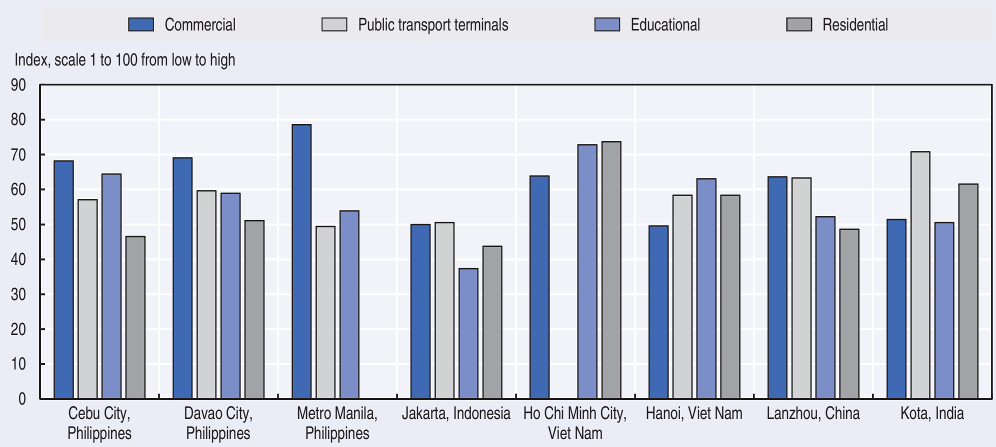
Box 2.3. **Non-motorised transportation in Emerging Asian cities**

Walking and cycling in many Asian cities are discouraged by, among other factors, inadequate infrastructure and air pollution. Walking has recently declined as a mode of transportation in many cities as the use of scooters, cars and other motor vehicles has increased. In Bangalore, the share of trips made by walking fell from 44.0% in 1984 to 8.3% in 2007 and in Shanghai, the share fell from 38.0% in 1986 to 10.4% in 2004 (Leather et al., 2011). A walkability index calculated from an assessment of footpath availability and quality, as well as safety and other indicators, shows differences across and within

Box 2.3. **Non-motorised transportation in Emerging Asian cities** *(cont.)*

cities; for example, commercial areas in Metro Manila received a relatively high score of 78.5, while the score for areas around public transit terminals is only 49.4 (Figure 2.3).

Figure 2.3. **Walkability Index scores for selected Emerging Asian cities**



Notes: Scores are not available for residential areas in Metro Manila or Public Transport Terminals in Ho Chi Minh City.
Source: Leather et al. (2011).
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In addition to reducing traffic congestion, efforts to promote walking and cycling as alternative modes of transportation can benefit the environment, health, property values and community cohesion (Litman, 2013b). Simple measures include ensuring that design codes consider pedestrian and cyclist safety and convenience as well as destination accessibility. Other initiatives include the establishment of public bike sharing schemes, which originated largely in Europe and the Americas, and are becoming more popular in the region. There has been particularly strong growth in China; a large-scale system in Huangzhou has 66 000 bicycles and 2 435 stations. Pilot programmes and smaller systems have been implemented in Pasig City, Bangkok, Bandung and Delhi (Mateo-Babiano, 2015). Any effort to promote the use of non-motorised transportation should be developed with stakeholder engagement and public participation.

Affecting vehicle ownership and use through policy

If alternative modes of transportation are available, demand for private transportation can be managed through the use of price-based and non-price-based policies to discourage or control vehicle ownership and use (Table 2.6). Vehicle ownership can be affected through price-based measures, such as additional taxes and fees at purchase or on a recurring basis that are not affected by the intensity of use, or through non-priced-measures such as quotas on vehicle licenses that directly control the number of new vehicles that can be purchased. Measures that may affect vehicle use include price-based policies on fuel pricing, the pricing of road use, and parking availability and fees, as well as non-price-based policies to ration road use by requiring carpooling or through other means.

Table 2.6. **Examples of vehicle ownership and use policies**

	Price-based	Non-price-based
Vehicle ownership	• Vehicle purchase taxes • Recurring taxes and charges	• License quotas
Vehicle use	• Fuel taxes and subsidies • Road use pricing and parking fees	• Road rationing

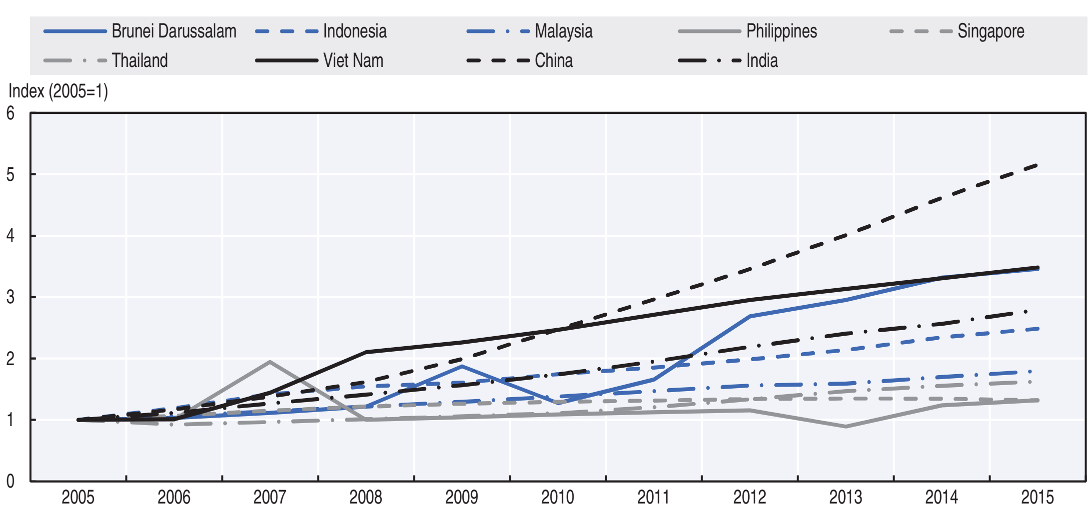
Source: OECD Development Centre compilation.

Policies affecting vehicle ownership and use may be particularly effective in low- and middle-income economies at earlier stages in the development of their transportation systems, as in many Emerging Asian cities (OECD/ITF, 2012). While they can be effective and may also be used to raise revenue when additional taxes or other fees are levied, these policies must be designed carefully to limit their negative consequences. These include raising transportation costs for lower-income urban residents. In addition, efforts to reduce traffic congestion by discouraging private vehicle use need to be combined with improvements in alternative modes of transportation such as public transit systems, so as not to adversely affect mobility and efficiency in cities.

Growing vehicle ownership and how to curb it

Vehicle ownership has increased rapidly in many Emerging Asian cities. The estimated number of motor vehicles in use increased between 2005 and 2015 in all Emerging Asian countries for which data were available, with the regional total expanding by an average of 13.2% per year (Figure 2.4). Growth has been the fastest in China, where the estimated number of motor vehicles grew by 17.8% per year. Many of the region's motor vehicles are used in cities, with increasing use accompanying urban population growth. Including both two- and four- wheeled motor vehicles, there are 10.7 million registered vehicles in Delhi, 9.7 million registered vehicles in Bangkok and 5.4 million registered vehicles in Chennai.

Figure 2.4. **Estimated total motor vehicles in use, 2005-15**



Notes: Data are not available for Cambodia, Lao PDR or Myanmar.
Source: OICA (2018), World Vehicles in Use.
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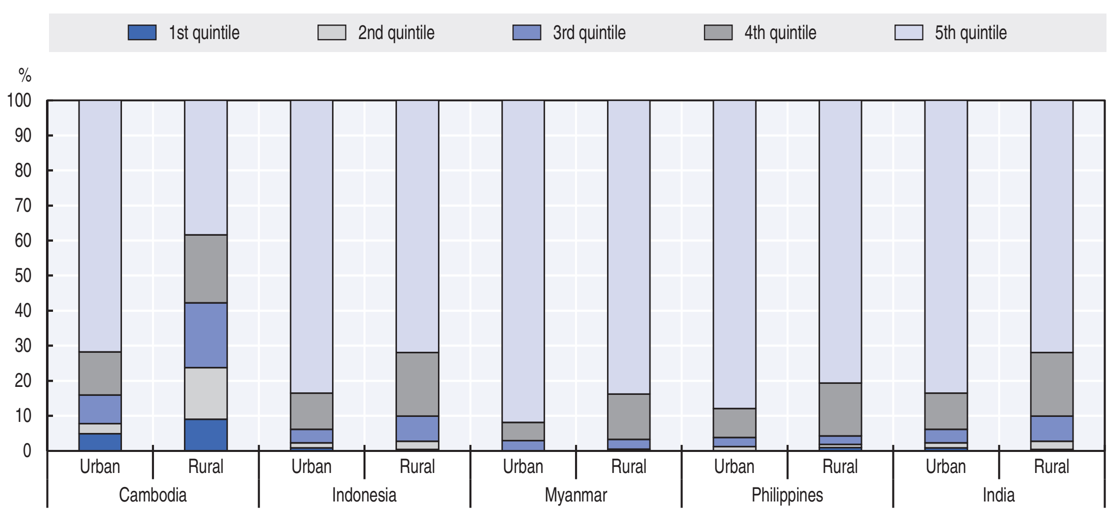
Increases in vehicle ownership look set to continue in the region. Around the world, rising incomes are associated with increasing ownership of motor vehicles. This association is the strongest in middle-income economies, as increases in ownership tend to slow as markets become saturated (Dargay, Gately and Summer, 2007). Growing demand may be further supported by subsidies and other incentives for vehicle ownership, such as the first-time car buyer scheme in Thailand. Interventions by local and central governments in these economies may help to reduce vehicle ownership and congestion. Policies affecting vehicle ownership include additional payments at and after purchase, as well as quotas on new vehicles. This could depress demand for vehicles, generate revenue and help achieve environmental goals.

To have a significant effect on vehicle ownership, price-based mechanisms may need to be substantial in size, however. While increases in vehicle prices reduce the registration of new vehicles, income elasticities are greater than price elasticities for motor vehicle ownership and use (Ingram and Liu, 1999). This implies that vehicle ownership will continue to increase with rising incomes unless prices increase faster than incomes, and that significant price increases are needed to moderate growth in ownership. Certainly, car owners in Emerging Asia's urban areas tend to be among the wealthiest, and the differences in rates of ownership by household wealth category tend to be greater than in rural areas (Figure 2.5). In Cambodia, Indonesia, Myanmar, the Philippines and India (the five countries in the region for which recent data were available), more than 70% of urban households owning cars were in the wealthiest quintile.

Figure 2.5. **Households owning cars by wealth quintile in selected Emerging Asian countries**



Notes: Results are taken from household surveys from Cambodia (2014), Indonesia (2012), Myanmar (2015/16), the Philippines (2013) and India (2015/16). Wealth indices are calculated using information on household ownership of selected assets, housing construction materials, and access to water and sanitation facilities.

Source: OECD Development Centre's calculations, using USAID (2012;2013;2014;2016a;2016b)

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Taxes paid on the purchase of a vehicle include general value added or retail sales taxes, import duties (which are waived in ASEAN Member States for automobiles coming from other members) (Table 2.7). They may also include specific taxes determined by vehicle attributes. Excise taxes and similar charges on the sale of motor vehicles in Emerging Asia are applied on an *ad valorem* basis. These rates vary in each country with factors such as the vehicle type, engine displacement, seating capacity, or price range, as well as the number of cars already registered to the owner (Yasol, 2016). High taxes and a lack of harmonisation within and across countries can reinforce market fragmentation and encourage consumers to try to bring in vehicles at lower costs (OECD, 2016d). Taxes and other fees may be charged by central or sub-national governments, though co-ordination is needed across levels of government in implementing coherent policies.

Table 2.7. **Selected vehicle acquisition taxes and fees in Emerging Asia**

Country	GST/VAT	Registration fee	Other
Cambodia	10%	4% of car price	Import tax of 35%;* special goods tax ranging from 30% to 70%.
China	16%	Varies across cities	Import tax of 15%; registration in some cities subjected to a lottery (Beijing) or an auction (Shanghai).
India	28%	6%-8% of car price	Varies across states (ex: Delhi road tax of 7%); additional tax ranging from 1% to 22% depending on type of car.
Indonesia	10%	USD 13.40	Import duty starting at 10% or 30% depending on the type of vehicle, much higher for luxury vehicles (150%).*
Lao PDR	10%	USD 15.00-USD 61.00	Import tax of 20% to 80%* depending on engine size.
Malaysia	10%	USD 29.00-USD 84.50	Import duty of 30%;* excise duty ranging from 75% to 105% levied depending on the engine capacity.
Myanmar	5%	30%-100% of car price, USD 32.00 for renewal	Import tax ranging from 15% to 30% depending on the car price;* special goods tax ranging from 20% to 50% depending engine power.
Philippines	12%	USD 18.50 (new); USD 7.40 (renewal)	Import tax of 30%;* proportional taxation system on the net manufacturer's/importer's selling price with the first bracket starting at 4% and the highest at 50%.
Thailand	7%	USD 61.30	Import tax of 80%;* excise tax ranging from 40% to 80%.
Viet Nam	10%	USD 10.30-USD 24.00	Import tax ranging from 45% to 60%;* ownership registration (10-15%).

Note: * Denotes excluding ASEAN countries. GST means goods and services tax. VAT means value added tax.
Source: OECD Development Centre based on various sources.

The main vehicle tax tools employed in Emerging Asia are generally comparable to OECD economies albeit the details. The ancillary taxes may be different as well. Value added tax rates or goods sales tax rates are a common feature of the frameworks in OECD economies with rates ranging from 5% in Canada to 25% in Nordic countries such as Denmark, Finland, Norway and Sweden (OECD, 2016c). Registration fees are also implemented in many countries following fixed fee and rate-based regimes. For rate-based regimes, bases include value, weight, seating capacity, engine or cylinder capacity and level of emission of CO_2 and NO_x. Moreover, some countries impose other forms of levies such as stamp duties, fuel efficiency and acquisition taxes.

All Emerging Asian countries impose some form of recurring tax on the ownership of motor vehicles, typically with lower rates for two-wheeled vehicles, though they differ in their form. In the Philippines, Indonesia, Thailand, Viet Nam and China, rates are based on gross vehicle weight, so that drivers who contribute to road damage or negative environmental effects are charged more (Mendoza, 2017). Engine capacity determines rates in Brunei Darussalam, Lao PDR, Malaysia, Singapore and for some vehicles in Thailand. Indonesia bases taxes on vehicle sales values and multiple criteria are used in determining taxes in India. Vehicle use is considered in the tax rates of several countries. While most countries in the region set recurring motor vehicle taxes at the national level, they are set at the subnational level in Malaysia, Indonesia, Viet Nam and India.

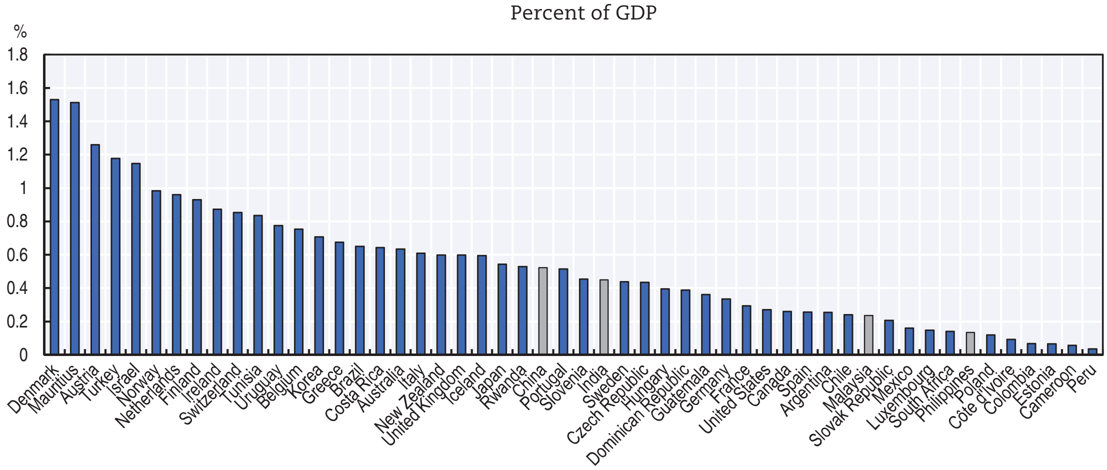
Regular vehicle inspections, done to test the roadworthiness and emissions of older vehicles, also raise the cost of holding vehicles. In China, private passenger vehicles more than six years old must be tested every six months, which is among the more frequent requirements in the region. There are also local level inspections; private passenger vehicles in Jakarta are subject to emissions tests every two years. Several countries in the region – including Malaysia, Singapore and China – use mandatory or voluntary vehicle scrappage programmes to reduce the number of older (and typically more polluting) vehicles on the road. Reduced opportunities for the resale of older vehicles may also reduce the number of total vehicles in use. Challenges that confront the implementation of vehicle inspection and maintenance in Asia include reliance on overstretched police force for enforcement, lack of established roadside testing facilities, lack of remote sensing facilities and fragmented education and awareness campaigns (Clean Air Asia, 2016).

Recurrent fees that are tied with vehicle ownership and usage are used in OECD countries as well. The peculiarities of these taxes depend on a list of vehicle characteristics such as engine or cylinder capacity, vehicle type and weight, fuel type and pollution emission. Vehicle inspections are a standard practice in all OECD countries to ensure compliance with regulations and to maintain road safety. In many cases among OECD member countries, taxes and other charges on vehicles – whether paid at purchase or recurring – are designed to reduce emissions by adjusting supplementary taxes for vehicle emission and other associated factors, such as vehicle size, engine size, fuel consumption and type of fuel used (OECD, 2015b).

Relative to OECD member countries and others for which comparable data are available, revenues collected from motor vehicle and transportation taxes in some Emerging Asian countries are moderate or low as a percentage of GDP. As a share of GDP, revenues from one-off import or sales taxes on transport equipment, recurrent taxes on ownership, registration or road use of motor vehicles, and other transport-related taxes aside from fuel taxes averaged 0.44% of GDP in OECD member countries in 2013, below the 0.52% in China and 0.45% in India, but above the 0.24% in Malaysia and 0.13% in the Philippines (Figure 2.6).

Figure 2.6. **Motor vehicles and transport tax revenue, 2013**

Percent of GDP



Source: OECD (2016e), *Database on Policy Instruments for the Environment*.

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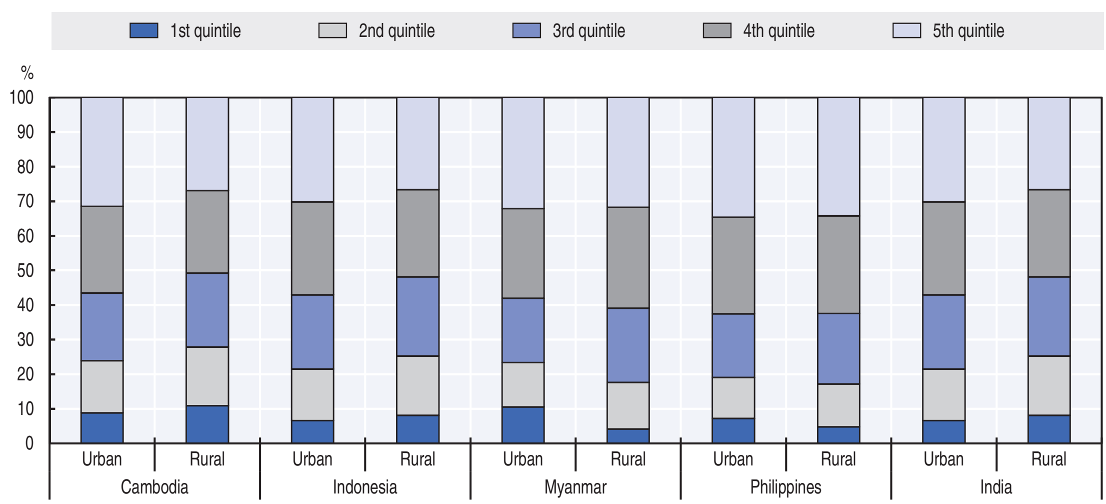
In addition to taxes, the purchase of new cars by residents of cities may be explicitly limited through quota systems. The specific intention is to reduce urban traffic congestion. Under Singapore's Vehicle Quota System, introduced in 1990, a limited number of registrations are auctioned off to purchasers of new vehicles. Similarly, in Shanghai, license plates for new vehicles are allocated by auction. Since 2011, limited numbers of new license plates have been issued in Beijing by lottery. While auctions ensure that vehicles can be purchased by those placing the highest value on them and prevent the emergence of illegal secondary markets, they can exclude lower-income households. In Guangzhou, Hangzhou, Shenzhen and Tianjin, both auctions and lotteries are used in allocating licenses for new cars.

Two-wheel vehicles may be treated differently by vehicle pricing and ownership policies – whether they are subject to fewer additional costs and restrictions than fourwheel vehicles, or more strict policies or bans, such as in Yangon since 2003. The results are unclear for urban traffic. Discouraging the ownership of motorbikes may lead to a reduction in the number of vehicles, but could also worsen traffic congestion if more cars are used as a result rather than alternative modes of transportation (Phang, 2014). This issue may be particularly relevant in low- and middle-income economies, where motorbikes and scooters are popular modes of transportation. Two-wheel vehicle ownership is the most responsive to income growth in economies at around USD 1 000 to 3 000 per capita income (2007 prices), is the highest at per capita income levels of USD 10 000 to 20 000 and declines at higher income levels (OECD/ITF, 2012).

Similarly, ownership of two-wheel vehicles is also more common across levels of wealth within countries, with implications for equity of policies raising vehicle prices. Ownership of motorbikes and scooters is not as strongly associated with wealth as car ownership (Figure 2.7). Even in the Philippines – the country with the greatest gap in motorbike and scooter ownership between the top and bottom household wealth quintiles – only 34.6% of households with these vehicles were among the wealthiest and 7.2% were among the least wealthy. Rural and urban households also show more similar patterns in motorbike and scooter ownership than car ownership by wealth.

Figure 2.7. **Households owning motorbikes or scooters by wealth quintile in selected Emerging Asian countries**



Notes: Results are taken from household surveys from Cambodia (2014), Indonesia (2012), Myanmar (2015/16), the Philippines (2013) and India (2015/16). Wealth indices are calculated using information on household ownership of selected assets, housing construction materials, and access to water and sanitation facilities.

Source: OECD Development Centre's calculations, using USAID (2012;2013;2014;2016a;2016b)..

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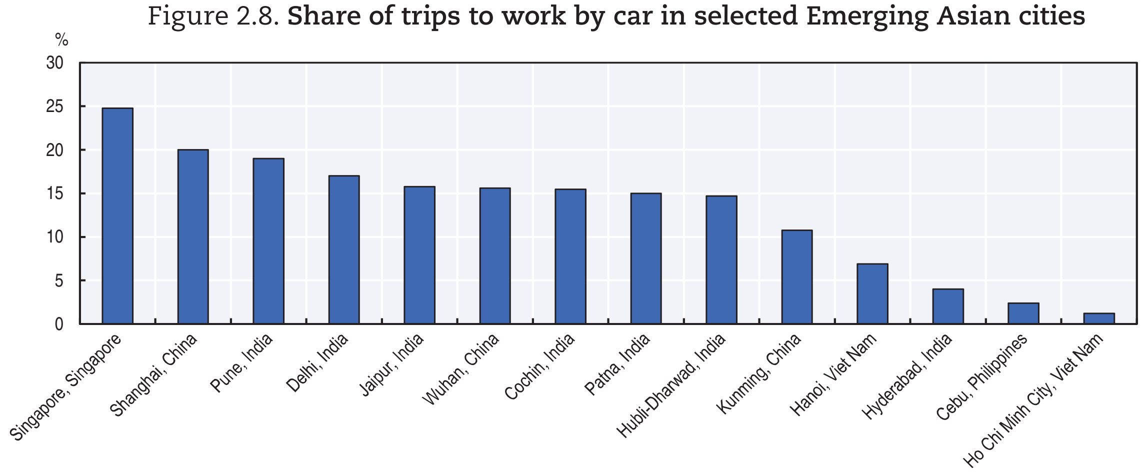
Policies on vehicle use could help to reduce urban congestion

Along with policies on vehicle purchase and ownership, demand can be managed through policies on vehicle use – either generally across the country or in specific areas. Vehicle use in cities can be affected through taxes and subsidies on fuel, the pricing of road use, and other road rationing measures. Since they can be used to more precisely target use in the busiest areas and times of day, policies to reduce the unnecessary use of vehicles may be a useful alternative to pricing and other policies discouraging vehicle ownership in addressing urban traffic congestion (OECD, 2012).

The extent to which cars are used in urban transportation varies considerably across Emerging Asian cities. In Singapore and Shanghai, 24.8% and 20% of trips to work are made by car (Figure 2.8). In Ho Chi Minh City, however, only 1.2% of trips to work are made by car, although motorcycles are used for 61.8% of such journeys. Distances travelled vary considerably between cities as well; the length of the average trip by car is 14.2 km in Mumbai, but only 3.1 km in Bhopal.

Figure 2.8. **Share of trips to work by car in selected Emerging Asian cities**



Source: World Bank (2014), *Urban Transport Data Analysis Tool*.
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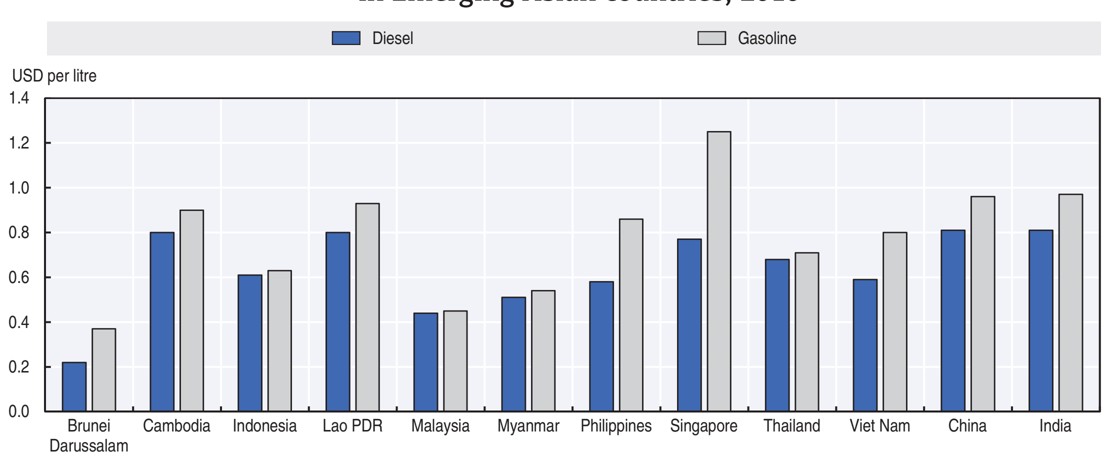
Though they do not directly target congestion in urban areas, fuel prices can be a major factor affecting individuals' decisions on the use of private vehicles (Gaymer, 2010). The pump price per litre of diesel varies across the region, from USD 0.22 in Brunei Darussalam to USD 0.81 in China and India, while that of gasoline ranges between USD 0.37 in Brunei Darussalam to USD 1.25 in Singapore (Figure 2.9). Fuel prices can account for a large share of drivers' transportation costs (Box 2.4). These prices are affected by taxes, which are often designed to generate revenue and to price the environmental effects of vehicle emissions. Fuel excise taxes are applied in all Emerging Asian countries except in Brunei Darussalam, Indonesia and Viet Nam. Subsidies in the region reduce fuel prices, encouraging greater use of motor vehicles. These subsidies, while considerable in several Emerging Asian countries, have been reduced or eliminated in recent reforms, though rising global oil price is still a challenge. Fuel quality standards, which are in use across the region, may raise fuel prices in addition to the typical goal of reducing pollution.

Figure 2.9. **Annual median pump price for diesel and gasoline in Emerging Asian countries, 2016**



Source: World Bank (2018), *World Development Indicators*.
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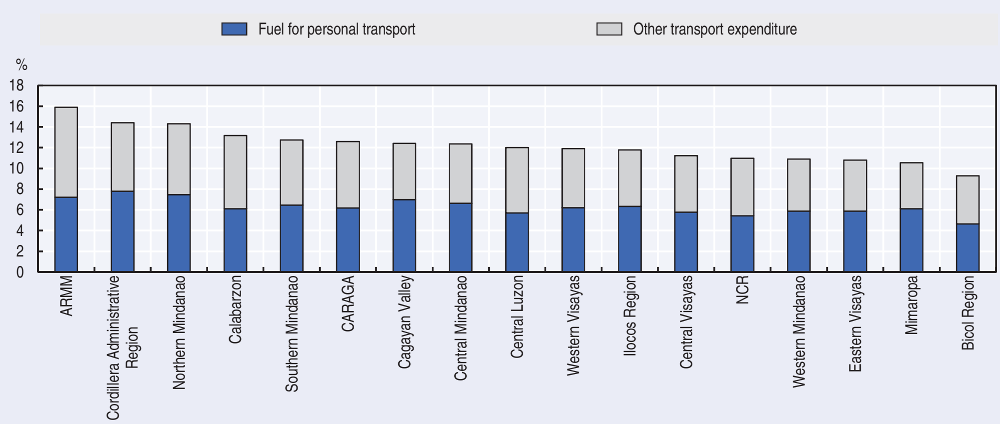
Box 2.4. **Fuel and household transportation expenditure in the Philippines**

Across the Philippines, households with at least one car spent an average of 12% of their non-food expenditure on transportation in 2015, of which 52.5% was spent on fuel for personal transport. By region, average household expenditure on transportation varied between 9.3% and 15.9% of non-food expenditure, with between 45.3% and 57.8% of this is spent on fuel, among households owning cars (Figure 2.10). As a share of non-food expenditure, average household transport expenditure was the highest in the Autonomous Region of Muslim Mindanao (ARMM), Cordillera Administrative Region and Northern Mindanao. However, average transportation expenditure in absolute terms by households with cars was the highest in the National Capital Region (NCR), Calabarzon and Northern Mindanao.

Figure 2.10. **Average transportation expenditure among households owning at least one car by region, 2015**

Percent of total non-food expenditure



Source: OECD Development Centre's calculations, using PSA (2015).

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Taxes and charges on road use – including congestion pricing and parking fees – offer a more targeted approach. Revenues from these vehicle use pricing schemes can finance the development or improvement of alternative modes of transportation. The fees collected from congestion pricing in London and Stockholm, for example, have been directed to road transportation infrastructure and public transit systems (OECD, 2011).

Congestion pricing schemes try to address traffic congestion by charging drivers in high-use areas, often with rates that are higher at times of peak demand. The goal is to raise revenue, discourage driving and encourage multiple passengers to share vehicles to reduce costs. Congestion pricing can be one of the most efficient means of reducing congestion. While prices need to be set sufficiently high to discourage road use, high prices also have disproportionately negative effects on the poor and those without access to alternative modes of transportation (OECD, 2015a). Congestion pricing is used in a number of large cities and systems used include road tolls and variably-priced lanes on specific roadways, cordon charges for entering congested areas, and area-wide charges per distance travelled in a designated area.

While road and bridge tolls, along with express toll lanes, are already used in much of the region to pay for infrastructure and to manage traffic flows, cordon charges to reduce traffic congestion in urban areas are less common. Singapore, however, has used cordon charges in its current ERP scheme since 1998, when it replaced the ALS, introduced in 1975. Under the ERP, cars entering the city centre are automatically charged as they pass through gantries into the city centre during peak hours. Rates are reviewed and adjusted on a quarterly basis with the goal of maintaining speeds of 20 km/h to 30 km/h on arterial roads and 45 km/h to 65 km/h on expressways, and vary by vehicle size, entry point, day of the week and by half-hour period during peak hours. These systems are becoming more popular globally and in the region; similar congestion pricing systems are being planned or considered in other large Emerging Asian cities, including Beijing and Jakarta.

The experience of Singapore and other cities using cordon charges suggests that they are successful in reducing the volume of traffic and improving traffic speeds in the areas that they cover (ITF, 2010). While the number of vehicles entering the city each day in Singapore increased by 22.1%, from 246 000 to 300 400, between 2004 and 2014, average speeds on expressways and arterial roads remained mostly unchanged and within their target ranges (Table 2.8). However, the design and pricing of these systems can create unintended consequences. They may lead to traffic spillovers on to non-charged areas, roads and lanes (Safirova and Gillingham, 2003). Like other charges, these also have differing effects on drivers at different income levels. A study of four European cities using congestion pricing systems found that higher-income groups who are more likely to drive tended to pay more under these schemes, but at a lower share of income (ITF, 2016).

Table 2.8. **Traffic conditions in Singapore during peak hours, 2004-14**

Year	Average daily number of vehicles entering city	Average speed (km/h)	
		Expressways	Arterial roads
2004	246 000	62.7	24.8
2005	244 000	63.0	27.2
2006	270 400	61.6	27.1
2007	278 300	62.4	26.9
2008	278 100	63.3	26.7
2009	278 400	62.0	27.9
2010	293 300	62.3	28.0
2011	300 000	62.5	28.5
2012	292 000	63.1	28.6
2013	289 000	61.4	28.9
2014	300 400	64.1	28.9

Source: LTA (2017), *Road Traffic Conditions During Peak Hours*.

Street parking charges and policies regarding private sector parking have been effective in reducing the number of car trips and in decreasing the share of total trips taken by cars in cities in OECD member countries (OECD, 2011). Parking fees can be adjusted to discourage driving in the busiest areas and times. Public sector officials in several major Asian cities seem more concerned, however, about the shortage of parking rather than a need for constraining availability (ADB, 2011). In some cities, bans or restrictions on street parking have been implemented. Where these target residential areas, they may discourage vehicle ownership in addition to the intensity of vehicle use. For example, Jakarta residents are required to prove that they have a garage before purchasing a car, while cars parked illegally on secondary and local roads in some areas of Manila are towed under the so-called "no garage, no car" policy. Mingardo, van Wee and Rye (2015) point out that in many European countries parking policies are local policies, wherein the national governments set the guidelines but each town or city has a free hand to set the objectives and determine the instruments. They also mention that as a rule of thumb parking fees are introduced or adjusted when occupancy rate is above the 80%-85% threshold even though they clarified that following the results of various empirical studies, parking fees typically do not reflect the costs of providing parking space.

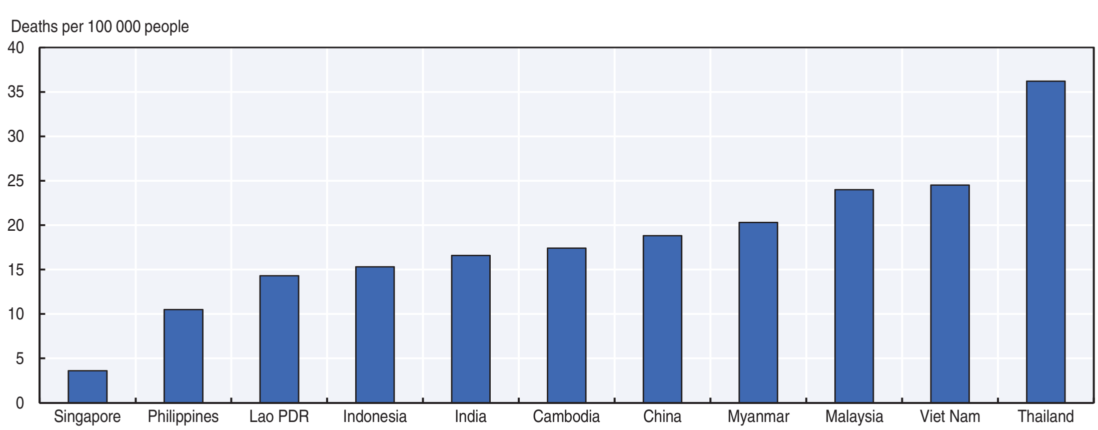
Vehicle use may also be managed through non-price-based initiatives or rules for rationing road access among drivers. These policies lack the economic efficiency of price-based mechanisms, but may avoid their regressive tendencies. Carpooling has been encouraged in the region through the establishment of high occupancy vehicle lanes (typically on highways) restricted to vehicles with two or more passengers concept is sometimes combined with road tolls in high occupancy/toll lanes open to either vehicles with the minimum number of passengers or those paying a fee. In a stricter example, under the Three-in-One policy, vehicles in central Jakarta were required to have at least two passengers in addition to the driver during peak hours. The policy was abandoned in 2016. The policy's effectiveness was undermined by a market for passengers for hire, or "jockeys". However, its end was followed by an increase in delays from 2.1 to 3.1 minutes per kilometre during the morning peak and from 2.8 to 5.3 minutes per kilometre during the evening peak (Hanna, Kreindler and Olken, 2017).

Rationing also works through sharing road access over time, typically by allowing cars with license plates ending in odd and even numbers the right to drive on alternate days. This is usually a response to periods of high pollution for health and environmental reasons. Some cities like Beijing implement rationing automatically when air pollution exceeds set levels.

Using new technologies to improve transportation efficiency

New technologies and innovations can help solve urban transportation challenges as part of smart city initiatives. The benefits of combining the use of technology and data are evident in traffic management in line with efforts to build intelligent transport systems (ITS). More than improving the flow of traffic, technology is behind initiatives to minimise accidents; to promote pedestrian welfare, particularly for the elderly and persons with disabilities (PWDs); and to swiftly respond to road hazards and other transport-related incidents. Efforts to improve road safety could make a considerable difference in the region; five Emerging Asian countries – Thailand, Viet Nam, Malaysia, Myanmar and China – have rates of road traffic fatalities above the global annual average of 17.4 per 100 000 people (Figure 2.11).

Figure 2.11. **Road traffic fatalities in Emerging Asia, 2013**



Source: WHO (2015), *Global Status Report on Road Safety*.
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There are many possible targets for initiatives using ITS tools, but public transportation, vehicle and ride sharing, and logistics services are often the most important areas where new technologies can improve efficiency. Digitalisation, the Internet of things, the widespread use of sensors, and big data collection and analysis can better match public transportation services to users' needs. Advances in cloud computing and analytical capacities will likely further improve the evaluation of urban mobility needs and future transportation priorities. The use of big data in particular has the potential to improve service and reduce costs in public transportation. Personal devices can make information on transportation options more accessible for travellers. Innovations in mobility could include allowing public transportation systems to co-operate with other transportation providers including taxis and, increasingly, ride-sourcing and ride-sharing services (Box 2.5).

Box 2.5. **The effects of taxis, ride-sourcing and ride-sharing services on congestion**

Taxis and similar services, including ride-sourcing and ride-sharing, form an important part of urban transportation systems. Even considering only formal taxis, these vehicles are numerous in many of the region's large cities: there are 211 960 taxis in Delhi, and even more relative to the population in Manila, where there are 16.9 taxis per 1 000 residents of the city (Figure 2.12). In addition, many cities in the region have large numbers of formal and informal alternatives to taxis, such as motorbike taxis, minibuses and others. Their contribution to traffic congestion figures are among the arguments for placing quantitative restrictions on licenses or banning some services from cities. The effectiveness of such policies in reducing congestion depends on the alternative modes of transportation used by passengers; if a shortage of taxis leads to more passengers using private motor vehicles, these policies may increase congestion. However, some policy interventions such as charging congestion fees per trip or on unoccupied taxis in busy areas could reduce taxis' unoccupied time (OECD, 2018b). Although they are not a substitute for poor service, ride-sourcing and ride-sharing services can complement public transportation systems, particularly on low-performing and costly routes (OECD/ITF, 2017b).

Figure 2.12. **Available taxis in selected Emerging Asian cities**

Note: RHS means right-hand scale and LHS means left-hand scale.

Source: World Bank (2014), Urban Transport Data Analysis Tool.

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Improvements to urban transportation systems can improve the efficiency of cities by reducing costs of delivery and logistics services. Technology provides new options for last-mile distribution. These include smart supply chain technologies and the use of new modes of transportation. For example, in the US market alone, the market size of commercial drones was estimated at around USD 500 million in 2017, and could double within five years. Innovation in this area requires supportive legal frameworks, however.

To be effective, ITS initiatives should be people-oriented, inclusive and open. Priorities should be based on user demand. This can prevent resource waste and increase support from the public. The responsible use of big data requires consideration of privacy concerns (especially in the use of passenger data, notably on smartcards). New models of public-private partnership may be helpful in using such data effectively (OECD/ITF, 2015). While transport innovations may help to reduce inequalities by, for example, facilitating the logistics activities of SMEs, existing unequal access to technology may simply widen the gap where technology-enabled services are used. Inclusiveness must therefore be a central part of the design of transportation systems.

Mature and established technologies may still be the best option when they are more affordable, reliable and easily understood by users, and when they have been tested in similar situations. For instance, there is a large variety of ready-for-use technologies and business solutions in the field of autonomous toll systems, real-time traffic light optimisation, Global Positioning System (GPS)-based data collection, and real-time traveller information. However, consideration should also be given to the interactions between technologies. Smart transportation is an integrated system where efficiency depends on a set of technologies rather than on just one or a few. This also means that consideration should be given to the future development of the system, including its expansion and upgrading.

Conditions for the implementation of different transportation technologies vary greatly per city, depending on physical factors such as size and structure, as well as on social and cultural factors. Implementing similar technologies in Emerging Asian cities may require different policy strategies and some technologies might be more suited for certain cities than for others. Moreover, implementing these innovations requires leadership at local and higher levels, and the involvement of a range of stakeholders. Smart transportation initiatives should, for example, be included in local development plans with a long-term focus. Stakeholder involvement is important not only in building support for new initiatives but also for finding solutions to technical and other challenges in implementation. Stakeholder inclusiveness can also help achieve a shared understanding of objectives that lead to more effective involvement and co-operation. With the proper framework and partnership among planners, authorities, operators and customers, this could be a self-supporting process.

Smart cities need to learn from one another and share lessons learned. Many cities have little experience with the latest technologies in public transport services. Lessons from other cities can reduce learning costs and facilitate incremental innovation. Standardisation and harmonisation play a role in supporting this. Standardisation (in technology) and harmonisation (in regulation) tend to facilitate the diffusion of knowledge nationally and internationally.

Examples from inside Emerging Asia and from OECD member countries illustrate the many ways in which ITS policies have been applied to improve urban transportation. The case of Singapore, which is at the forefront in building technology-driven traffic management mechanisms in ASEAN, provides some noteworthy examples. Technology and data were at the core of the traffic management in the country since early 1980s, which the government continues to develop as machine learning methods evolve. Based on most recent information, the expressway and tunnel networks that form part of the ITS stretches about 164 km with a total lane length of 1 107 km (LTA, 2018). It is equivalent to about 12% of the total length of road lanes in the country, incorporating arterial, collector and local roads. Notable thoroughfares included are the Kallang-Paya Lebar Expressway, Marina Coastal Expressway, Central Expressway, Fort Canning Tunnel and Woodsville Tunnel. Specific ITS initiatives in the past three decades have included:

- *Green Link Determining System* (1988), which uses pedestrian and vehicle traffic data to co-ordinate traffic signals in an adaptive manner intended to optimise time allocation of green lights for motorists travelling in different directions as well as pedestrians, in order to minimise vehicle stoppage;
- *Signalised Pedestrian Crossing* (late 1980s to early 1990s), a facility that balances the demands of motorists and pedestrians using the crossing intended to increase efficiency of road usage and promote pedestrian safety;
- *Junction Electronic Eyes* (1990s), which are surveillance cameras placed on lampposts that have the capability to view various angles, zoom and transmit real-time video images of the traffic situation;
- *Electronic Regulatory Signs* (1990s), which are traffic signs in light-emitting diode displays accompanying standard static traffic signs;
- *Expressway Monitoring and Advisory System* (1990s), which ensures quick responses to traffic incidents;
- *TrafficScan* (mid-2000s), a platform that allows motorists to access updated travel information on roads using taxis equipped with GPS as information sources;
- *Parking Guidance System* (2008), which sends out real-time information concerning parking space availability in shopping malls at major shopping areas; and
- *Green Man+* (2011), which is an initiative that gives about 13 seconds of extra time to elderly and PWDs to cross the road.

Moreover, technology and data are heavily utilised in parallel initiatives like the ERP system, which follows a variable pay-as-you-use approach depending on the traffic conditions. One of the innovations in line with this is the in-vehicle unit used to pay for priced roads such as those covered by the ERP and priced car parks using the electronic parking system. The Contactless e-Purse Application Standard is another advancement that allows different card issuers following the standard to offer services compatible with ERP and other non-transportation transactions without modifications. Online platforms have also been launched to provide additional information and consumer assistance.

Moving forward, Singapore unveiled its Smart Mobility 2030 plan in 2014 to further enhance the existing ITS (LTA/ITSS, 2014). The initiative seeks to make full use of the data from location-aware mobile devices and next-generation surveillance systems as well as application of global navigation satellite systems. It also intends to improve sensor deployment and enhance the existing data processing facilities. In the same year, the Singapore Autonomous Vehicle Initiative (SAVI) was launched. SAVI aims to serve as a platform for R&D collaboration on the areas of autonomous vehicles for public use, autonomous mobility system and automated road system.

From outside of the region, Japan's Universal Traffic Management System (UTMS), established in 1993, provides additional examples of technology-based traffic management mechanisms. UTMS is part of the broader ITS that was first conceived in the 1970s. Its structure is comprised of a central system that controls the traffic signals, vehicle detectors, roadside transmitters and message sign terminals, as well as a number of subsystems such as signal control subsystem, information collection and supply subsystems and operation management subsystem (IUTR, 1999). A local area network connects these subsystems, allowing expeditious transfer of large volumes of data. The information collecting subsystem gathers data from roadside vehicle detectors like traffic volume, traffic speed and vehicle type which are in turn used in calculating congestion length, saturated traffic volume, and division rate as well as estimated duration of travel times and estimated travel times for those roads not fitted with such terminals. The signal control subsystem processes the data and operates the signal controllers. The information supply sub-system gives the motorists information on congestion, travel times, traffic regulations, and parking space. Finally, the operation management subsystem operates traffic control system within a prefecture, provides supervisors at the traffic control centre with the information on the traffic situation and on the condition of other subsystems, and exchanges information with the information collecting subsystems in other prefectures.

The traffic control system makes use of various instruments, such as information boards, roadside radio transmitters, in-vehicle equipment, cameras and vehicle detectors (e.g. ultrasonic, infrared, radar and image processing). Within its ITS policy, other initiatives were developed in line with the UTMS to promote further use of technology and aggregate services for motorists that they can access from a single on-board unit (OBU). These initiatives include:

- *Vehicle information and communication system* (1996), a mechanism used by more than 58 million registered vehicles in 2017 based on MLIT (2018) designed to gather and process traffic data using infrared beacons, radio beacons and FM multiplex broadcasts to send to in-vehicle navigation systems and other similar devices;
- *Public transportation priority system*, which manages priority signal control for buses using bus-specific IDs that are readable by infrared beacons to ensure priority passage for high-volume public transportation;
- *Electronic Toll Collection (ETC)* (2001), a digital toll payment mechanism with a user coverage of more than 90% in 2017, based on the data of MLIT (2018), intended to address congestion and the accompanying externalities;
- *Smartway Project* is an umbrella platform that seeks to build on previous initiatives incorporating new developments in ITS sphere and come up with a single OBU for ITS;
- *Vehicle-to-Infrastructure communication service* (2011), which allows high-speed high-volume two-way communication between OBUs in vehicles and ITS spots installed along expressways across the country using a 5.8 gigahertz of dedicated short-range communication; and
- *ETC2.0* (second-stage ETC, 2014), which facilitates information dissemination in advance using ITS spots and OBUs to ensure traffic safety and minimise congestion – a platform that the government intends to make a base for other services in future.

In other OECD member countries, technological innovations have been used in cities to connect bus and taxi systems, improve real-time access to traffic information, increase the ease of access to various modes of transportation, make traffic signals responsive to current conditions, and facilitate toll payments (Table 2.9).

Table 2.9. **Technological innovations in urban transportation systems**

City	Technology
London, United Kingdom	In London, the Smart Ride system has been introduced in 2018. The concept is a hybrid bus and taxi: the buses are on-demand, are small enough to navigate the smaller streets of the inner city and have bookable seats. It also has the option to change routes dynamically, based on data from users' GPS-enabled smartphones (OECD/ITF, 2018)
Calgary, Canada	In Calgary, citizens can make use of an app that shows real-time traffic information such as travel times and road closures, as well as giving access to traffic camera footage (City of Calgary, 2018)
Gothenburg, Sweden	In Gothenburg, an integrated public transport service called UbiGo allows users to use all forms of public transport, car-sharing, rental care service, taxi and bicycle sharing with a single platform. A smartphone app is developed for the mobility service and users receive a single invoice (OECD/ITF, 2015)
Auckland, New Zealand	In Auckland, nearly all traffic signals at intersections have vehicle-actuated control using vehicle detectors. Based on real-time traffic, the phase length is adjusted continuously (Auckland Transport, 2015)
Seoul, Korea	In the Seoul Metropolitan Area, all expressways use Dedicated Short-Range Communication to automate settlement of tolls wirelessly (Chung, Choi and Yoon, 2018).

Source: OECD Development Centre's compilation.

Managing transportation demand through flexible working arrangements

Traffic congestion is at its worst during peak hours when commuters travel to and from work. Alternative working arrangements can ease the problem and improve urban transportation systems. Large numbers of workers in cities strain both road capacity and the limits of public transportation systems. Flexible working arrangements (FWAs) are not widely used in many countries in the region, but could be used to either reduce demand or to shift demand from peak hours. Forms of FWA relevant to managing transportation demand include flexibility in setting work-day start and end times, part-time work, compressed work weeks, telecommuting and working from home, and job sharing. A study of FWAs in firms in Asian countries found that flexible working hours were the most common arrangement offered (Anell and Hartmann, 2007). These may be set out in company policies or in informal arrangements between managers and staff. FWAs may also benefit employers directly. Flexibility in modes of working can improve work-life balance, and thus help in recruitment and retention, particularly in labour markets with skill shortages. Younger workers and others interested in balancing work and personal lives may be attracted by these non-remunerative aspects of work (Box 2.6).

Box 2.6. **Flexible working schedule is a stepping stone in achieving work-life balance**

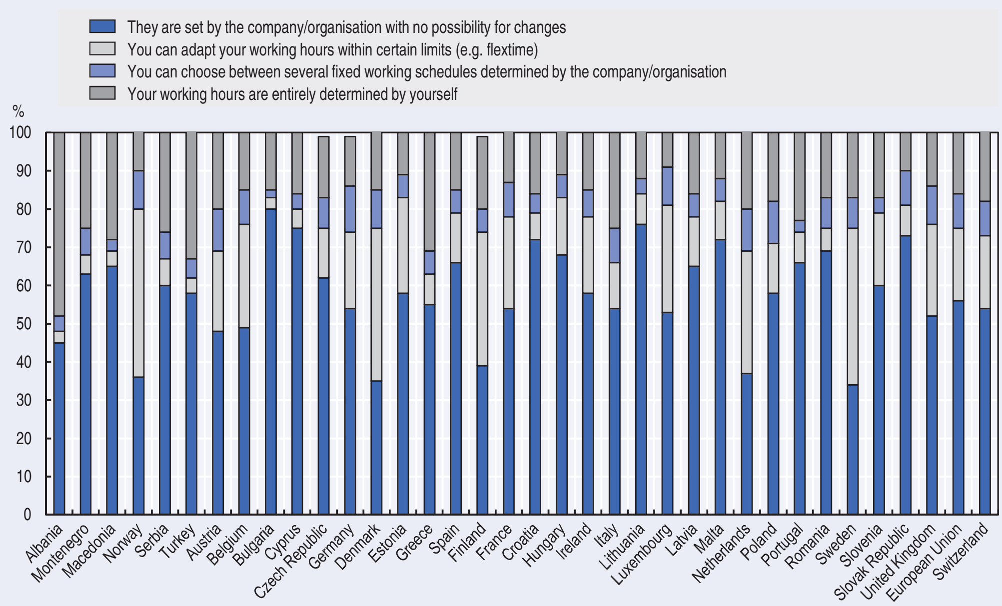
FWAs are increasingly common, and have been widely adopted in some parts of Europe. FWAs are best suited for skilled workers. In Europe, workers who work from home tend to be those with long working hours and long commutes. These workers are less inclined to take breaks for personal reasons during working hours. Flexible working arrangements are successfully implemented in Europe due to the use of ICT, teamwork and performance-based pay (OECD, 2016f).

In a 2015 survey of employees in European countries, 56% of the respondents stated that their working hours are set by their employers with no possibility for changes, while the remaining respondents said that they had somewhat flexible working schedules, in varying degrees (Figure 2.13). A total of 19% of respondents were able to adapt their working hours within certain limits, while 16% of the workers said that their working hours were set by themselves. Only 9% of the workers in the EU were able to choose between several fixed working schedules determined by their employers. Among European

Box 2.6. **Flexible working schedule is a stepping stone in achieving work-life balance** *(cont.)*

countries, the greatest flexibility for workers was found in Albania, where 48% of employees were able to set their own work schedules. This was followed by Turkey, at 34%. Luxembourg and the Slovak Republic had the least flexibility in this regard, at 9% and 10%, respectively. Nevertheless, 28% of the employers in Luxembourg do grant some flexibility in working hours within certain limits such as through the use of flextime.

Figure 2.13. **Employees' working hours flexibility in European countries, 2015**



Note: 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: Eurofund (2018), *European Working Conditions Survey* (database).

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Flexible working arrangements have been implemented widely in the EU-25 countries since the 1990s. For flexible working time arrangements specifically, it was found that about 40% of the employees in EU-25 are involved in these arrangements, whereby the starting and finishing times of work are not fixed. Even though there are many forms of flexible working arrangements, flextime especially has been implemented by both the public and private sectors in selected organisations in Emerging Asia. When this is implemented widely, not only will it enable workers to achieve a more balanced work-life regime, but also help to lessen traffic congestion during rush hours, the product of a traditional working schedule which is still prevalent in the region.

There are challenges, however, in pursuing FWAs in Emerging Asia. Many jobs require collaborative and in-person work and are ill-suited to such arrangements. Insufficient infrastructure and slow or inaccessible Internet impede the use of FWAs in general and of telecommuting in particular. Cultural and other factors affect the willingness of employers and employees to try FWAs. Company cultures may also affect these attitudes (Komarraju, 2006). Trust between employers and employees is critical to the success of FWAs, with traditional forms of oversight augmented or replaced by output-based evaluations of performance.

A lack of clear frameworks on FWAs may also discourage their use. In some countries, the private sector (and multinational firms in particular) has taken the lead on the issue. The Philippines and Singapore provide some examples on the use of FWAs. In the Philippines, House Bill No. 7402 or the Telecommuting Act, passed final reading in the House of Representatives in May 2018, after the version of the Senate (SB 1363) was approved in May 2017 and sent to the lower chamber requesting for concurrence. The bill introduces standards for employees telecommuting or working from home. It requires workers telecommuting not to be covered by less than minimum labour standards under law and that firms offer similar treatment to these workers as to those working on the employers' premises. This includes guarantees on working hours, overtime, rest days and leave benefits.

In 2017 Singapore launched the Tripartite Standard on Flexible Work Arrangements, which was jointly developed by the Ministry of Manpower, the National Trades Union Congress, and the Singapore National Employers Federation. Employers adopting the standard agree to inform their employees of available FWAs, offer clear and transparent approval processes for employees seeking FWAs, and appoint a senior manager to champion FWAs within the organisation, among other steps. More than 250 companies, with a combined workforce of 210 000, including many domestically-owned SMEs, quickly signed on.

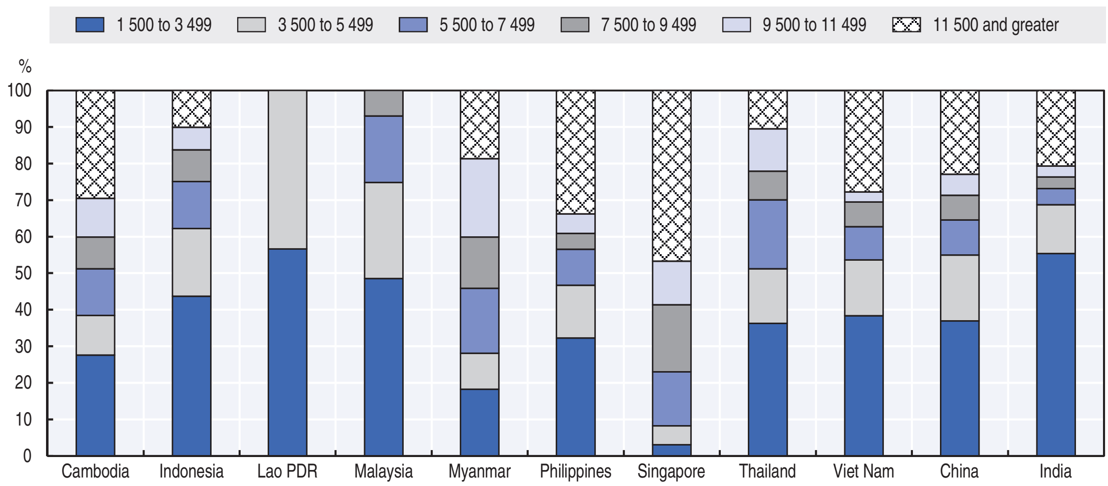
Addressing transportation challenges through urban planning

City design has a large impact on transportation challenges, as it affects demand of private transportation and the costs of supplying public transportation alternatives. While compact cities can foster traffic congestion and higher levels of air pollution, compact urban development can limit travel distances, reduce car dependence and facilitate the development of public transport systems. There are also other, non-transport benefits, such as the preservation of countryside and reduced material and energy use (OECD, 2012; Chen, Jia and Lau, 2008). Increased urban density is associated with reduced transportation CO_2 emissions per capita, and successful compact cities develop effective internal and external transportation linkages, mixed land use, and high-quality urban services (OECD, 2011).

Regardless of income level, Asian cities have tended to have higher population densities than Australian, New Zealand, American or Western European cities (Kenworthy and Hu, 2002). Urban population density varies considerably within and across countries in the region, however (Figure 2.14). The lowest category of population density in urban areas (1 500 to 3 499 people per km^2) accounts for the largest share of total urban population in Lao PDR (56.6%), India (55.4%) and Malaysia (48.5%). The highest category of population density in urban areas (more than 11 500 people per km^2) accounts for the largest share of total urban population in Singapore (46.7%), the Philippines (33.8%) and Cambodia (29.5%).

Figure 2.14. **Share of total urban population by density in Emerging Asian countries, 2015**

People per square kilometre in urban areas



Note: Using gridded data covering areas of approximately five square kilometres, areas with population densities of at least 1 500 people per square kilometre are defined as urban, following OECD (2013).

Source: OECD Development Centre's calculations, using CIESIN (2017).

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Despite their density, Emerging Asia's highly-populated cities take up considerable land area. The built-up areas of Shanghai, Beijing and Bangkok, for example, exceed 150 000 hectares. Expansion continues at a rapid rate in many of these cities. Average annual growth in the built-up area in recent years was 6.2% in Beijing, 5.5% in Kolkata and 5.1% in Bangkok. As a share of the built-up area, residential land use has declined in these cities in recent years, falling from 70.2% to 51.1% in Mumbai from 1991 to 2014, from 58.0% to 41.6% in Bangkok from 1988 to 2015 and from 39.9% to 28.0% in Shanghai over 1991-2015 (Angel et al., 2016).

In addition to population density, other aspects of spatial planning influence the demand for transportation. Flexible, mixed-using zoning has been used in some OECD member countries to reduce segregation between land uses, reducing travel distances between home, work and other destinations. Their relevance has often been limited by their use in specially-designed neighbourhoods or districts, however (Hirt, 2007). Similarly, transit-oriented development strategies can be employed to reduce travel distances. An example is the concentration of various functions of the city along public transit corridors. Density credits and other incentives for developers, as well as the overhaul of zoning codes help implement these strategies (OECD, 2011).

Urban planning should focus on balanced growth. While large cities can produce beneficial effects from agglomeration, population growth can bring with it negative externalities. The continued growth of cities raises transportation costs and leads to increases in land values, higher living costs, labour shortages and environmental degradation. All complicate continued inclusive and sustainable growth. Governments should therefore be cautious in subsidising activities fostering the continued expansion of cities past their period of increased returns (OECD, 2011; OECD, 2015a). National Urban Policies (NUPs) are helping to co-ordinate action on productive, inclusive and resilient urban development. Budgeting and other challenges in using NUPs can complicate their use, and only 15 OECD member countries have an explicit NUP, though 90% of member countries have existing partial elements of NUPs.

Some governments have responded to urban congestion by moving government functions from large cities. Myanmar moved the government to a new capital city, Nay Pyi Taw, in 2005; congestion in Yangon was a stated reason for the move. Its population is now close to one million. In 2017, the Indonesian government commissioned a survey by the Indonesian Ministry of National Development Planning (BAPPENAS) on the possible relocation of the capital from Jakarta. Governments in the region have also moved some government functions outside of large capital cities without moving the capital. The government of Malaysia moved its administrative functions to the newly-constructed city of Putrajaya in 1999 (Box 2.7). Kuala Lumpur remains the capital, however, and is the seat of the King and Parliament. Similarly, China plans to move most of the capital's administrative organisations and institutions to the Beijing suburb of Tongzhou without officially relocating the capital.

Box 2.7. **Administrative and capital relations in Malaysia and Myanmar**

The relocation of the administrative functions of Malaysia's government from Kuala Lumpur to Putrajaya was motivated by several factors. The long-term aim was to enable the civil servants to attain a better quality of urban living in a model city of sustainable environment. The trigger, however, was the government's struggle in securing additional office space in the already very congested city centre.

Putrajaya, which is the largest integrated urban development project in Malaysia, is situated 25 km away from the centre of Kuala Lumpur. The development project aimed to merge the functions of government agencies with proper amenities and infrastructure while coexisting symbiotically with commercial and residential entities. This major move marks a new milestone in urban planning policies in Malaysia as the country makes a bold move in relocating most of its administrative centre away from the capital city, which was very compact even in the 1990s. Despite being located away from the city centre, it is also located only 20 km away from the Kuala Lumpur International Airport. Most importantly Putrajaya is situated within the Multimedia Super Corridor (MSC), which is equipped with high capacity, digital telecommunication infrastructure designed to meet international standards in all aspects relating to capacity, reliability and pricing. Putrajaya borders with Cyberjaya, a technology township that serves as the main centre of MSC, which is also equipped with various technology and physical infrastructure aimed to attract FDI.

The characteristics of Putrajaya's city development are highlighted by the Putrajaya Master Plan 2025. With the objective of integrating nature and biodiversity into the city, 40% of the city is allocated to man-made lakes and wetlands. As for road and transportation infrastructure, 70% of the network is allocated to public transportation with the goal to minimise private transport use. The township has 20 precincts, with the business and commercial activities concentrated in the core islands. The residential areas, however, are situated beyond the periphery, which utilises the neighbourhood planning concept.

Box 2.7. **Administrative and capital relations in Malaysia and Myanmar** *(cont.)*

Table 2.10. **Land use distribution of Putrajaya, Malaysia**

Land use	Total area in acres	Percentage of coverage
Government	597.7	5.3%
Commercial	327.8	2.9%
Residential	2888.8	25.5%
Civic and cultural	25.1	0.2%
Public facilities	1103.1	9.7%
Infrastructure	519.2	14.2%
Utilities	1604	4.6%
Open Spaces	4254.1	37.6%

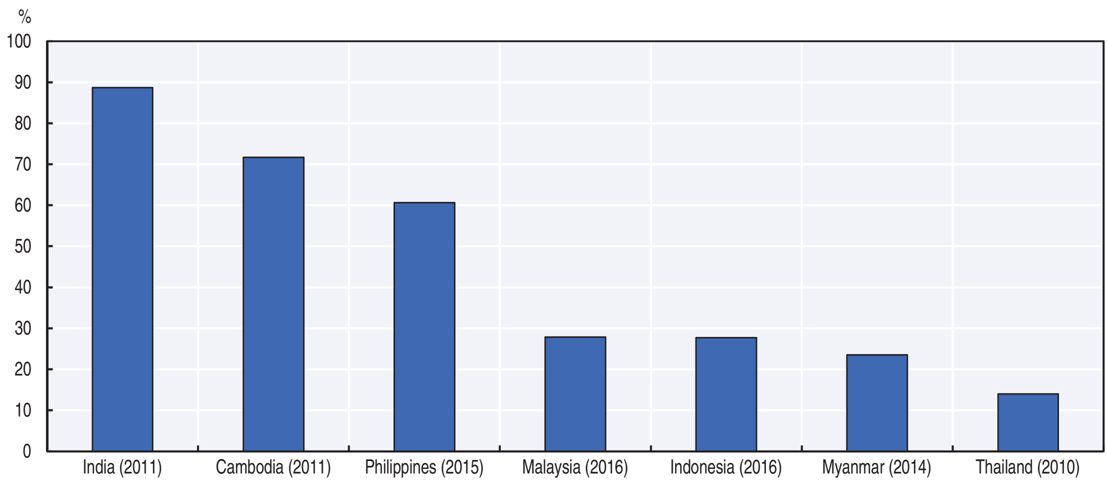
Source: Putrajaya Master Plan (1997).

Since the relocation to Putrajaya in 1999, the township has grown in population, attracting economic activities in its commercial centres. With good infrastructure available in terms of schools, hospitals and network, the price of real estate in Putrajaya has rocketed, rivalling the prices of properties in Kuala Lumpur.

Myanmar's relocation of its capital to Nay Pyi Taw from Yangon in November 2005 was similarly motivated partly by the limited opportunities to expand. The new capital is a planned township with residential, administration, recreation and commercial zones. The government ministries are located within the ministry zone. High-ranking military officers and other key officials live in a residential area that is located separately from those of regular government employees. The new capital has many parks and recreational areas, such as Ngalaik Lake Gardens, National Herbal Park, Nay Pyi Taw Water Fountain Garden, Nay Pyi Taw Zoological Gardens, Nay Pyi Taw Safari Park, Nay Pyi Taw City Golf Course and Yaypyar Golf Course. Additionally the commercial centre of the capital consists of Nay Pyi Taw Myoma Market, Thapye Chaung Market, Capital Hypermarket and Junction Centre. Hospitals were also built in 2006 to serve the civil servants in the area. Unlike Putrajaya, Naypidaw also hosts embassies and UN headquarters, making it a hub for both government administration and international organisations.

There is potential for diversified urban development across the large cities of several countries in the region. In India, Cambodia and the Philippines, the second-largest cities and urban agglomerations are greater than half the size of the largest in the country, while they are below 30% in Malaysia, Indonesia, Myanmar and Thailand (Figure 2.15). In Thailand, the Bangkok urban agglomeration is home to 8.3 million people, while nearby Chon Buri, the second-largest, is considerably smaller at 1.2 million. The percentage of the total population living in urban agglomerations with populations of more than one million is particularly high in China (25.2%) and Malaysia (22.6%), but lower in Indonesia (10.6%) and Cambodia (11.6%). Where larger cities face diminishing returns to further growth, smaller cities may become more important centres of new economic activity.

Figure 2.15. **Populations of second-largest cities as percentage of population of the largest city**



Note: Data for all countries refer to cities proper, except for India and Thailand, which refer to urban agglomerations.
Source: OECD Development Centre's calculations, using United Nations Statistics Division (2016).
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Urban sprawl is a major challenge. It can be limited through the development of transportation systems, land use policies that encourage increased density, and the fostering of economic linkages between large and medium-sized cities to create sites of further growth. New zoning rules and the provision of services to address the negative externalities of dense urban development may also be needed. Inter-city transportation systems can help the development of medium-sized cities to attract investment and growth. In urban areas near international borders, the implementation of smart trade initiatives can help to improve cross-border transportation and trade (Box 2.8).

These policies require the participation of policy makers at the local, regional and national levels. Co-ordination is needed across different levels of government to develop spatial and strategic planning that will foster synergies and avoid duplication and conflict in planning within and between cities and regions. Among OECD member countries, spatial planning considerations are increasingly important, while in some countries, such as Denmark, Finland and Norway, spatial planning takes into account land use and other related matters (OECD, 2011).

Box 2.8. **Smart trade can facilitate cross-border transportation between border cities**

Smart trade involves the use of ICT for international trade of goods and services and plays a crucial role in the development of cross-border value chains in Emerging Asia. Smart trade is characterised by connectivity, facilitation and collaboration. High connectivity opens up new markets and enhances the economic potential of agents currently not participating or struggling to participate in international markets. Government interventions to facilitate trade include policies to shape the business environment; trade and investment agreements; agglomeration policies, such as SEZs and industry cluster development; and systematic rationalisation of trade regulations, Box 2.8. **Smart trade can facilitate cross-border transportation between border cities** *(cont.)*

systematic rationalisation of trade regulations, procedures, and documentation. Collaboration at local and higher levels of government involves the promotion of common structural changes, leading to new types of investment and spatial administration for new trade procedures and promotion (Arnold, 2010).

Three cases from the region, located along the Thai borders with Myanmar and Lao PDR, offer lessons about the challenges and opportunities in smart trade initiatives at the local level: Myawaddy, Myanmar and Mae Sot, Thailand; Nakhon Phanom, Thailand and Thakhek, Lao PDR; and Mukdahan, Thailand and Savannakhet, Lao PDR.

The Mae Sot and Myawaddy border crossing, separated by the Moei River, has been of great importance for the Thai-Myanmar relationship as border trade makes up an 80% of trade between Thailand and Myanmar (Abonyi and Zola, 2014). They are connected through an infrastructure network, have potential for deep economic interdependency, and have implemented policies to facilitate trade and investment and increase business opportunities. The two cities are also part of a growing transport network within the East-West Economic Corridor (EWEC) connecting the cities across the border. However, further actions are needed to enhance smart trade between Mae Sot and Myawaddy. First, both governments are strongly urged to establish a single window to facilitate customs procedures and documentation by implementing an electronic data exchange system for all stakeholders. Second, dry ports, which contain logistical facilities such as container depots, yards, and truck terminals, can be developed, particularly at the Mae Sot side. Third, labour movement facilitation is needed to supervise migration and to enhance the working conditions of Burmese workers in Thailand. Fourth, a formal framework is needed to officially allow Thai electricity companies to export electricity across the border and the Myawaddy firms to use it. Fifth, the SEZs surrounding the border crossing are still at the first stage of their development, and a Cross-border Special Economic Zone (CSEZ) could be jointly developed to enhance smart trade, taking into account their comparative advantages, endowments, and strengths.

Mukdahan and Savannakhet are two province-wide urban economic centres, facing each other across the Mekong River and linked by the Second Thai-Lao Friendship Bridge, also known as the Second Mekong International Bridge. The EWEC has enhanced the two cities as gateway nodes with increasing transport flows. A transport infrastructure connects them and has led to increasing complementary flows of trade and services, and the implementation of a policy framework to facilitate trade and foster strategic industry clustering around the border. However, the emergence of smart trade needs new policies to strengthen further collaboration between Thailand and Lao PDR. First, smart trade would benefit from the implementation of the Greater Mekong Subregion Cross-Border Transport Facilitation Agreement (GMS-CBTA) at the border-crossing (ADB, 2016).

Second, a lack of Thai investment has created uneven development of the border-crossing. Mukdahan has experienced a lesser spatial reorganisation in comparison to its partner, Savannakhet. Third, smart trade would benefit from further administrative collaboration, especially given the cultural connections across the border.

Nakhon Phanom and Thakhek, separated by the Mekong River, increasingly play the role of a transit node for smart trade, linking Thailand and Viet Nam through Lao PDR. The two cities are close to each other along the Mekong river and the Thai-Lao border with an increasingly consistent infrastructure network and new urban facilities. They have

Box 2.8. **Smart trade can facilitate cross-border transportation between border cities** *(cont.)*

experienced a surge in smart trade supported by the Third Thai-Lao Friendship Bridge, and have recently developed SEZs as an important node of the Thai-Lao economic relationship. However, the two cities lack quality urban facilities, especially on the Lao PDR side. This has slowed the mutual development of both cities as hubs for smart trade. Further collaboration of local or national governments would foster cross-border development in integrating Nakhon Phanom and Thakhek. Smart trade would benefit from an easing and harmonisation of trade procedures by the implementation of policies such as a single-window system or the enforcement of the GMS-CBTA.

In order for smart trade to thrive and increase, appropriate policy initiatives are essential. These three cases illustrate the importance of ICT applications and data infrastructure, industry development and urban development. Overall, this set of policies must look at smart trade as a phenomenon of smart cities with strong connectivity to neighbouring countries. The lack of support and co-ordination between national and local authorities leads to questionable policy results and ineffectiveness. Smart trade will also benefit from active intergovernmental collaboration at both national and provincial levels.

Conclusion

Transportation challenges – particularly traffic congestion – in Emerging Asian cities are already imposing significant economic, social and environmental costs, and are likely to become more serious in the future. Addressing these issues is therefore critical in realising the potential benefits of urbanisation for growth and development. Policy priorities could include expanding and upgrading public transportation systems, the use of price-based and non-price-based tools to affect demand for vehicle ownership and use, the use of new technologies, the promotion of flexible work arrangements, and new approaches to urban planning. Policy makers at local and central levels of government should co-operate on the development and implementation of these actions to ensure that they are part of a coherent strategy. Among the necessary considerations to be taken are the combined effects of various interventions on transportation. The appropriate balance between such approaches will vary with local conditions.

Note

1. Public transportation in this report means publicly available and not necessarily publicly owned transportation systems.

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Chapter 3

Structural policy country notes

Domestic structural reforms are needed to maintain robust growth. This chapter discusses the key policy areas for reform in each of the ASEAN member countries, China and India. The structural policy country notes include topics on ageing population, accessibility of education, SME development and industrial development, among others. Examples from the OECD and other countries in the region are also included where relevant. Apart from policy recommendations, updates and progress on policy areas covered by previous editions of the Outlook are also highlighted in this chapter.

ASEAN-5

ASEAN-5

Indonesia

A. Medium-term economic outlook (forecast, 2019-23 average)

GDP growth (percentage change):	5.3
Current account balance (% of GDP):	-2.3
Fiscal balance (% of GDP) (central government):	-1.6

B. Medium-term plan

Period: 2015-19

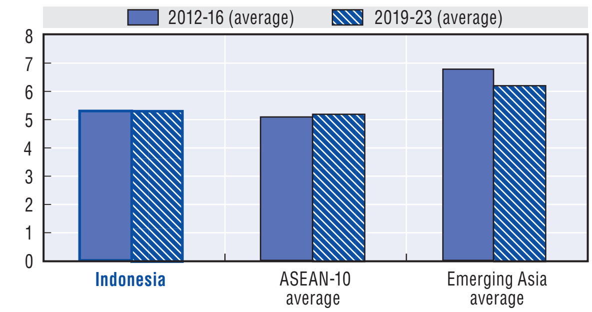
Theme: Strengthen security to maintain territorial sovereignty, support self-reliance in economy and establish community based on national personality and culture.

C. Basic data (in 2017)

Total population:	261.9 million *
Population of DKI Jakarta:	10.4 million *
Nominal GDP (US dollar):	1 015.4 billion **
GDP per capita at PPP:	12 403.7 (current International Dollar) **
Exchange rate in the first half of 2018 (period average):	13 773.4 (IDR/USD)

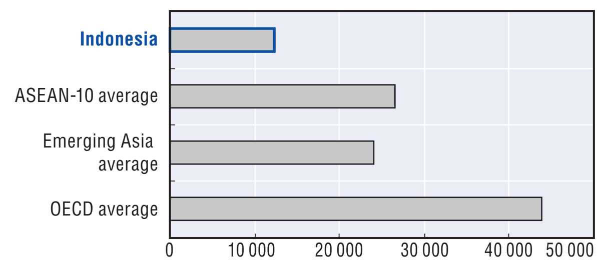
Note: * Population data are year-end government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage change)



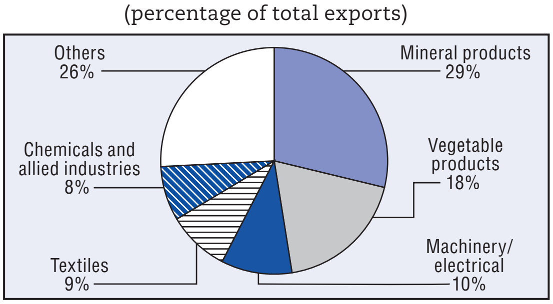
Source: OECD Development Centre, MPF-2019.

GDP per capita, 2017
(PPP, current international dollar)



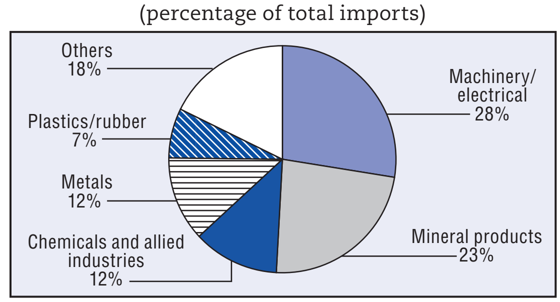
Source: IMF.

Composition of exports, 2017
(percentage of total exports)



Source: Trademap.

Composition of imports, 2017
(percentage of total imports)



Source: Trademap.

Structural policy challenges discussed in previous editions of the Outlook

2014	Education	Widening access to education, in particular for low-income households
	Disaster management	Strengthening natural-disaster management and protection infrastructure
	Social security reform	Accelerating reform of the pension system to improve transparency and quality
2015	Social security reform	Improving access to and the quality of health services and expanding the coverage of the newly implemented health insurance scheme
	Education	Further improving the education system, including through greater accessibility
	Inequality	Adequately addressing rising inequality
2016	Infrastructure	Improving infrastructure for maritime connectivity
	Social security	Reforming the national social security system
	Food security	Improving food security
2017	Tourism	Strengthening investment in tourism
	Infrastructure	Improving connectivity and infrastructure development
	Energy access	Reducing gaps in energy access between urban and rural areas
2018	Green finance	Fostering green finance

Recent developments in policy areas covered by previous editions of the Outlook

Energy: preventing electricity price hikes despite a soaring coal price

- Earlier this year, Indonesia's minister for energy and mineral resources signed a decree fixing the price of coal for electricity supply under the country's domestic market obligation system, which obliges coal producers in the country to supply the local market. The decree aimed both to prevent electricity price hikes and to ease the financial burden on the state-owned electricity company, PLN, from the increasing global coal price. Moreover, the government recently announced that it would not raise the prices of subsidised fuels and electricity before late 2019.

Food security: reducing rural poverty through agriculture

- Indonesia's agriculture ministry has launched a new programme to address rural poverty and improve farmers' welfare. Under the auspices of this programme, which is called BEKERJA, the government is providing livestock and seeds of various horticultural commodities to poor households in 1 000 villages over a six-month period.

POLICY FOCUS

Leveraging financial technology to bring banking services closer to the people

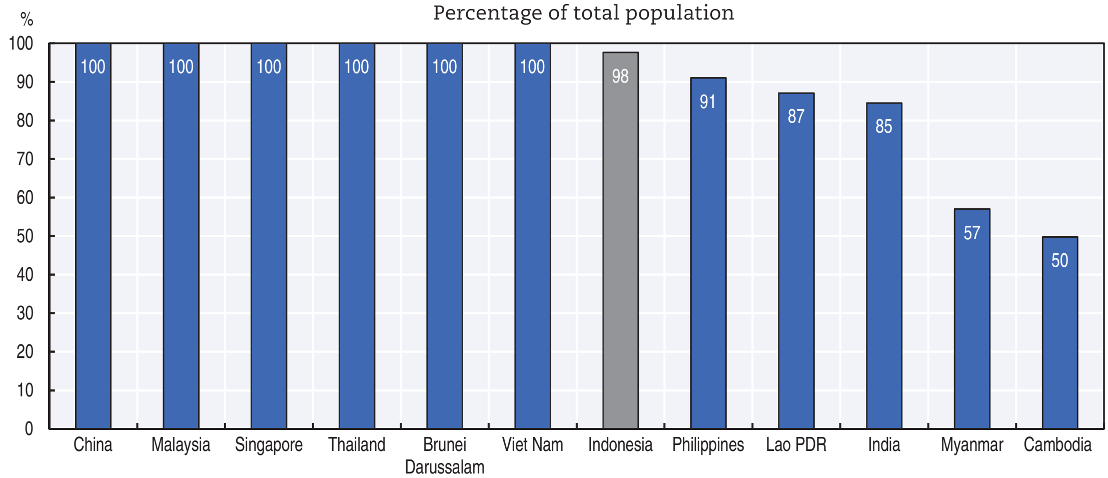
Development of Fintech holds great potential to improve access to financial services in Indonesia. In 2017, it is estimated that less than 49% of the adult population (aged 15 and above) has an account in a financial institution while commercial bank penetration is roughly 17.4 branches for every 100 000 adults in 2016 (World Bank, 2018). On both accounts, Indonesia is on par with the middle-income economies' average. To help address this issue, President Joko Widodo introduced a national strategy for financial inclusion in November 2016. One of the objectives of this plan is to expand the share of the adult population that holds an account in a financial institution to 75% in 2019.

Being an archipelago with more than 17 000 islands, Indonesia's geographical characteristics make it challenging for banks and other financial institutions to reach remote areas. Fintech could potentially improve this situation, reaching those who are unable to access bank branches and other financial institutions due to geographical constraints. In recent years, Indonesia's Fintech industry has grown in terms of investment, range of services and market penetration. Some Fintech branchless banking programmes like Laku Pandai, for instance, could help overcome the country's geographical barriers to financial inclusion. Accelerating the development of financial technology, however, puts domestic infrastructure's capacity and quality into question.

Indonesia's infrastructure has improved in recent years. For instance, the share of total population with access to electricity rose to 98% in 2016 from less than 50% in 1991, outperforming many of the Southeast Asian countries (Figure 3.1.1). Moreover, access to mobile phones in Indonesia is relatively high by ASEAN standards. Mobile cellular subscriptions is about 1.7 for every person, placing Indonesia second in the regional rankings (Figure 3.1.2). However, the total number of people who use the Internet on any type of device is still relatively low at just 32% of total population. To further develop Fintech, improving infrastructure, in particular ICT, is therefore necessary.

Figure 3.1.1. **Access to electricity, 2016**

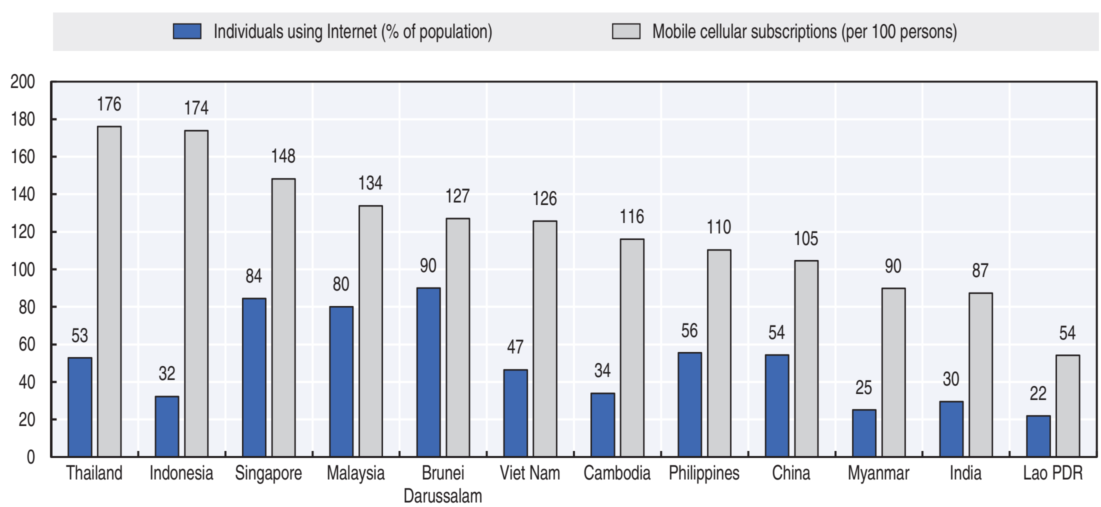
Percentage of total population



Source: World Bank (2017).

StatLink https://doi.org/10.1787/888933887101

Figure 3.1.2. **Access to mobile cellular and Internet, 2017**



Source: World Bank (2017).

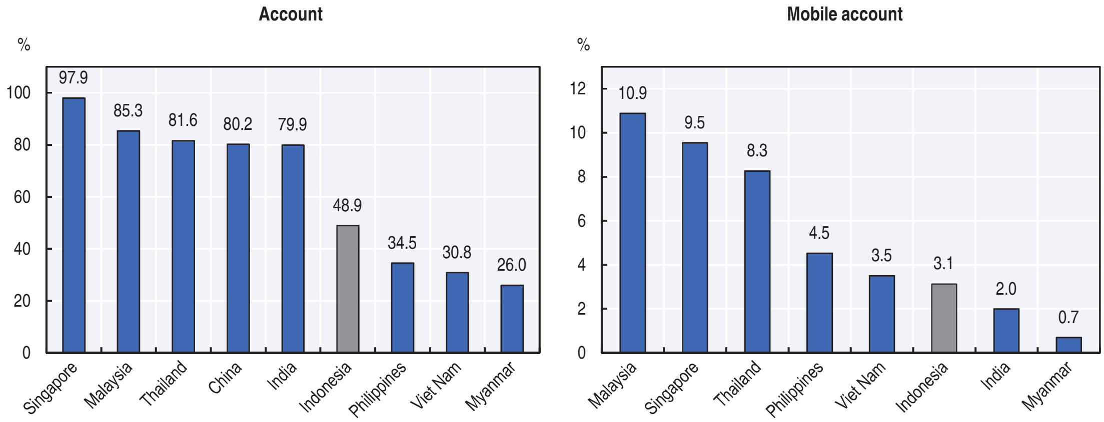
StatLink https://doi.org/10.1787/888933887120

Despite the size of the market, the country's readiness to maximise the use of digital financial services remains low

According to the Financial Inclusion Insights survey in 2016, 43% of mobile phone users in Indonesia have a smartphone, but only 5% of phone users had ever made financial transactions on their phone (Financial Inclusion Insight, 2017). Cash remains the preferred mode to do transactions with banking services as the next option. Incidentally, not only bank branch penetration among adults is low, ownership of accounts that are accessible on a mobile device is one of the lowest in the region, at only about 3.1% of the adult population in 2017 (Figure 3.1.3).

Figure 3.1.3. **Account ownership at financial institutions, 2017**

Percentage of population over 15 years old



Source: World Bank (2018).

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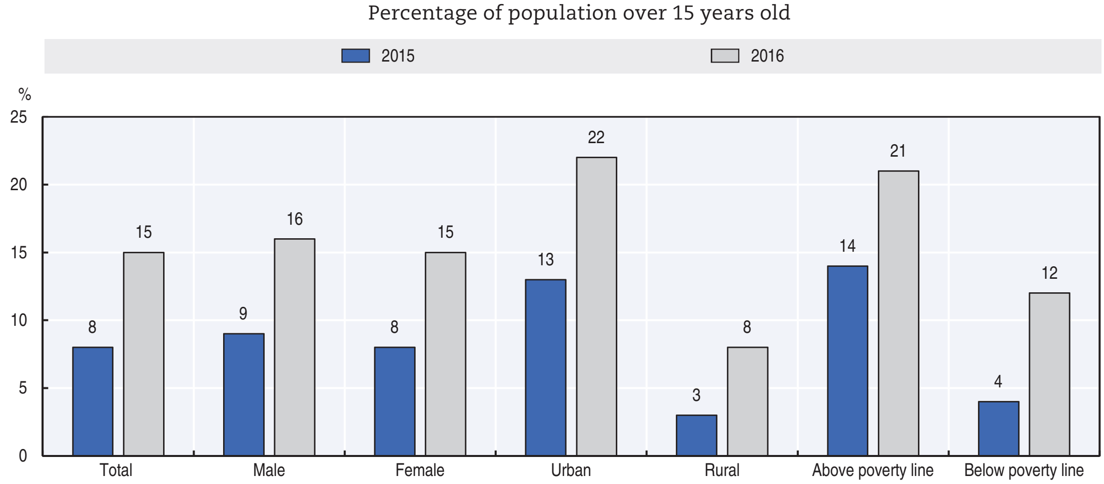
Another challenge is financial literacy and awareness despite the fact that 99% of the adults have the necessary basic numeracy skills. In 2016, just 14% of Indonesian adults were financially literate, and only 15% of them were aware of mobile money services (Financial Inclusion Insight, 2017). On the upside, awareness of mobile money has increased significantly across all demographic segments from 2015 to 2016 though financial literacy has been relatively stable in its performance (Figure 3.1.4). At the product level, awareness of other digital products (excluding mobile money), such as mobile network operators, payment providers, financial-planning companies, and digital-financial management, is slightly higher than the awareness of mobile money, standing at 16% of all adults (Financial Inclusion Insight, 2017).

Figure 3.1.4. **Mobile money awareness**

Percentage of population over 15 years old



Source: Financial Inclusion Insight (2017).

StatLink https://doi.org/10.1787/888933887158

Widespread use of informal financial services

In Indonesia, the use of informal financial services is common. Recent statistics have shown that only about 16% of the adult population has borrowed money from the banking sector in 2016, and that most of them borrowed from family, friends, or neighbours

(Financial Inclusion Insight, 2017).[1] There is also a culture of informal saving or lending groups – known locally as *arisan* – with people seeing it as a trusted loan-distribution system. In the *arisan* system, members pay in an agreed amount of money and then recoup a lump sum of money at a given moment. This culture could herald an opportunity for Fintech companies to reach new customers – in particular individuals and micro, small and medium-sized enterprises – by incorporating aspects of this widely-adopted culture into their own services. As alternative providers of financial services, Fintech companies have significant potential to improve financial inclusion across Indonesia.

Effective regulation and good co-ordination among regulators are crucial

The Indonesian government has been implementing some initiatives to support the rapid development of Fintech even though the development of Fintech regulation is still at a relatively early stage. This industry has four potential regulators. These include the financial services authority, Otoritas Jasa Keuangan (OJK), and Bank Indonesia, the country's central bank, as a regulator with purview over payments, the ministry for communication and information technology, or Menkominfo, with a role related to telecommunications and information technology, and the country's co-ordinating board for foreign investments, Badan Koordinasi Penanaman Modal (BKPM).

In October 2016, the OJK announced a plan to develop some regulations for digital financial services delivered through Fintech, releasing its first regulation in December 2016. The new rules were for lending services based on information technology and Fintech companies that run peer-to-peer (P2P) lending platforms. Under the new rules, Fintech P2P lending companies now have to register and then obtain a P2P licence. They have a minimum capital requirement of IDR 1 billion (Indonesian rupiahs) when they register, and IDR 2.5 billion at the point at which the company's licence comes into force. The new rules also cap foreign ownership at 85%, and insist on the server being inside Indonesia. More recently, in August 2018, OJK issued a new regulation on Fintech, covering a large number of issues related to innovation in digital technology for the financial sector.

Bank Indonesia has also set up a dedicated Fintech office to help developers in the sector. It will run a regulatory sandbox – a mechanism for developing regulation – to allow Fintech developers to test their new products under relaxed regulations, and to understand Indonesia's regulatory policies. In August 2016, Bank Indonesia published a regulation (no. 18/17/2016), which amended an existing regulation pertaining to electronic money (no. 11/12/PBI/2009). The new rules set out risk-management and prudential principles. They concern principals, issuers, acquirers, clearing processors, and financial-settlement operators. Moreover, at the end of 2017, Bank Indonesia brought in a new regulation for Fintech firms active in the field of payment systems. The regulation sets out a set of criteria that products must meet in order to qualify as Fintech. Those that do fulfil the criteria then have to register with Bank Indonesia.

Given the existence of multiple regulatory bodies, ensuring good co-ordination among them is crucial. It is also important to make sure that administrative processes are efficient, as this could facilitate the development of Fintech in the country. Indonesia's associations for Fintech and e-commerce – known respectively as AfTech and idEA – sent out a survey to all start-ups that plan to apply for a specific permit for electronic wallets and payment gateways. In all, 24 Fintech start-ups filled out the survey. More than 50% of the respondents stated that they were at the stage of having submitted an application for a permit, while 38% of respondents mentioned that they were waiting for clarifications concerning their permits. The survey showed that 52% of respondents saw the administrative process as the most difficult step in obtaining the permit, 31% of them cited unclear regulations as the biggest difficulties, with 17% underscoring other issues (Fintech Indonesia, 2017). As of June 2018, 64 Fintech companies operating in P2P lending had registered with the OJK.

Box 3.1.1. **The regulatory environment for P2P lending in the international market**

The most important factor for the favourable development of online finance is clear regulations, which can keep concerns like fraud and money-laundering to a minimum. Against a backdrop of rapid development in financial technology, many countries have been trying to forge an appropriate regulatory approach for P2P lending activities. For example:

- When it comes to Fintech, China is one of the most active countries in Asia. Recently, China's central bank has introduced a series of regulations relating to P2P lending and online payments. P2P platforms in China must register for a licence with the local financial authorities. While they do not have to meet minimum capital requirements, specific guidelines do impose credit limits and require a guarantee from the principal as well as debt securitisation in order to mitigate lenders' credit risks.
- In Hong Kong, China, current legislation from the Securities and Futures Ordinance prohibits retail investors from undertaking P2P lending activities.
- The United Kingdom has specific regulations or guidelines for the P2P sector. They have to obtain a licence from the Financial Conduct Authority if they wish to run an investment-based crowdfunding platform. The UK imposes a capital requirement of 20 000 pounds (GBP).
- In Singapore, platform operators facilitating securities-based crowdfunding offers (i.e. either debt-based or equity-based crowdfunding offers) between corporations and investors are required to hold a capital markets services licence. The corporations raising funds through SCF are subject to prospectus requirements under the SFA, unless exemptions apply. Peer-to-peer lending to businesses is considered as debt-based crowdfunding and thus falls under the SFA. In Singapore, platform operators which facilitate SCF offers between issuers and retail investors, need to fulfil the base capital requirement of SGD 500 000 or SGD 50 000 for offers made to accredited and institutional investors (provided the operators do not handle or hold investors' moneys, assets or positions, and do not act as principal against investors).
- In the United States, the current system asks platform operators to file full registration statements with the Securities and Exchange Commission, and to register the securities they offer to investors.

Source: DBS & EY (2016).

Banks are increasingly engaged in a process of technological transformation

While physical bank branches do still tend to dominate as centres for the provision of financial services, an increasing number of customers is migrating to digital services. In a recent survey of operators in the sector, 45% of respondents said that at least half of their customer transactions come from traditional branches. The survey also showed that a higher proportion of transactions go through traditional branches (55%) at Indonesian banks than at foreign banks (34%) (PWC, 2017). Moreover, foreign banks tend to take greater advantage of digital channels using mobile phones and the Internet.

In light of the recent trend for clients to migrate towards a digital approach to financial services, banks are changing their strategies and investing more in technology. According to the 2017 PWC survey, 84% of Indonesian banks are likely to invest in transforming their technology over the next 18 months. Meanwhile, 59% of global bankers expect the importance of branch banking to diminish significantly, as customers migrate to digital services. When the PWC survey was repeated this year, it was found that Indonesian banks continue to see technology as the primary driver of business transformation (PWC, 2018).

Another feature of the rise of Fintech is the widening of potential sources of financing. These new sources of financing are often less bureaucratic than traditional ones, and require little or no collateral. Amidst an increased competition with the rise of Fintech, traditional banks are increasingly transforming their own technology in order to stay competitive. Some of them, however, see a risk that alternative lenders will increase the level of competition in the sector and disrupt their business in the future. Over a quarter of respondents in the survey (28%) expressed concern that Fintech operators will significantly disrupt their bank's business by intensifying competition in the market over the coming five years, and 52% anticipated at least a moderate disruption. According to OJK data from May 2018, Fintech companies had provided loans of more than IDR 6 trillion with a total of 1 850 632 borrowers. Finding a balance between the benefits from increased competition and the risks of disrupting traditional banking is therefore crucial. Against this background, the Indonesian government is encouraging synergies and collaboration between banks and Fintech companies. Indeed, some banks in the country have already started to work together with Fintech players.

Financial inclusion is becoming an increasingly important agenda for the country. To help achieve this agenda, Fintech has great potential to reach those who have little or no access to financial services from conventional financial institutions. However, it is not without risk both for customers and for firms, and transparency through appropriate regulations is crucial to mitigate these risks.

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	Syafruddin
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
Defense	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 Djuwita .F. Moeloek
Home Affairs	Tjahjo Kumolo
Industry	Airlangga Hartarto
Law and Human Rights	Yasonna Hamonangan Laoly
Manpower	Hanif Dhakiri
Marine Affairs and Fisheries	Susi Pudjiastuti
National Development Planning	Bambang P.S. Brodjonegoro

Key government ministries in Indonesia *(cont.)*

Public Works and Public Housing	M. Basoeki Hadimoelljono
Religious Affairs	Lukman Hakim Saifuddin
Research, Technology, and Higher Education	Mohamad Nasir
Social Affairs	Agus Gumiwang Kartasasmita
State Secretariat	Pratikno
State-owned Enterprises	Rini .M. Soemarno
Tourism	Arief Yahya
Trade	Enggartiasto Lukita
Transportation	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	Perry Warjiyo

Note: Valid as of 16 October 2018.

Note

1. The financial literacy indicator is defined by using a combination of survey items that measure basic knowledge of four fundamental concepts including interest rates, interest compounding, inflation, and the diversification of risk in financial decision making.

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Malaysia

A. Medium-term economic outlook (forecast, 2019-23 average)

GDP growth (percentage change):	4.6
Current account balance (% of GDP):	2.1
Fiscal balance (% of GDP) (central government):	-2.5

B. Medium-term plan

Period: 2016-20

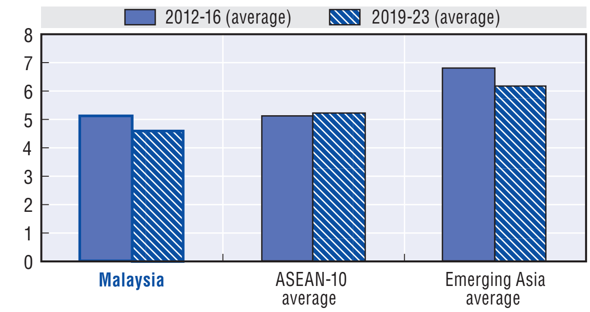
Theme: Anchoring growth on people

C. Basic data (in 2017)

Total population:	32.0 million *
Population of Kuala Lumpur	1.8 million *
Nominal GDP (US dollar):	312.4 billion **
GDP per capita at PPP:	29 144.3 (current International Dollar) **
Exchange rate in the first half of 2018 (period average):	3.9 (MYR/USD)

Note: * Population data are year-end government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

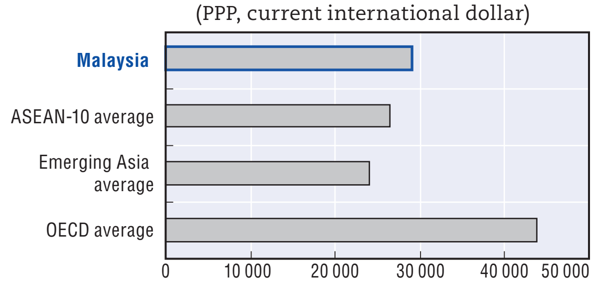
GDP growth rates (percentage change)



Source: OECD Development Centre, MPF-2019.

GDP per capita, 2017

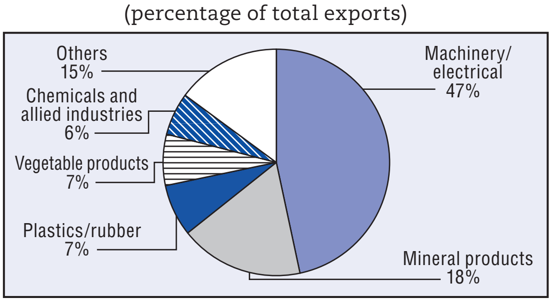
(PPP, current international dollar)



Source: IMF.

Composition of exports, 2017

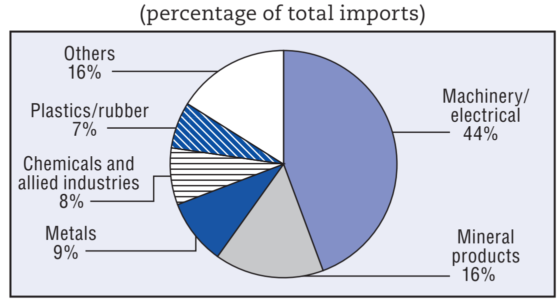
(percentage of total exports)



Source: Trademap.

Composition of imports, 2017

(percentage of total imports)



Source: Trademap.

Structural policy challenges discussed in previous editions of the Outlook

2014	Education	Improving the quality of education
	SME development	Improving the productivity of small and medium sized enterprises (SMEs)
	Taxation	Widening the tax base and improving tax administration and compliance
2015	Productivity	Improving productivity to support sustainable economic growth and transform Malaysia into a high-income developed nation
	ICT	Further development of Information and Communication Technology (ICT), which is particularly important in supporting growth
	Taxation and fiscal system	Enhancements to fiscal stability, and a reduction in the country's dependence on oil, including through the introduction of a goods and services tax (GST)
2016	SMEs	Raising the productivity of SMEs
	Education	Upgrading education to meet industry needs
	Urban green growth	Promoting urban green growth
2017	Housing	Keeping housing affordable and ensuring a supply of affordable housing
	Social safety net	Enhancing the social safety net to ensure citizens' well-being and participation
2018	Halal industry	Enhancing trade growth by strengthening the Halal sector

Recent developments in policy areas covered by previous editions of the Outlook

Taxation and the fiscal system: scrapping the goods and services tax (GST)

- Within 100 days of taking office, Malaysia's new government lowered the GST to 0%. The government replaced the GST by restoring the old system of a sales and services tax (SST). For goods, it is set to be between 5-10%, while tax on services is set at a 6% levy. The new rate came into force on 1 September 2018, following a three-month tax break. This temporary break in this kind of taxation led to an uptick in consumption. Legislatively speaking, the five bills to reinstate the old SST regime were successfully tabled in parliament and passed by the Senate in August 2018.

Social safety nets for workers

- Recently, Malaysia's Social Security Organisation – known locally as Sosco – has been addressing the challenges that workers face due to uncertainties posed by a number of global trends. These include: demographic ageing, the coverage gap, and enduring youth unemployment. They also include the transformation brought about by the rise of the digital economy. These challenges require fundamental and long-term strategic responses on the part of policy makers and administrators in the domain of social security.
- In this connection, Sosco aims to bridge the coverage gap in social security to ensure that a wider spectrum of workers benefit from social protection. These efforts include developing coverage for self-employed taxi drivers under the Self-Employment Social Security Act 2017: a new legislation, the Employment Insurance System Bill, will set up a system to provide protection in the event of loss of employment.
- As of 1 July 2018, Sosco also expanded its coverage to include housewives, single mothers, widows, and spouses working with their entrepreneur partners. Regulations disqualifying spouses of business partners from working with them were removed on the same date. Previously, people in this group were not deemed to be employees under the Social Security Act 1969 and the employment insurance scheme that dates from 2017.

POLICY FOCUS

Reintroducing a sales and services tax after the scrapping of the goods and services tax

Malaysia's 14th general election, held on 9 May 2018, saw a victory for the Alliance of Hope, or Pakatan Harapan. This is a milestone in Malaysia's history due to the fact that the same coalition had governed the country since its independence from the United Kingdom in 1957. At the age of 93, Dr Mahathir Mohamad once again became prime minister. Although the new government has not been in power for long, and the directions in which it will take policy remain uncertain, it has already made significant fiscal, institutional and administrative changes in line with the commitments in the Alliance of Hope manifesto.

As a way to reduce the cost of living for Malaysians – one of the objectives in Alliance of Hope's manifesto – the new government announced via the finance ministry that the GST would fall to 0% as of 1 June 2018, from its previous rate of 6%. This new measure fulfilled the government's campaign promise to abolish the GST within its first 100 days in office.

Malaysia's experiment with a general sales tax

Malaysia introduced the GST in 2015 as a consumption tax based on the logic of added value. GST was applied to goods and services at every stage of production and distribution in the supply chain, including the importation of goods and services, giving it a more comprehensive coverage than the old system of SST (Royal Malaysian Customs, 2013). When the GST came into force on 1 April 2015, the rate was set at 6%. The previous dual regime, with a sales tax rate set at 10% and a services tax rate at 6%, was thereby abolished.

Following the introduction of the GST, selected goods and services became exempt from taxation. These included piped water, the first 200 units of electricity per month for domestic consumers, transport services such as buses, trains, light rail transit, taxis, ferries, boats, highway tolls, and also education and health services (Razak, 2014). Even though exemptions were made, the implementation of the GST had a negative impact on low and middle-income groups, as it led to price increases for essential household goods, while wages remained sticky.

The elimination of this relatively recent tax was a way for the government to seek to reduce Malaysians' rising cost of living. As a result of its abolition, the annual revenue of the federal government is expected to fall by 21 billion Malaysian ringgit (MYR) annually. Still, the government is expected to introduce other fiscal measures in order both to make up for some of the fall in revenue and to support the reinstated petrol and diesel subsidy. The re-introduction of the SST took effect on 1 September 2018, giving consumers and businesses a three-month tax break from June to August 2018 (OECD, 2018).

In line with the new government's commitment to stabilise retail fuel prices and to reduce living costs in the country, the Ministry of Domestic Trade and Consumer Affairs announced in May that petrol and diesel subsidies would be reinstated. Diesel and RON 95 petrol were to stay at their current price, with the price of RON 97 petrol to be revised every Wednesday.

Reintroducing the sales and services tax to compensate for lost revenues

Malaysia's finance minister, Lim Guan Eng, made clear that the SST would tax the provision of services at 6% and the sales of goods at 10%. The sales tax is imposed only at the time at which the goods are either manufactured or imported. The service tax is imposed on specific services at the time at which the services are provided to the consumer.

The reintroduction of the SST will shift the burden from end users to the manufacturing sector and trade-related sectors. According to Central Bank Governor Nor Shamsiah Mohd Yunus, however, its impact on the country's inflation rate should be much smaller than that of the GST. This, she explained, is because 52% of the items in the basket that defines the consumer price index were subject to the GST. By comparison, only 28% of these items were subject to the SST under the old framework.

One way in which the new legislation reinstating the SST is different from the past system, is that it sets out harsher punishments for tax evaders. Repeat offenders face up to seven years imprisonment and fines of up to 40 times the amount of the sales tax they avoided. Under the old legislation, there was maximum jail time of three years and a cap on fines at MYR 50 000.

The introduction of the GST was actually part of the previous government's programme of tax reform, and was intended to enhance the capability, effectiveness, and transparency of tax administration and management. However, this proved to be a failure due to the abuse of the GST fund. At the moment, moreover, there is a shortfall in the fund for unpaid GST input tax amounting to MYR 19.25 billion which corresponds to the period between 2015 and 31 May 2018.

An increase in the national debt

Another challenge is on cutting the public debt and helping people in their fight against rising living costs. When it comes to the public debt, the finance ministry confirmed on 24 May 2018 that the federal government's debt and liabilities accounted for 80.3% of gross domestic product as of December 2017, much higher than the 50.8% of GDP reported by the previous government. As of December 2017, the government's liabilities comprised three parts. The first of these was the federal government's debt of MYR 686.8 billion (50.8% of GDP). Secondly, there were government guarantees of MYR 199.1 billion, or 14.6% of GDP (the government is committed to paying the debt of entities that are unable to pay for themselves, and this includes MYR 42.2 billion for Danainfra Nasional Berhad, MYR 26.6 billion for Prasarana Malaysia Berhad, and MYR 38 billion for 1Malaysia Development Berhad). Thirdly came lease payments of MYR 201.4 billion (14.9% of GDP) for public-private partnership projects. The government must pay for rental, maintenance and other costs on a number of projects, such as the construction of schools, hospitals and roads.

Ongoing structural and administrative reforms include a 10% salary cut for ministers, and the elimination of several non-essential and political government agencies. In May 2018, for example, the prime minister announced that a commission for land-based public transport, which had led negotiations with Singapore for a high-speed rail project under the previous government, would be shut down. Its tasks and responsibilities will be taken over by the transport ministry. Other agencies will be abolished as well, including the department for special affairs, the National Council of Professors, the Federal Village Development and Security Committee, the Residents' Representatives Committee, and Malaysia's external intelligence organisation. Moreover, the new government has introduced a new economic affairs ministry to promote economic growth, transparency and structural reforms. The new ministry will oversee matters related to economic policy and will also take over the economic planning unit, which was formerly under the supervision of the Prime Minister's Department (OECD, 2018).

As part of the new government's objective of curbing the ballooning public debt, the prime minister confirmed during a recent visit to Beijing that three China-backed projects totalling USD 22 billion will be cancelled until Malaysia can find a way to pay its debts. The projects include a railway connecting Malaysia's east coast to southern Thailand and Kuala Lumpur, as well as two gas pipelines. Additionally, the government's plans to optimise revenue include the collection of MYR 5 billion from higher dividends from government-linked companies and institutions, such as Khazanah Nasional Berhad, Bank Negara Malaysia, and PETRONAS.

Key government ministries in Malaysia

Prime Minister	Mahathir Mohamad
Deputy Prime Minister	Wan Azizah Wan Ismail
Agriculture and Agro-based Industries	Salahuddin Ayub
Communication and Multimedia	Gobind Singh Deo
Defence	Mohamad Sabu
Domestic Trade and Consumer Affairs	Saifuddin Nasution Ismail
Economic Affairs	Mohamed Azmin Ali
Education	Maszlee Malik
Energy, Science, Technology, Environment and Climate Change	Yeo Bee Yin
Entrepreneur Development	Mohd. Redzuan Md. Yusof
Finance	Lim Guan Eng
Foreign Affairs	Saifuddin Abdullah
Health	Dzulkefly Ahmad
Home Affairs	Muhyiddin Muhammad Yassin
Housing and Local Government	Zuraida Kamaruddin
Human Resources	Kula Segaran Murugeson
International Trade and Industry	Ignatius Darell Leiking
Primary Industries	Teresa Kok Suh Sim
Rural Development	Rina Mohd Harun
Territories	Khalid Abdul Samad
Tourism, Arts and Culture	Mohammadin Ketapi
Transport	Anthony Loke Siew Fook
Water, Land and Natural Resources	Xavier Jayakumar Arulanandam
Women, Family and Community Development	Wan Azizah Wan Ismail
Works	Baru Bian
Youth and Sports	Syed Saddiq Syed Abdul Rahman
Central Bank Governor	Nor Shamsiah Mohd Yunus

Note: Valid as of 16 October 2018.

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Philippines

A. Medium-term economic outlook (forecast, 2018-23 average)

GDP growth (percentage change):	6.6
Current account balance (% of GDP):	-0.1
Fiscal balance (% of GDP) (central government):	-2.3

B. Medium-term plan

Period: 2017-22

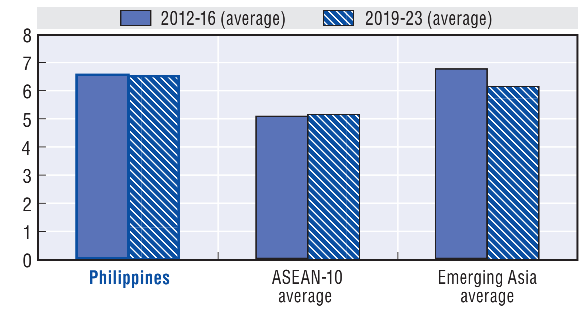
Theme: Aims to lay a stronger foundation for inclusive growth, a high-trust society, and a globally competitive economy toward realising AmBisyon Natin by 2040

C. Basic data (in 2017)

Total population:	101.0 million (in 2015)*
Population of Metro Manila (NCR):	12.9 million (in 2015)*
Nominal GDP (US dollar):	313.6 billion**
GDP per capita at PPP:	8 360.4 (current International Dollar)**
Exchange rate in the first half of 2018 (period average):	52.0 (PHP/USD)

Note: * Population data are year-end government estimates based on 2015 Census.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

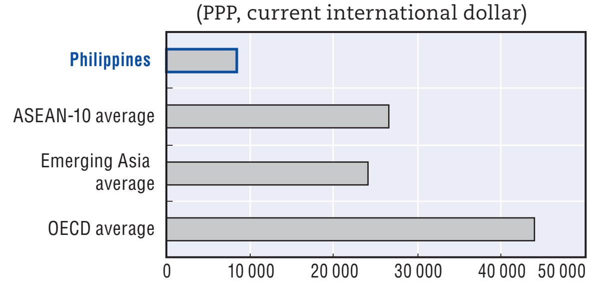
GDP growth rates (percentage change)



Source: OECD Development Centre, MPF-2019 .

GDP per capita, 2017

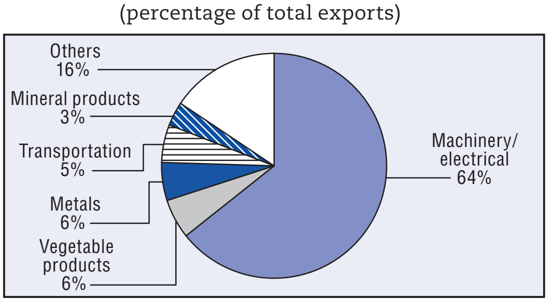
(PPP, current international dollar)



Source: IMF.

Composition of exports, 2017

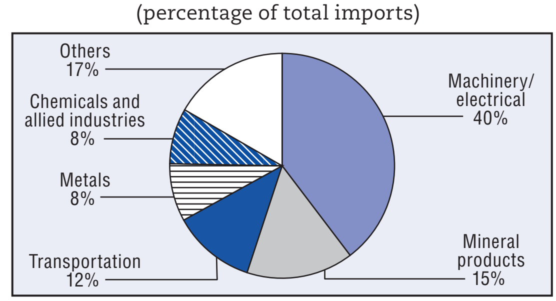
(percentage of total exports)



Source: Trademap.

Composition of imports, 2017

(percentage of total imports)



Source: Trademap.

Structural policy challenges discussed in previous editions of the Outlook

2011/12	Infrastructure	Increasing funding for infrastructure development and attracting more private participation
	Education	Improving the access to, and the quality of, basic education, and strengthening technical education and vocational training
	Taxation	Reforming the tax system by enhancing tax collection and widening the tax base
2013	Infrastructure	Improving road transportation and power and energy infrastructure, and strengthening public and private investment
	Job creation	Focusing sharply on job-creation strategies
	Education	Improving access to quality education and training by strengthening the K+12 programme
2014	Job creation	Creating more jobs for sustainable poverty reduction
	Disaster-risk management	Building holistic disaster-risk reduction and management capacities to reduce vulnerability to natural hazards
	Develop Mindanao	Improving agricultural productivity and transport infrastructure in Mindanao

Structural policy challenges discussed in previous editions of the Outlook *(cont.)*

2015	Competitiveness	Sustaining economic growth by stepping up the country's global competitiveness through quality employment
	Financial system	Striving to put in place a responsive, development-oriented, and inclusive financial system to serve as a platform for efficient management and the mobilisation of resources
	Social development	Further improving social development to make sure all Filipinos benefit from equal opportunities when it comes to having a decent job, acquiring assets, and enjoying higher living standards
2016	Job creation	Encouraging faster job creation
	Infrastructure	Strengthening infrastructure and the transport sector
	Disaster-risk management	Improving disaster-risk management
2017	Infrastructure	Investing in infrastructure improvements
	Job creation	Targeting faster growth in the services sector to create new jobs
	Foreign direct investment (FDI)	Eliminating hurdles in a bid to attract more FDI
2018	Infrastructure	Optimising infrastructure financing

Recent developments in policy areas covered by previous editions of the Outlook

Job creation

- In August 2018, a bill that strengthens enforcement of occupational safety and health hazard standards was passed into law. The bill, which updated the labour engagement standards and the penalty scheme for violations, was initially filed in 2004.
- In May 2018, Executive Order 51 was signed to prohibit certain contracting and subcontracting practices. These include hiring employees for only 5 months and then replacing them with another batch for five months to circumvent rules on labour regularisation, labour-only contracting wherein a contractor or subcontractor recruits and supplies workers for a principal to perform duties that are directly related to the primary business of the principal.

Infrastructure

- In August 2018, the Asian Development Bank (ADB) approved a USD 300 million loan to the Philippines, in order to enhance the country's framework of public-private partnership arrangements. ADB noted that the *Build, Build, Build* programme is estimated to require a total USD 168 billion in investments for 75 high-impact priority projects nationwide.

Disaster-risk management

- In August 2007, the government launched a catastrophe risk insurance programme with the help of the International Bank for Reconstruction and Development (IBRD) and the UK Department for International Development. The coverage amounted to USD 206 million for 25 participating provinces. Claims are triggered when certain conditions are met while risk is transferred from the government public insurance company to a panel of international insurers through IBRD.
- In a statement from July 2018, the Department of Interior and Local Government backed the transformation of the National Disaster Risk Reduction Management Council, which is currently under the Department of National Defense, into a full fledged executive department. This is in line with the President's message in his third State of the Nation Address that called for the passage of a law creating a Department of Disaster Management. Legislative bills pushing for such proposal had already been filed in both houses of Congress in mid-2017.
- In October 2018, the House of Representatives approved the bill creating the Department of Disaster Resilience bill on final reading. The bill gives the new

department the power to oversee and co-ordinate ex-ante and ex-post disaster-related measures, evaluate disaster and climate resilience initiatives and lead the development of adaptation and mitigation strategies. Counterpart bills are pending in the Senate for deliberations.

Competitiveness

- In August 2018, the Department of Trade and Industry launched the *Project One* initiative which aims to provide prospective investors with a portal to access the complete list of requirements and the process of doing business with local government units. The initiative is in line with the Ease of Doing Business and Efficient Government Service Delivery Act of 2018 and was announced on the occasion of the 6th Regional Competitiveness Summit.
- In August 2018, the Senate leadership revealed its aim of passing the bill on 14th month pay before the end of 2018. The bill, which was filed in June 2016, will mandate companies that fit the stipulated criteria to pay additional 2 months-worth of salary to their employees every year. In December 1975, the 13th month pay was instituted by virtue of a Presidential Decree.
- In August 2018, the Philippine Identification System Act was signed into law. The Law provides a legal basis for the national identification (ID) system, allowing Filipinos to avail of government and private sector services using a single ID card. The Philippine Statistics Authority is tasked to oversee the system to be supported by the Department of Information and Communications Technology. An inter-agency PhilSys Policy and Coordination Council was created to craft the policies and guidelines.

Financial system

- In April 2017, the central banks of Philippines and Thailand signed a letter of intent to pursue a cross-border banking arrangement in line with the ASEAN banking integration framework (ABIF). ABIF was endorsed by the central banks in December 2014 and was contained in the 6th Package of Commitments on Financial Services implementation protocol under the ASEAN Framework Agreement on Services signed in March 2015.
- In June 2018, the International Financial Corporation (IFC) under the World Bank floated the first multilateral agency-backed Philippine peso-denominated green bond. The debt paper called Mabuhay bond had a tenor of 15 years and raised about USD 90 million in capital, which IFC intends to invest in the optimisation programme of the privately owned Energy Development Corporation.
- In July 2018, BSP has approved business operations of two new cryptocurrency exchanges, increasing the number of exchanges in the country to five. Prior to the BSP decision, Cagayan Economic Zone Authority conveyed that it is also in the process of giving licenses to a number of cryptocurrency-oriented businesses, e.g. exchanges, mining and ICO. In February 2017, BSP published Circular No. 944 that set the guidelines for virtual currency exchanges.
- In September 2018, BSP signed a memorandum instructing financial institutions authorised to offer electronic financial and payment services to make fund transfers via PESO.Net and/or InstaPay available through its e-channels by 30 November 2018. PESO.Net and InstaPay are initiatives under the National Retail Payment System, which seeks to reduce cash-based transactions and raise electronic retail payments as a share of total retail payments from 1% in 2013 to 20% by 2020.

Regional development

- In July 2018, the Bangsamoro Organic Law was signed into law. The legislation could potentially expand the area of the current Autonomous Region of Muslim Mindanao, subject to plebiscite and opt-in petition results. The region will also get an increase in national government transfers through higher share in internal revenue allotment (i.e. from 70% to 75%) and an annual unconditional block grant amounting to 5% of national revenue.

Education

- In March 2018, the Commission on Higher Education released the IRR of the Universal Access to Quality Tertiary Education Act, otherwise known as the free tuition law. The law, which was signed in August 2017, covers 112 state universities and colleges and 78 local universities and colleges as well as the technical-vocation education and training programmes under the Technical Education and Skills Development Authority.

Taxation

- In March 2018, the Philippines became the first sovereign in ASEAN to issue an onshore Chinese yuan-denominated bond. The 3-year debt issuance amounted to CNY 1.46 billion, equivalent to roughly PHP 12 billion or USD 230 million, and fetched a coupon rate of about 5%, or 35 basis points above benchmark rate. The government hopes that the successful issuance opens a new credit source for the private sector enterprises in the Philippines.
- In August 2018, the House of Representatives approved a bill that intends to replace rice importation quota with a 40% tariff. The bill, which is premised on lowering inflation, earmarks the tariff revenues to a rice competitiveness enhancement fund in order to support farmers.
- In September 2018, the second tranche of the tax reform programme legislation renamed as *Trabaho* bill (or Jobs bill) was passed by the House of Representatives Committee on Ways and Means. The substitute bill, originally called Tax Reform for Acceleration and Inclusion package 2, seeks to lower the corporate income tax from the currently mandated 30% to 28% in 2021 and to 20% by 2029, though it also targets to rationalise corporate fiscal incentives. A counterpart bill was separately filed in the Senate in August.

Foreign direct investment

- In June 2018, the Senate set a schedule to review the country's foreign investment laws and policies intended to enhance competitiveness. Foreign ownership, which is capped at 40% in a number of industries, as well as fiscal incentives, were identified as key areas of discussion.

POLICY FOCUS

Coping with the risk of job automation in the offshoring and outsourcing industry

The information technology and business-process management (IT-BPM) sector was and continues to be a steady source of investment, foreign-currency liquidity, and high-paying employment in the Philippines. It is estimated that the sector directly employed about 1.1 million people in 2016, or around 5.6% of private-sector workers in the country, and took in USD 22.9 billion in revenues, or around 7.5% of gross domestic product

(GDP) (TESDA, 2017). By comparison, in 2009, IT-BPM employment stood at less than 450 000 while revenues were estimated to be roughly USD 7.2 billion (Del Prado, 2015). The influx of investment into this sector has contributed greatly to the development of infrastructure in the areas in which outsourcing offices have proliferated. In turn, this enhanced the market values of local real estate – for residential, office, and commercial spaces alike. While the IT-BPM sector does benefit from some fiscal incentives, it is also a substantial source of government revenues. In addition, the round-the-clock operations of outsourcing establishments have produced millions more indirect jobs to serve the needs of the companies and their employees.

Beyond the macroeconomic story, the relatively lucrative compensation packages that IT-BPM firms offer have underpinned an improvement in quality of life for many households. This is particularly apparent in areas outside Metro Manila, where formal-sector employment and well-paid jobs are not as widespread. Not only are basic salaries higher than in comparable professions, but fringe benefits such as health insurance also tend to have a broader scope. The latter is relevant because support from state-run social security is limited, and the cost of healthcare and medication can be steep relative to the average incomes of people, especially those without private insurance.

The looming threat of automation

As in many other industries, however, one important policy issue with regard to the IT-BPM sector is the onward march of automation, which is likely to constrain the industry's capability to generate employment in the next few years. The effects of automation on employment in outsourcing boil down to at least two key strands.

Firstly, business tools and platforms that use artificial intelligence make it feasible for clients to conduct certain business functions in-house rather than outsourcing them. These tools and platforms also give service providers scope to reduce their workforce in order to be able to charge more competitive fees. For example, advances in cloud computing and the business model of selling access to information technology as a service is one avenue that allows firms to cut out human labour. According to ISG (2018), the annual contract value of as-a-service outsourcing rose to 43% of the global commercial market in 2017, from about 23% of in 2014. Meanwhile, the value of traditional outsourcing fell from 77% to 57% during the period.[1]

Secondly, the automation of repetitive functions elevates the focus in the sector – even more than before – to innovativeness and creativity, as well as to problem-solving skills and astute judgement. For outsourced projects that demand such a skill set, real-time exchanges with senior personnel from a service provider is typically required. And it is in such instances when the advantages of onshore over offshore support – such as labour proximity, agility, and flexibility – become more important (Overby, 2017).

The substantial savings in terms of financial performance and efficiency that automation can generate are key to understanding the shift in the business framework that is underway. For instance, automation, robotics, and cloud computing have driven down prices by more than 20% in some cases (ISG, 2015). Moreover, there is evidence that the automation of robotic processes not only leads to fewer mistakes and faster delivery of output, but also significantly lowers the overall price of services (Kroll et al., 2016). Cost is estimated to be just about a third of the price of a full-time employee offshore and about a fifth of the price of a full-time staff member onshore. As more evidence like this emerges, it encourages enterprises to continue to automate. Data from a recent survey by KPMG show that over 800 executives worldwide whose firms participate in outsourcing, shared services, and operations indicated that robotic process automation (RPA) is at the top of their investment agenda (KPMG and HfS Research, 2017).

Debates continue over automation's likely impact on overall employment

Still, there seems to be no consensus as to the net effect of automation on total employment. According to one estimate, about 50% of current work activities across all industries worldwide can be automated (Manyika et al., 2017). Depending on the pace of at which companies adopt automation, this will entail a displacement of workers numbering between 10 million and 800 million, or up to 30% of the 2.66 billion combined workforce of the countries covered by the report. Moreover, as many as 375 million of these workers would need to change their occupation. According to another estimate, roughly 56% of all employment in five ASEAN countries – namely Cambodia, Indonesia, the Philippines, Thailand and Viet Nam – is at high risk of displacement due to automation over the next decade or two (Chang, Rynhart and Huynh, 2016). For the IT-BPM industry, the report claimed that 89% of contact-centre wage employees in the Philippines could be displaced due to automation over the period.

Apart from the contact centres, Kroll et al. (2016) argued that "all back office areas have processes that are strong candidates for robotic process automation". Considering the volume of transactions and the repetitiveness and rules-based nature of the functions involved, the authors identified processes in finance and accounting as being highly susceptible to automation. Processes in human-resource management and customer services have also been identified to be suitable for automation, although not to such a degree as in accounting and finance because they do sometimes require human intervention. The proliferation of chatbots, for example, is one development that could lessen demand for customer service support personnel.[2]

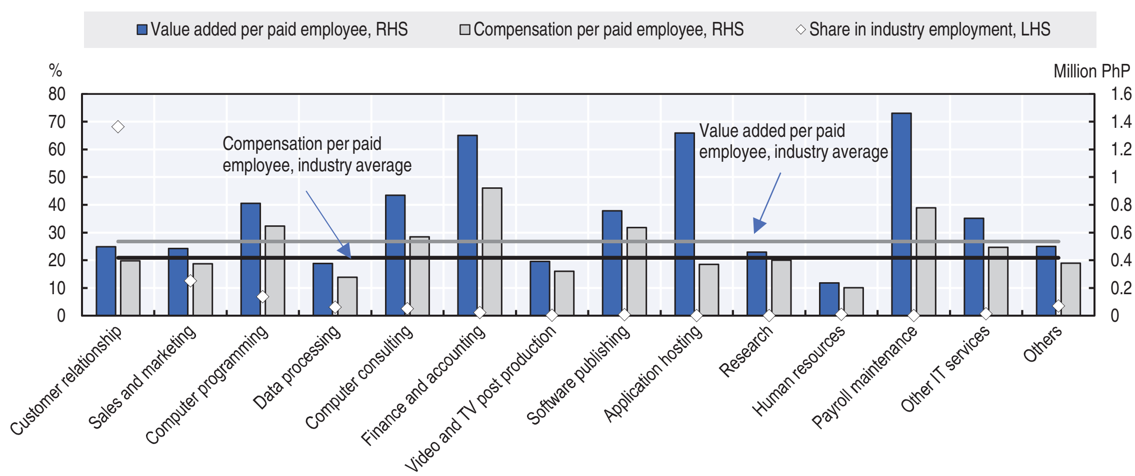
Specific examples of processes where RPA can be used include periodic reporting, data entry and analysis, conversion of data formats and graphics, process lists and file storage, the generation of mass emails, archiving and extracting, and enterprise resource planning. In essence, the report posited that RPA in its current form can perform complex functions so long as they are largely bound by rules. The vulnerability of jobs to automation is not determined by whether they consist of manual or white-collar work, but whether the work involved is routine or not (Autor and Dorn, 2013). Moreover, wages are likely to become stickier as automation gains more ground.

On the other hand, TESDA (2017) posited that while RPA will indeed eliminate some jobs, advances in technology also have the potential to create other types of employment. The Economist (2016) provided some examples to support this view such as the proliferation of cash machines, which shifted demand from one type of labour (bank tellers) to another (sales and customer-service personnel). What is uncertain in these analyses is whether the impact of technological disruption in the past on the job market is meaningful enough to provide a picture of the potential impact of the current and future technological disruptions. Additionally, even under an optimistic scenario where a good number of new jobs will be generated resulting from technological changes as had been the case in the past according to ADB (2018), it is possible that the displaced employees will not be the same group of people who will take the new jobs generated.

The makeup of the IT-BPM in the Philippines

In terms of the makeup of the IT-BPM industry in the country, the results of the 2015 annual survey of Philippine business and industry-to-business process management – which covers 1 493 establishments in the IT-BPM industry in the Philippines – showed businesses involved in the management of customer relationships to be the biggest sub-category of employers, accounting for about two-thirds of the industry's overall workforce (PSA, 2018). The sales and marketing sub-sector was a distant second, accounting for 12.7% of employment (Figure 3.3.1). In terms of value added and compensation per paid employee, however, these sectors have rates below the industry average. Payroll maintenance led the other sub-sectors in these metrics, followed by application hosting and finance-related jobs. Incidentally, the three high-value added subindustries only comprise less than 2% of the industry employment. Compensation per paid employee generally tracks the value added per employee across subsectors. One exception is the application hosting subindustry where compensation per paid employee is below the sectoral average despite the high value added per paid employee ratio.

Figure 3.3.1. **Annual value added and annual compensation per paid employee in business process management, 2015**



Source: OECD Development Centre calculations based on PSA (2018).
StatLink https://doi.org/10.1787/888933887177

Moreover, data from the country's central bank show that contact centres have remained steady as a share of total employment in the IT-BPM industry, providing between 61.5% and 63.8% of total sector employment from 2010 to 2013 (BSP, 2015). The share of contact centres in the IT-BPM industry's total revenue has also been stable at over 50%. By comparison, software development made up less than 23% of overall sales, while its share in employment stayed unchanged at slightly less than 10% during the same period. When it comes to generating jobs and revenues, these trends underscore the IT-BPM industry's still-heavy dependence on contact centres.

Yet, despite the concentration of the outsourcing workforce in contact centres, which tend to be susceptible to automation, the employment situation in the Philippines has so far remained robust. Neither the public nor the private sector appear to be pessimistic about automation's potential impact on overall employment conditions in the near term. Although the administration has acknowledged that automation will have a significant effect on low-skilled jobs, it nevertheless anticipates growth in low-skilled services jobs of 3%-6% between 2016 and 2020 (TESDA, 2017). The IT and Business Process Outsourcing Association of the Philippines (IBPAP) is likewise still looking to add about 700 000 jobs between 2016 and 2022. This is in line with the main targets of Philippine IT-BPM Roadmap 2022, namely, raising direct employment to 1.8 million, and increasing revenue to USD 40 billion (IBPAP, 2016).

Initial efforts to bolster the sector have borne some fruit, but there is scope to do more

In light of the challenges that the industry has been facing in recent years, the public and private sectors have worked together on a number of initiatives to elevate the skills of the workforce in IT-BPM [Errighi, Khatiwada and Bodwell (2016); Price and Caboverde

(2017)]. Over the past decade and a half, for instance, there has been an increased focus on technical and vocational education and training to provide more of the skills that the IT-BPM sector needs. In 2006, the Training for Work Scholarship Program was launched to bolster the IT-BPM and tourism sectors in areas where the supply of qualified labour had been insufficient. At the beginning of this programme, the government allotted PHP 500 million (Philippine pesos), or USD 9.7 million, in order to train prospective employees in the IT-BPM sector. Then, in two separate pledges in 2009 and 2011, the government granted additional funds totalling PHP 850 million, or USD 19.3 million, in support of this objective. Other examples of initiatives to boost competitiveness and to help the sector with the challenges it faces have included a programme launched in 2013 to improve English-language skills, and, in 2011, the Pre-Employment Training and the Global Competitiveness Assessment Tool (previously called the National Competency Test). Opened to the public in 2013, meanwhile, the Service Management Program (SPM) offers courses both in ICT and in business administration. An online version of this programme, called e-SPM, was rolled out a year later. Finally, a legislative bill creating a new government department for ICT development was also signed into law in 2016. In its New Wave Cities programme, this new ministry aims to build the capacity of cities outside Metro Manila, in order to sustain the kind of business ecosystem in which the IT-BPM sector can thrive.

Data on capital flows into the different segments of the IT-BPM sector between 2010 and 2013 shows that these funds appear to have supported the industry's goal of upgrading the skill set of its employees (BSP, 2015). The total amount of equity flowing into software development rose by an average of 38% annually during the three-year period, largely supported by foreign direct investment (FDI). Accordingly, the share of software development as a proportion of aggregate inflows into the IT-BPM sector rose from 20.4% to 27.1% of overall equity and from 19.8% to 27.4% of total FDI. In contact centres, however, total equity and its FDI component – which stood at 17% and 16% respectively – did not grow as briskly during the same period. This resulted in a decline in contact centres' share in total equity, from 55.2% to 46.2%, and in FDI flows from 56.4% to 48.1%. This indication that investors are keen on segments of the outsourcing industry that demand more skills can be viewed as an encouraging development as policy makers seek to protect jobs from the rise of automation.

Nonetheless, there remains ample scope for policy support. As automated processes replace repetitive functions, the IT-BPM industry in the Philippines has to compete effectively against other offshore and onshore sites for services that still require human intervention. Competing in this way is important as the country seeks to meet its employment targets, or at least to avoid a net decline in jobs. The extent to which the global market for these services picks up in the coming years will determine how tough this competition will be. The government can help the domestic industry to continuously enhance its global competitiveness for the kinds of outsourced services that will remain dependent on human labour.

In the near-term, it is imperative to not only continue investing in skills, but to expand the complexity, quality and reach of existing training programmes. The 18 ICT training programmes of TESDA has produced about half a million graduates in 2013 and 2014 (TESDA, 2017). Almost half of these students took up courses in software development, programming and IT networking, while about two-fifths of them completed courses in the installation and servicing of hardware. Relative to the employment targets of the industry, however, these numbers are modest. There also appear to be some unresolved issues with regard to both the quality of instruction and how effectively it is monitored (Price and Caboverde, 2017). Moreover, the content of training appears to have been somewhat deficient in responding to the demands of the industry, with limited data also making it difficult to track its effectiveness. To this end, ADB (2018) pointed out that stronger links between universities, vocational centres and firms could bring about synergy gains – a challenge which has prompted China and Indonesia to increase the number of polytechnics.

On top of the deficiencies in problem solving and technical skills, Price and Caboverde (2017) also observed that a lack of proficiency in English is one of the main factors that has held back the hiring rate in recent years. Industry executives are well aware that although English-language proficiency may not restore the leverage that domestic firms used to have over foreign competitors in this regard, it is still something that clients look for in the workforce of the firms they choose as their service providers. It is, therefore, worth examining why the industry continues to find this challenging despite government programmes that have tried to help.

The limited ability of government agencies to assess their programmes raises questions on how efficiently they have been allocating funding. It also calls into question the likelihood that the programmes will help firms to fill the kinds of job positions for which they aim to train candidates. While the private sector can conduct its own training programmes – and some companies are already doing just that – this adds to the cost of doing business. Apart from the cost, the timescale is another issue that comes up. For example, a voice-based customer-support agent with a less technical background may need a substantial amount of time and training to acquire a skill set that is less routine and more resilient to automation. Another issue is the high rate of turnover among employees, which forces firms to be very selective in the employees that they train.

Over the medium term, the IT-BPM sector can, just like any other sector, benefit from improvements in the overall competitiveness of the country's economy. In this regard, the quality of basic public education has a key role to play, particularly in areas outside Metro Manila. The recent implementation of a twelve-year cycle of schooling – known as K-12 – has essentially extended mandatory basic education by an extra two years, and this may help the Philippines achieve the labour-market outcomes that its government desires, especially with regard to workers who are unlikely to go on to study for a degree.

However, this assertion depends on several factors, particularly the responsiveness of the overall design of the basic education programme to the industry's evolving labour requirements, as well as the sufficiency and quality of teachers and other educational resources. Expanding the coverage of the e-SMP initiative by integrating its manuals into the K-12 curriculum is one possible initiative that is worth a closer look as a way to enhance communication capabilities and technical skills among high-school graduates. Universities can help in improving the contents of the training and learning manuals they produce. Moreover, encouraging the use of relevant massive open online courses (MOOCs) and other open resources might also be useful to this end. It is certainly worth examining the value of MOOCs in enhancing access and quality in public tertiary education in the Philippines – as explained by PIDS (PIDS and CHED, 2015).

The quality of infrastructure, particularly in the area of ICT, and the competitiveness of the overall business climate remain crucial for supporting employment growth in the IT-BPM industry. For instance, although there have been significant improvements in ICT infrastructure in the Philippines over the past few years, the cost, stability and quality of services are still far from ideal. A lack of competition can limit the incentives for industry players to make significant progress in these respects.

Key government ministries in the Philippines

President	Rodrigo Duterte
Vice President	Maria Leonor Robredo
Agrarian Reform	John Castriciones
Agriculture	Emmanuel Piñol
Budget and Management	Benjamin Diokno
Education	Leonor Briones
Energy	Alfonso Cusi
Environment and Natural Resources	Roy Cimatu
Finance	Carlos Dominguez III
Foreign Affairs	Teodoro Locsin, Jr
Health	Francisco Duque III
Information and Communications Technology	Eliseo Rio Jr. (Acting)
Interior and Local Government	Eduardo Año (OIC)
Justice	Menardo Guevarra
Labor and Employment	Silvestre Bello III
National Defense	Delfin Lorenzana
Public Works and Highways	Mark Villar
Science and Technology	Fortunato de la Peña
Social Welfare and Development	Rolando Bautista
Tourism	Bernadette Fatima Romulo-Puyat
Trade and Industry	Ramon Lopez
Transportation	Arthur Tugade
Central Bank Governor	Nestor Espenilla Jr.

Note: Valid as of 16 October 2018.

Notes

1. The ISG data from 2018 only cover contracts with an annual value of at least USD 5 million.
2. Accenture (2016) and Deloitte (2018) present in detail the functionality of chatbots.

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Thailand

A. Medium-term economic outlook (forecast, 2019-23 average)

GDP growth (percentage change):	3.7
Current account balance (% of GDP):	6.0
Fiscal balance (% of GDP) (central government):	-2.3

B. Medium-term plan

Period: 2017-21

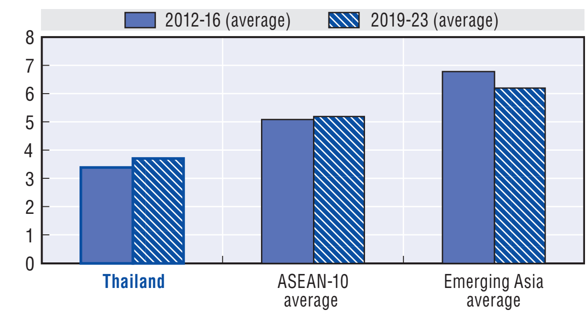
Theme: Reduce income disparity and poverty, strengthen the Thai economy and enhance the country's competitiveness, promote natural capital and environmental quality, and further boost the confidence of Thailand in international community

C. Basic data (in 2017)

Total population:	66.2 million*
Population of Bangkok:	5.7 million*
Nominal GDP (US dollar):	455.4 billion**
GDP per capita at PPP:	17 893.6 (current International Dollar) **
Exchange rate in the first half of 2018 (period average):	31.7 (THB/USD)

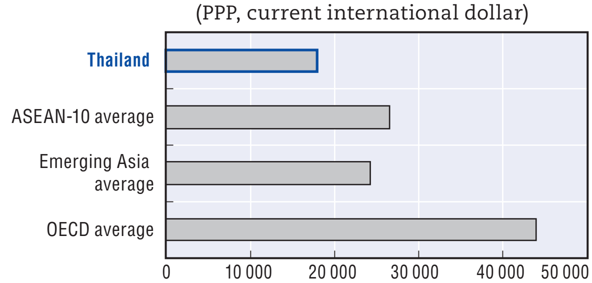
Note: * Population data are year-end government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage change)



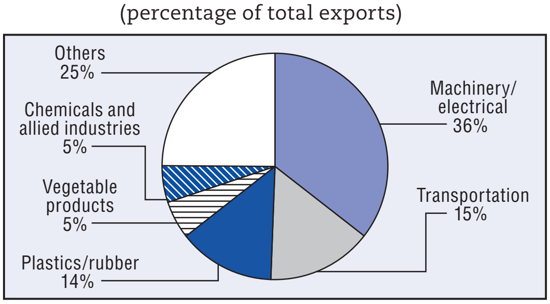
Source: OECD Development Centre, MPF-2019.

GDP per capita, 2017
(PPP, current international dollar)



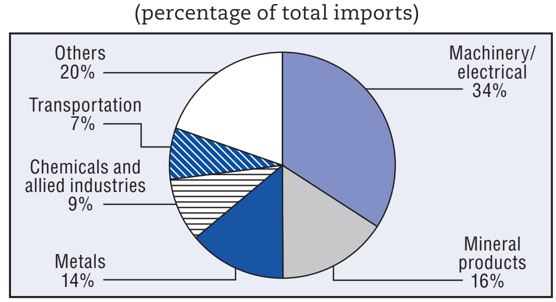
Source: IMF.

Composition of exports, 2017
(percentage of total exports)



Source: Trademap.

Composition of imports, 2017
(percentage of total imports)



Source: Trademap.

Structural policy challenges discussed in previous editions of the Outlook

	Health	Reforming healthcare schemes to provide a higher quality of services, and equal access to them
2011-12	Human-capital development	Improving outcomes in education, and reducing disparities between urban and rural areas
	Agriculture	Enhancing agricultural productivity and improving jobs in the farm sector
	Education	Raising the quality of education, and reducing disparities
2013	Healthcare system	Achieving a more equitable healthcare system
	Green economy	Fostering green growth through investment and fiscal reform
	Education	Upgrading human capital by improving the national curriculum and teaching standards
2014	Agriculture	Improving agricultural productivity through modernisation and education
	Green growth	Improving institutional co-ordination to achieve green growth

Structural policy challenges discussed in previous editions of the Outlook *(cont.)*

2015	Productivity	Accelerating improvements in productivity to ensure sustainable economic growth and enhance competitiveness
	Environment	Making further efforts in environmental management in order to support green growth
	Governance	Deepening good governance, with a particular emphasis on corruption and transparency, to reduce obstacles to growth
2016	Macro-economic performance	Using macro-economic policies to revive growth
	Tourism	Strengthening sustainable tourism
2017	Digital economy	Developing the digital economy as a new engine of growth
	Human capital	Developing human capital through education to make the most of the country's economic potential
2018	ICT skills	Strengthening information and communications technology (ICT) skills to develop the digital economy

Recent developments in policy areas covered by previous editions of the Outlook

Increasing productivity

- For the fiscal year of 2018, the government allocated THB 468 billion (Thai baht) – 16.1 % of the total budget and the third largest amount overall – to developing the country's competitiveness. Among other measures, this includes supporting SMEs, and developing Special Economic Zones (SEZs) and an Eastern Economic Corridor. There are also efforts to develop transport infrastructure, the logistics system, and the digital economy, to promote research and innovation, and to develop agriculture and tourism.
- The government is continuing its efforts to increase productivity in agriculture and to promote the sector more generally. In 2017, for example, the agriculture ministry signed a memorandum of understanding with 11 organisations on the development of agricultural research. This approach aims to boost the efficiency of the agricultural sector, helping the country towards a set of development objectives known as Thailand 4.0. The agriculture ministry announced in May that, in order to reduce the cost of production for farmers, it will provide them with financial assistance for the first month of the production season every year, with the co-operation of the Bank for Agriculture and Agricultural Co-operatives. In June 2018, the ministry organised SIMA ASEAN Thailand 2018, an agribusiness show for the Association of Southeast Asian Nations, gathering over 3 000 farmers, dealers, distributors, and heads of co-operatives. It aimed at helping Thai farmers to acquire new knowledge, notably in terms of technology, and to connect with the international market.

Promoting balance in tourism

- For the fiscal year of 2018, the government allocated THB 8.5 billion, or roughly USD 265 million, to develop tourism. The government wants to promote tourism in all of its dimensions, including those of quality and safety. Moreover, it seeks to develop attractions in clusters, emphasising respect for the environment and geographical balance.
- Popular sites such as Bangkok, Chiang Mai, or the country's much-loved beaches, attract a high concentration of tourists, putting the environment in danger of degradation if they are not managed adequately. On 1 June 2018, the Thai government decided to close Maya Bay for four months to restore the environment, especially the underwater ecosystem. In an effort to spread tourists out across a greater range of sites, the government plans to promote unseen places.

- It also has plans to link four provinces in a bid to develop community-based tourism. These four provinces are Nakhon Ratchasima, Chaiyaphum, Buri Ram, and Surin. The government is preparing a tourism development plan that includes efforts to link the country's cultural and historical sites with new tourism routes. Currently, 20 separate tourist communities operate across the four provinces. The government plans to encourage these bodies to work more closely with the private sector. Meanwhile, the government has also been moving forward with plans to develop infrastructure. These include a feasibility study for the construction of an airport in Surin province, a master plan to develop a new town in Nakhon Ratchasima and a runway expansion at Buri Ram airport.

POLICY FOCUS

Developing human capital to strengthen the Eastern Economic Corridor

Attracting investments

As part of its actions towards Thailand 4.0, the country is developing its eastern provinces with the government's Eastern Economic Corridor initiative, or EEC. This work also represents an enhancement of the country's projects for the development of its eastern seaboard. It includes three eastern provinces covering more than 13 000 square kilometres: Chachoengsao, Chonburi and Rayong. The plan is for these provinces to become a leading economic zone within ASEAN, as well as a hub for technological manufacturing and services. The government plans to deliver the EEC by 2021.

Meanwhile, the government has also put in place a range of other programmes and regulations to support the EEC initiative. In April 2017, for instance, the policy committee for the EEC adopted, under the chairmanship of the prime minister, eight implementation programmes for developing the region. These include an overarching programme of infrastructure development, another programme focusing on the development of targeted industries, and one that encompasses human resources, education, research, and technology. A fourth implementation programme focuses on developing and promoting tourism, a fifth one covers new cities and community development, and a sixth plan focuses on the development of hubs for business and finance. There is also a separate implementation programme covering public relations and mass engagement, and an eighth one targeting agriculture, irrigation, and the environment.

In February 2018, the Thai government passed the EEC Act into law. The new legislation, which took effect in May 2018, comprises some tax and non-tax incentives for business operators in the Special Economic Promotion Zones within the EEC area. These include, but are not limited to, the right to own land in one of these zones for the purpose of running a business, and also the right to own a condominium, either for business or for residential purpose. Another of the incentives is the right to lease both land and other immovable properties in the special zones for a period up to 50 years, with one-time renewal for less than 49 years. The aim of this measure is to develop and promote the government's target industries. The incentives also include an exemption from all or part of the customs law, for both imports and exports. A fourth incentive is the exemption or reduction of taxes and duties for businesses within the special zones. This is subject to limits under Thailand's investment promotion law, and also under a law on the enhancement of competitiveness for the targeted industries. The fifth of the incentives lies in granting skilled workers, executives, and specialists working for businesses in the special economic zones the right to work in Thailand upon receiving a permit from the secretariat-general of the EEC. A sixth measure was to grant the right for skilled workers, executives, and specialists working for businesses in the special areas – in addition to their family members – to obtain visas from the EEC Secretary-General. Seventh of all, there is a right to use foreign currencies to pay for goods and services within the zones, subject to the restrictions and requirements that the EEC's policy committee may request. Eighth of all, licensed foreign professionals will also be able to practise in the special economic zones. This, also, will be subject to the requirements and conditions of the policy committee for the EEC. Finally, there is a stipulation that the committee may grant other rights and privileges under Thailand's laws on investment promotion and enhancing the competitiveness of targeted industries to investors and professionals. This will be on a case-by-case basis.

The government estimates that the EEC initiative will require more than USD 45 billion over the first five years, expected to come from a mixture of foreign direct investment, public private partnerships, and state funding. Moreover, the government foresees the creation of 100 000 jobs a year in the manufacturing and service industries by 2020, thanks to the EEC. The government has pursued measures to develop public utilities, transport systems, logistics, human resources, and also one-stop service centres for investors, all to support and accelerate economic growth in the EEC. Direct investment in the EEC zone has reached 259 projects valued at around THB 310 billion, or roughly USD 10 billion, which have been approved.

The concept of special economic zones is a common way of attracting foreign investment into a country. In 2015, Thailand established 10 special economic zones – Tak, Mukdahan, Sakaeo, Trat, Songkhla, Nong Khai, Narathiwat, Chiang Rai, Phanom, and Kanchanaburi. With this in mind, and to maximise the use of economic zones (including the EEC) and the role they can play in attracting investment into the country, Thailand will need to address some challenges. Among these, the development of human capital is among the most important. Ensuring that the country has enough highly skilled workers to meet the demands of the industry is a challenge. Moreover, it will also be important to pay more attention to some of the concerns that local communities may raise and which could, in turn, affect the implementation of projects. These can include concerns about the possible difficulties that domestic companies may face in competing against foreign companies.

Businesses are facing a shortage of highly skilled workers

The EEC initiative envisages the development of large infrastructure projects (Table 3.4.1), including the construction of the U-Thapao international airport, the port of Laem Chabang, high-speed train network connecting the U-Thapao airport to the existing Suvarnabhumi and Don Mueang airports, and dual-track railway capacity. There will also be new motorway infrastructure, a port at Map Ta Phut, and further facilities for industry, healthcare, and tourism. These projects will affect Thailand's labour market as they require a large number of construction workers. The challenge in this regard is that the need for this type of workers will decrease once the construction phase is over.

Within the EEC initiative, the Thai government is promoting ten target industries for development, in line with the objectives of Thailand 4.0. These include next-generation automotive, intelligent electronics, advanced agriculture and biotechnology, food processing, and medical and wellness tourism. They also encompass the sectors of: digital technology, robotics, aviation and logistics, comprehensive healthcare, and biofuels and biochemicals. To develop most of these industries, the country will require a large number of highly skilled workers. This will especially be the case as these industries begin to grow and as businesses start operating. Over the past few years, however, businesses in the country have been facing the challenge of a labour shortage. In the first quarter of 2014, over 50% of companies were unable to fill vacancies within a period of three months. Industries requiring special skills such as automotive and electronics, and industries with harsh working conditions, such as construction, are facing a particularly large gap (SCB Economic Intelligence Center, 2015).

Table 3.4.1. **Targeted public and private investment into the EEC**

Projects	Investment target
U-Thapao international airport	THB 200 billion (USD 5.7 billiion)
Map Ta Phut port	THB 10.15 billion (USD 0.3 billion)
Laem Chabang port	THB 88 billion (USD 2.5 billion)
High-speed rail project	THB 158 billion (USD 4.5 billion)
Dual-track railway	THB 64.3 billion (USD 1.8 billion)
Motorway	THB 35.3 billion (USD 1 billion)
Industries	THB 500 billion (USD 14 billion)
New cities/Hospitals	THB 400 billion (USD 11.5 billion)
Tourism facilities	THB 200 billion (USD 5.7 billiion)

Source: RHB (2017).

Staff members with vocational degrees are especially in demand. In the EEC zone, industries including electronics, food processing, rubber, and plastics have a particular need for technical and vocational workers. Some other industries such as logistics, hotels, banks and retail are also in need of staff. One of the key challenges in Thailand is the shortage of workers with sufficient knowledge of science, engineering, and technical skills. Moreover, a weakness in soft skills and English proficiency poses a further challenge as the country faces up to increasing global competition in the services sector (Tan and Tang, 2016).

Meeting the demand for technical and vocational workers poses a particular challenge considering Thailand's decreasing enrolment rate in technical and vocational schools (Table 3.4.2). According to statistics from the United Nations Educational, Scientific and Cultural Organization (UNESCO), the share of enrolments in the vocational track stood at around 40% of total enrolment in secondary schools in 2008. By 2013, this had declined to around 34%, with a further drop to around 20% in 2017. This shows that most students prefer to opt for the general track of secondary education. It is crucial to make further efforts to improve the attractiveness of Technical and Vocational Education and Training (TVET) and balance the enrolment between general education and TVET.

Table 3.4.2. **Enrolment in technical and vocational education and training (TVET)**

Percentage of total enrolment in secondary education

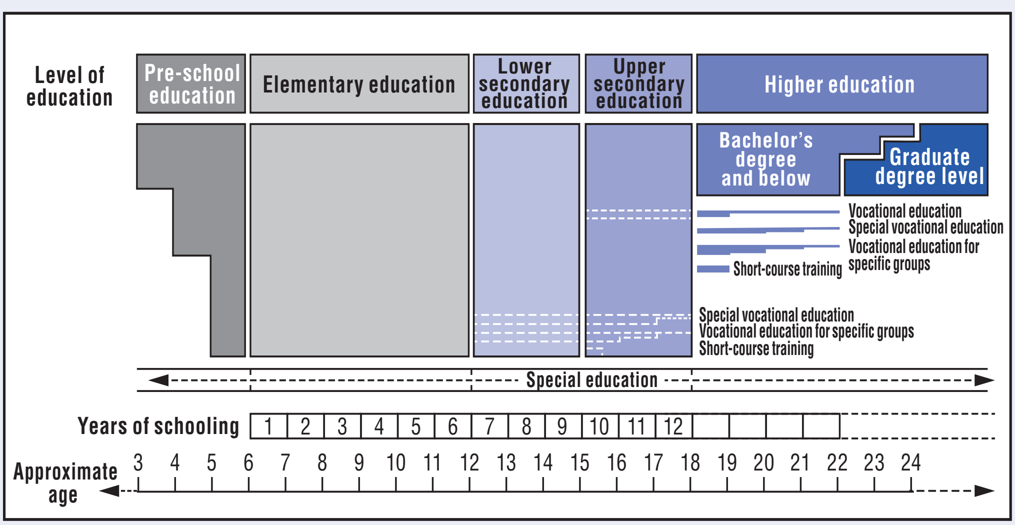
Year	Enrolment in TVET
2008	39.91%
2009	38.82%
2010	37.47%
2011	36.34%
2012	34.90%
2013	33.93%
2014	-
2015	19.76%
2016	19.89%
2017	20.66%

Source: UNESCO Institute for Statistics.

Box 3.4.1. **Vocational schools in Thailand's education system**

Thailand's education system is mainly managed by the country's education ministry. The education system in Thailand has four levels: pre-school, elementary education, secondary education (lower and upper), and tertiary and higher education (Figure 3.4.1).

Figure 3.4.1. **National Education System in Thailand**



Source: Southeast Asian Ministers of Education Organisation (SEAMEO), http://www.seameo.org/SEAMEOWeb2/index.php?option=com_content&view=article&id=115&Itemid=532.

The minimum duration of compulsory school attendance in Thailand is nine years – six years at elementary school and three years at lower-secondary school. For these nine years, the government provides free education. It also offers three years at upper-secondary school, and three years of pre-primary school. Both are non-compulsory. Secondary education is divided into lower- and upper- secondary, with both levels offering three-year cycles of education. The upper-secondary system is then divided

Box 3.4.1. Vocational schools in Thailand's education system *(cont.)*

into two tracks: general and vocational. The latter option leads to the lower certificate of vocational education. Tertiary and higher education encompasses all post-secondary education. It includes bachelor's and postgraduate degree programmes as well as studies below degree level, including the vocational diploma. Vocational education generally lasts two years, leading to a diploma. Students can then continue their vocational education at the university level, by enrolling in a two-year, degree-level programme. Under the aegis of the education ministry, Thailand's Office of the Vocational Education Commission manages around 416 vocational colleges across the country (UNESCO-UNEVOC, 2015).

Further improving the development of human capital is crucial

The Thai government has taken various initiatives to develop human resources in the country, in particular in the EEC areas. For instance, it has approved a budget of THB 861 million to develop human resources in the EEC. Furthermore, the office of the EEC recently signed a memorandum of understanding with the country's commissions for vocational and higher education and the national investment board to prepare the right number and quality of students for the ten target industries in the EEC zone. The Sattahip Technical College in Chonburi will serve as a useful model. This institution was established to provide dual vocational training. The idea is to forge agreements with private firms in order to build effective training curricula, to better evaluate students, and to provide them with practical work experience. In this model, there is teaching in several fields including ICT, tourism, and business management.

The government's department for skills has been providing training and workshops for construction workers in order to help keep up with the demand from the EEC initiative, which will be particularly useful during the construction phase. The programme covers the laying of tiles and bricks, plastering, building colouring, the installation of lightweight structures, metal-sheet roofing, construction using foam and alternative materials, and the construction of houses from soil for the purposes of tourism.

While the EEC is expected to attract foreign investment, Thailand also needs to make sure it receives transfers of skills and technology from foreign companies in the EEC. This will be crucial for the further development of the country's local human resources.

Lastly, it is also important to pay more attention to the concerns raised by local communities, which could potentially affect the implementation of the projects. This includes making sure that local communities are well-informed about the benefits of the EEC, and getting them more involved in the projects in order to build up a sense of ownership.

Key government ministries in Thailand

Prime Minister	Prayut Chan-o-cha
Agriculture and Co-operatives	Grisada Boonrach
Commerce	Sontirat Sontijirawong
Culture	Vira Rojpojchanarat
Defense	Prawit Wongsuwon
Education	Teerakiat Jaroensettasin
Energy	Siri Jirapongphan
Finance	Apisak Tantivorawong
Foreign Affairs	Don Pramudwinai
Industry	Uttama Savanayana

Key government ministries in Thailand *(cont.)*

Digital Economy and Society	Pichet Durongkaveroj
Interior	Anupong Paojinda
Justice	Prajin Juntong
Labour	Adul Sangsingkeo
National Economic and Social Development Board	Thosaporn Sirisumphand
Natural Resources and Environment	Surasak Karnjanarat
Public Health	Piyasakol Sakolsatayadorn
Science and Technology	Suvit Maesincee
Social Development and Human Security	Anantaporn Kanjanarat
Tourism and Sports	Weerasak Kowsurat
Transport	Arkhom Termpittayapaisith
Central Bank Governor	Veerathai Santiprabhob

Note: Valid as of 16 October 2018.

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Viet Nam

A. Medium-term economic outlook (forecast, 2019-23 average)

GDP growth (percentage change):	6.5
Current account balance (% of GDP):	1.4
Fiscal balance (% of GDP) (central government):	-5.1

B. Medium-term plan

Period: 2011-20

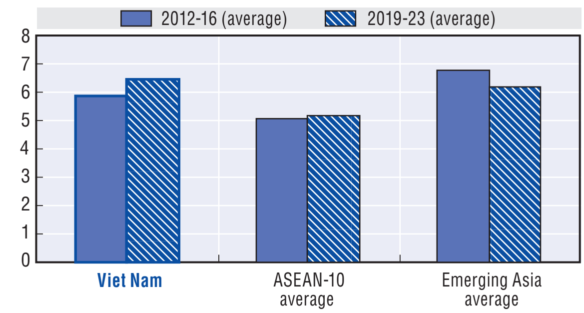
Theme: A modern, industrialised country by 2020

C. Basic data (in 2017)

Total population:	93.7 million*
Population of Hanoi:	7.4 million*
Nominal GDP (US dollar):	220.4 billion**
GDP per capita at PPP:	6 927.8 (current International Dollar)**
Exchange rate in the first half of 2018 (period average):	22 493.8 (VND/USD)

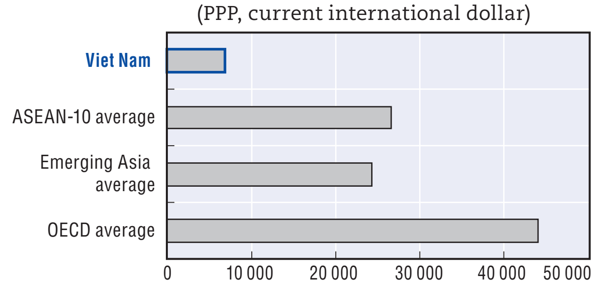
Note: * Population data are year-end government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage change)



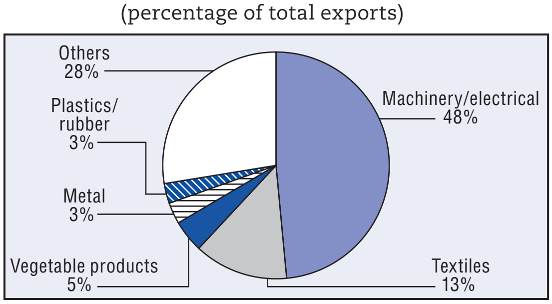
Source: OECD Development Centre, MPF-2019.

GDP per capita, 2017
(PPP, current international dollar)



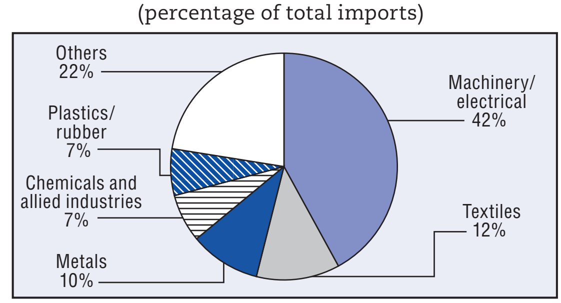
Source: IMF.

Composition of exports, 2017
(percentage of total exports)



Source: Trademap.

Composition of imports, 2017
(percentage of total imports)



Source: Trademap.

Structural policy challenges discussed in previous editions of the Outlook

2014	Skilled labour	Increasing access to education, and strengthening Technical and Vocational Education and Training (TVET), to improve the quality of human capital
	Private-sector development	Making it easier to access to credit, and lowering transport costs to develop the private sector
	Financial-sector development	Restructuring the financial system to enhance the effectiveness of monetary policy
2015	Policy stability	Maintaining stability in key economic and social-policy areas in order to be able to implement socio-economic strategies for the country
	Skilled labour	Fulfilling the as-yet-incomplete implementation of measures to develop high-tech industries and skills training
2016	Infrastructure	Improving infrastructure to support growth
	State-owned enterprises (SOEs)	Reforming and restructuring SOEs
	Skilled labour	Promoting both job creation and productivity growth
2017	Skilled labour	Training a skilled workforce to work in high-tech manufacturing
	Infrastructure	Building hard and soft infrastructure to allow the country to participate as fully as possible in promising new technologies and industries
2018	State-owned enterprises (SOEs)	Building momentum towards greater privatisation of state-owned enterprises (SOEs)

Recent developments in policy areas covered by previous editions of the Outlook

New measures to support SMEs

- On 1 January 2018, a new law establishing support measures for small and medium-sized enterprises (SMEs) entered into force in Viet Nam. It creates a legal framework to increase support for SMEs both from the private sector and from government agencies. It defines SMEs as enterprises that employ – on average and per year – no more than 200 staff covered by social insurance. In addition, the total capital of such a firm should not exceed VND 100 billion (Vietnamese dong), and its total revenue in the preceding year must not exceed VND 300 billion.

A new legal framework for infrastructure

- In July 2018, Viet Nam brought into effect a new railways law. The new legislation focuses on infrastructure planning, investment procedures, construction, protection, management, maintenance, preferential tax treatment, concessional loans, and the development of high-speed rail. It applies both to domestic and foreign firms, as well as to individuals involved in railway activities across the country.

POLICY FOCUS

Access to secondary education as a driver for social equality and social mobility

Over the past two decades Viet Nam has recorded great progress in steadily alleviating the number of people living under the poverty line while also managing to increase the average income of its population overall. Since the 1990s, almost 30 million people have moved above and away from the national poverty line. This has resulted in a dramatic increase in the country's Human Development Index rating. Following on from this achievement, Viet Nam attained the status of a lower-middle income country as of 2009.

Since the beginning of the process of economic reforms known as Doi Moi, which began in 1986, education in Viet Nam has gone through a remarkable overhaul. The Doi Moi reforms led to changes in socio-economic policies, which resulted in turn in the gradual reform of the education system. Before this period of reform, Viet Nam's education policies and system were part of a centrally-planned economy. Since the beginning of the period, Viet Nam's education laws have changed many times.

Viet Nam's strategic plan for the development of education in 2011-20 targets a fundamental and comprehensive reform of the system. The plan re-emphasises the objective of the country's 2009 education law, which is to provide universal pre-school education for children under five by 2015. This objective came to fruition. Another key objective of the plan is to increase the rates at which children enroll at the correct age in primary and lower-secondary education to 99% and 95% respectively. The strategic plan also aims to deliver a major reform agenda with regard to management in the education system, as well as the development and training of both teachers and education managers.

Several key challenges continue to hold back many of Viet Nam's schoolchildren

These steady reforms have resulted in an impressive score in the OECD's Programme for International Student Assessment (PISA) rankings, with Vietnamese students outstripping the performance of their counterparts in most countries in the region, including Indonesia and Thailand (Table 3.5.1).

Table 3.5.1. **PISA scores in 2015 for selected countries in the region**

	Science	Reading	Maths	Science, reading, maths	
	Mean score in PISA 2015	Mean score in PISA 2015	Mean score in PISA 2015	Share of top performers in at least one subject (Level 5 or 6)	Share of low achievers in all three subjects (below Level 2)
OECD average	493	493	490	15.3%	13%
Singapore	556	535	564	39.1%	4.8%
Viet Nam	525	487	495	12.0%	4.5%
Thailand	421	409	415	1.7%	35.8%
Indonesia	403	397	386	0.8%	42.3%

Source: OECD (2016).

According to Goyette (2016), if one looks only at Viet Nam's PISA scores for reading and maths and the generally low inequality they revealed compared to other nations in terms of socio-economic background, gender, and rural or urban residency, one gets the impression that education in Viet Nam is high in quality and low in inequality. Nevertheless, other indicators such as completion rates for lower-secondary education, the transition to and completion of upper-secondary schooling, and the average levels of education achieved, reveal a different story – one in which educational inequality is actually relatively high. Moreover, such inequality of opportunity results in turn in social immobility, especially for the poor and for ethnic minorities.

According to a study from Oxford University's Young Lives programme, which collected data on 3 000 Vietnamese children, poor performance in the classroom is the biggest reason why children leave school early. Household poverty and parental education are also important factors behind the probability of this phenomenon. The most common reason that parents cite for children ceasing to attend school is lack of interest. Moreover, in-depth interviews undergone in the study revealed that children's performance at school, and their perception of the value of schooling, are the most prevalent reasons why they drop out.

A World Bank study (World Bank, 2014) has shown that school students who fail to pass high-school entry exams have to go to private schools. These schools are generally more expensive, and are beyond the affordability of many poor students. This is also why many of these students have no choice but to drop out of high school. The government should improve the incentives for students to stay in school and complete secondary education, notably because of the importance of inclusive education in supplying the workers who can help Viet Nam to make the most of the so-called fourth industrial revolution.

Keeping children interested, and helping students from less well-off backgrounds

Since performance at school and the perception of the value of a school education are the most common reasons that children give for dropping out, attractive educational and extra-curricular programmes may entice children to stay in school and stay interested in studying. One way to keep children interested is to introduce classes providing extra tutoring and to make sure these sessions are accessible to all. This can help children who are falling behind and who need extra help after school.

This extra coaching may also improve the performance of students who are preparing to enter secondary school, and who have therefore shown commitment to keep on learning. Beyond offering extra tutoring, the government may wish to target assistance and subsidies towards students who are in transition (from elementary to high-school) and to those entering upper-high school, as the World Bank has done with success. Indeed, from 2010 to 2013, a World Bank programme – *GPOBA: Viet Nam Education Project* – provided tuition subsidies to more than 8 000 poor students to attend non-public upper-secondary schools and professional secondary schools. Using an approach of output-based aid, the project linked the payment of a tuition subsidy with student performance. This helped to increase access to upper-secondary school education in 12 rural provinces in Viet Nam.

Another approach to funding students from poor households who are prone to dropping-out is to bring in multinational companies (MNCs), which can provide assistance as part of their corporate social responsibility programmes. Students can be paired with selected MNCs, which will then provide financial support, as well as subsidising after-school programmes such as coaching from a tutor, or attending cultural activities during the weekends. MNCs can also introduce the students to the corporate world, hence motivating them to do well at school so that they will have a better chance of getting a good job after graduation. As well as the schools themselves, public and private agencies can also act as the mediators for this kind of initiative, which has been very successful in France and elsewhere in Europe.

Another incentive that should help to underscore the attractiveness of studying hard at school is the abundance of job opportunities and attractive salaries that are available in Viet Nam. The government's new labour policies have aimed to ensure that the supply of labour force is continuous, protected, and equipped to support the fourth industrial revolution. The government's approach has been to empower the workforce with more flexible working hours and by increasing minimum wages to keep up with inflation, as highlighted below (Box 3.5.1).

Box 3.5.1. **New labour policies**

As of January 2018, and as agreed by the National Wage Council, Viet Nam's labour ministry implemented an average increase of 6.5% to the Regional Minimum Salary (RMS). The new RMS for regions 1 through 4 in 2018 are 3.98, 3.53, 3.09 and 2.76 million Vietnamese Dong, respectively. The law defines the RMS as the minimum monthly salary level paid to employees who perform occupations in normal working conditions with normal working hours, and who meet labour-productivity standards or agreed work duties under employment contracts. Viet Nam is divided into four regions with different RMS standards. The RMS is also used to determine a maximum premium for calculating unemployment insurance contributions for both employers and employees. As soon as a decree on the RMS comes into force, labour costs will increase accordingly – both in terms of the salary that employees must receive and their contribution premiums towards unemployment insurance.

This recent increase in salary levels is low compared to recent trends – in the past few years, the increase has tended to be between 11-14%. This emphasises the struggle the government faces in balancing workers' rights and the objective of attracting more foreign direct investment into the country.

Viet Nam also introduced a new policy on flexible overtime working hours in 2018. Previously, the country had one of the lowest caps on overtime working hours in the

Box 3.5.1. **New labour policies** *(cont.)*

region. With the cap increased, production is now projected to increase in manufacturing, especially in the garment industry, to keep up with high demand.

In line with the goal of empowering workers, companies are mandated as of this year to make extra payments – such as the so-called responsible allowance and area allowance which will be included in the base salary. These allowances are regular fixed payments offered by the employers to cover working conditions, complexity of the job and living conditions which are not fully reflected in the contractual salary.

Key government ministries in Viet Nam

Prime Minister	Nguyễn Xuân Phúc
Agriculture and Rural Development	Nguyễn Xuân Cường
Construction	Phạm Hồng Hà
Culture, Sports and Tourism	Nguyễn Ngọc Thiện
Education and Training	Phùng Xuân Nhạ
Finance	Đinh Tiến Dũng
Foreign Affairs	Phạm Bình Minh
Health	Nguyễn Thị Kim Tiến
Home Affairs	Lê Vĩnh Tân
Industry and Trade	Trần Tuấn Anh
Information and Communications	Trương Minh Tuấn
Justice	Lê Thành Long
Labour, Invalids and Social Affairs	Đào Ngọc Dung
National Defence	Ngô Xuân Lịch
Natural Resources and Environment	Trần Hồng Hà
Planning and Investment	Nguyễn Chí Dũng
Public Security	Tô Lâm
Science and Technology	Chu Ngọc Anh
Transport	Trương Quang Nghĩa
Governor of the State Bank	Lê Minh Hưng

Note: Valid as of 16 October 2018.

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BRUNEI DARUSSALAM AND SINGAPORE

BRUNEI DARUSSALAM AND SINGAPORE

Brunei Darussalam

A. Medium-term economic outlook (forecast, 2019-23 average):

GDP growth (percentage change):	2.0
Current account balance (% of GDP):	10.0

B. Medium-term plan

Period: 2012-17

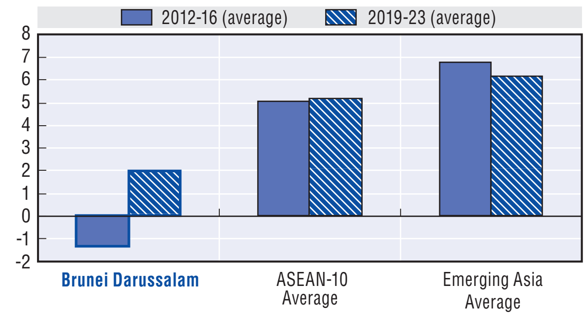
Theme: Knowledge and innovation to enhance productivity and economic growth

C. Basic data (in 2017)

Total population:	0.4 million*
Population of Brunei/Muara:	0.3 million*
Nominal GDP (US dollar):	12.1 billion**
GDP per capita at PPP:	78 970.8 (current International Dollar)**
Exchange rate in the first half of 2018 (period average):	1.3 (BND/USD)

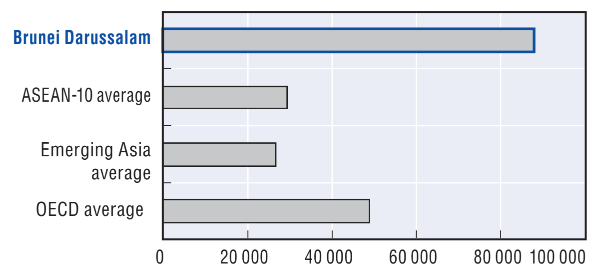
Note: * Population data are mid-year government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage change)



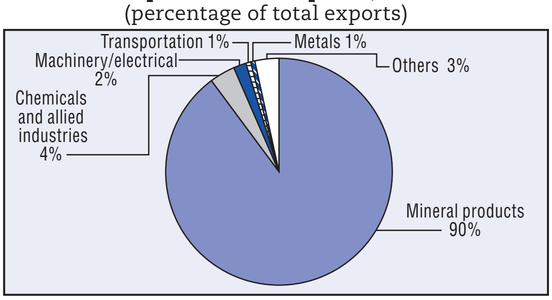
Source: OECD Development Centre, MPF-2019.

GDP per capita, 2017
(PPP, current international dollar)



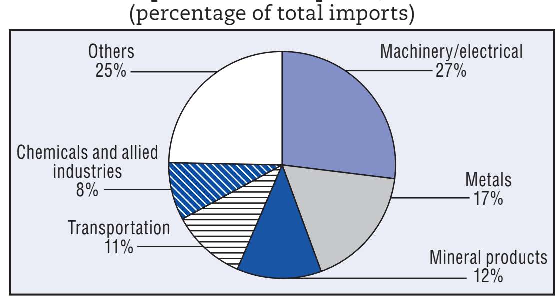
Source: IMF.

Composition of exports, 2017
(percentage of total exports)



Source: Trademap.

Composition of imports, 2017
(percentage of total imports)



Source: Trademap.

Structural policy challenges discussed in previous editions of the Outlook

2014	Human capital development	Improve tertiary education attainment
	Private sector development	Improve private sector development to diversify beyond the hydrocarbon economy
	Competition	Legislate and implement competition policy
2016	FDI	Encourage foreign direct investment inflows
	Business sector	Reform the business sector to promote diversification
	Public finance	Reform public finance
2017	Economic diversification	Promote economic diversification by inviting foreign investment and supporting the private sector
	Competition	Improve legislation on business competition
2018	FDI	Attracting foreign direct investment (FDI) to diversify the economy and create more jobs

Recent developments in policy areas covered by previous editions of the Outlook

Setting up a competition commission and a department for competition and consumer affairs

- In August 2017, the Prime Minister's Office announced the creation of a national competition commission to promote business competition in line with the Competition Order of 2015. This is a competition law that seeks to promote efficiency in the economy and consumer welfare. In turn, the aim is to foster economic growth, as per Brunei Darussalam's national strategy – Wawasan Brunei 2035. Brunei Darussalam has also set up a new government department for competition and consumer affairs (under the aegis of the department for economic planning and development) to investigate and conduct the administrative tasks for the new competition commission. In this connection, the competition commission took part in an engagement session in February 2018 at the economic planning department.

Education: strengthening human capital

- In March 2018, the education ministry released a strategic plan for 2018-22, aiming to deliver a "holistic education strategy to achieve the fullest potential for all" (Ministry of Education, 2018). With this in mind, the ministry's objectives are to strengthen the development of human capital while using education to help create an effective network environment. The vision is to provide equal access to education, to improve its quality, and to support lifelong learners who, through study and training, could become more efficient, productive and competitive, and thus help to improve the economy overall. The plan focuses on three key areas: leadership and governance, system-wide support, and teaching and learning. In this way, the education ministry expects to deliver a more performance-driven system and to implement its strategic plan, aiming constantly to provide high-quality teaching and better learning achievements.
- Between April and May 2018, a special task force within the education ministry carried out the main survey for the OECD's Programme of International Student Assessment (PISA). This kind of action is very much in line with Wawasan Brunei 2035's goal of improving learning outcomes at schools in Brunei Darussalam. The PISA survey will monitor educational practices and benchmark the national education system internationally. Therefore, this survey could help the education ministry to improve learning outcomes by identifying better strategies. Indeed, there is scope within this framework for Brunei Darussalam both to learn best practices and to share its own experiences with other countries.

Attracting FDI from foreign partners to diversify the economy

- China and Brunei Darussalam plan to complete the construction of the Zhejiang Hengyi Petrochemical Project on Pulau Muara Besar by the Q2 2019. This is one of the largest FDI-funded projects in the country. The project's partners plan to put this plant into operation in the Q2 or Q3 of 2019. The project is divided into two phases which will cost over USD 15 billion and will consist of feasibility and environmental studies plus the key construction work. The plan is then to bring a second phase of the refinery and petrochemical plant into operation in 2022.

POLICY FOCUS

Strengthening local SMEs

As an oil-producing nation, Brunei Darussalam is one of the richest countries in GDP per capita terms in the region. Brunei Darussalam's economy is mainly led by exports of crude oil and natural gas; when measured at constant prices based on the year 2010, oil and gas continue to account for 43.6% of GDP in 2017. However, their production continues to decline gradually from 2010. The government has taken steps towards diversification through a variety of initiatives. In an effort to lessen the economy's dependence on the oil and gas sector, and to generate more jobs in other sectors, the government has been focusing on strengthening SMEs domestically, so that they are competitive in exporting to the global market.

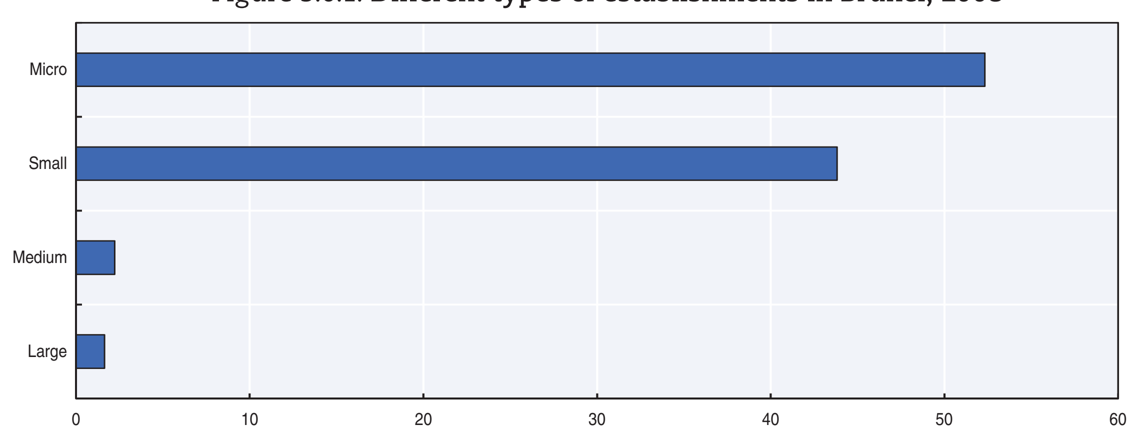
The nature of SMEs in Brunei Darussalam

Brunei Darussalam defines SMEs as enterprises with between 1 and 100 employees. They include SMEs as well as micro enterprises. Micro enterprises have between 1 and 5 employees; small enterprises have between 6 and 50 employees, while medium-sized enterprises have between 51 and 100 employees. The government has recognised the important role that SMEs have to play in helping with the urgent objective of economic diversification, and with Brunei Darussalam's broader agenda of industrial and economic growth. In its push for economic diversification, the government is paying particular attention to business services, financial services, hospitality and tourism, transport and logistics, manufacturing, primary resources (i.e. agriculture, fisheries, and ecotourism), as well as the food and halal industries. In order to achieve the economic diversification it wants to see, the government has developed a range of initiatives to encourage both local and foreign investors to take part in its diversification reforms.

In 2008, the total number of businesses registered in all sectors in Brunei Darussalam stood at 9 302 establishments. Of this number, 9 150 are active SMEs, which equates to 98.37% of the country's businesses. Most of Brunei Darussalam's SMEs are concentrated in the wholesaling and trading businesses. This is followed by the construction sector, and then by mining, quarrying and manufacturing sector. After that comes the community, social and personal sector, ahead of agriculture, forestry, and fishing.

SMEs have significant potential to contribute to the diversification of Brunei Darussalam's economy. In 2008, they contributed 58% of Brunei's total employment in the private sector and 22% of GDP. The 2008 statistics also showed that 52.3% of Brunei Darussalam's businesses were micro enterprises, 43.8% were small enterprises, 2.23% were medium-sized enterprises, and 1.63% were large enterprises (Figure 3.6.1). Most of the country's SMEs are run by young, educated and highly-skilled individuals, who use the latest technological developments to grow their businesses. Supported by various agencies, Brunei Darussalam's SMEs are set to grow both locally and abroad. To date, and in addition to oil and gas and manufacturing, the country's SMEs have been involved in sectors such as professional services, information and computer technology, e-Business, and hospitality.

Figure 3.6.1. **Different types of establishments in Brunei, 2008**



Source: MOHA (2009).

StatLink https://doi.org/10.1787/888933887196

Initiatives to help SMEs to become bigger players in the markets they serve

To ensure that SMEs are able to compete domestically and globally, the government recognises the need to develop the capability and competitiveness of local entrepreneurs. To do so it aims to promote qualities of socially responsible entrepreneurship and to encourage SMEs to get more involved in the export market. It also aims to increase their productivity and promote innovation and technology transfer among SMEs. To achieve these goals, the government provides various forms of assistance that include financing for entrepreneurial development, investment incentives, initiatives with regard to technology transfer and infrastructure, and various other facilities through its many governmental agencies.

In general, the government is pursuing three overarching objectives in assisting SMEs: to expand business opportunities, to provide a favourable business environment for trade and investment, and to ensure that SMEs are able to benefit from these opportunities. The main agencies that promote SMEs' development are the ministry of industry and primary resources and the BEDB, Brunei Darussalam's Economic Development Board. The industry ministry helps SMEs through its own projects as well as through its agencies, which include the Entrepreneurial Development Centre.

There are four chambers of commerce in Brunei Darussalam that help with the development of SMEs, notably by promoting co-operation and strengthening their business relations. These are: the National Chamber of Commerce and Industry, the Brunei-Malay Chamber of Commerce and Industry, Brunei International Chamber of Commerce and Industry, and the Chinese Chamber of Commerce. Apart from strengthening entrepreneurship domestically, the government has also continuously been attracting foreign investors and international co-operation (Ministry of Industry & Primary Resources, 2009).

Challenges to the growth of SMEs in Brunei Darussalam

Even though there is a push from government in the form of financing and training to promote SMEs, the biggest obstacles that Brunei Darussalam's SMEs face also include marketing and capital limitations, weak government policies, human-resources development, and issues pertaining to facilities, raw materials, and the general approach of the entrepreneurs themselves.

The SME sector is still in its early stages of growth in Brunei Darussalam. Most of these businesses are very dependent on initiatives led by the government, especially because entrepreneurial skills are still in relatively short supply. In addition, as the majority of the country's SMEs are not yet export-oriented businesses, they have to compete in an already saturated market. Due to this, SMEs end up having to compete among themselves and with foreign competitors against both local products and imported ones.

In terms of financing, and even though the government has put in place several programmes to help SMEs grow, financial schemes targeted at building and upgrading the capability and capacity of local SMEs – which is very much needed – have so far been limited.

Brunei Darussalam has no specific policy for SMEs, and its rules and regulations cover all types of businesses rather than differentiating between them. As a result, certain government policies may impact some SMEs negatively in their development. This is the case especially for provisions related to the labour quota cap and also the country's regulations on financing. This factor aside, Brunei Darussalam's SMEs also require more training in management skills, notably when it comes to finance, personnel development, marketing, sales, production, and operations. According to a survey undergone by Japan Overseas Development Corporation, about 76% of SME owners stated that capacity building is required for their employees to upgrade their skills, which is an important ingredient for succeeding in business. The shortage of human resources due to the small size of the country's population complicates the issue further. Moreover, this challenge is compounded when local graduates have many choices upon graduation, and joining an SME may not be their first priority given the risks involved.

Given that most SMEs in Brunei Darussalam are still in the initial stages of their development, capital accumulation is proving to be a gradual process. In terms of other facilities, premises like factories and workshops are rented from private owners, which translates into higher fixed costs. This results in a higher price per unit for SMEs' products, especially when economies of scale are not achieved. This factor comes on top of a higher cost of imported raw materials, with most resources coming in from neighbouring countries like Malaysia and Indonesia. Putting all of these factors together, SMEs are struggling to survive even in the domestic market. Apart from the quantity of raw materials available, quality is also an issue, and local SMEs have stated this themselves. Last but not least, the mindset of Brunei Darussalam's SMEs, which often prefer to avoid risks, is also a major challenge in growing the sector. In general, job roles in the public sector – with all of their pension benefits – are preferred to entrepreneurship, in which the risks are greater, even if there is also potentially a larger upside too.

Key government ministries in Brunei Darussalam

Prime Minister's Office	Sultan Hassanal Bolkiah (Prime Minister)
	Crown Prince Al-Muhtadee Billah (Senior Minister)
	Isa Ibrahim (Minister and His Majesty's Special Advisor)
	Abdul Mokti Mohd. Daud (Minister)
Ministry of Communications	Abdul Mutalib Md. Yusof
Ministry of Culture, Youth and Sports	Aminuddin Abidin
Ministry of Defence	Sultan Hassanal Bolkiah
Ministry of Defence (Second Minister)	Halbi Mohd. Yussof
Ministry of Development	Suhaimi Gafar
Ministry of Education	Hamzah Sulaiman
Ministry of Energy (Energy and Manpower) and Industry	Mat Suny Mohd Hussein
Ministry of Finance	Sultan Hassanal Bolkiah
Ministry of Finance (Second Minister)	Mohd. Amin Liew Abdullah
Ministry of Foreign Affairs and Trade	Sultan Hassanal Bolkiah
Ministry of Foreign Affairs and Trade (Second Minister)	Erywan Yusof
Ministry of Health	Md. Isham Jaafar
Ministry of Home Affairs	Abu Bakar Apong
Ministry of Primary Resources and Tourism	Ali Apong
Ministry of Religious Affairs	Awang Badaruddin Awang Othman

Note: Valid as of 16 October 2018.

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Singapore

A. Medium-term economic outlook (forecast, 2019-23 average)

GDP growth (percentage change):	2.7
Current account balance (% of GDP):	19.1

B. Medium-term plan

Period: 2010-20

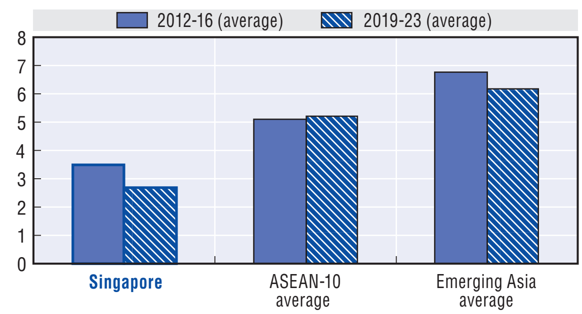
Theme: High skilled people, innovative economy and distinctive global city

C. Basic data (in 2017)

Total population:	5.6 million*
Nominal GDP (US dollar):	323.9 billion**
GDP per capita at PPP:	94 104.7 (current International Dollar)**
Exchange rate in the first half of 2018 (period average):	1.3 (SGD/USD)

Note: * Population data are mid-year government estimates.
** IMF estimate
Sources: OECD Development Centre,national sources, CEIC and IMF.

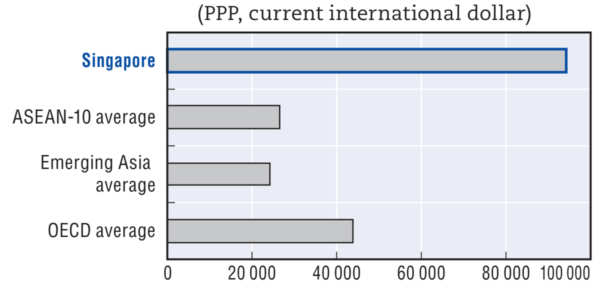
GDP growth rates (percentage change)



Source: OECD Development Centre, MPF-2019.

GDP per capita, 2017

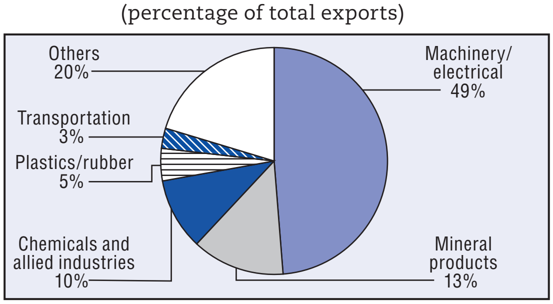
(PPP, current international dollar)



Source: IMF.

Composition of exports, 2017

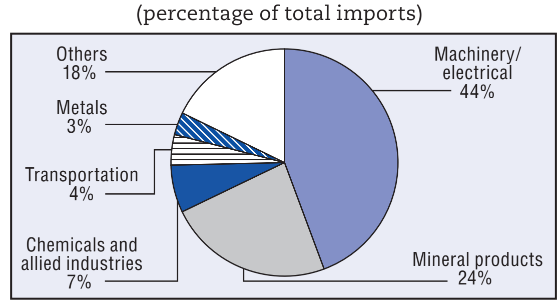
(percentage of total exports)



Source: Trademap.

Composition of imports, 2017

(percentage of total imports)



Source: Trademap.

Structural policy challenges discussed in previous editions of the Outlook

2011/12	Human capital development	Strengthen life-long learning by enhancing pre-school education
	Innovation	Raise the efficiency of innovation policy through well co-ordinated policy evaluation system
	SME development	Enhance SME development by improving assistance programmes
2013	Labour market	Manage foreign worker dependence by increasing the productivity of local workforce
	SME development	Sustain SME growth through fostering entrepreneurial environment
	Innovation	Enhance the innovation capabilities of local enterprises
2014	Land use	Optimise land use and allocation by incorporating a green growth strategy
	SME development	Raise SME productivity through well co-ordinated assistance programmes
	Education	Strengthen lifelong learning to increase labour market flexibility
2016	Aging population	Strengthen labour market and social policies for aging population
	Infrastructure (land use)	Leverage data to build a smart, energy-efficient city
2017	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
2018	Land use	Optimising the use of Singapore's limited land

Recent developments in policy areas covered by previous editions of the Outlook

Demographic change: strengthening healthcare and social services for seniors

- While the government has taken steps to empower Singaporeans to keep active and healthy as they grow older, efforts have also been made to strengthen Singapore's system of community care services to ensure that seniors with care needs are well supported in the community and at home. In April 2018, the government announced three structural changes to better integrate health and social support services for seniors in the community:
  - Firstly, the Community Networks for Seniors programme – which brings together different stakeholders in the community – voluntary welfare organisations, the People's Association's grassroots organisations, healthcare clusters and government agencies to jointly engage and support our seniors, will be progressively expanded nationwide by 2020.
  - Secondly, the Silver Generation Office has been merged into the Agency for Integrated Care, which co-ordinates the delivery of aged care services and facilitates efforts in care integration. This repositioning reflects the expansion in SGO's mandate beyond outreach, to include the proactive identification of seniors who are in need, in order to connect them to active ageing, befriending and aged care services in the community.
  - Thirdly, all senior-related healthcare and social care services (e.g. active ageing programmes, befriending services and community care services) have been consolidated under the Ministry of Health (MOH). This transfer follows an earlier exercise in 2013, where oversight of social care services for frail seniors were transferred from the Ministry of Social and Family Development to MOH, and will further enable MOH to integrate planning and policy-setting for health and social support services for seniors at the national level, providing seamless support to them so that they can age well in the community.
  - Taken together, these changes will strengthen Singapore's system of community care services for seniors, while enabling the government to plan and develop health and social support services for seniors more holistically.

Land use: forging the optimised districts of the future

- The government has continued to promote Singapore's Smart Nation initiative, strengthening the digital economy and the City in a Garden programme. The Smart Nation initiative aims to harness networks, data and information and communications technology (ICT) to improve living, create economic opportunity and build a closer community. The City in a Garden programme aims to cover over 40% of the island-state with green plants. Beginning with the first Tree Planting Campaign in 1963, Singapore has come a long way in greening up their island city, with 4 nature reserves and more than 350 parks sprawled across Singapore to date and still growing. Together, these will help create a "smart, green and liveable city". In this way, Singapore provides its citizens with a better quality of life, greater social inclusion, and a competitive environment in which to work. In addition, the Infocomm Media Development Authority, the Jurong Town Corporation, the Singapore Institute of Technology, and the Urban Redevelopment Authority revealed a joint master plan for the Punggol Digital District in January 2018. The district is part of Singapore's plan to build a Smart Nation, where citizens, companies and agencies are empowered by digital technologies and innovations. The construction of the new district was set to begin within the year, with the first few developments due to open by 2023. It will be the country's first enterprise district to feature built-in digital technology and infrastructure, and will also be an inclusive, green district that will act as an anchor for the north-eastern region of Singapore's. Building up the digital economy, and digital infrastructure in the business district, will create around 28 000 jobs with easy commuting conditions.

Education: making education more inclusive

- In February 2018, Singapore's Finance Ministry of Finance announced a budget increase for education to enhance access to educational opportunities for all Singaporean students through various schemes that focus on three main areas. These schemes will cost the Government close to SGD 200 million (Singapore dollars) a year. Firstly, the Singapore Government increased its annual contributions to Singaporean students' Edusave accounts, which can be used to pay for school enrichment programmes, through the Edusave scheme. The Edusave scheme was introduced in 1993 to support Singaporean students aged from 7 to 16 in both the academic and the non-academic aspects of their education, broadening their opportunities, enriching school activities, and encouraging holistic development. From 2019, annual contribution to the Edusave accounts for primary level students will go up from SGD 200 to SGD 230; for secondary level students, it will go up from SGD 240 to SGD 290. Secondly, the Government revised the income eligibility to increase financial support for more students. The income eligibility criteria to qualify for the Edusave Merit Bursary and the Independent School Bursary were increased so that more students could benefit from these awards. Thirdly, there will be more support for students with lower household incomes. The Education Ministry is increasing the annual bursary for pre-university students on the MOE Financial Assistance Scheme (FAS) from SGD 750 to SGD 900, and is also increasing its subsidies for more meals for secondary school students on the FAS to provide greater support to those from lower-income families.

Small and medium-sized enterprises (SMEs): building up skills and promoting digitalisation

- As per its 2018 budget plans, and in a bid to bolster skills in the SME sector, Singapore's Ministry of Finance has announced the Capability Transfer Programme (CTP), initiated by the Ministry of Manpower. The CTP aims to encourage skills transfers from foreign specialists to Singaporean trainers and trainees, thus improving human-capital development. The administration will seek input from private-sector partners, and will evaluate projects on a case-by-case basis. In this way, it will be able to identify deficiencies compared with international standards, and to size up the potential impact of each individual initiative.
- The Government launched a programme called SMEs Go Digital in 2017, which helps SMEs to build their digital capabilities and obtain pre-approved digital solutions according to industry digital roadmaps. The Government is also working closely with the private sector and business associations like the Singapore Business Federation, on key initiatives such as e-payments and a nationwide e-invoicing framework.
- Moreover, Singapore will keep investing in digital technologies, aiming to develop the digital capabilities of SMEs, as well as the levels of training and digital know-how in the broader population.
- Additionally, Singapore leverages the TechSkills Accelerator (TeSA), an initiative of SkillsFuture, to build and develop a skilled Information and Communications Technology (ICT) workforce for Singapore's digital economy. Started in 2016, TeSA is

driven by the Infocomm Media Development Authority and in collaboration with the industry and its relevant associations, SkillsFuture Singapore, Workforce Singapore and the National Trades Union Congress. Essentially, an integrated approach is taken for skills acquisition and practitioner training, enabling professionals to acquire the relevant in-demand tech skills. Singapore is also expanding TeSA to additional sectors such as manufacturing and professional services.

Supporting research and development (R&D) across the public and private sectors

- The Ministry of Finance's 2018 budget plans contained support for R&D in businesses. The aim is to boost innovation by increasing the tax deduction for intellectual property registration fees from 100% to 200%, and by raising the tax deduction for qualifying expenses incurred on R&D done in Singapore from 150% to 250%. This support should help firms to develop and protect their intangible assets. In the public sector, meanwhile, the Ministry of Finance has allocated about 1% of gross domestic product to public R&D under the Research, Innovation and Enterprise 2020 (RIE2020) plan (2016 to 2020), with the aim of maintaining and growing Singapore's national research capabilities to promote economic competitiveness and support national initiatives. Moreover, the ministry is supporting the launch of a commercialisation vehicle for intellectual property, which is a joint venture between Singapore's National Research Foundation and Temasek Holdings, an investment company. This will connect Temasek's global investment networks with the R&D community in Singapore. The joint venture plans to invest at least SGD 100 million. The government is contributing SGD 50 million, with Temasek investing at least SGD 50 million.

POLICY FOCUS

Enhancing strategies for lifelong learning programmes

The ageing of Singapore's population, and the decline in its fertility rate, present the country with an opportunity to re-allocate the resources into lifelong learning. It is important to make sure that Singapore can maintain educational standards and preserve a rich and varied curriculum. Reallocating resources from surplus capacity in schooling into lifelong learning will boost growth and productivity by developing the country's overall human capital. Underscoring the fast pace of ageing in Singapore, the share of the population that is 65 or over has risen, while the share that is 14 or younger has declined. According to the country's statistics department, Singapore's total fertility rate declined from 1.66 births per female in 1996 to 1.16 per female in 2017. As the younger population has shrunk, school enrolment has been decreasing. Total enrolment declined from 0.56 million in 2007 to 0.47 million in 2016.

As a result of this trend, the Ministry of Education plans to merge seven pairs of primary schools, three pairs of secondary schools and four pairs of junior colleges in 2019. These changes aside, the Ministry of Finance has continued to prioritise the education sector, dedicating 17% of the country's overall budget to education in 2017. Singapore continues to achieve world-beating results in the OECD's PISA rankings, and the adequate provision of resources plus fresh policy improvements in areas like scholarships and subsidies should help to develop the country's human capital.

As noted above, re-allocating some of the savings from school mergers into lifelong learning has the capacity to improve human development, and thus to boost the economy. For example, even as the so-called fourth industrial revolution creates new jobs with a strong focus on advanced technology, it will also eliminate other jobs, and public policies have a role to play in helping people adapt to the new reality. One key way of doing so is to offer the kind of adult education they need to match their skills with the new job descriptions of the 21st century, such as jobs related to e-commerce, the Internet, and information and computer technology more generally. SkillsFuture is a national movement that can tackle this issue. The primary goal of SkillsFuture is to provide Singaporeans with the opportunities to develop their fullest potential throughout life, regardless of their starting points, by offering a variety of resources to help them attain mastery of skill (SkillsFuture, 2018). There are four key areas of focus under the SkillsFuture that include 1) helping individuals make well-informed choices in education, training and careers; 2) developing an integrated, high-quality system of education and training that responds to constantly evolving industry needs; 3) promoting employer recognition and career development based on skills and mastery; and 4) fostering a culture that supports and celebrates lifelong learning (MOM, 2018). In 2017, hundreds of thousands of Singaporeans have benefited from various SkillsFuture programmes (Table 3.7.1).

Table 3.7.1. **Singaporeans benefited from SkillsFuture, 2017**

SkillsFuture programmes	Benefited population
SkillsFuture credit	285 000
SkillsFuture mid-career enhanced subsidy	120 000
SkillsFuture advice workshops	4 600
SkillsFuture digital workplace	4 600
SkillsFuture study awards	2 400
SkillsFuture series	2 100
SkillsFuture fellowships	27
SkillsFuture employer awards	14

Source: SSG/WSG (2018), "SkillsFuture 2017 Year-In-Review", http://www.ssg-wsg.gov.sg/new-and-announcements/1_Feb_2017_2.html.

On 1 February 2018, SkillsFuture Singapore launched the Education [Training and Adult Education (TAE)] Industry Transformation Map (ITM) to help professionalise and strengthen the capabilities of the TAE sector in three key areas – 1) innovation, 2) jobs and skills, and 3) productivity. Unlike the other ITMs which focus on jobs creation within their industry, the TAE ITM focuses on strengthening the TAE sector as a critical enabling infrastructure in supporting other industry transformations and enabling Singaporeans to stay relevant and competitive in the economy.

Technological progress in the form of automatic systems and computer-assisted technologies has already been eliminating jobs in restaurants, supermarkets and retail stores. But the kind of support discussed above can help people overcome the threat of technological unemployment, and to upgrade and reallocate human resources in the economy. For example, the Professional and Adult Continuing Education Academy at Singapore Polytechnic currently has about 1 500 students attending night classes every week. Indeed, polytechnics are gradually adding courses in highly-demanded areas such as data science, business intelligence and cyber security. More specifically, Polytechnics have also started to provide customised training for firms and organisations that want to improve their workers' skills. One example of such customised training has been the short courses Republic Polytechnic has offered since 2015 on drones. This training has helped both government agencies and firms in the construction business.

The attainment of lifelong learning programme objectives in Singapore still faces key challenges (Tan, 2017). Lifelong learning remains a relatively new concept in Singapore. While most people can agree that lifelong learning can improve skills and 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). Fostering a strong cultural preference for lifelong learning and helping participants to see the benefits of engaging in such activity will be key for its success.

Key government ministries in Singapore

Prime Minister	Lee Hsien Loong
Deputy Prime Minister and Coordinating Minister for National Security	Teo Chee Hean
Deputy Prime Minister and Coordinating Minister for Economic and Social Policies	Tharman Shanmugaratnam
Coordinating Minister for Infrastructure	Khaw Boon Wan
Minister in Prime Minister's Office	Ng Chee Meng
	Indranee Rajah
Communications and Information	S. Iswaran
Culture, Community and Youth	Grace Fu
Defence	Ng Eng Hen
Education	Ong Ye Kung
Environment and Water Resources	Masagos Zulkifli
Finance	Heng Swee Keat
Foreign Affairs	Vivian Balakrishnan
Health	Gan Kim Yong
Home Affairs	Kasiviswanathan Shanmugam
Law	Kasiviswanathan Shanmugam
Manpower	Josephine Teo
National Development	Lawrence Wong
Social and Family Development	Desmond Lee
Trade and Industry	Chan Chun Sing

Note: Valid as of 16 October 2018.

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CLM

Cambodia

A. Medium-term economic outlook (forecast, 2019-23 average)

GDP growth (percentage change)	6.9
Current account balance (% of GDP):	-8.3

B. Medium-term plan

Period: 2014-18

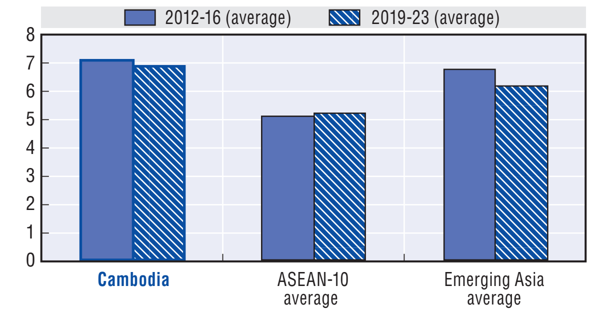
Theme: To gain high benefits from ASEAN Economic Integration in 2015 and to become an upper middle-income country by 2030

C. Basic data (in 2017)

Total population:	15.6 million (in 2016)*
Population of Phnom Penh:	1.9 million (in 2016)*
Nominal GDP (US dollar):	22.1 billion**
GDP per capita at PPP:	4 009.8 (current International Dollar)**
Exchange rate in the first half of 2018 (period average):	4 029.3 (KHR/USD)

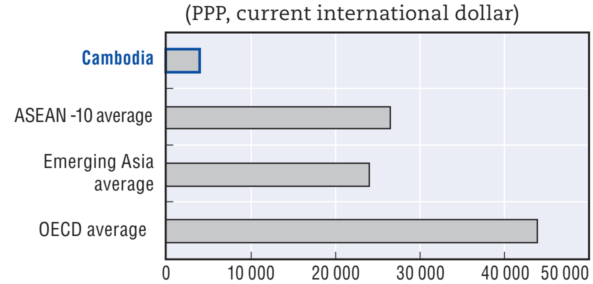
Note: * Population data are year-end government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

GDP growth rates (percentage changes)



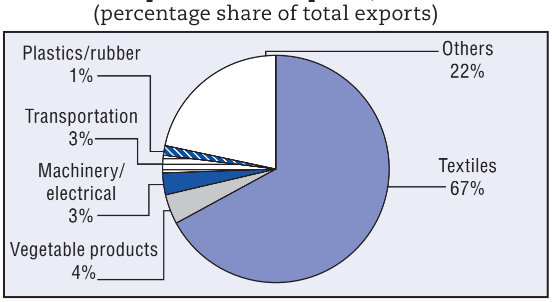
Source: OECD Development Centre, MPF-2019.

GDP per capita, 2017
(PPP, current international dollar)



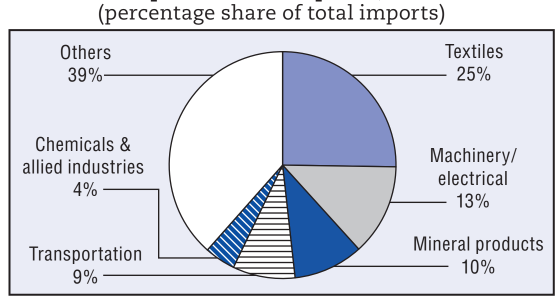
Source: IMF.

Composition of exports, 2017
(percentage share of total exports)



Source: Trademap.

Composition of imports, 2017
(percentage share of total imports)



Source: Trademap.

Structural policy challenges discussed in previous editions of the Outlook

2013	Agriculture	Building agricultural productivity and tapping export potential
	Human-capital development	Increasing enrolment rates at all levels of education, and strengthening technical and vocational training (TVET) to build a skilled labour force
	Financial-sector reform	Strengthening the banking sector and prudential measures
2014	Agriculture	Improving the productivity of agriculture, in particular for rice production
	Financial sector	Improving the prudential and supervisory framework for the financial sector
	Tourism	Developing tourism-specific infrastructure
2016	Education (TVET)	Improving competitiveness by strengthening TVET
	Tourism	Addressing complex challenges in developing tourism
2017	Agriculture	Helping the agricultural sector to move ahead
2018	Education	Strengthening financial education

Recent developments in policy areas covered by previous editions of the Outlook

Modernising agriculture to improve productivity and competitiveness

- According to recent data from the economy and finance ministry, the average annual growth of the Cambodia's agricultural sector has dropped significantly. Growth fell to around 1% between 2013 and 2017, from 4.5% between 2008 and 2012, and 7.2% between 2003 and 2007. The Cambodian government attributes this decline to low productivity, climate change, a sluggish expansion of cultivated land, and the sector's lack of competitiveness on domestic and international markets alike. In order to address this challenge, the country has set itself the target of modernising the agricultural sector by 2030 in order to make it more competitive and sustainable. In order to achieve this objective, the plan is to upgrade obsolete farming machines and increase the overall level of mechanisation.

Improving the quality of education by training teachers

- Cambodia's ministry for education, youth and sport is trying to improve teaching in primary and secondary schools (grades 1 to 12). Currently, many teachers in Cambodia have not had a university education, and they only require two years of additional training after completing secondary school – the so called 12+2 system. However, the government now aims to raise the minimum requirement to 12+4. Under the reform, new teachers will be required to hold a bachelor's degree, while existing teachers will be encouraged to participate in a fast-track programme to reach the new required level.
- In 2017, Cambodia launched a programme to create the so-called new-generation schools, rolling out the initiative to 200 schools in all 25 provinces in 2018. Schools that undergo this transformation acquire the status of autonomous public schools, like the so-called charter schools that exist in a number of advanced economies, and have greater autonomy to innovate. The establishment of new-generation schools is one of the 15 national reforms implemented by the education ministry, and it lies at the core of a two-track approach to education under which the government targets certain schools with intensive and concentrated investment in order to improve the standard of education.

Reforming the budget process to manage national resources more efficiently

- In April 2018, the government launched an overhaul of the budget system for the period 2018-25. The aim of this strategy is to make the allocation of national resources more efficient and effective, and to encourage greater sustainability. This budget reform is part of a four-stage overhaul of the management of Cambodia's public finances that began in 2004. Indeed, it allows this four-stage process to progress from its third stage, which focused on the linkages between budget and policy, to the fourth stage, which is about performance accountability. The first two phases, which have reached completion, were about budget credibility and financial accountability.

A tourism master plan to bring in investment and develop new attractions

- In 2017, Cambodia's tourism ministry set out a master plan promoting high-quality tourism in Cambodia. The plan includes a range of initiatives to develop the relevant infrastructure, build environmentally-friendly resorts, maintain social order, provide good services, and ensure hospitality. The master plan contains a thoroughly drafted outlook for each tourist area, and calls for the use of information and communication technology in order to make management more efficient (Chan, 2017).

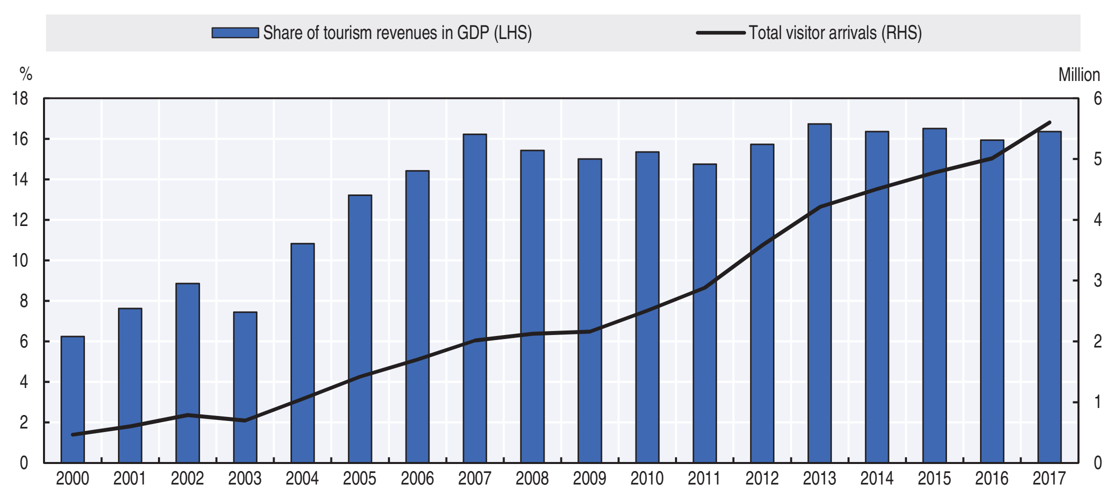
POLICY FOCUS

Addressing challenges in developing ecotourism

A robust approach to developing tourism supports economic growth

Tourism has been an important driver of Cambodia's rapid economic expansion in the past decade – annual GDP growth averaged 7.2% in 2011-15 and looks set to remain so for the next five years (OECD, 2018). Since 2000, the development of the tourism sector in the country has proceeded apace. Total visitors to Cambodia – the majority of whom are tourists – have increased more than tenfold to 5.6 million people a year, and tourism's share of GDP has risen from 6.2% to 16.3% over 2010-17 (Figure 3.8.1). Taking into account indirect contributions such as investment in tourism-related projects from other industries, the World Travel & Tourism Council has estimated tourism's total contribution to Cambodia's GDP at 32.4% of GDP in 2017, the highest among all member states of the Association of Southeast Asian Nations (ASEAN) (WTTC, 2018). In terms of its contribution to employment, meanwhile, the tourism sector accounted directly for 13.6% of jobs, and for 30.4% when including jobs in related industries. These were also the highest ratios in ASEAN. Moreover, the rapid growth of the tourism sector has attracted strong interest from investors and accounted for 15.8% of total investment in Cambodia last year.

Figure 3.8.1. **Development of tourism in Cambodia, 2000-17**



Source: CEIC.

StatLink https://doi.org/10.1787/888933887215

Despite the government's wish to promote it, the development of ecotourism remains slow

While tourism can bring substantial economic benefits and help raise a country's prestige around the world, it can also have a negative impact on society and the environment if not managed properly. Policy makers in the region now widely agree that tourism should develop in a sustainable manner, and that its negative impacts such as pollution, social issues, and damage to biodiversity should be kept to a minimum. In the *ASEAN Tourism Strategic Plan 2016-2025*, member states vow to make tourism sustainable and inclusive by upgrading participation from local communities, ensuring safety and security, and addressing environmental problems and climate change.

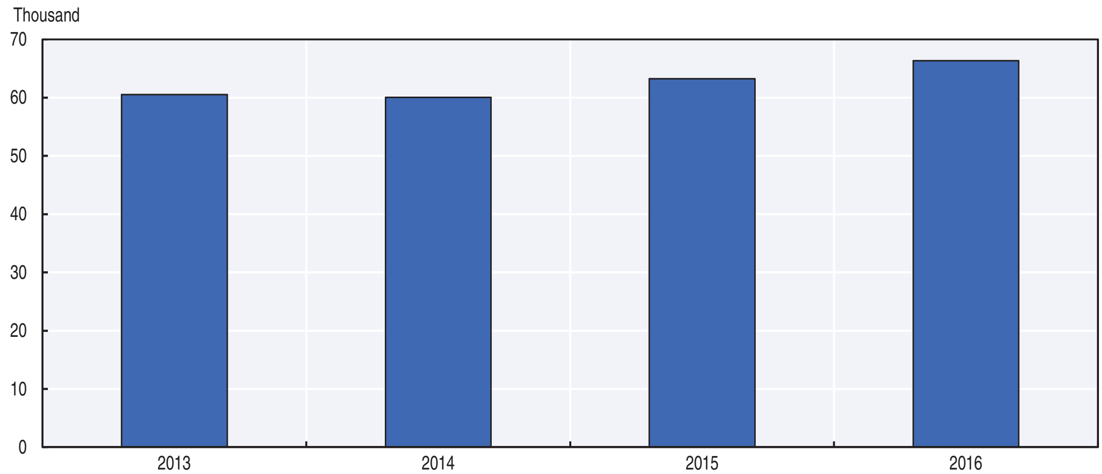
Ecotourism is the most emblematic form of socially and environmentally responsible tourism in Cambodia. The United Nations defines it as "all nature-based forms of tourism in which the main motivation of visitors is the observation and appreciation of nature as well as the traditional cultures prevailing in natural areas" (UNWTO, 2002). Moreover, Cambodia's government sees ecotourism as an important tool for diversifying tourism and achieving sustainable development in the longer term. Due to the closer participation of local communities that it encourages, ecotourism also plays a crucial role in poverty reduction, inclusive growth, and the preservation of both the environment and human culture.

Cambodia has considerable potential in developing ecotourism. Representing the Khmer culture that flourished in Southeast Asia for many centuries, Cambodia is endowed with rich historic, cultural and natural resources. Due to the civil war that ended in 1991, many remote and pristine natural areas were left untouched by economic development, and these places can offer an "unspoiled" ecotourism experience that is unique by comparison to other options (Walter and Sen, 2018). In 2001, a study by the Asian Development Bank showed that out of 209 tourist sites in Cambodia at the time, 98 were suitable for developing ecotourism (OECD, 2016). Currently the country has about 50 ecotourism sites in operation, with a handful of them being major ecotourism attractions. They include seven national parks, nine wildlife sanctuaries, and four so-called Ramsar sites, which protect wetlands of international importance (ODC, 2018).

The government of Cambodia showed an interest in developing ecotourism as early as the late 1990s, and has spoken of promoting it in several national plans. In the *National Strategic Development Plan 2014-2018*, the government intended to strengthen the conservation of national resources, and to promote linkages between conservation and ecotourism. The plan also identified nature-based ecotourism in the country's northeast as one of four priority areas for developing tourism products. It also tasked the tourism ministry with drafting a national strategic policy for ecotourism, in order to co-ordinate efforts among government agencies in developing the sector. In its *Tourism Development Strategic Plan 2012-2020*, meanwhile, the government admits that ecotourism needs to be improved and developed, as part of a vision for sustainable development in the tourism sector.

Yet despite its vast potential and the government's efforts to promote it, the development of ecotourism is still relatively slow in Cambodia. In 2013, the tourism ministry started to publish ecotourism data in a monthly statistical report. Based on these data, about 61 000 foreigners visited ecotourism attractions in Cambodia in 2013, rising to 66 000 in 2016 (Figure 3.8.2). Visits by foreigners to ecotourism sites grew only 4.9% in 2016, below the 5% growth of total visitors. According to the latest data from the first quarter of 2017, only 1.3% of foreign tourists visited ecotourism attractions (Figure 3.8.3). This result is largely consistent with a 2011 visitor survey for ecotourism, which showed that foreign tourists did not see nature-based activities as an important reason for visiting Cambodia (Thong, 2011).

Figure 3.8.2. **Arrivals of foreign visitors in ecotourism areas in Cambodia, 2013-16**



Source: MOT (2014; 2015; 2016).

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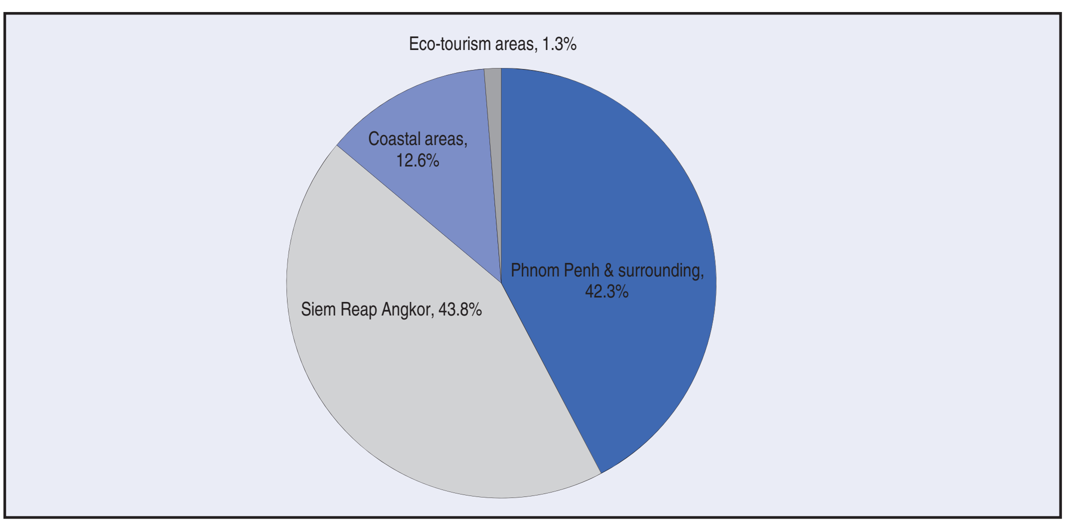
Figure 3.8.3. **Foreign visitors' destinations in Cambodia, Q1 2017**

Percentage



Source: MOT (2017).

StatLink https://doi.org/10.1787/888933887253

Challenges and policy recommendations for developing ecotourism in Cambodia

Looking forward, the government of Cambodia will need to address several key challenges in order to strengthen the development of ecotourism. First of all, it needs to turn government support for ecotourism into concrete actions backed by adequate financial and human resources. While the government has touched on ecotourism development in a number of plans, the concrete implementation of policies and strategies has been limited. For example, only recently have the tourism and environment ministries come together to discuss drafting a national ecotourism policy and a legal framework to promote ecotourism, even though this task was set out four years ago in the national strategic development plan (Sophanith, 2017). To improve policy implementation, the government can seek help from the private sector and international investors for securing the necessary resources to expand ecotourism destinations in Cambodia. It is also vital to strengthen co-ordination among ministries as ecotourism development involves not only the tourism ministry but also those responsible for the environment, education, forestry, transportation, among others.

Second, Cambodia needs to improve the quality of its ecotourism products and to offer a distinct experience to tourists. Ecotourism has great potential in Cambodia, but the country also faces competition from neighbouring countries such as Lao PDR, Thailand, and Malaysia. Some of these countries have more developed ecotourism attractions, while some boast natural scenery with similar natural charms to that of Cambodia. In comparison with regular tourism, ecotourism in Cambodia is still on a small-scale and many ecotourism sites are managed partly or entirely by local communities. These ecotourism attractions provide much-needed employment and income opportunities for the local population, motivating them to help protect wildlife, the natural environment and local cultures. However, many local communities are not trained as providers of tourism services, and there is much room for improvement. For example, the hygiene levels in many ecotourism sites are basic. Many ecotourism sites do not have trained translators and interpreters (Thong, 2011).

Third, Cambodia needs a smart and targeted marketing strategy to promote ecotourism. Unlike mass tourism, ecotourism serves a niche market of tourists who enjoy and appreciate a wild environment. Currently the majority of tourists to visit ecotourism attractions are domestic ones who spend much less than their international counterparts. So, to make ecotourism sites financially sustainable it is important for the government to reach out to foreign visitors, in addition to local visitors. According to the 2011 ecotourism visitor survey in Cambodia, Europeans (30%) were more likely to visit a national park than visitors from other regions such as ASEAN (17%) and Asia/Oceania (15%).

Last but not least, regional co-operation can also boost the development of ecotourism in Cambodia. According to the survey, most international visitors to Cambodia would also visit other countries in the region such as Thailand, Viet Nam, Lao PDR, Malaysia and Singapore. This means there is scope for Cambodia to join forces with tourism authorities in other countries in the region to offer ecotourism packages that include cross-border ecotourism destinations. Together with more convenient arrangements for crossing the country's borders, this will help increase the attractiveness of ecotourism products in Cambodia and raise the visibility of ecotourism attractions within the country.

Key government ministries in Cambodia

Prime Minister	Hun Sen
Permanent Deputy Prime Minister	Bin Chhin
Agriculture, Forestry and Fisheries	Veng Sakhon
Civil Service	Pich Bun Thin
Commerce	Pan Sorasak
Cults and Religion	Him Chhem
Culture and Fine Arts	Phoeurng Sackona
Economy and Finance	Aun Pornmoniroth
Education, Youth and Sport	Hang Chuon Naron
Environment	Say Sam Al
Foreign Affairs and International Cooperation	Prak Sokhonn
Health	Mam Bunheng
Industry and Handicrafts	Cham Prasidh
Information	Khieu Kanharith
Interior	Sar Kheng
Justice	Ang Vong Vathana

Key government ministries in Cambodia *(cont.)*

Labour and Vocational Training	Ith Sam Heng
Land Management, Urban Planning and Construction	Chea Sophara
Mines and Energy	Suy Sem
National Assembly–Senate Relations and Inspection	Men Sam An
National Defence	Tea Banh
Planning	Chhay Than
Posts and Telecommunications	Tram Iv Tek
Public Works and Transport	Sun Chanthol
Rural Development	Ouk Rabun
Secretary of State for Civil Aviation	Mao Havannall
Social Affairs, Veterans and Youth Rehabilitation	Vong Soth
Tourism	Thong Khon
Water Resources and Meteorology	Lim Kean Hor
Women's Affairs	Ing Kuntha Phavi
Chairman of the National Bank	Chea Chanto

Note: Valid as of 16 October 2018.

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Lao PDR

A. Medium-term economic outlook (forecast, 2019-23 average)

GDP growth (percentage change):	7.0
Current account balance (% of GDP):	-11.1

B. Medium-term plan

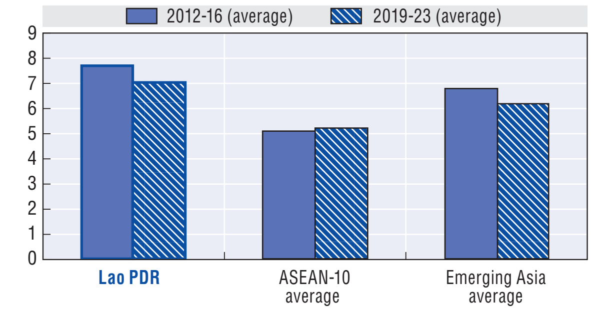
Period:	2016-20
Theme:	Continued poverty reduction, graduation from Least Developed Country status through realisation of national development potential and comparative advantages, effective management and utilisation of natural resources and strong regional and international integration.

C. Basic data (in 2017)

Total population:	6.9 million*
Population of Vientiane:	0.9 million*
Nominal GDP (US dollar):	17.0 billion**
GDP per capita at PPP:	7 385.7 (current International Dollar)**
Exchange rate in the first half of 2018 (period average):	8 311.5 (LAK/USD)

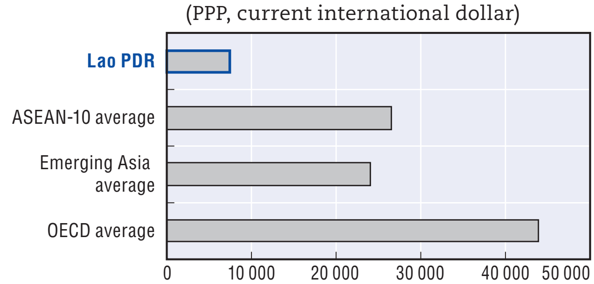
Note: * Population data are mid-year government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources and IMF.

GDP growth rates (percentage changes)



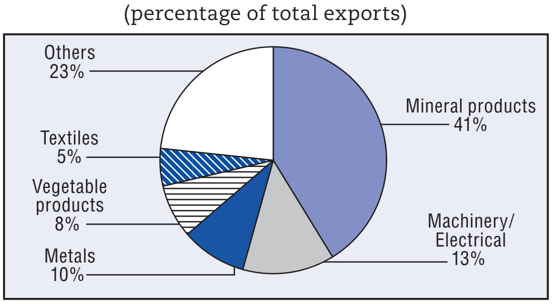
Source: OECD Development Centre, MPF-2019.

GDP per capita, 2017
(PPP, current international dollar)



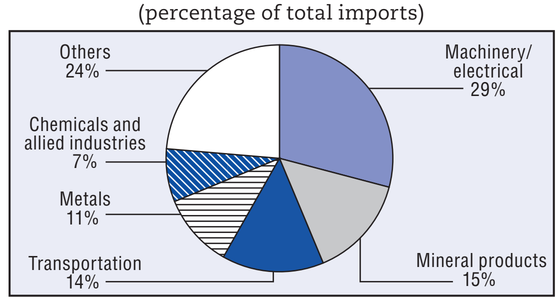
Source: IMF.

Composition of exports, 2017
(percentage of total exports)



Source: Trademap.

Composition of imports, 2017
(percentage of total imports)



Source: Trademap.

Structural policy challenges discussed in previous editions of the Outlook

2014	Poverty	Reducing poverty through inclusive growth
	Natural-resource management	Improving national resource management, in particular in mining, to ensure environmental sustainability
	Infrastructure	Developing transport infrastructure to speed up rural development
2016	Natural resources	Managing the boom in natural resources
	Small and medium-sized enterprises (SMEs)	Fostering the development of SMEs
	Tourism	Promoting travel and tourism
2017	Hydro-power development	Promoting small hydropower projects
	Special Economic Zones (SEZs)	Strengthening skills to make the most of the country's SEZs
	Tourism	Boosting tourism by fully exploring opportunities in the Association of Southeast Asian Nations (ASEAN)
2018	Education	Improving access to education and reducing disparities

Recent developments in policy areas covered by previous editions of the Outlook

Natural resources: expanding energy trade with neighbouring countries

- In January 2018, Lao PDR and neighbouring Myanmar signed a memorandum of understanding initiating a feasibility study for trade in electricity between the two countries. If the study is successful, Myanmar may purchase about 100-200 megawatts of power from Lao PDR through its northern power grids.

Promoting local products and smaller companies with a new intellectual property law

- A new intellectual property law (No.38/NA) came into effect in June 2018, replacing legislation from 2011 (No.01/NA). The new law aims to support trade and investment and to boost the competitiveness of local businesses thanks to a closer alignment with international standards. It is part of the government's efforts to promote better integration within a single market for the whole of the Association of Southeast Asian Nations (ASEAN), as envisioned in 2015 with the establishment of the ASEAN Economic Community. The new law should support the development of SMEs in a number of ways, including by streamlining the registration of trademarks, improving mechanisms for resolving disputes, and strengthening protection for intellectual property rights. More regulations will follow the new law in order to support its smooth implementation.

Encouraging tourists to visit

- According to the latest statistics from Lao PDR's tourism authority, the total number of foreign tourists fell in 2017, due mainly to a significant decrease in visitors from Western countries. Recognising tourism as a priority sector for socio-economic development, the government of Lao PDR launched the "Visit Laos Year 2018" campaign in November 2017 in order to promote the country in the international community and attract more visitors. This campaign has included activities hosted both at home and abroad, including festivals in various provinces across Lao PDR. For 2018, the government aimed for Lao PDR to attract at least 5 million foreign visitors and to generate more than USD 900 million in revenues from international tourism.

Improving the quality of education by addressing various challenges

- A recent survey of schools in Lao PDR shows that there is a serious lack of teachers across the country. According to the education ministry, mismanagement is one of the primary causes of this teacher shortage – there are too many teachers for some subjects but too few for others. In addition, many teachers have to teach subjects that they are not trained for, lowering the efficiency of their work. To tackle this challenge, and to improve the general quality of education, the education ministry recently changed the way that new teachers are selected. To this effect, it has now given schools the right to choose between teachers who have passed the qualification examination.
- A new national curriculum for primary education is currently under discussion in Lao PDR, and will be rolled out gradually as of September 2019. The new curriculum covers nine subjects including the Lao language, mathematics, science and the environment, morality, arts and handicrafts, music, physical education, English (from Grade 3) and social studies (from Grade 4). Unlike the old curriculum, the new one will focus on promoting active learning by allowing students to engage in lessons by taking part in activities. Teachers will also receive detailed guides for every subject, which include information about how to organise lessons, how to work with multi-grade classes, and other advice on teaching.

POLICY FOCUS

Diversifying Lao PDR's energy portfolio by developing solar power

Hydropower continues to dominate, but has its limits

Lao PDR features mountainous areas with major tributaries of the Mekong River and contains about one third of the Mekong River basin. This geographical feature, together with the country's relatively high annual rainfall, grants Lao PDR advantages in hydropower and makes electricity exports to neighbouring countries a driving force for its economic growth. As a result, hydro plants currently produce most of the country's electricity. Data from the state power company Électricité du Laos show that, prior to 2013, all of the country's electricity was produced by hydropower plants. Since 2013, biomass has also been used to produce electricity and accounts for roughly 0.02-0.03% of Lao PDR's overall energy portfolio. As of 2015, when the Hongsa power plant came on line, coal has also been used, and it accounts for 14% of total electricity production. The use of solar power was first recorded in 2014, but its overall footprint remains tiny in comparison to other sources (Table 3.9.1).

Table 3.9.1. **Sources of electricity production in Lao PDR, 2000-15**

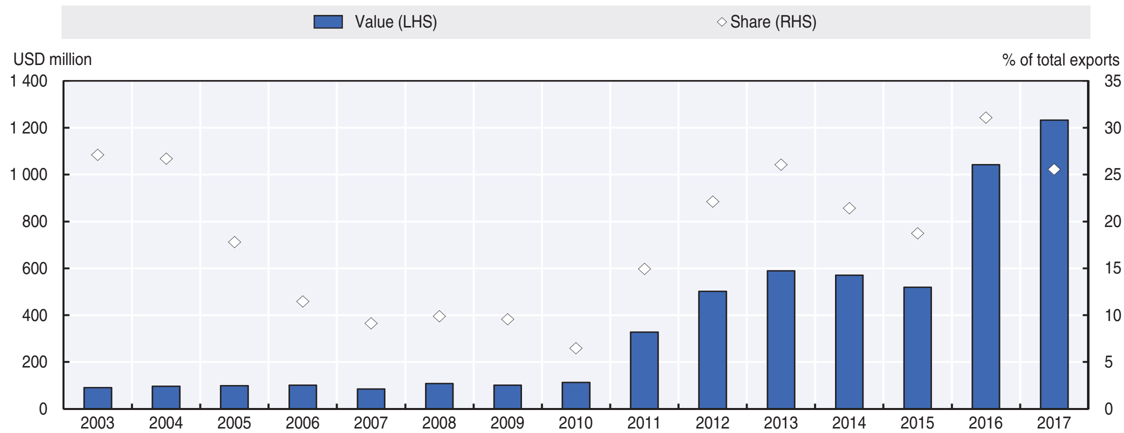
GWh

	Hydro	Coal	Solar	Biomass
2000	3 438			
2001	3 654			
2002	3 604			
2003	3 178			
2004	3 348			
2005	3 509			
2006	3 595			
2007	3 374			
2008	3 717			
2009	3 366			
2010	8 449			
2011	12 969			
2012	13 057			
2013	15 505			5
2014	15 270		0.001	5
2015	14 039	2 259	0.001	4

Source: ERIA (2018).

Power exports are a major source of revenues for Lao PDR and have contributed to the country's robust economic growth over the past decade, representing about 26% of total exports in 2017 (Figure 3.9.1). While hydropower accounts for more than 86% of electricity generation in Lao PDR, over-reliance on hydropower could lead to several problems. First of all, its potential is limited. Indeed, the financially-viable hydropower potential of Lao PDR is expected to reach its maximum by 2030, and diversification is needed to sustain the country's economic development and to absorb an increasing working-age population that is not expected to peak until 2050 (ADB, 2017).

Figure 3.9.1. **Value and share of electricity exports from Lao PDR, 2003-17**



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

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Moreover, although about 90% of the Lao population currently have access to electricity, hydropower alone is unlikely to cover the proverbial "last mile" and provide universal access to electricity to the entire country. As hydropower plants need to be installed at specific locations along rivers, electricity has to be transferred via inefficient national transmission and distribution networks to reach the rest of the country. In some regions, as much as 20% of power supply can be lost during distribution, and the local governments are then forced to import electricity (World Bank, 2015). Lao PDR imported about 2 050 gigawatt hours (GWh) worth of electricity in 2015, approximately 17.8% of the country's electricity exports in the same year.

In addition, hydropower is affected by seasonal factors, and its performance may be disrupted by extreme weather conditions (such as a prolonged dry season). Such conditions are becoming more and more regular due to global warming and climate change. Therefore, the country will need to use alternative power sources to support its domestic needs if and when this happens.

Furthermore, hydropower generation requires the construction of large man-made structures such as dams along waterways. These can damage the local environment, displace local residents, and herald other possible negative impacts including risks to people living downstream. One example of such a threat is the recent flooding in Attapeu province due to the collapse of the Xe Pian-Xe Namnoy hydropower dam (KPL, 2018).

Government backing for renewable energy beyond hydropower, notably solar

Recognising the need to diversify energy generation, the government of Lao PDR has started exploring the potential of other energy resources beyond hydropower, notably non-hydro renewables. Indeed, it has established the development of renewable energy other than hydropower as one of its main priorities, aiming to increase the share of non-hydro renewable energies to 30% of total consumption by 2025 (OECD, 2017).

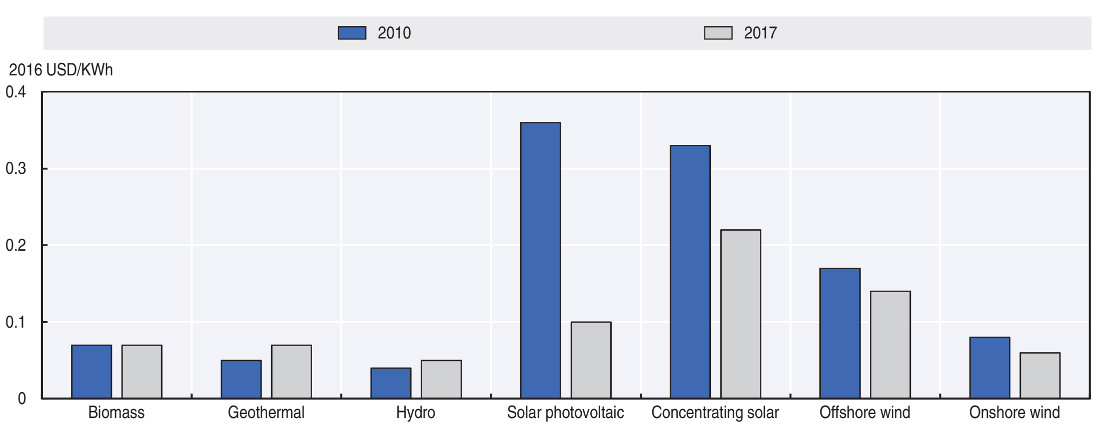
Studies show that Lao PDR has potential to develop solar power. Moreover, the capacity of solar panels to generate electricity from direct sunlight, which is especially strong during the dry season, also makes solar power a good complement to hydropower. In addition, solar power systems can be installed in close proximity to end users, avoiding power losses through transmission. Currently solar power production only accounts for a miniscule share of Lao PDR's electricity output, but it has huge potential for growth if policy makers can address a number of challenges and obstacles.

Currently, the footprint of solar power in Lao PDR extends mainly to the small home systems installed by actors in both the public and the private sectors. They are present notably in the rural areas that the national grid cannot reach. Most of these solar power modules are funded either by international organisations, foreign aid, or private companies themselves. More than 18 657 households across 430 villages in total – equivalent to 1.64% of total households nationwide – have consumed electricity from these solar power systems (GOL, 2016). While many solar power systems in the country are quite small, around one megawatt (MW) or less, the government has reportedly started several relatively large projects recently. In 2017, the first significant solar power project was set up to supply power for Vientiane, the country's capital. It began by generating 10 MW of electricity, with further expansion up to 100 MW planned for 2020 (DFDL, 2017). This rapid scaling up underscores solar power's considerable potential in Lao PDR, in contrast to its negligible share in the energy industry at the moment.

According to past research from the government, Lao PDR enjoys up to 300 days of sunlight per year, and the south of the country has many good locations for solar power projects (GOL, 2011). A more recent and detailed study conducted by the United States Agency for International Development (USAID) and the National Renewable Energy Laboratory (NREL) conveyed a similar message. The study investigates the potential of three non-hydro renewable energy sources in Lao PDR, including solar photovoltaics (PV), wind power and biomass, and concludes that solar PV has the largest potential capacity which is almost 50% more than the second largest wind power (USAID/NREL, 2018). The study also found that the most attractive solar PV resources in Lao PDR are located in the southern provinces of Attapeu, Champachack, Saravane, and Savannakhet, in addition to Vientiane and Vientiane Prefecture in the north.

While Lao PDR's solar power potential is remarkable, potential capacity does not always translate into financially feasible power production. The biggest and most well-known issue with solar power is its relatively high production cost. Indeed, according to an estimation by the International Renewable Energy Agency (IRENA), the levelised cost of electricity (LCOE) from utility-scale solar power is the highest among all renewable energies including biomass, geothermal, hydro, and wind power (Figure 3.9.2). In 2010, electricity produced by solar PV systems was priced at 0.36 constant USD per kilowatt hour (KWh), in comparison to 0.04 for hydro.

Figure 3.9.2. **Cost of electricity from utility-scale renewable energies, 2010 and 2017**



Note: Electricity cost in this figure is global weighted average levelised cost of electricity (LCOE).
Source: IRENA (2018).
StatLink https://doi.org/10.1787/888933887291

Advances in solar power are making it cheaper, narrowing the gap with hydro

Nevertheless, this trend has started to change. Thanks to a significant drop in cost driven by an 81% fall in prices for solar PV modules, and reductions in so-called balance of system costs, electricity from solar PV was only about twice as costly as hydropower by 2017, and its cost will continue to decline (IRENA, 2018). However, despite a narrowing gap in production costs, solar power in Lao PDR is still in its infancy, and many investors are reluctant to enter the new industry due to uncertainty on profits and the lack of a regulatory framework.

In order to facilitate the growth of solar power, the government of Lao PDR has listed solar power as an important component for developing off-grid electrification, and also as a way to create sustainable new incomes and reduce poverty. The government did so as part of its eighth five-year national socio-economic development plan for 2016-20. The energy ministry has also displayed its commitment by voicing support for developing solar power in various locations such as the annual Solar and Off-Grid Renewables South East Asia event in Bangkok in 2016.

In order to explore the full potential of solar power and support the growth of this new industry, the government could consider providing investment incentives to lower the risk of entering the sector. The administration should also draft updated and more detailed guidelines on investing in solar power, which could facilitate investment both from abroad and from domestic sources.

Key government ministries in Lao PDR

President	Bounnhang Vorachith
Prime Minister	Thongloun Sisoulith
Agriculture and Forestry	Lien Thikeo
Education and Sports	Sengdeuan 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
National Defense	Chansamone Chanyalath
Natural Resources and Environment	Sommath Pholsena
Planning and Investment	Souphanh Keomixay
Post, Telecom and Communications	Thansamay Kommasith
Public Health	Bounkong Sihavong
Public Security	Somkeo Silavon
Public Works and Transport	Bounchanh Sinthavong
Science and Technology	Boviengkham Vongdara
Governor of the Bank of Laos	Somphao Faisith

Note: Valid as of 16 October 2018.

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Myanmar

A. Medium-term economic outlook (forecast, 2019-23 average)

GDP growth (percentage change):	7.0
Current account balance (% of GDP):	-6.8

B. Medium-term plan

Period: 2017-21

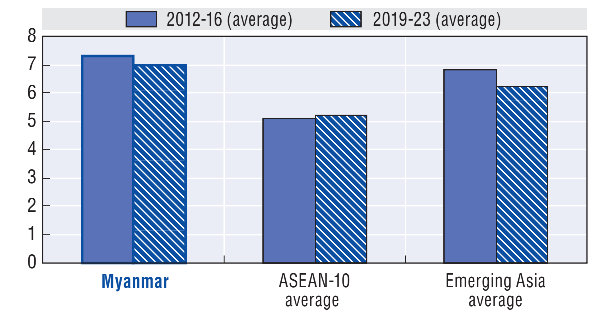
Theme: Boost economic growth by encouraging investment in the public and private sectors to ensure higher local productivity through the process of industrialisation

C. Basic data (in 2017)

Total population:	53.4 million*
Population of Nay Pyi Taw:	1.2 million*
Nominal GDP (US dollar):	67.3 billion**
GDP per capita at PPP:	6 265.5 (current International Dollar)**
Exchange rate in the first half of 2018 (period average):	1 342.8 (MMK/USD)

Note: * Population data are government projections based on the 2014 Myanmar Population and Housing Census. Projected population numbers refer to 1 October, the midpoint of the Myanmar Government's fiscal year.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

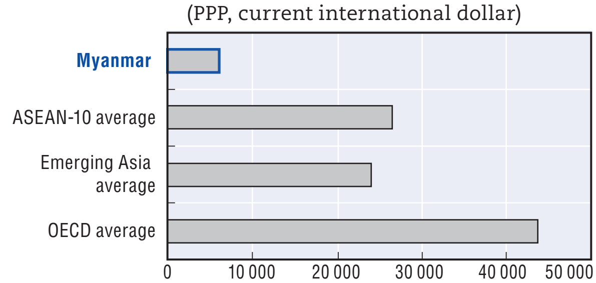
GDP growth rates (percentage changes)



Source: OECD Development Centre, MPF-2019.

GDP per capita, 2017

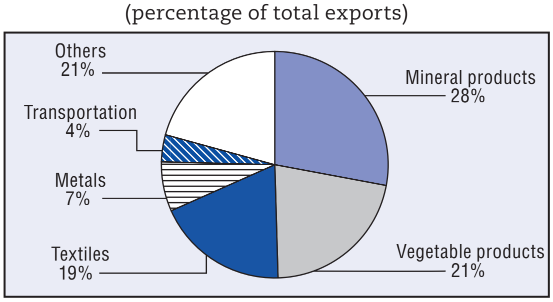
(PPP, current international dollar)



Source: IMF.

Composition of exports, 2017

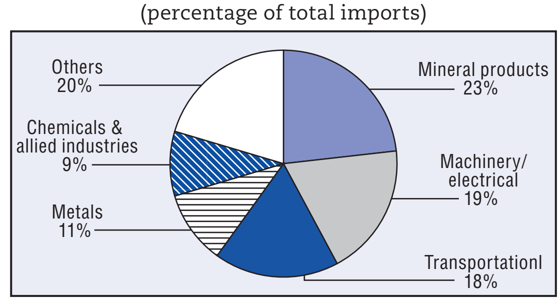
(percentage of total exports)



Source: Trademap.

Composition of imports, 2017

(percentage of total imports)



Source: Trademap.

Structural policy challenges discussed in previous editions of the Outlook

2014	Business sector	Creating an environment that enables business
	Education	Upgrading education, and anticipating future demands for skilled labour
	Finance	Creating a stable and efficient financial system
2015	Statistics	Developing reliable indicators, quantifiable goals, and measurements of government performance, particularly in the areas of regulatory reform and public finance
	Budget	Developing policy-planning and budgeting, including appropriate financial support in agriculture and education
	Private sector	Co-operating with the private sector through public-private partnerships, in the setting up of new businesses, and by promoting the involvement of civil society
2016	Agriculture	Upgrading and modernising agriculture
	Education	Developing human capital
	Finance	Financing development
2017	Finance	Promoting capital markets to bolster the private sector
	Infrastructure	Supporting investment in infrastructure
	Education	Reforming higher education to deliver better quality
2018	FDI	Continuing reforms to attract foreign direct investment for development

Recent developments in policy areas covered by previous editions of the Outlook

Private-sector and foreign-direct investment: reforming legal and regulatory frameworks

- In February 2018, the Ministry of Planning and Finance released a draft version of the Myanmar Sustainable Development Plan (MSDP) for comment from other government ministries. The plan encompasses five goals, including economic stability and private-sector growth. The MSDP is to be aligned with the 12-Point Economic Policy of the Union of Myanmar, with the objective of building up the economic community of the Association of Southeast Asian Nations (ASEAN), and meeting the United Nations Sustainable Development Goals.
- A new Myanmar Companies Act was signed by President U Htin Kyaw on 6 December 2017 and came into effect on 1 August 2018. Companies are required to re-register under the act, and it includes special provisions for small firms. It also allows foreigners to own up to 35% of local companies, classifying firms with a higher share of foreign ownership as foreign firms. Regulatory approval is not necessary for firms to switch their status in this way.
- The Myanmar Investment Commission was reformed in June 2018. It is now comprised of 13 members, and it is chaired by Minister of the Office of Union Government.

Education: reforming primary-level curricula

- Changes to the curriculum for Standard 2 students will be implemented for the 2018-19 school year, following changes to the kindergarten and Standard 1 curriculum implemented in the previous year. The Ministry of Education has described the curriculum changes as replacing an emphasis on learning by-heart to learning through critical thinking.

Finance: reducing restrictions on bank lending and currency trading

- In October 2017, it was announced that the Central Bank of Myanmar (CBM) would allow banks to provide loans without requiring movable and resalable assets as collateral, as long as suitable risk-management policies are in place. The change is expected to be particularly beneficial for SMEs, which tend to have fewer assets. In August 2018, the CBM announced that it would lift trading-band restrictions on foreign currency at commercial banks, abolishing a trading band of 0.8% above and below the daily reference rate in Myanmar Kyat (MMK), which is set by the central bank.

Budget: changing the fiscal year and reforming tax administration

- In October 2017, the Pyidaungsu Hluttaw approved a presidential proposal to change the period of the government's fiscal year from April 1 to March 31 to a calendar running from October 1 to September 30. The change begins in October 2018. The Deputy Minister for Planning and Finance explained it as an effort to allow for several consistent months of business at the beginning of the fiscal year, as the country's monsoon typically runs from June until October.
- In August 2018, the Internal Revenue Department (in the Ministry of Finance and Planning), announced that a new integrated tax administration system would be introduced by 2020. The new and streamlined system will provide a centralised platform for registration and payment online.

Agriculture: planning for future development

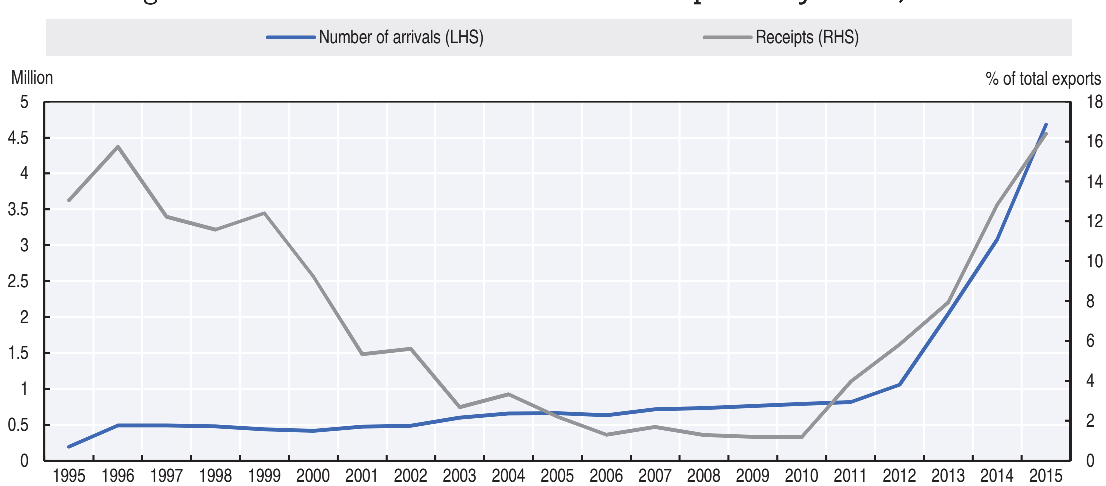
- The Ministry of Agriculture, Livestock and Irrigation launched the Agriculture Development Strategy and Investment Plan (2018/19-2022/23) on 7 June 2018. The strategy contains three pillars: governance (including planning, policy, monitoring and evaluation, and other outcome areas), productivity (including research, extension, irrigation, mechanisation and other outcome areas), and market linkages and competitiveness (including business environment, intellectual property rights, food quality and safety, and other outcome areas). The investment plan covers the responsibilities of different agencies, risks and mitigating actions, and monitoring and evaluation.

POLICY FOCUS

Fostering the inclusive development of the travel and tourism sector

Located near large population centres with rising incomes and with attractive natural, historical and cultural sites, Myanmar is well-positioned to benefit from tourism. Indeed, travel and tourism are becoming increasingly important to the country's economy. The number of annual international arrivals in Myanmar increased dramatically between 1995 and 2015, rising from 194 000 to 4 681 000 (Figure 3.10.1). Most of this growth took place from 2012-15, with annual growth rates ranging from 19.8% to 93%. Foreign visitors come primarily from elsewhere in Asia, with Thailand (15.7%), China (11.4%) and Japan (6.9%) the top sources of visitors in 2015. Receipts from international arrivals have been increasing as a share of total exports in recent years after a period of decline. Between 2010 and 2015, this share rose from 1.2% to 16.4%, totalling USD 2.3 billion in 2015. The average annual growth in the number of international arrivals and receipts (both in absolute terms and as a share of total exports) over 2011-15 in Myanmar is very high, where both have declined in recent years, on average.

Figure 3.10.1. **International arrivals and receipts in Myanmar, 1995-2015**



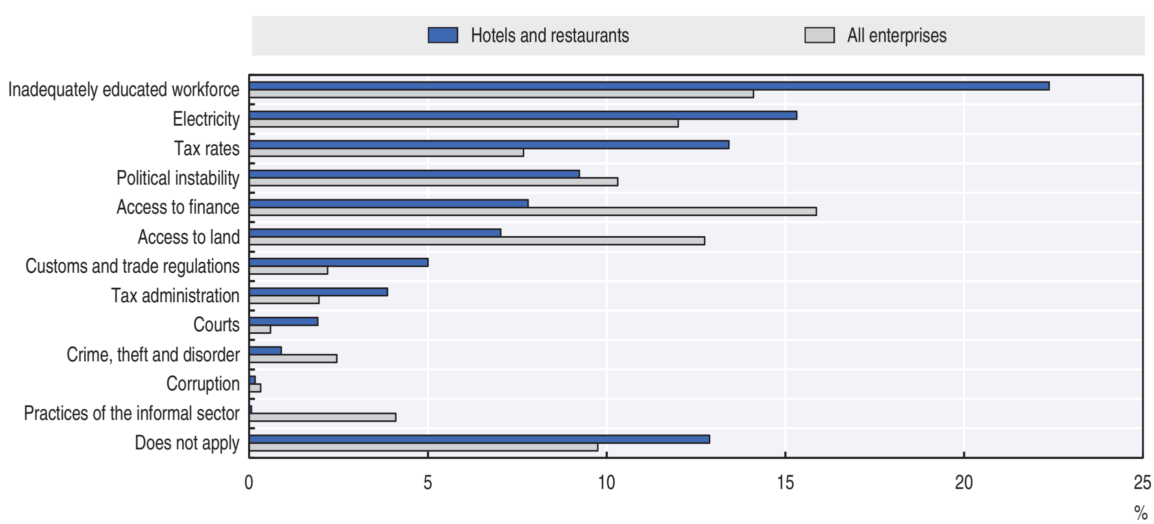
Source: World Bank (2017a).
StatLink https://doi.org/10.1787/888933887310

Most of the international visitors in an identified category in 2015 came as independent travellers (24%), though there were also significant numbers of individuals travelling on package tours (18%). Between 2008-15, the greatest growth among these categories has been in business travel, while the relative share of independent travellers registered the biggest fall. Domestic tourism is also sizeable. In 2015, there were 2.5 million domestic tourists, who spent an estimated MMK 733.2 billion on hotels and guest houses.

Despite this recent growth, the travel and tourism sector continues to face serious challenges in its development. Among the most pressing challenges are improving the business environment, prioritisation of policies for the sector, encouraging increased investment flows into the sector, and promoting geographic diversification in tourist destinations. The World Economic Forum's *Travel and Tourism Competitive Index Report 2015*, which scored 141 economies on the factors that enable the sustainable development of the sector, ranked Myanmar 134th – below all other Emerging Asian countries (WEF, 2015). Among the four sub-indices, Myanmar performed best relative to other countries in natural and cultural resources, in which it was ranked 103rd globally, and worst on the enabling environment, in which it was ranked 135th. Myanmar was ranked 105th in the sub-index of travel and tourism policy and enabling conditions. Meanwhile, the country received a relatively high score in international openness (71st), environmental sustainability (81st) and price competitiveness (95th), but did less well in the prioritisation of travel and tourism (117th). Continued rapid growth is expected in the sector, but additional investment and reforms are needed to seize the benefits offered by this growth.

Similarly, firms in the sector see constraints in the business environment as hampering their operations. According to firm-survey data from 2016, hotels and restaurants in Myanmar are most likely (22.4% of respondents) to identify an inadequately educated workforce as the biggest obstacle to their operations (Figure 3.10.2). Other constraints commonly identified as the most important included electricity (15.3% of respondents) and tax rates (13.4% of respondents). These results differ somewhat from the national average across all enterprises, among which the biggest constraints were identified as access to finance (15.9%), inadequately educated workforce (14.1%), and access to land (12.7%).

Figure 3.10.2. **Biggest obstacle to operations reported by firms, 2016**



Note: The results do not add up to 100%, as the figures exclude four categories with zero responses from the hotels and restaurants that responded: transport (3.4% of all enterprises), business licensing and permits (1.0% of all enterprises), labour regulations (0.8% of all enterprises), and do not know (spontaneous) (0.8% of all enterprises).
Source: OECD Development Centre calculations, using World Bank (2017b).
StatLink https://doi.org/10.1787/888933887329

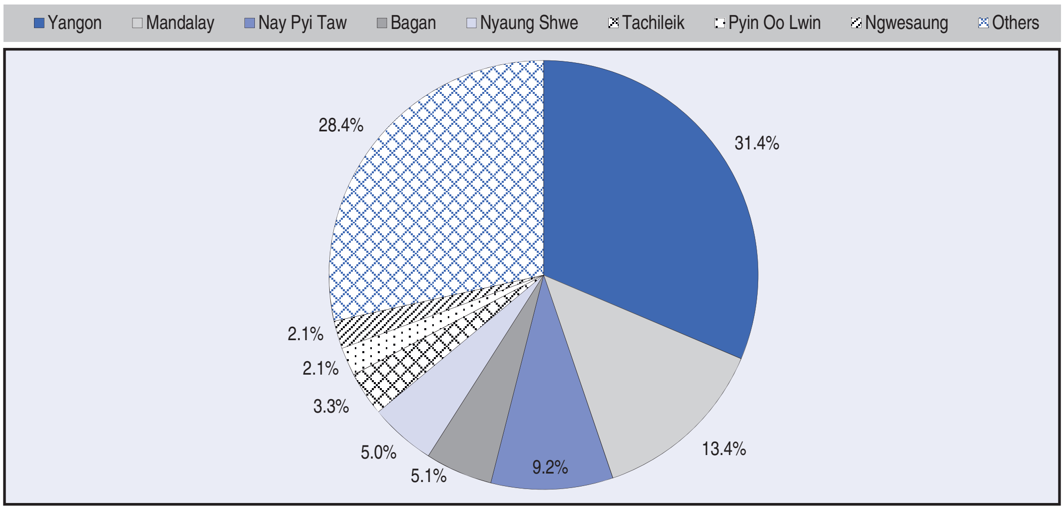
Increased investment will be needed to drive further growth in travel and tourism. Indeed, FDI has been an important source of capital in the sector. Approved FDI in hotels and tourism totalled USD 300 million in 2012-13, representing 21.1% of total FDI. This share has since declined, falling to 3% in 2015-16 before increasing slightly to 6.1% in 2016-17. Much of the investment in the sector comes from other countries in the region. In 2015, investments from Singapore in hotels and commercial complexes came to USD 1.5 billion, or 56.5% of the annual total. According to the OECD's *FDI Regulatory Restrictiveness Index*, Myanmar has somewhat liberalised its regulations on foreign investment in hotels and restaurants in recent years, along with the rest of its rules for the tertiary sector and the economy in general (Figure 3.10.3). The index measures how open a country is to FDI in terms of foreign-equity limitations, discriminatory screening or approval mechanisms, restrictions on the employment of foreigners as key personnel, and other operational restrictions, across 22 sectors. From 2013 to 2015, the score for the hotel and restaurants sector declined from 0.373 to 0.248, but it remained unchanged in 2016. Still, regulations on the sector remain more restrictive than in most of the rest of Emerging Asia. Among the nine countries in the region covered by the index, regulatory restrictiveness was only higher in 2016 in the Philippines (0.320) and Lao PDR (0.280).

Figure 3.10.3. **FDI Regulatory Restrictiveness Index in selected sectors in Emerging Asian countries**

Source: OECD (2017).
StatLink https://doi.org/10.1787/888933887348

The geographic concentration of tourism in Myanmar could act as a constraint on future growth and on the possibilities for fostering inclusive growth throughout the sector. On the other hand, improved domestic travel options and sector standards, as well as increased investment, could help to diversify the sector geographically. For now, though, domestic and international travel and tourism in Myanmar are fairly concentrated in a small number of locations. For example, 71.6% of the country's hotel, motel and guest house rooms in 2016 were found in just eight sites. These were: Yangon (31.4%), Mandalay (13.4%), Nay Pyi Taw (9.2%), Bagan (5.1%), Nyaung Shwe (5.0%), Tachileik (3.3%), Pyin Oo Lwin (2.1%) and Ngwesaung (2.1%) (Figure 3.10.4). As tourism expands, protections may be needed to manage growing numbers of visitors at sensitive historical, cultural and environmental sites. Meanwhile, attracting more visitors to new destinations in the country may reduce the strain on accommodations and other services at popular sites and help to better distribute the direct and indirect gains from travel and tourism.

Figure 3.10.4. **Number of hotel, motel and guest house rooms by location, 2016**



Source: MOHT (2017).

StatLink https://doi.org/10.1787/888933887367

In recognition of the sector's potential, and of the need for reform in order to realise it, the government is pushing ahead with a number of initiatives, including branding programmes and addressing broader concerns such as infrastructure development, health and hygiene, access to electricity, and the development of telecommunications services. The Ministry of Hotels and Tourism's *Myanmar Tourism Master Plan 2013-2020* outlined six strategic programmes towards the goal of maximising the sector's contribution to employment and income generation in as inclusive a manner as possible. These are: strengthening the institutional environment, building human-resource capacity and promoting service quality, strengthening safeguards and procedures for destination planning and management, developing quality products and services, improving connectivity and tourism-related infrastructure, and building the image, position and brand of Tourism Myanmar. The 38 projects planned under these programmes on issues including training and the development of new rules and guidelines were estimated to cost USD 486.8 million in total, with 23 priority projects costing USD 215.6 million. Alongside these domestic initiatives, Myanmar is contributing to ASEAN initiatives that promote travel and tourism at the regional level (Box 3.10.1).

Box 3.10.1. **ASEAN initiatives are addressing common challenges in travel and tourism**

Regional co-operation is helping to foster the development of travel and tourism in ASEAN member countries. Tourism is one of nine sectors covered under the "enhanced connectivity and sectoral co-operation" characteristic of the ASEAN Economic Community Blueprint 2025, which outlines a vision for the sustainable and inclusive development of the sector through measures including promotion, diversification, human capital development, and mainstreaming local community and PPP participation in tourism value chains. These goals are further elaborated upon in the ASEAN Tourism Strategic Master Plan 2016-2025. Among other initiatives, it notes the importance of implementing ASEAN tourism standards and the ASEAN Mutual Recognition Arrangement on Tourism

Box 3.10.1. **ASEAN initiatives are addressing common challenges in travel and tourism** *(cont.)*

Professionals (MRA-TP). The MRA-TP was adopted by the ASEAN Tourism Ministers in 2009. It seeks to facilitate the mobility of certified ASEAN Tourism Professionals (ATMs) within the region and exchange information on best practices in training professionals in the sector. It is underpinned by the ASEAN Common Competency Standards for Tourism Professionals (ACCSTP), the Common ASEAN Tourism Curriculum (CATC), and the Regional Qualifications Framework and Skills Recognition System (RQFSRS).

Further work can also be done in implementing the ASEAN Framework Agreement on Visa Exemption for ASEAN Nationals, which was signed by the ASEAN Foreign Ministers in 2006 and will enter into force once ratified by all ASEAN member countries. It has been ratified by Myanmar. The Agreement allows two weeks visa-free entry for ASEAN nationals traveling within the region to promote business and personal travel within ASEAN. While the Agreement remains not in effect, bilateral agreements on visa exemptions have been made; Myanmar currently has bilateral visa exemption agreements with the nine other ASEAN member countries.

Liberalised air travel through ASEAN's Open Skies policy has faced hurdles before and since its implementation at the beginning of 2015, but should help to improve competition in international travel in the region. Alongside these developments, improvements are needed to domestic passenger transportation systems for long-distance and local travel. According to ADB estimates, USD 60 billion in infrastructure investments may be needed over 2016-30 (ADB, 2016).

A number of challenges relating both to travel and tourism itself and also to general infrastructure raise costs in the sector and can discourage investment. However, Myanmar's investments in developing infrastructure are helping to address the country's deficit in that regard, while also addressing constraints in the travel and tourism sector. Expansions, upgrades, and the construction of new airports across the country are facilitating more international travel to Myanmar. This includes the ongoing three-phase expansion of Yangon International Airport and the planned construction of a new Hanthawaddy International Airport in Bago. In July 2017, the Department of Civil Aviation announced that it would call for tenders for upgrading Kawthaung Airport in Tanintharyi Region, Mawlamyine Airport in Mon State and Heho Airport in Shan State through PPPs. These investments will help to build up the country's capacity to manage further growth in passenger air travel and air freight transport. Indeed, registered carrier departures (both international and domestic) from Myanmar have already increased – from 10 329 in 2000 to 60 627 in 2016. Moreover, additional growth is anticipated in the future. Beyond infrastructure investment, travel was also previously facilitated through the streamlining of the visa application process, allowing for visas to be issued the same day by embassies and consular offices and visas on arrival with prior arrangement with the Ministry of Hotels and Tourism. An e-visa service was introduced in 2014, and an expansion of the visa-on-arrival system was announced in 2017.

Efforts are being made to expand educational programmes to prepare workers with the skills needed in the travel and tourism sector. Established in 1992, the Ministry of Hotels and Tourism's (MOHT) Tourism and Training School offers courses for tour guide training and tourism management. MOHT and the Ministry of Education introduced a four-year degree programme in tourism beginning in the 2012/13 academic year at the National

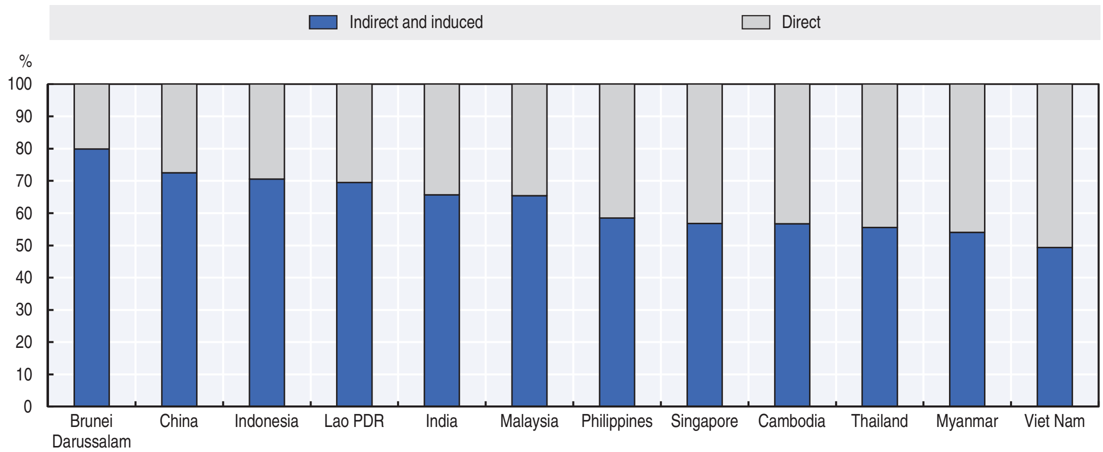
Management Degree College in Yangon and Mandalar Degree College in Mandalay, as well as collaborating on capacity building for Yangon University's tourism department. In June 2016, the Hospitality Training School was opened, under the guidance of the Ministry and with the assistance of the Myanmar Tourism Federation and Luxembourg Agency for Development Cooperation. It offers front office, housekeeping, and food and beverage courses. Various vocational programmes are also offered around the country.

These initiatives for fostering the development of travel and tourism are important for driving growth and development, as the sector can be a significant creator of jobs and income. In 2016, it was estimated that travel and tourism directly supported 804 000 jobs (or 2.7% of total employment). Including indirect employment, that figure rose to 1 662 000 jobs (5.7% of total employment). Over the next ten years, it is forecasted that direct employment from travel and tourism will increase by 4.8% annually and that indirect employment will grow by 3.8% a year, totalling 1 296 000 and 2 387 000 jobs in 2027 respectively (WTTC, 2017). As many of these positions will require specific skills, training programmes will need to be a central plank of the sector's development and growth.

Effective policy strategies are needed to ensure that the benefits of growth in travel and tourism are widely shared. Indeed, a great deal of tourism expenditure can end up flowing to large international firms in transportation and accommodation, and quality jobs may require specialised training that is not accessible to all. Inclusiveness can be improved by encouraging the growth of community-based tourism. The hotels and tourism ministry defines this as the kind of tourism that "a significant number of local people have substantial control over and involvement in, with a high proportion of benefits remaining within the local economy" (MOHT, 2013). This may be fostered through the establishment of community funds for local development from tourism revenues (which are already being used in a few sites in Myanmar) and the development of local training opportunities. Community-led initiatives can also have the added benefit of preserving local cultural heritage. Guidelines such as the UNWTO Global Code of Ethics for Tourism can also help to direct sector stakeholders when addressing concerns regarding the quality of jobs in travel and tourism and the social effects of the sector's growth.

A significant share of the potential receipts from travel and tourism are lost due to under-developed linkages with local producers. Improving linkages with domestic suppliers – particularly smaller firms – could further improve indirect and induced economic activity and job creation, benefitting inclusive growth, as recognised in the *Myanmar Tourism Master Plan 2013-2020*. According to estimates by the World Travel & Tourism Council, the indirect and induced financial impacts of travel and tourism as a share of the sector's total contribution to gross domestic product (GDP) have fallen slightly as the sector has grown in recent years. They fell from 58.9% in 2009 to 54.0% in 2016, which is a lower share than in most of the rest of Emerging Asia (Figure 3.10.5). A value-chain model for Myanmar's tourist-guide sector highlights the many opportunities for firms to participate indirectly in tourism, through input supply, production, wholesale, retail and consumption segments (ILO, 2017). Additional domestic investment in hotels and other areas of travel and tourism could also help to develop these linkages. Smaller firms in particular may benefit from policies encouraging improved production, fostering inter-industry linkages, developing infrastructure, and reducing unnecessary regulatory burdens and transaction costs.

Figure 3.10.5. **Contributions of travel and tourism to GDP in Emerging Asia, 2016**



Source: OECD Development Centre calculations, using WTTC (2017).
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In addition to these specific concerns for policy makers in Myanmar, many of the new challenges it faces in developing the travel and tourism sector are common to other countries as well. The *OECD Tourism Trends and Policies 2016* report highlights international challenges being faced, including the rapid growth of international tourism, new consumer trends, digitalisation, security issues and adaptation to climate change (OECD, 2016). Focusing on addressing the need for seamless transportation links and adapting to the sharing economy, the study recommended a number of policy reforms. These include integrating travel and tourism considerations in transport infrastructure planning, encouraging the use both of integrated ticketing and pricing and of destination smart cards, using timely and accurate information and navigation tools, considering the impacts of the sharing economy both on tourism and on broader policy objectives, and strengthening data collection and research on the effects of the sharing economy on the sector.

Key government ministries in Myanmar

President	Win Myint
State Counsellor	Aung San Suu Kyi
Vice President 1	Myint Swe
Vice President 2	Henry Van Thio
Agriculture, Livestock and Irrigation	Aung Thu
Border Affairs	Ye Aung
Commerce	Than Myint
Construction	Han Zaw
Defence	Sein Win
Education	Myo Thein Gyi
Electricity and Energy	Win Khaing
Ethnic Affairs	Naing Thet Lwin
Finance and Planning	Soe Win
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
International Cooperation	Kyaw Tin
Labour, Immigration and Population	Thein Swe

Key government ministries in Myanmar

Natural Resources and Environmental Conservation	Ohn Win
Religious Affairs and Culture	Aung Ko
Social Welfare, Relief and Resettlement	Win Myat Aye
Transport and Communications	Thant Sin Maung
Governor of the Central Bank	Kyaw Kyaw Maung

Note: Valid as of 16 October 2018.

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CHINA AND INDIA

CHINA AND INDIA

China

A. Medium-term economic outlook (forecast, 2019-23 average)

GDP growth (percentage change):	5.9
Current account balance (% of GDP):	0.2
Fiscal balance (% of GDP) (central government):	-3.9

B. Medium-term plan

Period: 2016-20

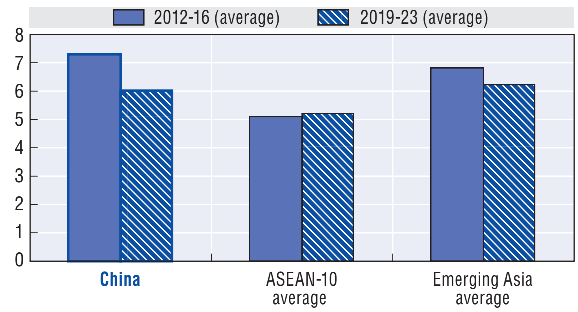
Theme: Actively manage the "new normal" of economic development, facilitate innovation and sustainable growth, maintain openness in the economy, ensure inclusiveness and establish a moderately prosperous society

C. Basic data (in 2017)

Total population:	1 390.1 million*
Population of Beijing:	21.7 million*
Nominal GDP (US dollar):	12 014.6 billion**
GDP per capita at PPP:	16 695.6 (current International Dollar)**
Exchange rate in the first half of 2018 (period average):	6.4 (CNY/USD)

Note: * Population data are year-end government estimates.
** IMF estimate.
Sources: OECD Development Centre, national sources, CEIC and IMF.

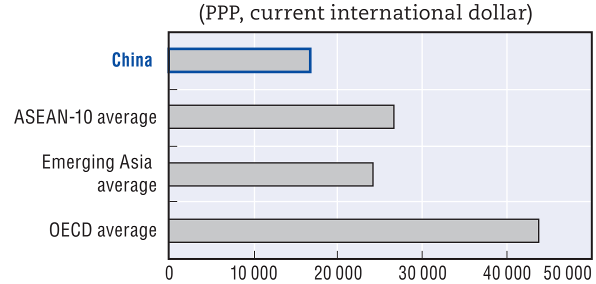
GDP growth rates (percentage changes)



Source: OECD Development Centre, MPF-2019.

GDP per capita, 2017

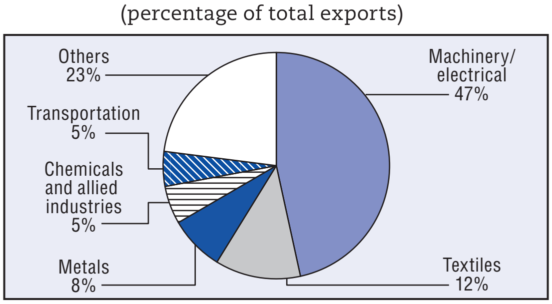
(PPP, current international dollar)



Source: IMF.

Composition of exports, 2017

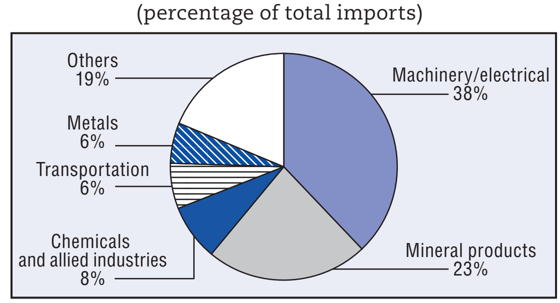
(percentage of total exports)



Source: Trademap.

Composition of imports, 2017

(percentage of total imports)



Source: Trademap.

Structural policy challenges discussed in previous editions of the Outlook

2014	Fiscal policy	Improving fiscal efficiency through institutional reform
2015	Environment	Increasing clean-energy consumption in response to the serious environmental degradation that persists despite the country's efforts to reduce pollution
	Rural development	Expanding rural and agricultural development to help improve equality between urban and rural areas
	Education and skills	Continuing with reforms and improving education in order to exploit the service sector's potential to drive future growth
2016	Environment	Strengthening environmental regulations to improve the quality of growth
	Education and skills	Upgrading human capital to help expand the value-added economy
	Rural development	Boosting rural development to ensure robust growth in incomes
2017	Capacity utilisation	Working off excess capacity
	Environment	Upgrading the quality of the environment
2018	Connectivity and integration	Unlocking synergies with the Belt and Road Initiative

Recent developments in policy areas covered by previous editions of the Outlook

Fiscal policy: performance budgeting to enhance efficiency, and cutting taxes to stimulate the economy

- The Central Committee of China's ruling communist party, along with the country's State Council, recommended implementing a comprehensive system of performance budgeting to cover all budgetary accounts. It will take between three and five years to fully implement this system.
- After completing a raft of legislation in mid-2017 establishing legislation on common reporting standards, China started sharing tax information with other jurisdictions as of September 2018 within the framework of the OECD's Global Forum on Transparency and Exchange of Information for Tax Purposes. The exchange of information will give tax officials a better view of the overseas financial investments and earnings of Chinese residents.
- In order to boost disposable incomes and consumption, the government recently raised the tax-free income threshold and increased deductibles. Starting from October 2018, the minimum threshold for personal income tax has been raised from CNY 3 500 (Chinese yuan) per month to CNY 5 000 per month. In addition, the tax rates on lower brackets have also been reduced.
- In August 2018, the Chinese government announced that the rate of export-tax rebates for some products will be increased, and that banks can now lend more money to small firms without having to pay VAT and income taxes on their SME-related lending. In addition, foreign investors will not have to pay corporate income taxes or value added taxes for three years on interest income that they earn in China's domestic bond market.

A new ministry to enhance environmental protection

- In March 2018, China's government established a new ministry of ecology and the environment, replacing the existing ministry of environmental protection. The new government department took over a range of major environmental protection responsibilities that had been scattered across various other government agencies and ministries.
- Aside from creating this new ministry, China will, as of the latter part of 2018, also begin to reduce the average intensity of the particulate matter known as PM2.5 – a major air pollutant – by around 3% year a year in Beijing, Tianjin, Hebei and the areas that surround these cities.
- In June 2018, the State Council released a three-year action plan for tackling air pollution, which sets up targets for improving the country's air quality by 2020.

Providing extra resources for the development of rural infrastructure

- China's ministry for housing and urban and rural development announced in September 2018 that the government will allocate more resources to rural infrastructure projects through the so-called pledged supplementary lending programme. Rural infrastructure projects eligible for funds from this programme span water, electricity, roads, the construction of gas networks, and sewage and garbage treatment.
- Meanwhile, a "silver-age" project under the aegis of the education and finance ministries will recruit 10 000 retired headmasters and teachers to teach in primary and junior middle schools in rural areas between 2018 and 2020.

POLICY FOCUS

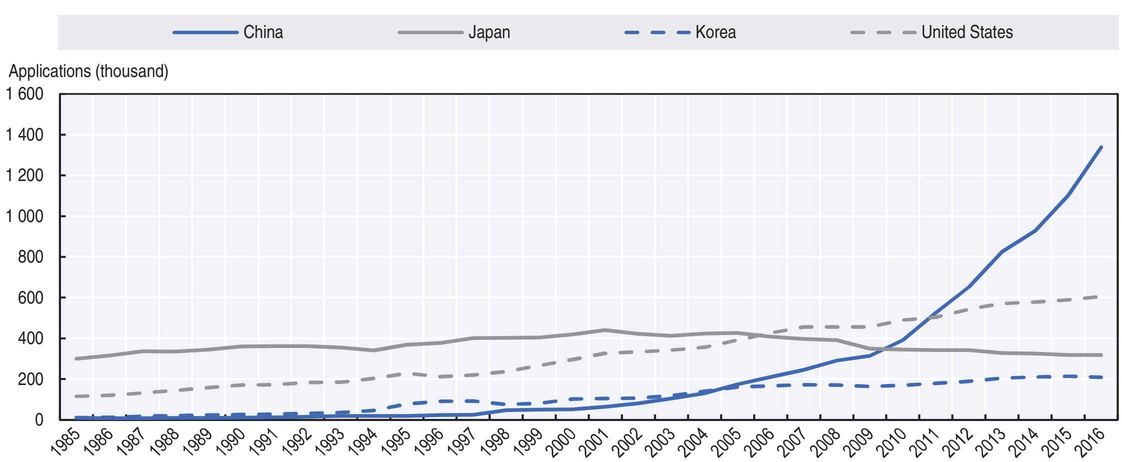
Making innovation a new driver of growth

China's growth has been impressive in the past couple of decades, but it is set to slow as the population ages rapidly. It is a long time since China reaped a demographic dividend, and the working-age population has been shrinking for a number of years now – both in absolute terms and as a share of the total population. As a result, the contribution of labour to economic growth will be limited, notwithstanding the necessary raise of the retirement age sooner or later. This measure is necessary, yet it is unlikely to come into force within the coming couple of years. The expansion of productive capacity through high growth in investment has expanded the economy's potential for growth, but as excess capacity looms large in a number of industries, capital's contribution will also decline somewhat in the years to come. Indeed, recent data confirm that investment is set to play a weaker role in driving growth. Thus, the only remaining factor that can be a key driver is productivity growth, which can be attained by continuous innovation. Chinese policy makers have recognised this, and innovation features among the five keywords of the country's five-year plan, the 13th in the history of the People's Republic.

Judging from the various output indicators used to measure the economy's capacity to innovate, achievements in this field have been quite remarkable. In 2016, for instance, 1.3 million of the roughly 3 million patents filed worldwide were filed in China (Figure 3.11.1). As well as becoming the number one patenter in terms of domestic filings, China is also excelling in international patent applications. In 2017, the country attained second position after the United States as a source of patent applications filed via the World Intellectual Property Organization (WIPO).

Figure 3.11.1. **Chinese patent applications have soared**

Number of patent applications in the top five offices



Source: WIPO Statistics database.

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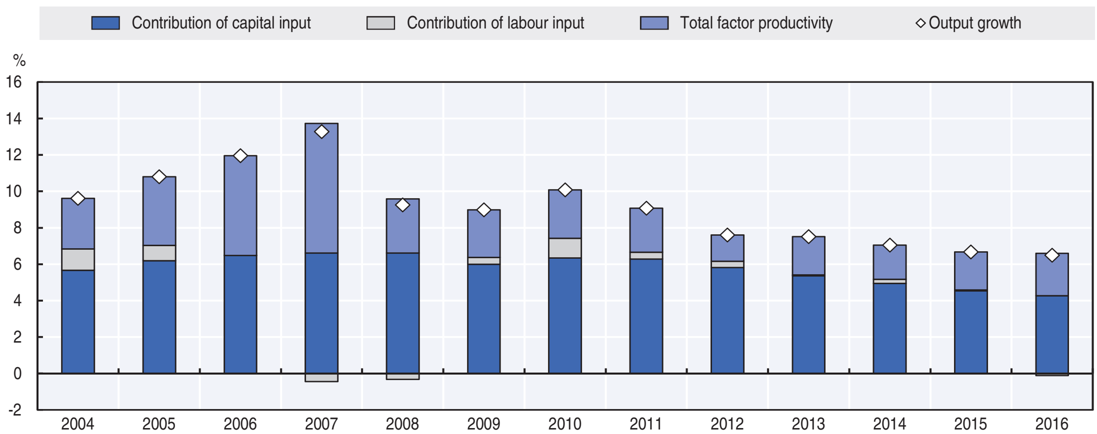
International trademark applications reveal that China enjoys a similarly prominent position. In 2017, the country ranked third in this regard, following the United States and Germany. More importantly, China has registered double-digit growth in international applications of both patents and trademarks in the latest year for which data are available. Such an impressive performance on various output indicators would suggest that China can produce new goods and apply new technologies and processes, thereby improving productivity and overall growth. However, available data indicate that the contribution of overall productivity to growth has diminished over the past decade or so (Figure 3.11.2).

Figure 3.11.2. **Productivity's role in driving growth has fallen**



Source: Asia Productivity Organisation database.
StatLink https://doi.org/10.1787/888933887424

The fact that innovation has soared even as productivity's contribution has slowed may be due to a weak link between the two. In fact, there is evidence to suggest that innovation often may not be driven by the potential business returns. Indeed, the performance-evaluation system of academics and researchers suggests that their focus is more on the quantity than on the quality of the patents they hold (OECD, 2015). Furthermore, patent subsidies have led to soaring filings in recent years, resulting in a decreasing impact of new patent applications in terms of productivity (Boeing, Mueller and Sandner, 2016).

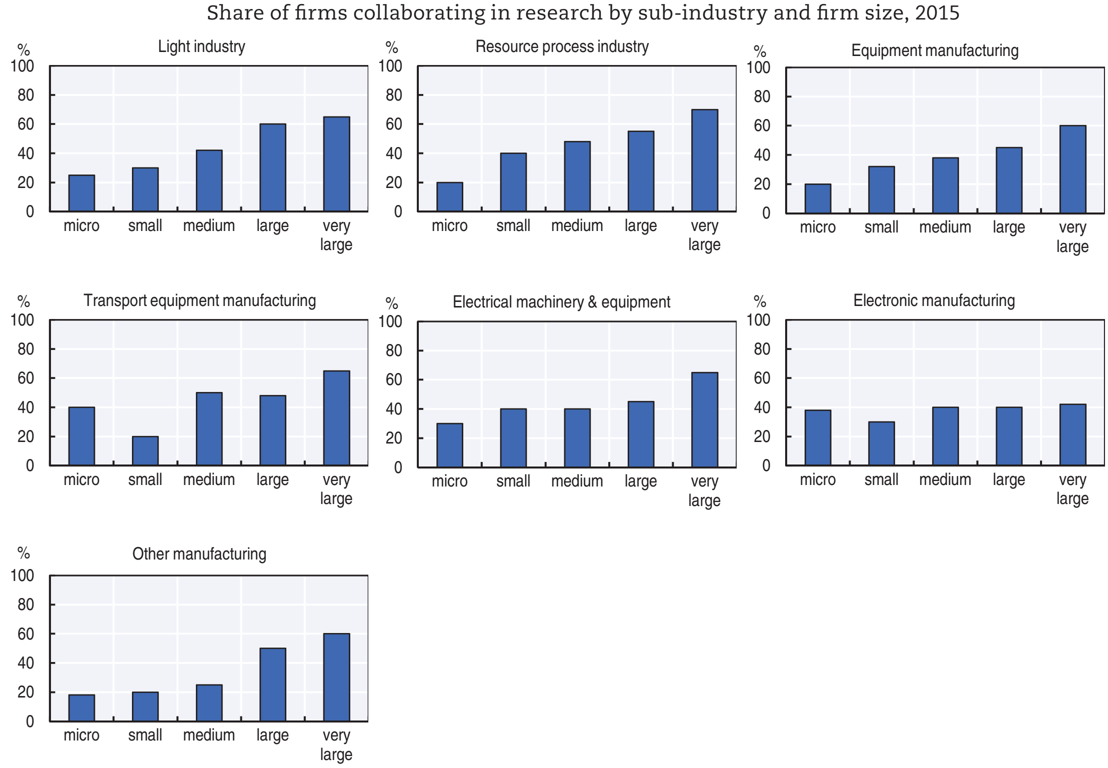
The decreasing impact of soaring patenting activity on productivity is largely related to issues of quality and relevance. The quality of patents is often measured by citations or scope of claim, but such information is not readily available for Chinese firms. As an imperfect alternative, the share of invention patents may provide an indicator as to their overall quality. The majority of Chinese patents fall into the categories of utility patents – which represent marginal improvements relative to the original product or process – and design patents. Only a small share of the patents are genuine inventions. The utilisation rate of patents can also provide a measure of their relevance, and this rate tends to be particularly low in the case of patents registered by universities and research institutes, standing at around 5% (OECD, 2015). Furthermore, both the number of registered patents and their rates of utilisation vary widely across China's provinces. Moreover, a high utilisation of patents is not necessarily related to the number of patents that are registered in the province. Furthermore, neither a high number of registered patents nor a high degree of utilisation ensures productivity spillovers. Notwithstanding the large number and high utilisation of patents in Guangdong, there is no concentration of high-productivity firms there, unlike in the delta of the Yangtze river (OECD, 2014). The highly concentrated holding of patents by a small number of firms without much spillover to the surrounding firms in Guangdong, and also the fact that these firms operate in networks that are often more international than domestic, may help to explain this.

While in other countries most inventions are the result of collaborative projects, collaboration in research is relatively limited in China. Among manufacturing industries, moreover, producers of electronics and small firms are less likely to collaborate than others (Figure 3.11.3). This may have something to do with the type of inventions, and with the ease of imitation that is characteristic of various firms and industries (Molnar, Xu and Khor, 2019). Indeed, the limited collaboration across firms in China may be hampering innovation and the diffusion of its benefits (Zhao, 2015). In the Chinese ecosystem of innovation, vertical linkages or interactions with suppliers and customers are well established, but horizontal linkages are more limited (Zhao, 2015). Most research and development (R&D) projects are carried out by the firms alone. Collaborative projects with research institutions are rare, and are even scarcer between different firms.

Notwithstanding the large number of registered patents and applications, not all innovations are patented in China. Companies often do not bother registering patents: two-thirds of them think that patent rights cannot effectively prevent others from copying their inventions. According to a country-wide representative survey of patent holders by the State Intellectual Property Office, 17% of patent owners have experienced a violation of their rights, yet a third of them took no action in response (SIPO, 2015). The problem is especially acute for micro-enterprises. Domestic firms are more likely not to take any action in this regard than firms with foreign investors. Almost half of the firms think that better protection of patent rights would effectively stimulate innovation at company level, and 87% would like to see a strengthening of intellectual property rights. In addition to sometimes seeking protection for intellectual property, most firms try to reap the first-mover advantage by quickly marketing their invention. They also sign confidentiality agreements with staff or change their products quickly so that competitors cannot catch up. Better protection for intellectual property rights would encourage more firms to patent their valuable inventions.

Figure 3.11.3. **Research collaboration is less common in electronics and among smaller firms**

Share of firms collaborating in research by sub-industry and firm size, 2015



Note: Size categories are defined using the definition of up to 19 employees for micro firms, 20-49 for small, 50-245 for medium, 250-999 for large and at least 1 000 employees for very large firms.

Source: OECD Development Centre's calculation based on the 2016 SIPO Patent Survey.

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Key government ministries in China

President	Xi Jinping
Premier	Li Keqiang
Agriculture and Rural Affairs	Han Changfu
Civil Affairs	Huang Shuxian
Commerce	Zhong Shan
Culture and Tourism	Luo Shugang
Ecology and Environment	Li Ganjie
Education	Chen Baosheng
Emergency Management	Wang Yupu
Finance	Liu Kun
Foreign Affairs	Wang Yi
Housing and Urban-Rural Development	Wang Menghui
Human Resources and Social Security	Zhang Jinan
Industry and Information Technology	Miao Wei
Justice	Fu Zhenghua
National Audit Office	Hu Zejun
National Defence	Wei Fenghe
National Development and Reform Commission	He Lifeng
National Health Commission	Ma Xiaowei
Natural Resources	Lu Hao
Public Security	Zhao Kezhi
Science and Technology	Wang Zhigang
State Ethnic Affairs Commission	Bater
State Security	Chen Wenqing
Transport	Li Xiaopeng
Veterans Affairs	Sun Shaocheng
Water Resources	E Jingping
People's Bank of China	Yi Gang

Note: Valid as of 16 October 2018.

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India

A. Medium-term economic outlook (forecast, 2019-23 average)

GDP growth (percentage change):	7.3
Current account balance (% of GDP):	-1.9
Fiscal balance (% of GDP) (central government):	-5.7

B. Medium-term plan

Period: 2018-32

Transform India into a prosperous, highly educated, healthy, secure, corruption-free, energy-abundant, environmentally clean and globally influential nation by 2031-32.

C. Basic data (in 2017)

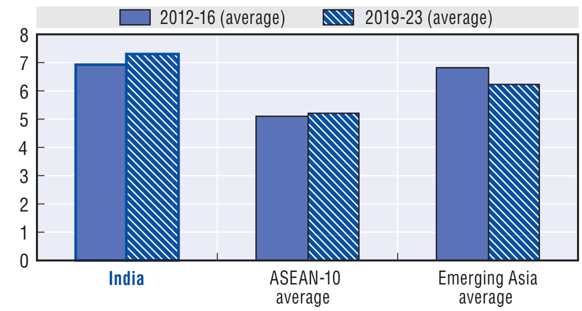
Total population:	1 316.0 million*
Population of Delhi:	19.0 million*
Nominal GDP (US dollar):	2 602.3 billion**
GDP per capita at PPP:	7 194.0 (current International Dollar)**
Exchange rate in the first half of 2018 (period average):	65.7 (INR/USD)

Note: * Population data are year-end government estimates. Indian data are based on fiscal year ending in March. Population data in 2016 refer to fiscal year 2016/2017 ending in March 2017.

** IMF estimate.

Sources: OECD Development Centre, national sources, CEIC and IMF.

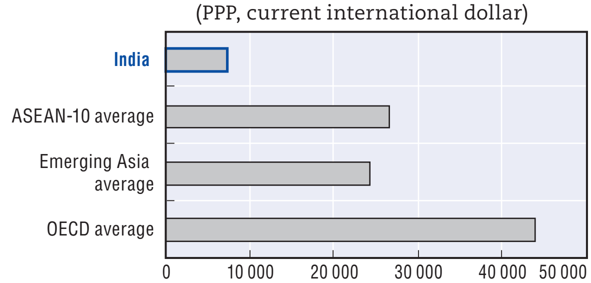
GDP growth rates (percentage change)



Source: OECD Development Centre, MPF-2019.

GDP per capita, 2017

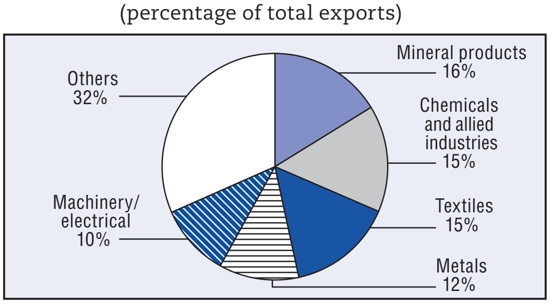
(PPP, current international dollar)



Source: IMF.

Composition of exports, 2017

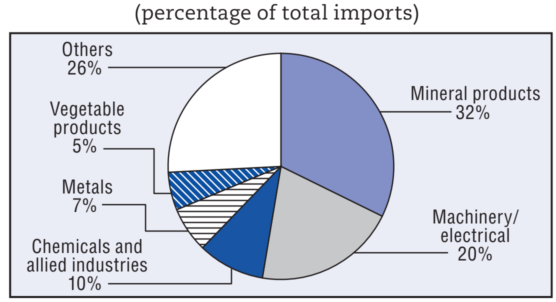
(percentage of total exports)



Source: Trademap.

Composition of imports, 2017

(percentage of total imports)



Source: Trademap.

Structural policy challenges discussed in previous editions of the Outlook

2014	Education	Improving teaching and national assessment systems to raise education standards
2015	Manufacturing	Restoring growth to reverse the trend of slower growth (and even negative growth in 2013-14) in manufacturing over the past few years
	Education	Widening access to secondary education in order to meet the goal of universal secondary education by 2017
	Health	Strengthening the public health system. Improving access to curative and preventative healthcare facilities
	Infrastructure	Accelerating the development of infrastructure, especially in rural areas
2016	Financial literacy	Strengthening financial-education initiatives
	Education	Enhancing education in terms of both access and quality
2017	FDI	Encouraging foreign direct investment (FDI) and promoting the made-in-India brand
	Entrepreneurship	Strengthening the set of initiatives known as Startup India
2018	Innovation	Fostering inclusive innovation to boost growth and development

Recent developments in policy areas covered by previous editions of the Outlook

Education: reforming the National Policy on Education

- The National Policy on Education under development is to be implemented by the end of 2018, according to Union Human Resource Development Minister Prakash Javadekar.

Manufacturing: fostering the development of manufacturing

- In November 2017, the government announced that export incentives for textile and garment manufacturers under the Merchandise Export from India Scheme would be increased. The programme offers duty exemptions, pegged at certain percentages of total export values, to exporters.
- A new defence production policy under development by the government targets turnover of INR 1.7 trillion in military goods and services by 2025, with exports from the sector totalling INR 350 billion. Major platforms currently imported are expected to be developed and manufactured domestically under the plan. The procurement process is also to be simplified under the plan.
- The Ministry of New and Renewable Energy announced plans in July 2018 to foster the development of local manufacturing in supplying planned solar power projects to meet renewable energy capacity targets.

Health: expanding health coverage

- The Minister of Finance unveiled in February 2018 the new Ayushman Bharat, or National Health Protection Scheme. The programme is intended to cover over 100 million vulnerable families for up to INR 500 000 in hospital care per year. Beneficiaries are to receive family health cards that can be used for cashless treatment at public and private hospitals across the country. Costs are to be shared between central and state governments. The programme was launched on 25 September 2018 and subsumes the Rashtriya Swasthya Bima Yojana and the Senior Citizen Health Insurance Scheme. A network of health and wellness centres is also to be established under the scheme.

Infrastructure: increasing annual investment in infrastructure

- The government's 2018 budget increased infrastructure spending by INR 1 trillion to INR 5.97 trillion. In his budget speech in February, Finance Minister Arun Jaitley said that additional investment in infrastructure was needed in the country, estimating that INR 500 million would be needed. The Minister suggested that infrastructure financing could be raised from equity markets.

FDI: liberalising investment rules

- In January 2018, the Union Cabinet of India approved measures to liberalise the Foreign Direct Investment Policy in selected sectors, including single brand retail trading, construction development, civil aviation, real estate and pharmaceuticals. The reforms allow higher levels of foreign investment through automatic routes and remove other approval requirements.

POLICY FOCUS

Continue FDI reforms and develop opportunities for technology transfer

As a percentage of GDP, inflows of FDI into India declined from a recent peak of 3.8% in 2008 to 2% in 2016. This rate was lower than in most other Emerging Asian countries, with smaller relative inflows seen only in China (1.2%), Thailand (0.4%), Indonesia (0.3%) and Brunei Darussalam (-1.2%). Still, FDI has an important role to play in India's growth and development. It can help drive economic growth by improving access to knowledge and technology, increasing trade, enhancing competitiveness, and spurring companies to develop. India will need to continue with reforms – both to FDI policy and to policy areas of broader scope – in order to make the most of the opportunities that FDI can herald, and to ensure that FDI inflows contribute to making growth more inclusive.

In the context of the Make in India initiative, the country has recently sought to reform its policies in order to attract additional investment. The government launched this programme in 2014, aiming to foster design and manufacturing activities in India by implementing economic reforms and attracting higher levels of FDI. As part of this initiative, India is reforming its rules on the restriction of FDI, and on business more generally. India is also developing six industrial corridors across the country, in which it plans to encourage the growth of industrial cities.

In the context of this initiative, recent reforms to FDI rules have expanded opportunities for foreign investors by making ownership limits less restrictive in a number of new sectors, while also making the approval of investments faster and easier in a broader range of sectors. Railways, defence, insurance and medical devices are among the sectors in which India has relaxed limits on FDI. Of the 35 sectors in which the country permits foreign investment, there are 28 sectors in which either all of the sub-sectors, or at least some of them, have no caps on foreign ownership as a share of equity (Table 3.12.1). The automatic entry route, in which government approval is not required, is open to investments in 31 sectors, though the government route may be required in some subsectors or above defined foreign ownership shares in these sectors. FDI is prohibited in only eight sectors: lotteries; gambling; chit funds; nidhi companies, which engage in non-bank finance; trading in transferrable drawing rights; real estate businesses and the construction of farmhouses; manufacture of tobacco products; and activities closed to private sector investment, such as atomic energy and railway operations.

These reforms are the latest steps in a series of measures to liberalise foreign investment. India's score in the OECD's FDI Regulatory Restrictiveness Index has been declining for some time. The index takes into account factors including limitations on foreign equity, screening and approval mechanisms, restrictions on the employment of foreigners as key personnel, and operational restrictions. Between 1997 and 2016, India's score declined from 0.480 to 0.212. Indeed, the primary, secondary and tertiary sectors have all experienced considerable declines in their performance in this regard over the past two decades, although restrictions remain higher in the tertiary sector than in the other two.

In addition to taking some steps towards liberalising investment rules in India, the government has sought, as part of its Make in India initiative, to implement reforms to improve its business environment – as measured by the World Bank's Doing Business rankings. From 2017 to 2018, India's greatest improvements in these rankings were in paying taxes (for which the score rose from 47.7 to 66.1), getting credit (from 65.0 to 75.0), and resolving insolvency (from 32.8 to 40.8). Indeed, the evaluations pointed to improvements in all of the areas they examined. Among the central government's recent reforms in the areas of tax payment, credit access, and the resolution of insolvency is the development of an online system for return-filing and payment by the Employees' State Insurance Corporation, and also an e-verification system. Other reforms have included amending central registry rules to make it easier to access credit. Moreover, 2016 saw the roll-out of a new Insolvency and Bankruptcy Code, India's first comprehensive legislation on corporate insolvency. Although its implementation in July 2017 encountered short-term challenges, a goods and services tax should also help to improve the investment environment in the Indian economy by addressing the problem of tax cascading.

It does this by facilitating a common market across the country, and by reducing the administrative costs of tax compliance.

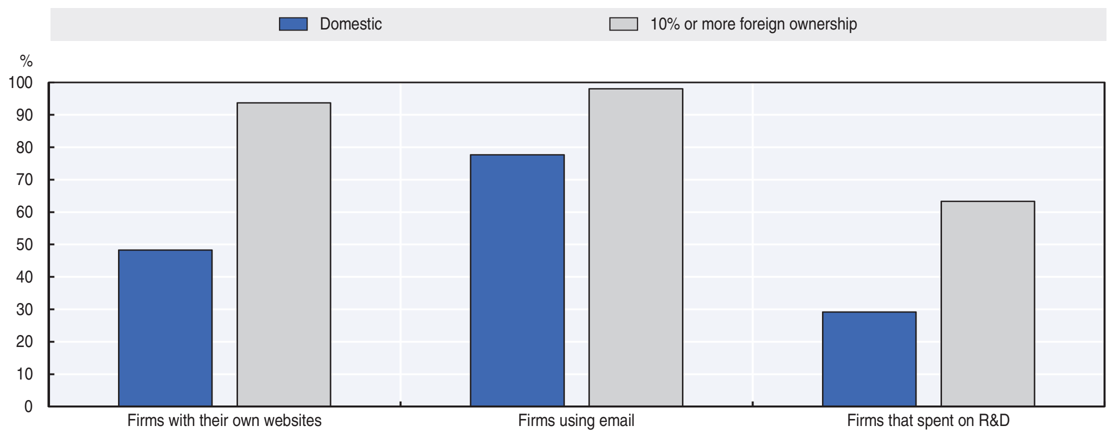
Table 3.12.1. **Entry routes and FDI caps in different sectors, 2017**

Entry route	FDI cap as a percentage of equity	
	100%	<100%
Automatic	• Agriculture and animal husbandry • Plantation sector • Mining and exploration of metal and non-metal ores • Coal and lignite • Petroleum and natural gas* • Non-defence manufacturing • Defence** • Broadcasting carriage services • Broadcasting content services*** • Airports • Air transport services** • Other services in the civil aviation sector • Construction development: townships, housing, built-up infrastructure • Industrial parks • Telecom services** • Trading • E-commerce activities • Single brand product retail trading** • Duty-free shops • Railway infrastructure • Asset reconstruction companies • Credit information companies (CIC) • White-label ATM operations • Other financial services • Pharmaceuticals**	• Private security agencies** • Infrastructure companies in the securities market • Insurance • Pensions sector • Power exchanges • Private-sector banking**
Government	• Mining and mineral separation of titanium-bearing minerals and ores, plus value-added and integrated activities • Print media* • Establishment and operation of satellites	• Multi-brand retail trading

Notes: (*) FDI cap is less than 100% in one or more subsectors. (**) Government route is required in one or more subsectors and/or investments are subject to FDI equity shares, as defined above. (***) FDI cap is less than 100% in one or more subsectors and government route is required in one or more subsectors.
Source: OECD Development Centre's compilation, using DIPP (2017).

Still, there is still plenty to do to realise India's full potential to attract FDI inflows. This is notably the case when it comes to international transfers of technology, which could make a stronger contribution in India to upgrading technology and improving productivity, as in many other countries in the region. According to a survey in 2014, firms with foreign ownership are more likely than domestically-owned firms to have their own websites, to use email to communicate with clients and suppliers, and to spend money on research and development (R&D) (Figure 3.12.1). Indeed, there is a link between a higher incidence of technology and investment in R&D and the higher overall rates of innovation among foreign firms. Compared with domestically-owned firms, firms with 10% or more foreign ownership are more likely to introduce new products or services (73.0% versus 41.5%), and to innovate with processes (74.9% versus 56.2%). The foreign firms also had better rates both of real annual sales growth (11.1% versus 2.1%) and annual labour productivity growth (5.0% versus -3.1%). However, domestically-owned firms are more likely to introduce products or services that are new to their main markets (74.8% versus 35.8%).

Figure 3.12.1. **Innovation and technology use among Indian firms by ownership, 2014**



Source: OECD Development Centre's calculations, using World Bank (2017).
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It is generally the case that FDI inflows – particularly those that come from advanced economies – can have positive effects on productivity in less-developed and emerging economies. Along with effects on trade, competition and growth, these can originate from technology spillovers and backward and forward linkage effects between foreign firms and their suppliers and clients (Lee, Lee and Kim, 2011). The presence of foreign firms and demonstration effects have been shown to be a greater factor in technology transfer in India than the purchase of foreign technology (Pant and Mondal, 2010). These transfers are also dependent on the absorptive capacities of domestic firms and other factors such as the degree of competition, with greater technology spillovers in more competitive industries.

Policies that relate to companies' capacities to absorb international technology transfers can help. These include training and education, protecting intellectual property rights, the promotion of FDI in technology-intensive sectors, performance requirements linked to the transfer of technology, investment incentives, and policies concerning the restriction of FDI. Efforts to improve the capacity of domestic firms to absorb technology transfers are likely to have limited distortionary effects. However, few studies suggest that either targeting FDI promotion at technology-intensive sectors, or joint-venture requirements, are effective tools in this regard. Furthermore, performance requirements may have significant effects on competition, and investment incentives can have considerable distortionary effects (Kowalski, Rabaioli and Vallejo, 2017).

Strengthening education and training programmes will undoubtedly be an important element of any strategy to encourage greater technological transfers as part of inflows of FDI into India. Moreover, such policies have the scope to make a particularly significant contribution in technology-intensive sectors. In recent years, the composition of FDI inflows into India has favoured the sectors of services – both financial and non-financial – and information and computer technology. Over April 2000 to June 2017, large shares of total FDI inflows were made into other services (17.9%), computer software and hardware (7.6%), construction development (7.2%), telecommunications (7.0%), and the automobile industry (5.1%).

In addition to developing human capital and improving the capacity of domestic firms to absorb technology transfers, strengthening the other relationships between firms may facilitate these spillovers. While it is true that FDI has, for example, already played an important role in the growth of green technology both in India and China, new mechanisms could help. These could include international R&D partnerships and joint ventures (Lema and Lema, 2012). Such relationships are not very common among Indian firms. Indeed, only 9.2% of domestically-owned firms used technologies licensed from foreign companies in 2014. This share was significantly lower than in some other recently surveyed Emerging Asia countries, such as Indonesia (22.5% of domestic firms in 2015) and Malaysia (22.3% of domestic firms in 2015) (World Bank, 2017).

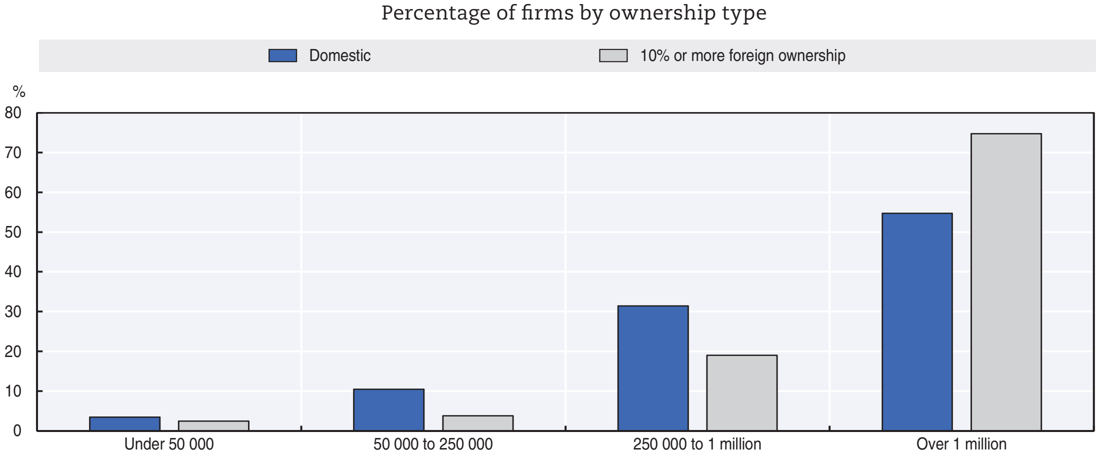
FDI can also generate employment and boost economic growth, and it is important to encourage the kinds of inflows that make growth more inclusive. In innovative and technology-intensive sectors, FDI can create good and high-paying jobs. However, these jobs often require high levels of skills and education. These considerations are made more important by the recent decline in employment in jobs requiring mid-level skills in India (OECD, 2017a).

Moreover, while there is evidence that FDI inflows in India have boosted the country's GDP, their effect on employment has been less clear (Mehra, 2013). India needs to invest more in improvements to access and quality in education in order to prepare workers with the skills they need. Indeed, literacy rates in India are below those for most other Emerging Asian countries. In 2011 – the most recent year for which data are available – the adult literacy rate stood at 86.1%, with youth literacy at 69.3%. More generally, employment growth in the formal sector tends to be low in India. If the country were to simplify its labour law to allow for more flexibility, this would help to encourage firms to invest, and to create more jobs. In addition, the production of timely data, the continued benchmarking of India's different states, and an increase in the sharing of best practices would also help to foster better policies across the country (OECD, 2017b).

To make growth more inclusive, India should encourage a more even geographical distribution of FDI. While about two thirds of India's population is rural, FDI is largely concentrated in a few parts of the country, notably in large urban areas. Indeed, over half of India's total FDI inflows from April 2000 to September 2017 were registered with the Reserve Bank of India's offices in Mumbai (which covers the states and union territories of Maharashtra, Dadra and Nagar Haveli, and Daman and Diu) and New Delhi (covering the states and union territories of Delhi, part of Uttar Pradesh and Haryana). According to a 2014 survey, while manufacturing and services firms of all types were more commonly found in places with a higher population, this bias was greater for firms with foreign ownership than for domestically-owned firms (Figure 3.12.2). The survey found that 54.7% of domestically-owned firms were in population centres with more than a million residents, a statistic that rose to 74.8% for firms with at least 10% of foreign ownership. Compared with the distribution of domestic firms, fewer foreign firms are to be found in smaller cities, towns and villages.

Figure 3.12.2. **Firm distribution by ownership and municipality population, 2014**

Percentage of firms by ownership type



Source: OECD Development Centre's calculations, using World Bank (2017).

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When looking state by state at the picture of FDI in India, a range of factors have been shown to affect inflows. There is greater foreign investment in states with larger markets, lower taxes and labour costs, and better infrastructure. Agglomeration effects and the size of the existing base in manufacturing and services also affect inflows of FDI. This suggests that states that have historically received less investment will also face greater challenges in attracting future investment (Mukherjee, 2011). Another factor to bear in mind is that while the whole of India needs more investment in addressing deficiencies with its infrastructure (ADB, 2017), this can be an even more serious constraint in rural and less-developed areas than it is elsewhere. Rural Indians have less access to quality transportation, communication and energy infrastructure. Policy makers in state and central governments should keep these rural-urban development gaps and other challenges in mind as they develop comprehensive strategies to attract and retain investment from foreign firms.

Key government ministries in India

Prime Minister	Narendra Modi
Agriculture and Farmers Welfare	Radha Mohan Singh
Chemicals and Fertilisers	Ananth Kumar
Civil Aviation	Suresh Prabhu
Coal	Piyush Goyal
Commerce and Industry	Suresh Prabhu
Consumer Affairs, Food and Public Distribution	Ram Vilas Paswan
Corporate Affairs	Piyush Goyal
Defence	Nirmala Sitharaman
Drinking Water and Sanitation	Uma Bharati
Electronics and 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	Rajnath Singh
Housing and Urban Poverty Alleviation	Narendra Singh Tomar
Human Resource Development	Prakash Javadekar
Information and Broadcasting	Rajyavardhan Rathore
Law and Justice	Ravi Shankar Prasad
Mines	Narendra Singh Tomar
Minority Affairs	Mukhtar Abbas Naqvi
Panchayati Raj	Narendra Singh Tomar
Parliamentary Affairs	Ananth Kumar
Petroleum and Natural Gas	Dharmendra Pradhan
Railways	Piyush Goyal
Road Transport and Highways	Nitin Gadkari
Rural Development	Narendra Singh Tomar
Science and Technology	Harsh Vardhan
Shipping	Nitin Gadkari
Social Justice and Empowerment	Thawar Chand Gehlot
Statistics and Programme Implementation	D. V. Sadananda Gowda
Steel	Chaudhary Birender Singh
Textiles	Smriti Irani
Tribal Affairs	Jual Oram
Urban Development	Venkaiah Naidu
Water Resources, River Development and Ganga Rejuvenation	Nitin Gadkari
Women and Child Development	Maneka Gandhi
Governor of the Reserve Bank of India	Urjit R. Patel

Note: Valid as of 16 October 2018.

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Chapter 4

Progress towards regional integration in Emerging Asia

Regional integration is needed to boost productivity, improve investment, increase resilience and tackle shared challenges. ASEAN has been central to many of the efforts on regional integration involving Emerging Asia countries. Increasingly, regional integration in Emerging Asia is taking place through broader frameworks: ASEAN+3 and ASEAN+6. Gradual progress is being made towards regional goals regarding trade in goods, trade in services; investment and capital market liberalisation; competition and consumer protection; intellectual property; infrastructure and connectivity; SMEs; food, agriculture and forestry; tourism; human and social development; energy; and the Initiative for ASEAN Integration.

Introduction

Regional integration is needed to boost productivity, improve investment, increase resilience and tackle shared challenges. ASEAN has been central to many of the efforts on regional integration involving Emerging Asia countries. Since its founding, ASEAN has worked on enhancing co-operation, with further progress made through the Preferential Trading Arrangement in 1987; the ASEAN Free Trade Area in 1992; the common vision for trade, services, investment and capital in 1997; and the establishment of the ASEAN Economic Community (AEC) in 2015, with additional goals set for the future, including ASEAN Vision 2020 and the AEC Blueprint 2025.

Increasingly, regional integration in Emerging Asia is taking place through broader frameworks: ASEAN+3 (including the ten ASEAN Member States, China, Japan and Korea) and ASEAN+6 (including the ASEAN+3 members, Australia, India and New Zealand). The ASEAN+3 grouping has been particularly active on financial issues, through the Chiang Mai Initiative Multilateralisation currency swap agreement and its macroeconomic surveillance unit, the ASEAN+3 Macroeconomic Research Office. The ASEAN+6 countries were the original participants in the East Asia Summit, which has since been joined by the Russian Federation and the United States as well.

Co-operation on trade in the region is progressing. Since 2012, the ASEAN+6 countries have been negotiating the Regional Comprehensive Economic Partnership (RCEP), a proposed free trade agreement to upgrade existing trade agreements between ASEAN and their six partner countries. Several countries in the region – Brunei Darussalam, Malaysia, Singapore and Viet Nam – are also signatories to the Comprehensive and Progressive Agreements for Trans-Pacific Partnership (CPTPP), a trade agreement between eleven countries that includes most of the provisions of the defunct Trans-Pacific Partnership.

Most Emerging Asian countries (with the exceptions of Cambodia, Lao PDR, Myanmar and India) are members of the Asia-Pacific Economic Co-operation (APEC), of which Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand have been members since its establishment in 1989. Together, APEC member countries address a range of economic, social and other issues.

Through these frameworks, policy dialogue, harmonisation, liberalisation and other forms of integration and co-operation have proceeded. Gradual progress is being made towards regional goals regarding trade in goods, trade in services; investment and capital market liberalisation; competition and consumer protection; intellectual property; infrastructure and connectivity; small and medium-sized enterprises; food, agriculture and forestry; tourism; human and social development; energy; and the narrowing of development gap through the Initiative for ASEAN Integration (IAI) (Table 4.1).

Table 4.1. **Progress in Emerging Asia's integration in key policy areas**

Policy area	Summary of progress
Trade in goods and services	ASEAN countries have made progress in reducing tariffs, though non-tariff barriers remain. Recent developments are liberalising trade in services.
Investment and capital market liberalisation	Investment integration is progressing through ASEAN's FAST Action Agenda and the 3rd AFMGM. Liberalisation in financial services is opening new opportunities for innovation and modernisation.
Competition and consumer protection	A common framework on cross-border consumer protection is being developed. Regional co-operation is strengthening competition law.
Intellectual property	Progress is being made at the national and regional levels in strengthening intellectual property protection frameworks, though additional efforts will be needed.
Infrastructure and connectivity	Regional road, rail and air connectivity is improving. While the development of roll-on/roll-off shipping routes is progressing, limited port capacities remain a constraint.
Small and medium-sized enterprises	Work on small and medium-sized enterprises by ASEAN is progressing, including through work regarding young and female entrepreneurs and integration into global value chains.
Food, agriculture and forestry	Progress is being made in implementing the ASEAN Integrated Food Security Framework and the Strategic Plan of Action on ASEAN Food Security 2015-2020.
Tourism	Efforts are being made to strengthen and co-ordinate national tourism policies, as well as to promote the region as a tourism destination, such as through the Visit ASEAN@50 campaign.
Human and social development	Extreme poverty is declining in Emerging Asian countries. Plans for regional co-operation on the issue are outlined in the ASEAN Framework Action Plan on Rural Development and Poverty Eradication 2016-2020.
Energy	Among other programme areas, the ASEAN Plan of Action for Energy Co-operation outlines strategies for improving energy efficiency, which is improving in much of the region.
Initiative for ASEAN Integration	IAI Work Plan III outlines actions to be taken to reduce development gaps in a number of important policy areas. Differences between the ASEAN-6 and CLMV countries are more pronounced in some of these areas than others.

Source: OECD Development Centre.

TRADE IN GOODS AND SERVICES

Progress in integration

- Overall, ASEAN countries have made significant progress in reducing tariffs over the years. Nevertheless, additional efforts will be needed to eliminate the non-tariff barriers.
- Recently, ASEAN has undertaken to liberalise air transport services as part of the ASEAN Framework Agreement on Services, and is working to facilitate the free movement of skilled workers in the region through an improved qualifications framework.

ASEAN countries have made progress on trade facilitation measures to overcome non-tariff barrier issues and are on the brink of a level playing field

Like the other six members, the CLMV countries (Cambodia, Lao PDR, Myanmar and Viet Nam) committed to reducing their tariffs when joining ASEAN. They are now required to lower them further on additional products by 2018. Tariffs on goods, such as coffee, tea, chocolate confections, animal feed, salt, cement, hand-made lace, tableware and alcoholic beverages will be eliminated to 0% from a rate of 5% the year before. On 5 January 2018, Viet Nam, for example, passed 10 decrees on preferential import tariffs for the five years from 2018 to 2023. The move affects Viet Nam's free trade agreements (FTAs), including with ASEAN itself and those between ASEAN and China, Korea, Japan, India, Australia and New Zealand. It also applies to Viet Nam's bilateral agreements with Japan, Korea, Chile and the Eurasian Economic Union.

The further reduction of tariffs on remaining products by the end of 2018 will yield a level playing field for all ASEAN members. Even though they have cut tariffs drastically over the years, they still have a long way to go before they fully eliminate the non-tariff barriers between each other.

As part of their bid to overcome non-tariff barriers (NTBs), the ASEAN countries continuously strive to improve trade facilitation and co-operation. Presently the most prevalent NTBs are customs surcharges (non-technical measures) and technical measures which include sanitary and phytosanitary measures, technical barriers to trade, pre-shipment inspection and other formalities.

Countries are rolling out AEO programmes and making progress on customs integration and co-operation

At the annual meeting of ASEAN Directors-General of Customs in Langkawi, Malaysia, between 2 and 4 May 2018, the directors-general agreed to intensify their work to roll out national authorised economic operator (AEO) programmes in all member states. Three years earlier, ASEAN Customs Authorities committed in establishing national AEO programmes, based on the SAFE Framework of Standards developed by the World Customs Organisation (WCO). An AEO is a party, which is involved in the international movement of goods and approved by a national Customs administration. The entity must comply with the supply chain security standard set by WCO. So far, Brunei Darussalam, Indonesia, Malaysia, Singapore, Thailand and Viet Nam have rolled out AEO programmes. The Philippines, Lao PDR, and Myanmar are either in the process of implementation or just beginning. Cambodia will start later this year.

The meeting also saw progress towards customs integration, especially with the establishment of the ASEAN Technical Sub-Working Group on Classification in May 2018. It is designed to settle all differences related to the classification of goods and procedures for reviewing ASEAN Harmonised Tariff Nomenclature. In the same meeting, countries also approved measures to carry out a feasibility study for mutual recognition arrangements on AEO and set up an e-commerce study group (ASEAN, 2018a).

Additionally, directors-general also held talks with the customs authorities of Australia, China, Japan and Korea to strengthen customs-to-customs co-operation in the region. They also consulted with the private sector, namely the ASEAN Business Advisory Council, the Federation of Malaysian Manufacturers, the EU-ASEAN Business Council, and the US-ASEAN Business Council to bolster customs-to-business partnerships.

ASEAN has committed to opening up air transport services as part of the AFAS agreement which still restricts skilled workers' freedom of movement

ASEAN Framework Agreement on Services (AFAS) comprises packages of commitments that its ASEAN signatories pledge to meet. The latest package is the tenth. Signed in October 2017 after the land transport and freight forwarding sub-sectors in the ninth package, its provisions spell out how each country should go about liberalising its air transport services incrementally. The services covered are aircraft repair and maintenance, sales and marketing of air transport services, computer reservation, the leasing of aircrafts and crew, and air freight forwarding.

Co-operation in the air transport services sector is not new in ASEAN. Two years before the Tenth Package of Commitments, on 1 January 2015, ASEAN ushered in an open skies policy. Known as the ASEAN Single Aviation Market (ASEAN-SAM), it is designed to increase regional and domestic connectivity, integrate production networks and enhance regional trade, so creating a single, unified air transport market, which allows airlines from ASEAN member states to fly freely throughout the region. The ASEAN-SAM should give rise to greater connectivity between aviation markets, easing the flow of air traffic, improving service quality and lowering ticket prices. As ASEAN-SAM continues to open up the market to more competition, it will contribute to growth and development.

The liberalisation of air transport services is a welcome move. It is also important, however, to take stock of how ASEAN countries are faring in the liberalisation of other services. Monitoring their progress can be challenging as levels of commitment, timelines and carve-outs are different. Instead of liberalising new sectors, they may want to pool their resources and fully liberalise priority sectors as a bloc to improve market access and level the playing field for all members.

The ninth and tenth packages of commitments, specifically, are short on in-depth provisions for Mode 4 service supply. That shortcoming hinders the movement of skilled labour within the region and points to the fundamental issue of workers' standards of skills and training across ASEAN. ASEAN is aware of the issue and has addressed it through the ASEAN Qualifications Reference Framework (AQRF) published in 2016.

ASEAN has strengthened and widened the use of its Qualifications Reference Framework and initiated a target-led competitiveness roadmap

If ASEAN is to maximise its mutual recognition arrangements, it needs to strengthen the AQRF. It intends to do so through peer reviews conducted by representatives of different sectors. The AQRF Committee – established in February 2017 with the support of the AANZFTA Economic Cooperation Support Program – commenced a peer-review process at its fourth meeting in Bangkok in May 2018.

The meeting was a milestone in ASEAN's use of AQRF to champion the movement of skilled labour within the region. The job of the AQRF Committee was to foster and maintain mutual trust and confidence between the ASEAN countries in each other's qualification systems through transparent referencing and the sharing of best practices and experience. Prior to the meeting, a technical workshop gave AQRF Committee members the chance to exchange views on the draft referencing reports that Malaysia, Philippines and Thailand had submitted. The purpose of the workshop was to give the AQRF Committee experience of the peer-review process ahead of the formal consideration of the AQRF Referencing Reports, which is expected to take place by the end of 2018.

If ASEAN is to make full use of the AQRF platform, it must update and further improve the referencing of National Qualifications Frameworks (NQFs) to AQRF. Countries have agreed to use NQF learning outcomes as standards for developing curriculum and training programmes and ensuring the quality of higher education across member countries. With affirmed commitments from the ASEAN member states that draft referencing reports, the AQRF Committee is on target to consider at least two reports this year. This project to reference NQFs to the AQRF aims to build mutually comparable NQFs that share a common reference framework and increase the capacity of ASEAN country officials to implement the referencing process effectively (ASEAN, 2018b).

The centrality of services to ASEAN's productivity and competitiveness prompted APEC leaders in 2015 to call for a strategic Services Competitiveness Roadmap (ASCR) that spelled out targets to be met by 2025. As part of ASCR, endorsed in 2016, Korea proposed developing a set of non-binding principles for the domestic regulation of the services sector. Work to that end is ongoing. Similarly, APEC's Committee on Trade and Investment (CTI) and the Group on Services (GOS), which it established in 1997, agreed on a proposal to develop an APEC Index – a set of indicators for measuring the regulatory environment of the services trade in APEC economies. A GOS-led technical group was put in place to discuss and co-ordinate details for developing and implementing the APEC Index.

The CTI, for its part, is also working on sectoral issues in trade in services through the GOS. With a view to facilitate the liberalisation of manufacturing-related services, the GOS drew up the Manufacturing-related Services Action Plan (MSAP), which ministers endorsed in 2015. An interim review of progress made as part of the MSAP is to be conducted by the end of 2018.

Growing momentum for new regional partnership deal, despite protectionist tensions

There is a growing momentum for the RCEP to be concluded by the end of 2018, according to various government sources. The scope of the RCEP encompasses traditional and non-traditional FTA areas, including provisions on goods, services, investments, economic and technical co-operation, competition, and intellectual property rights.

During the 22nd round of negotiations held in Singapore in May 2018, concern was raised over the slow pace of talks, as member states continue to discuss by how much to reduce customs duties on a maximum number of the products traded between them. Difficulties stem from countries' different competitive advantages and interests. RCEP comprises 10 ASEAN members (Brunei Darussalam, Cambodia, Indonesia, Malaysia, Myanmar, Singapore, Thailand, the Philippines, Lao PDR and Viet Nam) and their six FTA partners – India, China, Japan, Korea, Australia and New Zealand. Its members outnumber those in the CPTPP, which adds to the complexity of the trade negotiations. Nevertheless, the latest 6th RCEP Ministerial Meeting held on 30-31 August 2018 in Singapore reviewed that the negotiations made headway.

Amidst heightening protectionist sentiment in global trade, the CPTPP was signed on the 8th of March 2018. The CPTPP is one of the largest free trade agreements in the world, accounting for nearly 13.5% of global GDP. The agreement brings together Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Viet Nam, and offers those members freer trade and investment access.

The CPTPP has kept two-thirds of the 30 chapters in the original Trans-Pacific Partnership intact. The most significant revisions were in the investment and intellectual property (IP) chapters. The investment chapter, for example, now restricts investors' ability to litigate disputes under investment agreements and investment authorisations, used chiefly for mining and oil investment. Similarly, the revised IP chapter has shortened the length of patent protection for innovative medicines, narrowed the terms of technology and information protection, and reduced copyright periods for written material.

INVESTMENT AND CAPITAL MARKET LIBERALISATION

Progress in integration

- After approving the ASEAN Fast Action Agenda on Investment, the ASEAN Coordinating Committee on Investment reconvened to address ways of linking MSMEs with ASEAN and global MNCs and strengthening their collaboration. The ultimate objective was to improve their competitiveness, integrate their markets into global value chains, and promote investment promotion, facilitation, protection and liberalisation.
- The liberalisation of financial services is increasingly prompting the insurance industry to harnessing digital technology to modernise. Similarly, green bonds seeks to incentivise investment in eco-friendly infrastructure as part of capital market liberalisation.

ASEAN's FAST Action Agenda and 3rd AFMGM are milestones in the move towards greater integration in capital and investment

ASEAN has been striving to bring about wider regional and global integration in capital and investment through various platforms and socially inclusive strategies. As part of its drive to build competitive, innovative, dynamic, resilient and integrated economies, ASEAN's capital and investment liberalisation policies focus on bringing micro, small and medium-sized enterprises (MSMEs) closer to the digital economy. Accordingly, the Focused and Strategic (FAST) Action Agenda on Investment and the work of the 3rd ASEAN Finance Ministers' and Central Bank Governors' Meeting (AFMGM) have sought to:

- improve collaboration between ASEAN MSMEs and multinational companies (MNCs) in ASEAN countries and globally;
- foster financial and capital integration in order to afford certain ASEAN banks easier access to and operating flexibility in each other's markets and build larger technology-oriented insurance markets;
- strengthen green bond issuance to promote eco-friendly infrastructure development in ASEAN.

ASEAN's FAST Action Agenda has laid the foundations for greater integration of the region's MSMEs as part of its aim to liberalise investment

The FAST Action Agenda on Investment was one of ASEAN's key deliverables in 2017. It was approved in February of that year at the 69th meeting of the ASEAN Coordinating Committee on Investment (CCI). The FAST Action Agenda calls for the expansion of regional economic growth in MSMEs through closer ties with ASEAN and global MNCs. To address that issue, the Philippine Board of Investment, which chaired the 69th meeting, and the Philippine Chamber of Industry and Commerce then convened another meeting of the CCI in Manila on 19 October 2017. The meeting thus provided ASEAN MSMEs and global MNCs with an opportunity to gather and exchange information about each other and build networks as part of the effort to improve the competitiveness of MSMEs and integrate their markets into global value chains. The FAST Action Agenda on Investment seeks to further investment promotion, facilitation, protection and liberalisation – a four-pronged aim that is consistent with the four pillars of the ASEAN Comprehensive Investment Agreement (ACIA). The ACIA endorses the AEC's goal of capital and investment liberalisation, while the CCI, as a technical body, oversees its implementation in furtherance of ASEAN business and investment regionally and internationally.

ASEAN has been making headway in liberalising services through the AFAS agreement and in integrating its banks under the ASEAN Banking Integration Framework

The 3rd ASEAN Finance Ministers' and Central Bank Governors' Meeting (AFMGM), held in the Philippines in April 2017, marked significant progress on the financial integration and capital market liberalisation fronts. Indeed, ASEAN has seen its banks gain access to markets and improve their operational flexibility. It has also gradually fostered a technology-oriented insurance market and promoted greater ecological infrastructure investment and development. As for financial integration, some important developments have taken place in areas such as services liberalisation and banking and insurance integration. As for the 7th AFAS Package, it endorses the broad-based liberalisation of financial services. An important feature of both packages is that ASEAN central bank governors and finance ministers have agreed to include provision for their implementation in the ASEAN Banking Integration Framework 2020 (ABIF). ABIF promotes easier access to, and operational flexibility in, other ASEAN markets for banks that meet appropriate regulatory criteria, called Qualified ASEAN Banks (QABs), by 2020. ABIF also affords ASEAN countries the opportunity to strike bilateral agreements to make it easier for QABs to enter their domestic markets. On 6 April 2017, Thailand and the Philippines, for example, signed letters of Intent to enter into a bilateral agreement under the terms of the ABIF. As members of the AEC, ABIF requires Indonesia, Malaysia and the Philippines, Singapore and Thailand to sign bilateral agreements by 2018.

Green bond standards foster capital markets liberalisation in ASEAN

On the capital market liberalisation front, the ASEAN Capital Markets Forum (ACMF) launched the ASEAN Green Bond Standards (AGBSs) in Kuala Lumpur on 8 November 2017. Green bonds are intended to strengthen connectivity in ASEAN's capital markets by financing infrastructure projects and ensuring corporate governance practices that yield environmental and climate-related benefits. Indeed, the promotion of an eco-friendly infrastructure environment is changing market dynamics in the age of digitalisation. The AGBSs adhere to the Green Bond Principles (GBPs) of the International Capital Market Association (ICMA). The ICMA published its GBPs in 2014 as guidelines in the following areas – the use and management of proceeds, project evaluation and selection processes, and reporting. Similarly, the AGBSs encourage green financing, stressing the importance of transparency, disclosure and integrity. They seek to improve the transparency, consistency and uniformity of green bonds in the regional market. ICMA and ASEAN capital market regulators and industry players have lent the ASEAN GBS their backing, while the ACMF has added five key new principles: issuers must be eligible; fossil fuel projects are ineligible; information must be continuously accessible; issuers should report more frequently; and external reviewers should be qualified. Green bonds are to be issued in accordance with the original GBPs and the five new features.

COMPETITION AND CONSUMER PROTECTION

Progress in integration

- ASEAN is laying the foundations of effective consumer protection and greater market competitiveness.
- It could focus further on the implementation of consumer protection and disparities between countries in the roll-out of competition law, which pose as obstacles to the establishment of a single, integrated, competitive market.

ASEAN is building the blocks for effective regional co-operation but needs to look beyond frameworks and information

Cross-country transactions in ASEAN are increasing and, combined with technological advances, making consumer and business protection more and more difficult. In such a context, the conformity of businesses with codes of good conduct enables consumers to make informed choices and not lose confidence in the market, which will eventually lead to growth in businesses.

To effectively protect consumers involved in cross-border transactions, ASEAN is working on a common framework. As a first step, it drafted the ASEAN High-Level Principles for Consumer Protection, which it adopted in 2017. The eight principles are (ASEAN, 2018c):

1. The enforcement of consumer protection laws is fair, consistent, effective and proportionate.
2. Consumers are equipped with the skills, knowledge, information and confidence to exercise their rights.
3. Consumers are protected from harmful goods and services.
4. Consumers have access to appropriate and convenient sources of advice and redress including Alternative Dispute Resolution.
5. Consumers understand the impact of consumption decisions on the shared environment.
6. Strong consumer advocacy is promoted.
7. High levels of co-operation between different levels of government, businesses and other stakeholders.
8. Consumers in e-commerce are protected.

On 7 May 2018, ASEAN released a handbook that compiles information on consumer protection laws and regulations in ASEAN member countries. The publication provides information on, for example, agencies, consumer associations and complaint mechanisms. It is designed to increase consumers' awareness of their rights and to empower them with knowledge of the remedial tools that they need and the consumer associations that can advise them. Ultimately, it contributes to the development of competitive markets in the region. Although efforts to protect consumers continue, they need to go beyond frameworks and information sharing in the long run.

The region and countries are addressing disparities in the development of competition law and stepping up co-operation

Competition law is essential to the development of an integrated, dynamic and competitive single market and production base. To that end, ASEAN member states continue to strengthen their competition frameworks. Nine had introduced competition laws by 2015. Cambodia is expected to enact legislation in the near future, while Thailand widened its 1999 competition law in October 2017 to include institutions such as state-owned enterprises (SOEs). Countries have also established new competition agencies and restructured existing ones:

- Thailand is restructuring its Office of Trade Competition Commission;
- Viet Nam's Competition Authority became the Viet Nam Competition and Consumer Authority in August 2017;
- Brunei Darussalam put in place the Competition Commission of Brunei Darussalam, also in August 2017.

ASEAN, for its part, has compiled member states' competition laws in a compendium and updated its 2013 handbook on competition policy and law (ASEAN Experts Group on Competition, 2018).

ASEAN countries also draw on the support of international partners for training in building the capacity of their competition authorities, which are still comparatively young. At a workshop in October 2017, the Australian Competition and Consumer Commission and the Philippines Competition Commission shared their experience with Viet Nam, Lao PDR, Myanmar and Cambodia in designing competition regulations and agencies. While multilateral, regional and bilateral agreements afford access to foreign markets, they also open doors to domestic ones. Accordingly, competition officers need to negotiate competition clauses in trade agreements so as to protect consumers and local markets. In April 2018 the Indonesian Business Competition Supervisory Commission and the Japan Fair Trade Commission held a workshop for competition officials on negotiating competition chapters in FTAs. Another workshop in May 2018, convened by the Australian Competition and Consumer Commission and the New Zealand Commerce Commission, afforded countries the opportunity to share their experience and examine challenges.

The growth in cross-border trade calls for adequate measures to investigate and sanction infringements, though not to the detriment of business development. ASEAN plans to establish an ASEAN Research Centre for Competition by 2020, which will encourage research into competition policy and law and provide competition officials and stakeholders with training. ASEAN officials are also working on a Regional Co-operation Framework (RCF). It outlines general competition-related objectives, principles, areas and sets the scope of co-operation between ASEAN member countries. It is to be finalised by the end of 2018 and will be the basis for a Regional Co-operation Agreement on competition scheduled for 2020.

INTELLECTUAL PROPERTY

Progress in integration

- ASEAN as a whole as well as individual countries are increasingly acting to protect intellectual property rights, which are important in safeguarding national products and driving innovation.
- Despite the many achievements of the ASEAN Working Group on Intellectual Property Co-operation, gaps between ASEAN member countries in awareness and promotion of IP protection for innovators exist.

Intellectual property frameworks in ASEAN are being strengthened

The ASEAN Economic Community Blueprint 2025, released in 2015, singled out IP as an issue that the roadmap needs to address towards a harmonious AEC. ASEAN acknowledges not only that IP is key to efforts to build an innovative, competitive bloc, but that intellectual property rights (IPRs) should be protected and recognised. The protection of IPRs enables ASEAN members to advance technologically by encouraging technology transfer and stimulating innovation and creativity in the region (ASEAN, 2015a).

On the ground, ASEAN countries are already recognising IPRs as a way to protect their national products and heritage in trade activities. Thailand grants IP protection for wines, spirits, rice and silk – not only to safeguard the quality of the products, but also to reinforce its national identity in the global marketplace. Viet Nam also uses geographical indications (GIs) as a mark of quality control and to differentiate and promote its products. GIs indirectly empower the country's farmers and strengthen its agricultural exports. Cambodia, too, has benefitted from GIs as Kampot pepper and palm sugar have gained popularity worldwide. As for the Philippines, it uses IPRs to protect the rights of local indigenous communities through a regulation that mandates a register of indigenous knowledge systems and practices. The country also requires any traditional knowledge used in patent applications to be disclosed. As a multi-ethnic, multi-cultural country, Indonesia, too, gains from IPRs as they enable strong legal protection of traditional knowledge.

IPRs also help to strengthen institution building. Some ASEAN countries have established Technology and Innovation Support Centres. They have become a valuable part of the process that goes from conceiving the idea for a product to its promotion and sale. It is important to develop such hubs to facilitate communication between investors, researchers and the private sector. Brunei Darussalam, for example, is conducting a series of public awareness campaigns to educate the public on the importance of IP protection. Singapore, however, has taken a different approach. As an International Searching Authority and International Preliminary Examining Authority under WIPO's Patent Co-operation Treaty, the country is setting new standards of patent quality and patent applications in the ASEAN bloc. As for the Philippines, its Intellectual Property Office boasts a high settlement rate in disputes over IPs. For example, it successfully mediated a public health dispute between the government and a pharmaceutical firm applying for special compulsory licensing (Garcia, 2017).

As part of its many measures, ASEAN has steadily stepped up co-operation with the World Intellectual Property Organisation (WIPO) in recent years. Countries like Lao PDR, Myanmar, the Philippines and Viet Nam work with WIPO to strengthen their national IP strategies and meet their commitments under the regional framework.

ASEAN is widening international co-operation in IPRs

There are also initiatives outside the ASEAN framework. In March 2018, for example, a Memorandum of Co-operation (MOC) on Intellectual Property was signed by the heads of ASEAN intellectual property offices and the Korean Intellectual Property Office (KIPO) in Brunei Darussalam. The MOC sets out an institutional framework for enhanced, structured co-operation, whereby both parties work to develop their respective intellectual property systems, promote innovation and technology and contribute to the economic partnership growth between ASEAN and Korea.

As for regional co-operation, the ASEAN Working Group on Intellectual Property Co-operation (AWGIPC) plays a key role in spearheading action such as reviewing and upgrading the IP regulatory frameworks already in use by ASEAN member countries. In March 2018, the Fifty-Fifth Meeting of the AWGIPC discussed IP issues, exchanged views and updates of ASEAN IP priorities for 2018, and examined the implementation of the AWGIPC IP Rights Action Plan in ASEAN member states. Also attending the meeting were a number of dialogue partners, namely the KIPO, the Japan Patent Office (JPO), and China's State Intellectual Property Office.

Immediately afterwards, the Tenth Meeting of the Committee on Intellectual Property of the ASEAN-Australia-New Zealand Free Trade Agreement (AANZFTA) was held. It discussed and exchanged information on key outcomes and decisions of the AANZFTA Joint Committee. AANZFTA's IP Committee is currently looking at an Economic Co-operation Work Programme Component Implementation Plan and post-2015 intellectual property project proposals that cover training and capacity building among AANZFTA signatories. These multiple moves show how many existing and future FTAs are incorporating and will incorporate IPRs. ASEAN and its partners in the ASEAN-Plus-One Free Trade Agreements do so, as does the newly signed CPTPP, which includes a very detailed and advanced chapter on IPRs (MEMI, 2018).

As well as bridging the gap between ASEAN countries in rolling out IPR and monitoring IP-related issues – through training and online platforms like the ASEAN IP Case Law and ASEAN GI databases – AWGIPC has been working closely with WIPO since 1993. The WIPO helped draft the ASEAN Intellectual Property Strategic Plan for 2016-2025, which sets four main goals to:

- Strengthen intellectual property offices and build infrastructure;
- Build regional platforms;
- Expand ecosystems;
- Improve regional mechanisms to promote asset creation and commercialisation, particularly for geographical indications and traditional knowledge.

The current work of the AWGIPC is based on the ASEAN Intellectual Property Rights Action Plan 2016-2025. The action plan seeks to transform ASEAN into an innovative, competitive region by using intellectual property rights to protect its nationals and ensure that the region remains an active player in the international intellectual property community (ASEAN, 2016a).

A streamlined patent application procedure has been enhanced by the publication of guidelines for filing requests

ASEAN countries have been working together to share patents for nearly 10 years. In 2009 they created ASEAN Patent Examination Co-operation (ASPEC). It was the region's first patent work-sharing programme and brought together the IP offices of Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam. In May 2018, the ASPEC participating offices went on to improve and streamline the process of an ASPEC request by publishing the Document Submission Guideline in the ASEAN IP Portal. It is designed to steer patent applicants through the requirements of individual ASEAN member states and help them avoid pitfalls. Due to the fact that the IP offices of ASPEC members can use each other's Search and Examination, duplication is averted, corresponding patents are obtained more swiftly and effectively, and world-class quality is maintained. Currently, more than 300 ASPEC requests have been filed. With the time saved through work sharing, more than two-thirds have received an IP office response or been granted a patent.

Despite the many achievements of ASEAN Working Group on Intellectual Property Co-operation and other IPR-related work, there are still gaps between ASEAN member countries in awareness and promotion of IP protection for innovators. While regional frameworks and co-operation on IP rights have made significant headway, a great deal more needs to be done at national level to make IP protection a priority in all ASEAN countries.

INFRASTRUCTURE AND CONNECTIVITY

Progress in integration

- Much progress has been made in road, railway and air transportation, increasing connectivity in the region. Tackling financial and technical barriers can foster further integration.
- Progress in the development of roll-on/roll-off shipping routes is a good sign. However, greater effort should be directed towards increasing the capacity of ports, as they are where most transactions take place.

Steady progress is being made in land and air transport

ASEAN Highway Network (AHN), a major project to connect and upgrade highways in the region, is a top priority for ASEAN. As part of the Asian Highway Network project, which totals over 140 000 kilometres and connects 32 countries, the AHN comprises 23 designated routes totalling 38 400 kilometres in length. The AHN project has made progress as there are almost no more missing links,[3] while sub-Class III roads are to be found only in Lao PDR and Myanmar. This is expected to be resolved by 2020 for Lao PDR, but the situation is still unclear in Myanmar due to funding issues. For similar reasons, Lao PDR is unlikely to be able to upgrade very busy roads by 2020 (Table 4.2).

Table 4.2. **Progress in the ASEAN Highway Network project to connect and upgrade highways**

Key actions	Progress
Upgrade sections that are below Class III to at least Class III by 2012	Not completed in Myanmar (536 km remaining) or Lao PDR (391 km remaining).
Install common road numbering signs and route signage on all transport transit routes (TTRs) by 2013	Completed in Brunei Darussalam, Cambodia, Myanmar, Philippines, Thailand and Viet Nam. Ongoing in Malaysia, Singapore, Indonesia and Lao PDR.
Upgrade sections with high traffic volume to Class I by 2020	Upgrading ongoing on segments in Cambodia, Indonesia, Thailand, and rehabilitation pursued in the Philippines while Lao PDR is seeking for funds.
Conduct feasibility study (FS) on bridging archipelagic countries and mainland ASEAN by 2015	FS and basic design conducted on Sunda Straits Bridge (SBB), but Indonesia no longer considers it a priority.
Upgrade extension of AHN to China and India by 2015	Talks and implementation ongoing for the India-Myanmar-Thailand Trilateral Highway and its extension to Lao PDR, Cambodia and Viet Nam. The Lao-Myanmar Friendship Bridge, part of the AHN extension project, completed.

Source: OECD Development Centre's compilation based on MPAC 2010 and MPAC 2025.

As for railways, while several sections of the Singapore Kunming Rail Link are still stalled, the connection from Singapore to Phnom Penh was completed in 2018. After the rehabilitation of the stretch from Aranyaprathet to the Thai border in early 2018, the line from Poipet to Sisophon was completed in April 2018 and the final section to Phnom Penh in July 2018. Work is still ongoing on other sections in Lao PDR, while stretches in Cambodia and Viet Nam are still in their study phase, which has caused completion, scheduled for 2020, to be postponed until December 2021. Work to build sections near the Myanmar-Thai border has been called off due to low return on investment. A new section is being considered instead, but Myanmar has yet to secure technical and financial assistance for its part (ASEAN, 2017b).

With regards to air transport, ASEAN member countries have been gradually moving towards the ASEAN-SAM. This will permit member countries' airlines to freely operate freight and passenger services across ASEAN, foster competition, lower fares, and boost tourism in the region. While member countries have ratified the necessary agreements and most, though not all, have implemented them, they have yet to harmonise their regulations – in areas such as safety, for example –and liberalise the market in accordance with the ASEAN-SAM Implementation Framework. Such a unified position would increase ASEAN's bargaining power in the negotiations it is conducting with major market partners like India and Korea (Tan A. K.-J., 2017).

Maritime infrastructure still needs a push

Maritime transport accounts for a large share of traffic in international trade. If ASEAN countries are to reap the full benefits of being part of the global shipping system, they first need to improve shipping between each other by building port capacity and increasing connectivity between the mainland and archipelagic regions. ASEAN laid the foundations for greater connectivity when it completed the Master Plan and Feasibility Study on the Establishment of a Roll-On/roll-Off Network and prioritised three routes. Malaysia and Indonesia are particularly working closely together ahead of the forthcoming operationalisation of the Melaka-Dumai route. And while the Philippines and Indonesia opened the Bitung-General Santos-Davao route in April 2017.

The capacity upgrade of ASEAN's 47 designated ports is still under study and significant gaps remain within ASEAN countries. Smoothly operating ports also require the harmonisation of formal procedures like customs clearance and quarantine.

Co-ordinated efforts at the ASEAN level could expedite seamless logistics

While a considerable effort is being made at the sub-regional level, co-ordination at the ASEAN level could expedite processes for seamless logistics while closing the infrastructure gap between countries. Member states are working to ratify several transport facilitation agreements. However, ratification is still ongoing.

While the ASEAN Trade Repository, designed to enable the transparent exchange of information on non-tariff measures (NTMs), was soft-launched in 2015, some member states are still in the stage of inventorying their NTMs.

Since January 2018, five countries have benefitted from the ASEAN Single Window, which simplifies and accelerates the clearance of cargo. Some countries have put in place national single windows (NSWs), others are in the midst of developing their NSWs. A concerted effort would help those that do not yet have NSWs to move forward.

SMALL AND MEDIUM-SIZED ENTERPRISES

Progress in integration

- ASEAN can strengthen its MSMEs agenda only if countries attract informal MSMEs into the formal sector through incentives that outweigh formalisation costs of their businesses.

One of the four main objectives of the latest phase of the ASEAN Strategic Action Plan for SME Development 2016-2025 is strengthening the sustainability of micro enterprises. Accordingly, one of the plan's strategic goals is to improve the MSME policy and regulatory environment. It sets a 2016 target for providing MSMEs with information and advice about regulations governing business formation, with a special focus on informing informal businesses about the MSME support available to them. The dissemination of information and advice is part of the region's drive to streamline formalities and harness the formal and informal sectors as engines of domestic economic growth. However, it is not enough in itself to coax informal firms into the formal sector. On the ground, and going beyond the ASEAN MSME agenda, countries should act on a national level. They should, for example, address the cost of registering businesses and offer new businesses tax incentives (ASEAN, 2016b).

ASEAN is moving to empower and integrate young and female entrepreneurs as part of its drive to unlock the regional potential of MSMEs

Many women- and youth-operated MSMEs operate in the informal sector, both regionally and globally. Another strategic goal in the effort to ensure the sustainability of micro enterprises in ASEAN is to promote entrepreneurship and develop human capital and development. As part of its action to meet that goal by 2025, ASEAN highlights the importance of collaborating with the private sector to provide micro enterprises and young and female entrepreneurs with vocational training and counselling. Further measures to empower young and female MSME entrepreneurs could be – again working with the private sector – to develop technical vocational education and training (TVET) in the focus industries to meet those industries' needs and establish SME technical training centres for updating operational efficiency through on-the-job training. Such measures would help better integrate women- and youth-operated businesses in the formal sector in the near future and make them as competitive and well equipped as other firms in the economy.

In the context of ASEAN's effort – though outside its SME framework – to empower young and female entrepreneurs, the ASEAN Plus Three Young Entrepreneurs Forum in August 2017 in Phnom Penh took as its theme, "Enhanced Roles of Young and Women Entrepreneurs in the East Asia Economic Community". The forum's prime goal was to promote networking and build mutual understanding between young and women entrepreneurs from ASEAN and the Plus Three countries, seen as conducive to SMEs' development, exports and innovation. The forum also sought to explore ways in which young and female entrepreneurs could take their place on platforms that would give them a voice and enable them to share their views and recommendations on the process of building the East Asia Economic Community. The most important focus, though, was to enhance the role of youth and women in the growth and development of SMEs and, thereby, in ASEAN and the Plus Three countries as a whole (ASEAN, 2017c).

Even though the size of the informal sector is unmonitored and underestimated, it has provided jobs and opportunities for those who choose, for numerous reasons, not to compete or join the formal sector. Accordingly, countries like Malaysia, through its 1AZAM programme, and Thailand, with its One Tambon One Product scheme, have successfully channelled needed resources to help empower female entrepreneurs who run informal micro businesses.

Viet Nam, too, has enacted a new Small and Medium-Sized Enterprise Support Law, which came into effect on 1 January 2018. It also introduced a legal framework that enables the private sector and government agencies to increase support for SMEs. To benefit from the new provisions, however, SMEs should employ no more than 200 workers and they must be insured, limiting those SMEs operating within the formal sector. Additionally, their total capital should not exceed VND 100 billion and their total revenue from the previous year limited to VND 300 billion. SMEs that do qualify for support, however, enjoy tax incentives, loan provisions, credit guarantees, preferential terms for renting land, technology transfers, training, and human resource development.

Efforts are ongoing to internationalise ASEAN MSMEs and integrate them into global value chains

In October 2017, a meeting was convened in Siem Reap to promote co-operation in developing the growth and exports of ASEAN and Korean MSMEs and build networks between them. Priority sectors included were steel and steel products, agriculture, healthcare, tourism, logistics and e-commerce. One objective of the two-day meeting was to put on an operational footing for the sector board initiative as proposed by the ASEAN-Korea Business Council. To that end, delegates identified priority sectors on which sectoral boards should focus. They will be proposed as the reference in further talks to advance the initiative (ASEAN, 2017d).

Given the importance of MSMEs in the region's inclusive growth agenda, APEC's CTI has initiated the publication of the APEC Strategic Blueprint for Promoting Global Value Chains Development and Co-operation (GVCs Blueprint), agreed upon by government leaders in 2014. The blueprint includes a Korea-led initiative to help SMEs benefit from global value chains and the online APEC Global Value Chain Partnership Platform proposed by China and Indonesia.

On the ground, APEC kick-started a project in 2017 called "SMEs' Integration into Global Value Chains in Services Industries: Tourism Sector" which runs through 2018. Its objectives are to:

- facilitate better understanding of the structure of the main tourism global value chains, which involves examining cultural and nature tourism, accommodation and transport providers, cafes and restaurants, and the opportunities and challenges for MSMEs operating in tourism in Asia Pacific;
- provide APEC policy makers with a set of recommendations on how to enhance competitiveness in tourism GVCs;
- help MSMEs build capacity and develop a strategy for effective integration into services GVCs.

Other APEC initiatives to strengthen MSMEs in the region include *Promoting E-commerce to Globalize MSMEs*: a 2017 study into the challenges that MSMEs face in their use of e-commerce and ways of facilitating it. APEC also drew up a set of best practices in the *APEC Best Practices for Promoting Supporting Industry in the Asia Pacific Region,* an industry support initiative, which was welcomed by ministers in 2017. The Joint CTI-APEC SME Working Group is compiling a compendium of methodologies, measures and programmes for SMEs seeking to internationalise their business. The compendium contains best practices and success stories posted on APEC's MSME Marketplace website.

FOOD, AGRICULTURE AND FORESTRY

Progress in integration

- Efforts to standardise food safety and nutrition labelling could keep up with the updated rules and regulations that complement ASEAN free trade agreements.
- ASEAN countries could speed up their capacity building and harmonisation of food and nutrition labelling in order to stay in line with regional integration agreements.

The AIFS and SPA-FS 2015-2020 foster regional integration and sustainable economic development

The standardisation of food products facilitates the trade thereof. It is thus a key part of efforts to foster regional integration and, by the same token, sustainable economic development ASEAN-wide. ASEAN has successfully enacted regional free trade agreements in recent years. It is therefore important that it should update and improve rules and regulations that complement those agreements. It has, for instance, made progress in implementing the ASEAN Integrated Food Security Framework (AIFS) and the Strategic Plan of Action on ASEAN Food Security (SPA-FS) 2015-2020. The aims of the two instruments are to foster long-term food security, provide safe and nutritious food, and enhance farmers' livelihoods. In other words, AIFS and SPA-FS seek to promote regional integration through the food trade and the exchange of knowledge and technologies. They also provide ASEAN members with guidelines in building a resilient, sustainable infrastructure that enables them to provide safe and nutritious food, respond swiftly to emergencies, invest further in agriculture, and improve their coordination and monitoring efforts in the sector.

Non-tariff measures to be utilised to complement safe, sustainable cross-border regional trade

The AIFS implementation timeline comprises short, medium and long-term milestones – 2015-2016, 2016-2018, and 2018-2020. For example, the long-term 2018-2020 milestone contains provisions for AIFS signatory countries to conduct pilot tests on the nutrition information module (integrated into AIFS and related mechanisms), to revise and finalise the module accordingly, then share their improvements with the other countries. However, key actions in the AIFS framework were recently rolled out in 2018. Speeding up the harmonisation of non-tariff measures such as standardisation and labelling to keep in line with ASEAN regional integration agreements. Accordingly, non-tariff measures (trade permits, export taxes and bans, etc.) still hamper cross-border regional trade.

Capacity building and the harmonised rules and regulations smooth regional integration

Measures for easing regional integration fall into two broad categories: 1) building capacity to narrow economic gaps between the ASEAN countries, and 2) standardising regional rules and regulations (on labelling, for example) to bring them into line with international standards. Such measures help harmonise regional standards by encouraging the less-developed countries to catch up with the more highly developed ones. Once regional integration has been completed, food standards can then be brought into compliance with international standards at a faster pace. The process brings regional trade closer to international markets.

Capacity building narrows gaps between countries and maximises knowledge of trade standards

Capacity building helps narrow sector-related disparities between ASEAN regions and countries and maximise ASEAN members' knowledge and understanding of food standardisation and analytical techniques. It thus improves the regional food system so that it is better equipped for integration with the global food markets. For instance, in September 2017, Food Industry Asia, which aims to enhance the industry's role as a hub for advocacy and debate, collaborated in a capacity-building project with the Asian Development Bank (ADB) and six agricultural ministries in the Greater Mekong Sub-region (GMS) – those of Cambodia, China, Lao PDR, Myanmar, Thailand and Viet Nam. They first consulted with stakeholders before focusing on building the capacity of MSMEs in the agricultural sector, since such MSMEs may not be always aware of the benefits of being integrated in supply chain standards. ASEAN, along with Japan's Ministry of Agriculture, Forestry and Fisheries, then provided project guidance on how to strengthen capacity building in the agricultural sector. As part of the project, training courses and classes designed to improve food value chain ability in ASEAN member states were held from May to August 2018.

Accelerating the harmonisation of regional food standards compatible with international standards is key to further success in regional integration

The ASEAN Food and Beverage Alliance (AFBA, 2018) believes that it is essential to speed up the standardisation of food and nutrition labelling in the region because its sheer variety could hinder regional and international trade. By way of example, the AFBA (2018) notes that some ASEAN countries – such as Singapore, Malaysia, Brunei Darussalam, Lao PDR, Viet Nam and Cambodia – follow Codex Alimentarius (or food code) guidelines for pre-packaged food and beverages. Others, however, like Thailand and the Philippines, abide by United States nutrition labelling guidelines. As world food trade has increased over time, so has membership of international Codex standards that seek to protect the health of consumers and improve harmonisation. However, there is still divergence in food and nutrition labelling from country to country. It is mandatory in Malaysia and the Philippines, as it is in Thailand for certain food items. These different requirements and formats in nutrition labelling may give rise to non-trade barriers within the region and higher compliance costs for firms. Accordingly, it is important to accelerate the standardisation of the ASEAN region's food and nutrition labelling in the region so that it is compatible with international standards and non-tariff measures to encourage cross-border regional trade.

TOURISM

Progress in integration

- ASEAN's vision of the region as a single unified tourist destination strengthens the co-ordination of countries' tourism policies, so enhancing sustainable development.
- The Visit ASEAN@50 campaign has given ASEAN tourism a great boost, attracting about 125 million international visitors and generating USD 93 billion in 2017.

When the ASEAN region promotes itself as a single unified destination it is also promoting sustainable development

The AEC 2025 vision for tourism aims to harmonise member countries' policies in the sector. The vision also promotes high-quality tourist destinations and the development of sustainable, inclusive tourism as part of ASEAN's agenda for regional and global integration (ASEAN, 2015b). In particular, ASEAN tourism is also guided by the ASEAN Tourism Strategic Plan 2016-2025. The AEC 2025 vision steers ASEAN towards its goal of being a single unified destination where sustainable tourism has a positive impact on the environment, stimulates GDP growth, improves infrastructure development and increases international trade and investment. Specific areas focused on the the governments include infrastructure (e.g. airport and port networks and connectivity) and human capital (by boosting the efficiency and quality of services in the hospitality industry). As part of its effort to strengthen sustainable economic development through the tourism sector, the 36th ASEAN Tourism Forum (ATF) in 2017 was themed "Shaping Our Tourism Journey Together" and the 37th, held in 2018, "Sustainable Connectivity, Boundless Prosperity".

Harmonised tourism policies strengthen the ASEAN region as a tourist destination in its own right, while promoting the diversity of each country

The 36th ATF, which was hosted by Singapore in 2017, aimed to promote ASEAN as a single unified destination. The goals set during the forum include making visa application procedures easier, training tourist guides better in countries' cultures and languages, stimulating diverse types of businesses in the tourist sector, and building infrastructure (e.g. electricity networks, IT services, airports, ports and roads). The 20th ASEAN Tourism Ministers Meeting and the 16th ASEAN Plus Three Tourism Ministers Meeting (with ministers from China, Japan and Korea) also took place in 2017 in conjunction with the ATF. The two meetings were designed to back the ASEAN integration goals laid out in the ASEAN 2025 blueprint and in the ASEAN Declaration on Cruise Tourism of the ASEAN Tourism Competitiveness Committee. ATF 2017 also officially launched Visit ASEAN@50, the Golden Celebration campaign to mark 50 years of ASEAN through the promotion of festivals and different modes of tourism offered in the region.

Cruise tourism has enormous potential in the region. It creates jobs, facilitates new infrastructure development and protects the environment, cultural heritage and modern and historic cities. It also widens business opportunities by offering packages and travel experiences in the ASEAN region. The AEC 2025 vision seeks to stimulate GDP growth, improve infrastructure development and boost international trade and investment in ASEAN. Against that background, cruise tourism could help harmonise the AEC 2025 vision across ASEAN, while demonstrating the uniqueness of each country as a tourist destination. The Visit ASEAN@50 campaign both addresses the region's rich diversity and promotes it as a single, unified tourism destination. Regional attractions include trekking, nature tours, wildlife, beaches and the sea, rivers and lakes, cultural encounters, ancient buildings, city visits, food and drink, local and luxury shopping. Tourism may also be a country-level experience, as Thailand, for example, has successfully demonstrated with its "Unique Thai Local Experience" package deals.

ASEAN's drive to promote the region as a tourist destination in support of sustainable development has drawn millions of visitors and generated billions of dollars in revenue

The city of Chiang Mai in Thailand hosted ATF 2018. The theme was "Sustainable Connectivity, Boundless Prosperity". The goal of the ATF was to promote better livelihoods and develop mechanisms for sustainable development in ASEAN, so providing populations with economic and social opportunities and helping to reduce the development gaps between them. The 21st ASEAN Tourism Ministers Meeting and the 17th ASEAN Plus Three Tourism Ministers Meeting were held in conjunction with ATF 2018. The purpose was to promote sustainable development by expanding the programme to market the ASEAN region as a tourist destination in itself. The programme is already creating jobs and strengthening infrastructure development. For example, Visit ASEAN@50 has successfully attracted an estimated 125 million international visitors, exceeding its target of 121 million. What is more, tourism generated a revenue of USD 93 billion in 2017 (ASEAN, 2018d).

HUMAN AND SOCIAL DEVELOPMENT

Progress in integration

- Recently released regional plans on human and social development that are of relevance to the ASCC include the ASEAN Work Plan on Securing Communities Against Illicit Drugs 2016-2025 and the ASEAN Framework Action Plan on Rural Development and Poverty Eradication 2016-2020.
- The prevalence of extreme poverty is falling in Emerging Asian countries, but addressing remaining challenges is likely to require additional effort. The ASEAN Framework Action Plan on Rural Development and Poverty Eradication 2016-2020 sets goals on access and control of productive natural resources, financial and support services, and social protection; participation in socio-economic opportunities; and the convergence of rural development and poverty eradication initiatives.

ASEAN's human and social development goals are outlined primarily in the ASEAN Socio-Cultural Community (ASCC) Blueprint 2025. It defined the five characteristics of a region that is inclusive, sustainable, resilient and dynamic, and engages and benefits people (Table 4.3). Among the strategic measures set out in the blueprint pertain to education, human rights, social protection, poverty eradication, health and gender equality. The ASEAN Economic Community Blueprint 2025 also touches on human and social development issues that affect economic development and integration in the region, such as education and the social responsibility of businesses in various sectors.

Table 4.3. **ASCC characteristics and key result areas**

Characteristic	Key result areas
Engages and benefits the people	• Engaged stakeholders in ASEAN processes • Empowered people and strengthened institutions
Inclusive	• Lower barriers • Equitable access for all • The promotion and protection of human rights
Sustainable	• Conservation and sustainable management of biodiversity and natural resources • Environmentally sustainable cities • Sustainable climate-friendly energy use • Sustainable consumption and production
Resilient	• A disaster-resilient ASEAN able to anticipate, respond to, cope with, adapt to and build back better, smarter, and faster • A safer ASEAN that is able to respond to all health-related hazards including biological, chemical, radiological-nuclear, and emerging threats • A climate-adaptive ASEAN with enhanced institutional and human capacity to adapt to the impacts of climate change • Strengthened social protection for women, children, young people, the elderly, people with disabilities, ethnic minority groups, migrant workers, vulnerable and marginalised groups, and people living in at-risk areas, which includes those who live in remote, border and climate-sensitive areas to reduce vulnerabilities in times of climate-change crises, disasters and other environmental changes • Enhanced and optimised financing systems, food, water and energy availability; social safety nets thanks to more available, accessible, affordable and sustainable resources • Efforts to bring about a drug-free ASEAN
Dynamic	• Towards an open, adaptive ASEAN • Towards a creative, innovative and responsive ASEAN • A culture of entrepreneurship in ASEAN

Source: ASEAN (2016c), ASEAN Socio-Cultural Community Blueprint 2025.

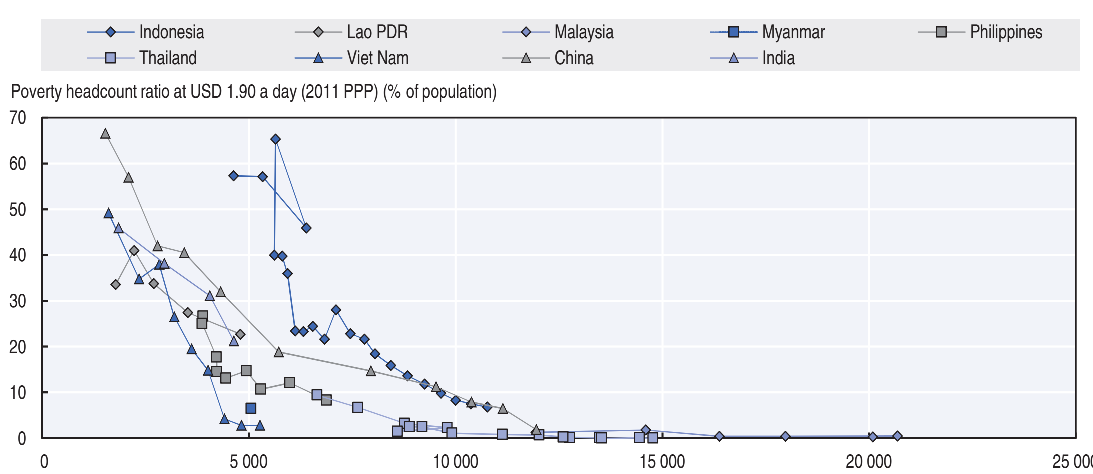
The first ASEAN Socio-Cultural Community Blueprint, released in 2009 and covering the period up to 2015, included plans for implementation and review. The current ASCC Blueprint builds on the first one, but also examines in detail institutional mechanisms, strategies and capacity building. In addition, it considers necessary resources, the co-ordination of communication, and how it is to be implemented and reviewed. The review process is to use the existing monitoring and evaluation system used for the ASCC Scorecard and a results framework in which objectives, key result areas and indicators pertain to each Blueprint component. A mid-term evaluation will cover the period from 2016 to 2020 and an end-of-term evaluation will span 2021-2025.

Recently released regional plans on human and social development that are of relevance to the ASCC include the ASEAN Work Plan on Securing Communities Against Illicit Drugs 2016-2025, which was adopted in October 2016, and the ASEAN Framework Action Plan on Rural Development and Poverty Eradication 2016-2020, published in September 2017.

The prevalence of extreme poverty is falling – the estimated share of the ASEAN population living on less than USD 1.90 per day dropped from 17% in 2005 to 7% in 2013 (UNDP, 2017). Nevertheless, it remains a serious challenge in much of the region. Of the seven Emerging Asian countries with recent, internationally comparable data on poverty headcount ratios at less than USD 1.90, USD 3.20 or USD 5.50 (in 2011 USD PPP), Thailand had the lowest and Lao PDR the highest. Of the seven countries, the greatest absolute number of people living below all three poverty lines was in China, followed by Indonesia and the Philippines.

Strategies that go beyond economic growth are needed to address the poverty challenge. While rates have declined as incomes have risen, the relation between poverty and income varies from one Emerging Asian country to another (Figure 4.1). In Viet Nam, for example, 2.8% of the population lived on less than USD 1.90 per day in 2014, when GDP per capita was USD 5 264.83 (2011 PPP), while in Indonesia the share was 57.1% in 1993, when GDP per capita was USD 5 331.07 (2011 PPP). Action to reduce poverty will need to address development, particularly in rural areas, as they account for a disproportionate share of the poor.

Figure 4.1. **GDP per capita and extreme poverty in Emerging Asia, 1990-2016**



Note: Figure represents available data on poverty headcount ratios (USD 1.90 per day, 2011 PPP) and GDP per capita for the period 1990-2016 in Emerging Asian countries.

Source: Word Bank (2018), *World Development Indicators*.

StatLink https://doi.org/10.1787/888933887500

In line with the five overall objectives of the ASEAN Socio-Cultural Community Blueprint 2025 and those of its targets that single out rural development and poverty eradication, the ASEAN Framework Action Plan on Rural Development and Poverty Eradication 2016-2020 sets three goals:

- Improving access to and/or control of productive natural resources, financial and support services, and social protection;
- Enabling participation in socio-economic opportunities;
- Strengthening the convergence of rural development and poverty eradication initiatives at local, national and regional levels.

The three goals straddle the action plan's six components – rural economic growth, social protection and safety nets, infrastructure and human resource development, public-private partnerships (PPPs), economic and environmental risks, and monitoring and evaluation.

To ensure its proper implementation, the action plan assigns country coordinators and potential partners to each of its 22 programmes, projects and activities. All ASEAN Member States are listed as country coordinators, along with the Chair of the ASEAN Ministers Meeting on Rural Development and Poverty Eradication, the ASEAN Secretariat, and the ASEAN Senior Officials Meeting on Rural Development and Poverty Eradication (Table 4.4). Potential partners include Australia, the Japan International Co-operation Agency (JICA) and the Central Bank of Lao PDR, as well as 23 ASEAN, international and other organisations.

Table 4.4. **ASEAN Framework Action Plan country coordinators and potential partners**

Country co-ordinators		Potential partners	
ASEAN Member States	**ASEAN organisations**	**National**	**ASEAN and other organisations**
• Brunei Darussalam (contributing country) • Cambodia • Indonesia • Lao PDR • Malaysia • Myanmar • Philippines • Singapore • Thailand • Viet Nam	• ASEAN Ministers Meeting on Rural Development and Poverty Eradication Chair • ASEAN Secretariat • ASEAN Senior Officials Meeting on Rural Development and Poverty Eradication	• Australia • JICA • Central Bank of Lao PDR	• Asian Development Bank • ASEAN Business Advisory Council • ASEAN Committee on Disaster Management • ASEAN Community Statistical System Committee • ASEAN CSR Network • ASEAN Foundation • ASEAN Senior Officials on Youth • ASEAN Senior Transport Officials Meeting • ASEAN+3 Co-operation Fund • Asia DHRRA • ERIA • International Poverty Reduction Center in China • Private sector from AMS • Relevant ASEAN sectoral bodies • Senior Officials Meeting of the ASEAN Ministers on Agriculture and Forestry • Senior Officials Meeting on Social Welfare and Development • UNDP • UNESCAP • World Bank • ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management • Enhanced Regional EU-ASEAN Dialogue Instrument • Japan-ASEAN Integration Fund

Source: OECD Development Centre' compilation, using ASEAN (2017e), ASEAN Framework Action Plan on Rural Development and Poverty Eradication 2016-2020.

Other regional frameworks have also addressed poverty. At the 12th East Asia Summit, held in Manila in November 2017, the leaders of the ASEAN member states, Australia, China, India, Japan, Korea, New Zealand, Russian Federation and United States released a statement of co-operation on poverty alleviation. They pledged to promote policy dialogue on the 2030 Agenda for Sustainable Development and poverty eradication, co-operation on pro-poor human resource development, and growth in MSME productivity. The statement also spelled out the commitment to inclusiveness, the provision of assistance and marshalling of appropriate financial or non-financial resources, and co-operation with the business sector, institutions and civil society organisations. Emerging Asian countries that are members of the APEC also work through the forum on issues such as food security and sustainable development.

The ASEAN-China-United Nations Development Programme (UNDP) Symposium on Financing the Implementation of the Sustainable Development Goals in ASEAN, held in August 2017 in Thailand, also discussed strategies for poverty eradication in the region. While many of the interventions needed to reduce poverty are likely to be carried out at the national level, regional efforts will also be important in addressing common challenges, coordinating action and sharing knowledge. Recommendations from a background report to the meeting included mobilising greater funds while avoiding harmful competition and using effective coordination and monitoring systems to improve revenue-raising capacities for financing sustainable development outcomes. Further recommendations were the strengthening of integrated national financing frameworks and the introduction of regional mechanisms to facilitate knowledge sharing (UNDP, 2017).

ENERGY

Progress in integration

- Although energy efficiency declined between 2005 and 2015 in Brunei Darussalam and Cambodia, it improved in the rest of the region over the period with Myanmar making the most progress.
- Measures that help to support energy efficiency and the development of a single market among ASEAN member states have been introduced regionally. Beyond ASEAN, member countries are working with dialogue partners and international organisations, in implementing energy efficiency programmes that target residential and commercial buildings, industry and transport.

The plan of action to boost energy efficiency focuses on seven programme areas

The ASEAN Economic Community Blueprint 2025 addresses regional energy initiatives in order to give the ASEAN Economic Community "enhanced connectivity and sectorial co-operation". It also briefly discusses the need for co-operation on renewable energy in the context of sustainable economic development. Plans for regional co-operation in the sector are further elaborated upon in the current Phase I of the ASEAN Plan of Action for Energy Co-operation (APAEC), launched by the ASEAN Centre for Energy for the period 2016-2020. The phase comprises seven programme areas: ASEAN Power Grid, Trans-ASEAN Gas Pipeline, coal and clean coal technology, energy efficiency and conservation, renewable energy, regional energy policy and planning, and civilian nuclear energy (Table 4.5). The APAEC is to put in place a monitoring mechanism to track and annually report on the plan's progress in achieving its goals.

Table 4.5. **APAEC 2016-2025 programme areas**

Programme area	Key strategy
ASEAN Power Grid	Initiate multilateral electricity trade in at least one sub-region by 2018
Gas Pipeline	Enhance connectivity for energy security and accessibility via pipeline and regasification terminals
Coal and clean coal technology	Enhance the image of coal through promotion of clean coal technologies (CCT)
Energy efficiency and conservation	Reduce energy intensity – calculated as total primary energy supply (TPES) per PPP GDP in constant 2005 USD – by 20% in 2020 based on 2005 level
Renewable energy	Aspirational target of an increase to 23% to the TPES-based ASEAN Energy Mix by 2025 of the renewable energy component (which includes hydropower systems of all sizes but excludes traditional biomass).
Regional energy policy and planning	Improve international profiling of the energy sector
Civilian nuclear energy	Build capabilities in policy, technology and regulatory aspects of nuclear energy

Source: ACE (2015), ASEAN Plan of Action for Energy Co-operation (APAEC) 2016-2025.

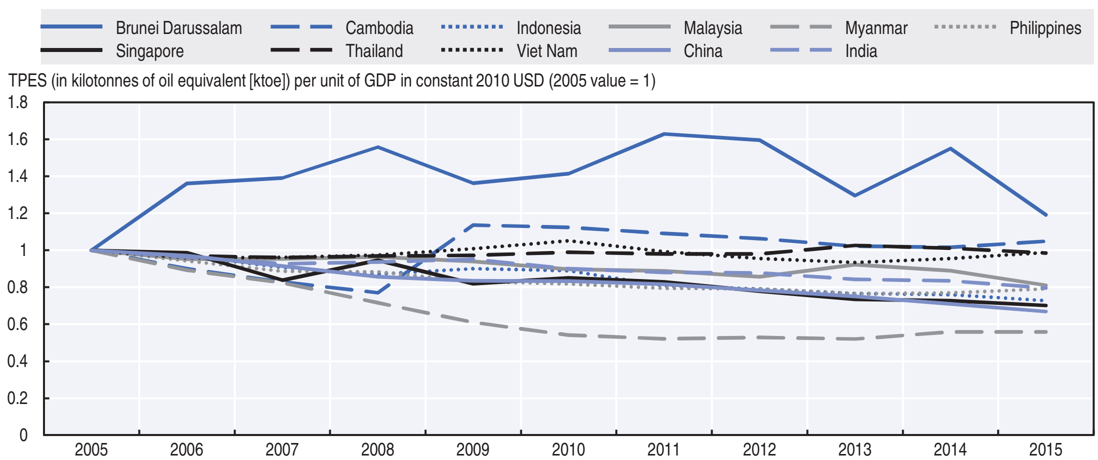
As stressed in the APAEC, which calls for a 20% reduction in ASEAN's energy intensity from 2005 levels by 2020, improved energy efficiency spells improved energy security, helps to address climate change, and promotes increased competitiveness in the region. Strategies for energy efficiency and conservation include harmonising and promoting efficiency standards and labelling, increasing the participation of the private sector and financial institutions in energy efficiency and conservation, and developing green building codes.

Most of the ASEAN member countries have improved energy efficiency and have drawn up policies and programmes to continue improvements

Although energy efficiency declined between 2005 and 2015 in Brunei Darussalam and Cambodia, it improved in the rest of the region over the period (Figure 4.2). The greatest strides came in Myanmar, where energy intensity in 2015 was 55.9% of the 2005 level. By 2015 Indonesia, Myanmar, the Philippines, Singapore, China and India had outperformed the 20% target for 2020 (as a share of GDP in constant 2010 USD rather than PPP GDP in constant 2005 USD as in the APAEC target). The ASEAN-wide TPES per unit of GDP in constant 2010 USD fell by 18.6% between 2005 and 2015, while efficiency had already improved 27.2% in Emerging Asia as a whole by 2015, due chiefly to the considerable progress made in China.

Figure 4.2. **Changes in energy efficiency in Emerging Asian countries, 2005-2015**

TPES (in kilotonnes of oil equivalent [ktoe]) per unit of GDP in constant 2010 USD, 2005 value = 1



Note: TPES data were not available for Lao PDR.

Source: IEA (2018); World Bank (2018).

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ASEAN member states have also set their own energy efficiency targets for the period 2020 to 2040, targeting reductions by form of energy use – particularly electricity in Malaysia and Myanmar, for example – or by economic sector, as in Indonesia. Countries have deployed a range of domestic initiatives in support of efforts to meet the targets. Indonesia's National Master Plan for Energy Conservation, for example, includes fiscal incentives, training programmes and energy audits. The Eleventh Malaysia Plan 2016-2020 contains measures to improve the demand-side management of energy. The Philippines' Energy Efficiency and Conservation Roadmap, 2017-2040, released in 2017 by the country's Department of Energy, covers transport, industry, residential buildings, commercial buildings and cross-sectoral strategies over the short, medium and long term. As for Singapore, it set up its Energy Efficiency Programme Office to manage energy efficiency programmes in households, industry and the public sectors. It requires corporations to draw up energy efficiency improvement plans that describe progress made and the energy efficiency measures they plan to implement or will complete. The Thailand 20-Year Energy Efficiency Development Plan 2011-2030 focuses on transport and industry through a combination of rules, regulations and supportive measures. The Viet Nam National Energy Efficiency Programme, for its part, aims to improve efficiency in industry through loans for investment, technical assistance and capacity building. The CLM countries (Cambodia, Lao PDR and Myanmar) are also developing energy efficiency plans and policies.

China's 13th Five-Year Plan targets improvements in energy efficiency through technology upgrades in heavy industry and the power sector, although planned reductions in overcapacity should also help to reduce energy intensity in the economy. India's National Mission for Enhanced Energy Efficiency – one of eight national missions under the National Action Plan on Climate Change – includes initiatives to improve efficiency in energy-intensive sectors, boost capacity to finance energy efficiency, accelerate the shift towards the use of energy-efficient appliances, and develop fiscal instruments for promoting energy efficiency.

ASEAN maintains its energy efficiency drive at regional and sub-regional levels

At the regional level, the Energy Efficiency and Conservation Sub-sector Network (EE&CSSN) is responsible for coordinating ASEAN's efforts to achieve targeted reductions in energy intensity. The EE&CSSN has rolled out the ASEAN Energy Management Accreditation Scheme and already harmonised methods of testing air-conditioner efficiency standards. Such measures should help to support energy efficiency and the development of a single market among ASEAN member states. Working with dialogue partners and international organisations, ASEAN has implemented energy efficiency programmes[4] that target residential and commercial buildings, industry and transport. Measures include the annual ASEAN Energy Awards – held since 2000 – which include categories that recognise the energy efficiency achievements of property developers.

ASEAN is also addressing energy efficiency with its dialogue partners. The Eleventh East Asia Summit Energy Ministers Meeting, held in the Philippines in September 2017, for example, was attended by representatives of the 10 ASEAN member states, Australia, China, India, Japan, Korea, New Zealand, the Russian Federation, and the United States, who discussed progress made in energy efficiency and saving – also among the energy topics addressed at the East Asia Summit two months later. At the annual Senior Officials Meeting on Energy Plus Three and gatherings of the ASEAN Ministers on Energy Plus Three, the governments of the ASEAN member states, China, Japan and Korea shared views on energy efficiency. The issue is also being addressed at the sub-regional level through, for example, the work of the GMS (Box 4.1). Emerging Asia's APEC members also work on energy efficiency issues through the APEC Energy Working Group (EWG), which targets reductions in aggregate energy intensity by 45% from 2005 levels by 2035.

Box 4.1. **Greater Mekong Sub-region co-operation on improving energy efficiency**

The Greater Mekong Sub-region is a framework for economic co-operation between six Emerging Asian countries with territory in the Mekong River basin: Cambodia, China, Lao PDR, Myanmar, Thailand, and Viet Nam. The programme supports the implementation of projects in agriculture, energy, environment, health and human resource development, information and communication technology, tourism, transport and trade facilitation, and urban development.

Common challenges for the GMS countries in improving energy efficiency include how to mainstream efficiency measures in all sectors of their economies. They target, for example, public utilities and private investors in power generation, transmission and distribution on the supply side and, on the demand side, industry and commercial users. Policy barriers, a lack of information on efficiency practices, and limitations in human capital and institutional capacities complicate efforts to address challenges. The shift

Box 4.1. **Greater Mekong Sub-region co-operation on improving energy efficiency** *(cont.)*

to commercial energy sources has helped boost energy efficiency, and pricing energy according to the market cost of its supply, and it is likely to play a major role in incentivising further improvements in energy efficiency in the sub-region (ADB, 2015).

The GMS Road Map for Expanded Energy Co-operation, which helps to guide efforts in project planning and implementation in the energy sector, calls for collaborative efforts to enhance energy access, develop low carbon and renewable energy sources, improve energy supply, and promote public-private partnerships and private sector participation in energy development. Planned action that focuses on energy efficiency includes sharing experiences and best practices, involving the private sector, pursuing efficiency in the transport sector, and expanding financing for energy efficiency initiatives.

INITIATIVE FOR ASEAN INTEGRATION

Progress in integration

- The new IAI Work Plan III outlines enabling actions to be taken on legal and judicial systems, digital governance, crisis and disaster management, administration and public policy, safety standards and systems, and sustainable development.
- Differences between the ASEAN-6 and CLMV countries are more pronounced in some of the policy areas covered by Work Plan III's objectives than others, and these groupings do not always line up with development gaps in the region.

The IAI was launched in 2000 to assist ASEAN's newer member states – Cambodia, Lao PDR, Myanmar and Viet Nam (the CLMV countries) – in implementing ASEAN agreements and narrowing development gaps with the other (ASEAN-6) countries in the region. IAI's goals are defined by a series of work plans, the first of which was endorsed by ASEAN Foreign Ministers at the 35th ASEAN Ministerial Meeting in July 2002 in Brunei Darussalam. After Work Plan I (2002-2008) and Work Plan II (2009-2015), Work Plan III for the period 2016-2020 was released in September 2016. It focuses on new policy areas, as well as some similar to those of the first two plans, in its five strategic areas: education; health and well-being; trade facilitation; food and agriculture; MSMEs (Table 4.6). Each area sets out objectives (20 in total) and specific actions (26).

Table 4.6. **Focus areas of Initiative for ASEAN Integration Work Plans**

	Work Plan I Priority Areas	Work Plan II (AEC Objectives)	Work Plan III Strategic Areas
Education, health and human development	• Human resource development	• Human development	• Education • Health and well-being
Economic integration	• Regional economic integration	• Single market and production base • Integration into the global economy	• Trade facilitation
Connectivity and competitiveness	• Infrastructure • Information and communication technology	• Competitive economic region	
Economic sectors			• Food and agriculture • Micro, small and medium enterprises
Social issues and inclusive growth		• Equitable economic development • Social welfare and protection • Social justice and rights • Building ASEAN Identity	
Environment		• Ensuring environmental sustainability	
Political and security co-operation		• A rules-based community of shared values and norms (political co-operation) • A cohesive, peaceful and resilient region with shared responsibility for comprehensive security (security co-operation) • A dynamic and outward-looking region in an increasingly integrated and interdependent world (external relations)	

Source: OECD Development Centre' compilation, using ASEAN (2002), IAI Work Plan (2002-2008); ASEAN (2009), IAI Work Plan (2009-2015); ASEAN (2016d), IAI Work Plan (2016-2020).

Work Plan III outlines six categories of enabling action in support of the goals in its five strategic areas:

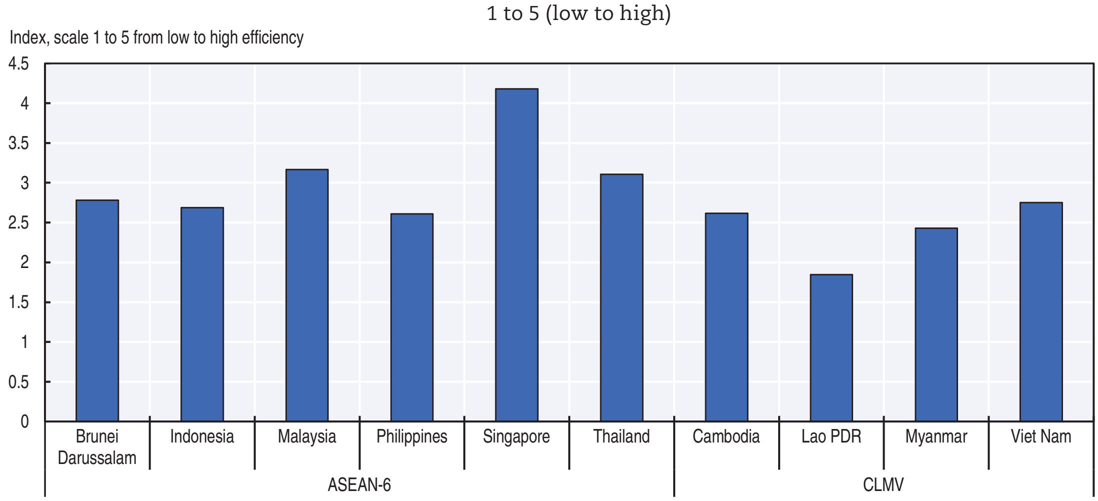
- Develop regulatory techniques and practices and frameworks for legal and judicial excellence;
- Strengthen digital government strategies;
- Improve capacity for crisis and disaster management;
- Foster best practices in administration and public policy;
- Promote the implementation of international safety standards and systems;
- Further sustainable development.

In addition, the plan's roll-out will take in four dimensions: clear governance and ownership, the presence of core skills and finance, proactive stakeholder engagement, and robust performance management.

Differences between the ASEAN-6 and CLMV countries are more pronounced in some of the policy areas covered by Work Plan III's objectives than others. Agricultural productivity, for example, is uniformly higher in the ASEAN-6 than in the CLMV countries. In 2016, value added per worker in agriculture in ASEAN countries ranged from a low of USD 1 909.35 (2010 PPP) in the Philippines to USD 19 231.07 in Malaysia, and from USD 801.35 in Viet Nam to USD 1 071.28 in Myanmar.[5] Similarly, the World Bank's Logistics Performance Index gives the efficiency of ASEAN-6 customs clearance processes a higher average score (3.09 out of 5) than the CLMV countries (2.41) (Figure 4.3). However, the individual scores of both Viet Nam (2.75) and Cambodia (2.62) are above that of the Philippines (2.6).

Figure 4.3. **Efficiency of customs clearance processes in ASEAN-6 and CLMV, 2016**

1 to 5 (low to high)



Source: World Bank (2017), World Development Indicators (database).

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When it comes to child and maternal health indicators, there are considerable disparities between the ASEAN-6 and CLMV countries. In 2015, the modelled estimate of the number of maternal deaths per 100 000 live births averaged 55.5 in the ASEAN-6, but 147.5 in CLMV – though the ratio in Viet Nam (54) was lower than in either Indonesia (126) or the Philippines (114). Similarly, the infant mortality rate per 1 000 live births averaged 12 in the ASEAN-6, compared to 33.2 in the CLMV countries, though Viet Nam once again performed relatively well, boasting lower rates (17.3) than Indonesia (22.2) and the Philippines (21.5). Access to primary education, by contrast, is comparatively high in the CLMV countries. The lowest primary net enrolment rate in 2015 was in Lao PDR, at 92.7%, though it was higher than the lowest rate among the ASEAN-6 – 89.7% in Indonesia. Gaps have been wider in secondary schooling in recent years, however. Myanmar had a net enrolment rate of 48.3% in 2014 and Lao PDR of 54.3% in 2015 – well below the lowest rate in the ASEAN-6, which came in Indonesia, with 84.8%.

SMEs and entrepreneurs are similarly important to the economies of the ASEAN-6 and CLMV countries, although the challenges that they face and the outcomes expected of them are different. On average, SMEs accounted for 99% of establishments and 69.7% of total employment in the ASEAN-6 countries in 2014, while the comparable CLMV figures were 96.5% and 68.7% (ASEAN, 2015c).[6]

The success of Work Plan III will also depend on the implementation of its projects, which has been a challenge in the past. Although Work Plan I spanned the period from 2002 to 2008, only 133 of its 232 projects (57.3%) had been rolled out in April 2017 (Table 4.7). Work Plan II did slightly better, with 65.8% of its projects (252 of 383) implemented by the same date. In response, Work Plan III enters into significantly more detail on implementation than either of its predecessors. It includes a chapter devoted specifically to the implementation plan. The chapter considers the implementation schedule per action, identifies responsible sector-related bodies, alignment with sectoral plans, and sets out guidelines for projects. Nevertheless, further work will be needed on monitoring and evaluating implementation. At the time of Work Plan III's launch, outcome metrics for specific objectives and actions had yet to be developed, as the plan document acknowledges. The missing metrics include those that measure:

- the proportion of farmers and producers certified as compliant with the Food and Agriculture Organization and ASEAN'S good agricultural practices;
- the contribution of MSMEs to GDP;
- planned actions relating to MSMEs;
- education and health and wellbeing.

Table 4.7. **Funding and implementation of Initiative for ASEAN Integration Work Plans I and II**

Status as of 3 April 2017

Plan and priority area	Total number of projects	Number of projects implemented
Work Plan I	232	133
Infrastructure: Transport	12	1
Infrastructure: Energy	9	2
Human Resource Development: Public Sector Capacity Building	95	53
Human Resources Development: Higher Education	2	1
ICT	33	26
Regional Economic Integration: Trade in Goods & Services	26	17
Regional Economic Integration: Customs	10	1
Regional Economic Integration: Standards	12	11
Regional Economic Integration: Investment	5	1
Tourism	11	8
General Coverage Projects	17	12
Work Plan II	383	252
Trade in Goods and Services	58	31
Investment and Finance	40	17
Labour	5	4
Food, Agriculture and Forestry	18	1

Table 4.7. **Funding and implementation of Initiative for ASEAN Integration Work Plans I and II** *(cont.)*

Status as of 3 April 2017

Plan and priority area	Total number of projects	Number of projects implemented
Competition and Consumer Protection	7	3
Intellectual Property Rights	6	5
Infrastructure	17	12
SME Development	10	4
Human Resource Development	15	6
ICT	24	21
Public Sector Capacity Building	153	133
Poverty Alleviation	1	0
Health and Well-being	7	4
Disaster Management	4	2
Promoting Corporate Social Responsibility	1	1
Environment	14	8
Cultural Promotion	1	0
Others	2	0
Trade in Goods and Services	58	31
Investment and Finance	40	17
Labour	5	4
Food, Agriculture and Forestry	18	1
Competition and Consumer Protection	7	3
Intellectual Property Rights	6	5

Source: Authors' compilation, using ASEAN (2017f), List of Projects for IAI Work Plan I & II, http://asean.org/storage/2017/02/List-of-Projects-for-IAI-Work-Plan-I-and-II.pdf.

While Work Plan III does not specify planned sources of funding for its projects, attention will nevertheless have to be paid to securing appropriate financing for IAI projects. In the past, higher-income ASEAN member countries funded the bulk of projects, though other countries and regional and international organisations also provided support. Malaysia was sole or joint funder of 64 projects under Work Plan I, Singapore of 60 projects, Japan/JICA of 43, and Indonesia of 34. Along with Japan, other non-ASEAN countries that supplied funding included Korea, India, Australia, New Zealand and Denmark. Financial backing was also forthcoming from regional and international organisations and non-governmental organisations – e.g. UN Economic and Social Commission for Asia and the Pacific (UNESCAP) and UNDP, the European Union, the Hans Seidel Foundation, the ASEAN Bankers Association, the ASEAN-UNDP Partnership Facility, the ASEAN University Network and the International Labour Organization. Although 22 funders contributed to the implementation of Work Plan I, only 17 did when it came to rolling out Work Plan II. Singapore was by far the most active, financing 231 projects, while Japan/JICA contributed to the second highest number of projects with 86.

Notes

1. GATT identifies four ways, or "modes", in which services are provided. Mode 1 is "cross-border", whereby services are supplied from the territory of one country into that of another, e.g. by telecommunications or post. Mode 2 is "consumption abroad", whereby consumers who are nationals of one country move to another country where they consume a service, e.g. foreign students. Mode 3 is "commercial presence", whereby a service supplier from one country supplies a service to another through its commercial presence in that country, e.g. the locally established affiliate of a foreign-owned and controlled company. Mode 4 is "the presence of natural persons", whereby natural persons – freelance or employed workers – from one country operate in another country to supply the service.
2. There is a shortfall of 150 kilometres on the road from the Thailand-Myanmar border to the Dawei Special Economic Zone project area. Supported by loans from Thailand, construction is scheduled to start in November 2018.
3. Programmes include the ASEAN Energy Management System (AEMAS), Promotion of EE&C (PROMEEC), ASEAN-Japan EE Programme (AJEEP), Energy Conservation Workshop under AJEEP (ECAP), Energy Market Transformation with Information Provision Scheme (EMTIPS), and the ASEAN Standard Harmonization Initiative for Energy Efficiency (ASEAN-SHINE).
4. Excluding Brunei Darussalam and Singapore for reasons of data availability and comparability.
5. These data are from national sources and use national definitions of firm size.

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Annex A. Statistical annex

Table A.1. **Real GDP growth of Southeast Asia, China and India**

Annual percentage change

Country	2016	2017	2018	2019	2019-23 (average)	2012-16 (average)
ASEAN-5						
Indonesia	5.0	5.1	5.2	5.2	5.3	5.3
Malaysia	4.2	5.9	4.9	4.8	4.6	5.1
Philippines	6.9	6.7	6.4	6.5	6.6	6.6
Thailand	3.3	3.9	4.5	4.1	3.7	3.4
Viet Nam	6.2	6.8	6.9	6.7	6.5	5.9
Brunei Darussalam and Singapore						
Brunei Darussalam	-2.5	1.3	2.0	2.3	2.0	-1.3
Singapore	2.4	3.6	3.5	2.9	2.7	3.5
CLM countries						
Cambodia	6.9	7.0	7.0	6.9	6.9	7.1
Lao PDR	7.0	6.9	6.6	6.8	7.0	7.6
Myanmar	5.9	6.8	6.6	6.9	7.0	7.3
China and India						
China	6.7	6.9	6.6	6.3	5.9	7.3
India	7.1	6.7	7.5	7.3	7.3	6.9
Average of ASEAN 10 countries	4.8	5.3	5.3	5.2	5.2	5.1
Average of Emerging Asia	6.4	6.5	6.6	6.3	6.1	6.8

Note: The cut-off date for data used is 21 November 2018. ASEAN and Emerging Asia growth rates are the weighted averages of the individual economies in these groupings. Data for India and Myanmar relate to fiscal years. Myanmar's 2018 data refers to the interim 6-month period, from April 2018 to September 2018 while the 2019 data refers to the period from October 2018 to September 2019. The 2018 and 2019 projections for China, India and Indonesia are based on the OECD Economic Outlook 104 (database).
Source: OECD Development Centre, MPF-2019 (Medium-term Projection Framework).

Table A.2. **Current account balance of Southeast Asia, China and India**

Percentage of GDP

Country	2018	2019	2019-23 (average)
ASEAN-5			
Indonesia	-2.8	-2.6	-2.3
Malaysia	2.6	2.4	2.1
Philippines	-1.5	-1.4	-0.1
Thailand	8.9	8.0	6.0
Viet Nam	2.5	2.2	1.4
Brunei Darussalam and Singapore			
Brunei Darussalam	10.4	11.1	10.0
Singapore	19.0	19.0	19.1
CLM countries			
Cambodia	-10.3	-10.1	-8.3
Lao PDR	-13.2	-11.9	-11.1
Myanmar	-4.9	-5.2	-6.8
China and India			
China	0.4	0.4	0.2
India	-2.1	-2.8	-1.9
Average of ASEAN 10 countries	1.5	1.3	1.0
Average of Emerging Asia	0.0	-0.2	-0.2

Note: The cut-off date for data used is 21 November 2018. The weighted averages are used for ASEAN average and Emerging Asia average. Data for India and Myanmar relate to fiscal years. Myanmar's 2018 data refers to the interim 6-month period, from April 2018 to September 2018 while the 2019 data refers to the period from October 2018 to September 2019. The 2018 and 2019 projections for China, India and Indonesia are based on the OECD Economic Outlook 104 (database).
Source: OECD Development Centre, MPF-2019 (Medium-term Projection Framework).

Table A.3. **General government fiscal balances of Southeast Asia, China and India**

Percentage of GDP

Country	2018	2019	2019-23 (average)
ASEAN-5			
Indonesia	-2.0	-2.0	-1.6
Malaysia	-2.7	-2.6	-2.5
Philippines	-2.7	-2.7	-2.3
Thailand	-2.9	-2.7	-2.3
Viet Nam	-4.9	-4.9	-5.1
China and India			
China	-3.1	-3.3	-3.9
India	-6.4	-6.2	-5.7
ASEAN-5 average	-2.6	-2.6	-2.3
Emerging Asia average	-3.8	-3.9	-4.1

Note: The cut-off date for data used is 21 November 2018. Weighted averages are used for ASEAN average and Emerging Asia average. Data for India and Thailand relate to fiscal years. The 2018 and 2019 projections for China, India and Indonesia are based on the OECD Economic Outlook 104 (database). General government balances data are not necessarily comparable to the budget balances published by national governments. Emerging Asia in this chart is comprised of ASEAN-5, China and India.
Source: OECD Development Centre, MPF-2019 (Medium-term Projection Framework).

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